

FINAL

**INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION**

**SOUTHERN HEIGHTS BRIDGE REPLACEMENT PROJECT
SAN RAFAEL, CALIFORNIA**

State Clearinghouse Number: 2018062022

LSA

July 2018

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SOUTHERN HEIGHTS BRIDGE REPLACEMENT PROJECT

SAN RAFAEL, CALIFORNIA

State Clearinghouse Number: 2018062022

Submitted to:

City of San Rafael
Public Works Department
111 Morpew Street
San Rafael, California 94901

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Project No. MKT1604

LSA

July 2018

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1.0 INTRODUCTION

The City of San Rafael Public Works Department (City of San Rafael), the lead agency, proposes to replace the existing Southern Heights Bridge (No. 27C0148) on Southern Heights Boulevard (herein referred to as the Project) with a new bridge. The proposed Project would replace the existing narrow 162-foot long, multi-span, timber structure, constructed in 1930, reconstructed in 1958, and rehabilitated in 1981. The California Department of Transportation (Caltrans) performed a routine bridge inspection on the existing bridge (Bridge No. 27C0148) on December 28, 2017. During the inspection, it was discovered that the bridge exhibited severe deterioration and loss of connection with the superstructure. Caltrans immediately closed the bridge and notified the City of San Rafael. The bridge is to remain closed until the proposed Project is implemented or intermediate repairs are made.

1.1 ENVIRONMENTAL REVIEW

The proposed Project constitutes a “Project” in accordance with CEQA. Prior to approving the proposed Project, the City of San Rafael must provide environmental review in accordance with CEQA to assess the potential impacts of the proposed Project, including mitigation where necessary.

The City of San Rafael has prepared this Initial Study to provide agencies and the public with information about the potential impacts of the proposed Project on the local and regional environment. This document has been prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 as amended, and the State CEQA Guidelines, California Administrative Code, Title 14, Division 6, Chapter 3 (CEQA Guidelines). In anticipation of determining that all potentially significant impacts resulting from the proposed Project can be mitigated to less than significant levels, a Mitigated Negative Declaration is being considered to provide environmental clearance for the proposed Project.

1.2 CLARIFICATIONS AND CORRECTIONS

During the public review period, one comment letter was received, from the State of California Governor’s Office of Planning and Research State Clearinghouse and Planning Unit. The comment letter did not identify the need for clarification or revisions to the IS/MND text. On the Cover and Title Pages of this document the word “Draft” has been deleted and the word “Final” has been added and the State Clearinghouse number has been added. Sections 1.2 “Clarifications and Corrections”, 1.3 “Public Comments”, 1.4 “Response To Comment Format”, and 1.5 “Additional Documentation” have been added to this Final IS/MND and provides discussion of steps that have been taken since the public circulation of the Draft IS/MND. Section 1.2 “Summary Information” of the Draft IS/MND has been renumbered and is included in this Final IS/MND as Section 1.6. Section 5.0 “Response to Comments” has been added to this Final IS/MND and provides response to comments that were received during the public review period of the Draft IS/MND occurring from June 15, 2018 to July 16, 2018. Section 6.0 “Mitigation and Monitoring Program” has also been

added to this Final IS/MND and provides a matrix of the mitigation measures that would be implemented, the mitigation milestones (timing of when the measure is to be implemented/completed) and agencies/entities responsible for implementing/overseeing the measures.

1.3 PUBLIC COMMENTS

The City of San Rafael circulated the Draft IS/MND for the Southern Heights Bridge (No. 27C0148) Replacement Project for public review and agency review, for 30 days, commencing on June 15, 2018 and ending on July 16, 2018. The following comment letters (one public agency comment letter) were received on the June 2018 Draft IS/MND:

- State of California Governor's Office of Planning and Research State Clearinghouse and Planning Unit (Dated July 17, 2018)

1.4 RESPONSE TO COMMENT FORMAT

Section 5.0 Response to Comments is organized in the following way:

- The comment letters are included and labeled with a comment code that corresponds to the responses; and,
- A response to each relevant comment follows, organized by comment code.

1.5 ADDITIONAL DOCUMENTATION

The Final IS/MND includes additional documentation for the public record, including:

- Notice of Completion;
- Notice of Determination; and,
- Letter dated July 17, 2018 from the Governor's Office of Planning and Research State Clearinghouse and Planning Unit noting compliance with the State Clearinghouse review of requirements.

These additional documents are included in Appendix D of this Final IS/MND.

1.6 PROJECT INFORMATION

1. Project Title:

Southern Heights Bridge Replacement Project

2. Lead Agency Name and Address:

City of San Rafael
Public Works Department
111 Morphew Street
San Rafael, CA 94901

3. Contact Person and Phone Number:

Kevin McGowan, P.E.
Assistant Public Works Director/City Engineer
City of San Rafael Public Works Department
(415) 485-3355

4. Project Location:

The Project site is a bridge located in eastern Marin County just south of central San Rafael. The Southern Heights Boulevard Bridge is located just north of the intersection of Meyer Road and Southern Heights Boulevard in the Southern Heights neighborhood of San Rafael. The Project site is approximately 0.34 acres in size. Figure 1: Regional Location and Figure 2: Project Vicinity show the location of the Project site on a regional and local scale, respectively.

5. Project Sponsor's Name and Address: City of San Rafael Public Works Department
111 Morphew Street, San Rafael, California 94901.

6. General Plan Designation: The City of San Rafael General Plan 2020 Land Use Map identifies the parcels surrounding the Project site as Hillside Residential (0.5-2 units/acre), Residential – Low Density (2-6.5 unites/acre), and Open Space.

7. Zoning: The parcels surrounding the Project site are designated as Single Family Residential (R1a-H, R7.5, R20) and Parks/Open Space (P/OS).

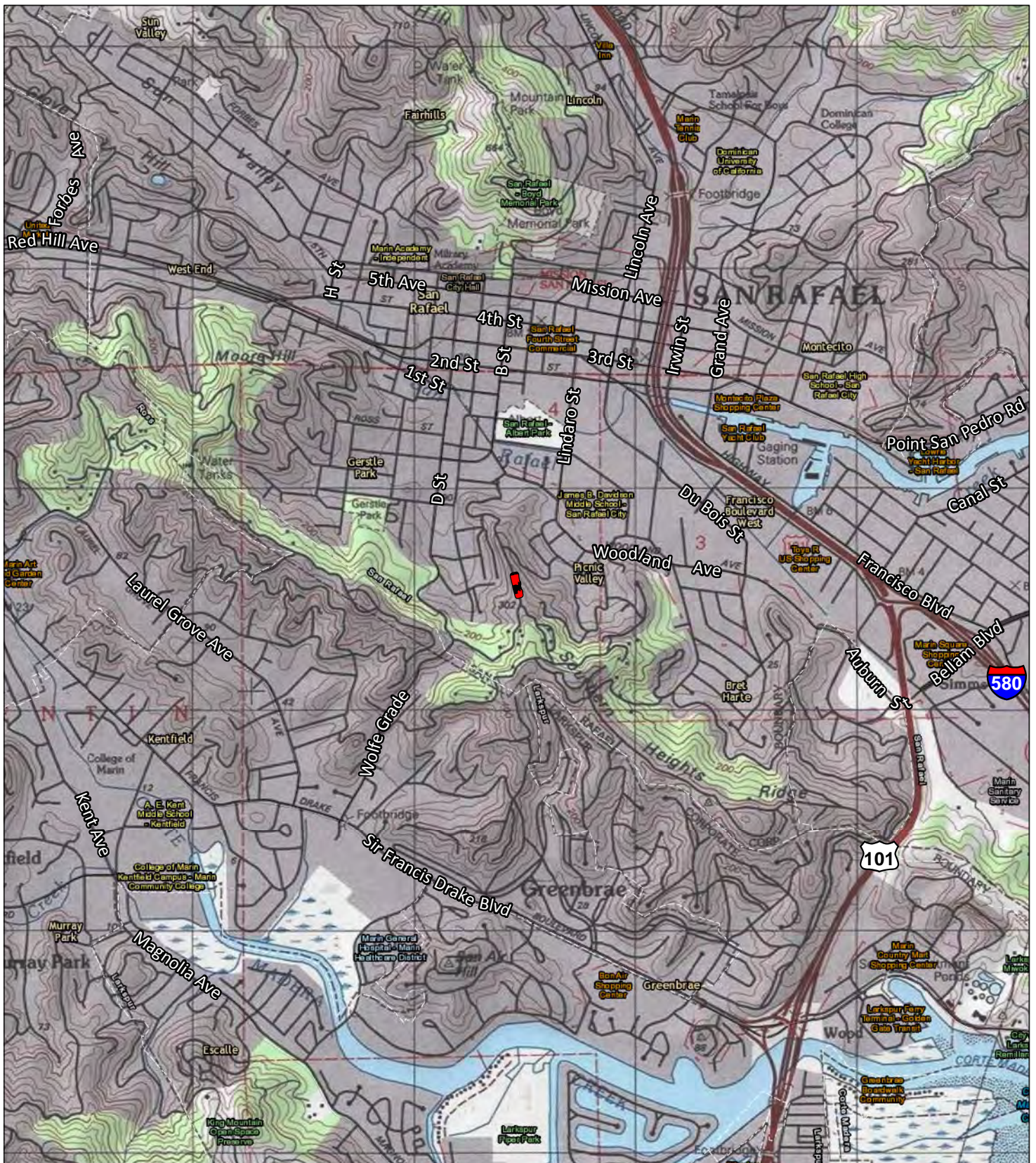
8. Description of Project: Southern Heights Boulevard is a narrow one-lane roadway that provides local access to residential properties throughout the neighborhood. The existing bridge was constructed circa 1930, reconstructed in 1958, and rehabilitated in 1981. The hillside crossing consists of a 162-foot long, multi-span, timber structure.

The California Department of Transportation (Caltrans) performed a routine bridge inspection on the existing bridge (Bridge No. 27C0148) on December 28, 2017. During the inspection, it was discovered that the bridge exhibited severe deterioration and loss of connection with the superstructure. Caltrans immediately closed the bridge and notified the City of San Rafael. The bridge is to remain closed until the proposed Project is implemented or intermediate repairs are made.


The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge will be a three-span, reinforced concrete slab structure, approximately 127 feet long. The roadway alignment and grade will remain unchanged. The existing right-of-way width is 20 feet.

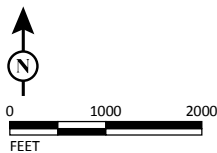
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LEGEND

 Biological Study Area



SOURCE: USGS 7.5-Minute Quadrangle (San Rafael)

I:\MKT1604\GIS\Reports\NESM\Figure_2_ProjectVicinity_Topo.mxd (6/27/2017)

FIGURE 2

Southern Heights Bridge Replacement Project
 City of San Rafael, Marin County, California
 Bridge No. 27C0148; Caltrans District 4
 Federal Project No. BRLO-5043(038)
 Project Vicinity on Topographic Base

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No new right-of-way will be required for the new bridge or retaining walls. Temporary construction easements (TCE) are anticipated on the east and west sides of the bridge to provide construction access. Utilities, including overhead power and communication and underground water and natural gas, will need to be relocated with the project. It is not yet clear if the overhead utility relocations can be accommodated within the existing right-of-way or if utility easements will be needed for the utility poles and wires. The water and gas lines will be relocated onto the new bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on cast-in-drilled-hole piles. There is no waterway beneath the bridge but a corrugated metal storm drain pipe will need to be temporarily relocated away from the structure during the construction. Construction of the roadway approaches will involve the removal of existing pavement, retaining walls, and fences, and the placement of fill material, aggregate base, hot mix asphalt pavement, concrete retaining walls, and new guardrails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

Construction may begin as early as winter 2019 and will have a duration of approximately twelve months.

9. Surrounding Land Uses and Setting: The proposed Project is located in the southwestern portion of the City of San Rafael, along Southern Heights Boulevard. According to the City of San Rafael General Plan 2020 Land Use Map, surrounding land uses include Hillside Residential (0.5-2 units/acre), Residential – Low Density (2-6.5 units/acre), and Open Space.

10. Other Public Agencies Whose Approval is Required (i.e., permits, financial approval, or participation agreements):

- Caltrans: NEPA Clearance – Categorical Exclusion
- Regional Water Quality Control Board National Pollutant Discharge Elimination System Stormwater General Construction Permit

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, has consultation begun?

The Federated Indians of Graton Rancheria (FIGR) have requested consultation pursuant to Public Resource Code section 21080.3.1. Consultation with FIGR was initiated and is considered complete.

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2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist in Chapter 3.0.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input checked="" type="checkbox"/> Mandatory Findings of Significance | | |

2.1 DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “Potentially Significant Impact” or “Potentially Significant Unless Mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Signature

Date

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3.0 CEQA ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

The major features that give San Rafael its visual character are the hills and valleys, the San Francisco Bay (Bay), creeks, the San Rafael Canal, the highways and other transportation corridors, neighborhoods, and the Downtown. The City's historic structures also add to the uniqueness and identity of San Rafael. These include the Mission San Rafael Arcángel and St. Raphael's Church, historic homes, buildings in the Downtown constructed from the late 1800s through the 1920s, the Rafael Film Center and the Marin Civic Center. New development and other physical alterations are required to respect the existing character and scale of the City.

The area surrounding the existing Southern Heights Boulevard Bridge is hilly and residential, with winding streets and homes set against the hillside at varying angles and elevations. Area residents value the aesthetics of the existing bridge; in public meetings, residents have praised the “quaint” aesthetic of the existing bridge. Likewise, participants expressed an interest in retaining design features such as the existing cantilevers, white horizontal boards, and top railing in order for the new bridge to echo the white-washed wood look of the existing bridge. Residents also requested retention of as much as possible of the tree canopy, as it contributes to the look of the bridge and the neighborhood.

The roads in the Project area are narrow and winding, providing some scenic vistas which are interrupted by homes and trees. Southern Heights Boulevard within the Project site is on the west side of the hilltop, and extends in a north-south alignment. From the northern end of the bridge traveling south, there are clear views to Mount Tamalpais, though the views are interrupted and disappear due to tree cover in the center and southern end of the bridge. Approximately 91 percent of the 0.34-acre project footprint is covered by the tree canopy (0.31-acre). The trees in the area are largely California Bay Laurel and Coastal Live Oak, with a mix of other species. Both California Bay Laurel and Coastal Live Oak are evergreen species, so views to Mount Tamalpais from the center and southern end of the bridge would remain interrupted throughout the year.

In the City of San Rafael's General Plan Community Design (CD) Element, two policies with respect to visual resources are relevant to the proposed Project. These are:

- CD-5: Views. Respect and enhance to the greatest extent possible, views of the Bay and its islands, Bay wetlands, St. Raphael's church bell tower, Canal front, marinas, Mt. Tamalpais, Marin Civic Center and hills and ridgelines from public streets, parks and publicly accessible pathways.
- CD-6: Hillsides and Bay. Protect the visual identity of the hillsides and Bay by controlling development within hillside areas, providing setbacks from the Bay, and providing public access along the Bay edge.

Thus, views along Southern Heights Boulevard in the Project footprint as well as the visual setting of the Project vicinity are protected under both CD-5 and CD-6.

No designated state scenic highways or locally designated scenic roadways are within or adjacent to the Project site (Caltrans 2017; City of San Rafael 2004).

3.1.2 Impact Analysis

a. Would the project have a substantial effect on a scenic vista?

LESS THAN SIGNIFICANT IMPACT. Scenic vistas from the Project site include views of Mt. Tamalpais to the south and views of hills and ridgelines to the north. During construction, equipment may block some views from Southern Heights Boulevard; however, this impact would be temporary. Implementation of the proposed Project would not affect these vistas as views from the northern end of the bridge to Mount Tamalpais and from the southern end of the bridge to the hills and ridgelines to the north would not be blocked by the new bridge. Therefore, Project impacts on scenic vistas would be less than significant.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

NO IMPACT. The Project site is located within the City of San Rafael. No designated state scenic highways or locally designated scenic roadways are within or adjacent to the Project site. Therefore, the proposed Project would not substantially damage scenic resources within a state scenic highway.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

LESS THAN SIGNIFICANT IMPACT. The Project would involve the construction of a new bridge along Southern Heights Boulevard. Most visual changes to the Project footprint would be temporary (over the construction period) and are considered to be minor, including the presence of construction equipment. Once the proposed Project is operational, residents adjacent to the Southern Heights Boulevard Bridge, pedestrians, and motorists travelling through the area, and other visitors may

notice a visual change compared to existing conditions; however, these changes would be minor and would not degrade the visual quality of the Project area. The new bridge would be designed with modern engineering, but would adhere to the design preferences of the City and residents to the extent feasible and would be consistent with the guidance in the City of San Rafael General Plan 2020 and the architectural character of the area.

Once construction is complete, the proposed Project would not create any new visual impacts within or adjacent to the Project area that have not been previously introduced by the existing roadway. The proposed Project would not significantly increase the bridge footprint on the surrounding landscape. In addition, the Project would not change the use, function, or scenic values associated with adjacent properties. Several trees along the new bridge (west of the bridge) would be removed due to construction of the new bridge. The ten trees slated for removal are (1) a Pacific madrone (*Arbutus menziesii*), (2) an oak (*Quercus sp.*), (3) seven California Bay Laurels (*Umbellularia californica*), and (4) a single-tree, multi-trunk California Bay Laurel (*Umbellularia californica*). Approximately 36.1 percent, or 0.11 acres, of the 0.31-acre tree canopy within the 0.34-acre project footprint would be removed. The average diameter-at-breast-height of the trees proposed for removal is 26.7 inches. The ten trees to be removed represent a small percentage of the local canopy. Viewers from the road and off the road alike will likely notice a nominal change in the view scape of the Project area. The loss of ten trees would result in a less-than-adverse effect on visual resources. Therefore, the Project will not substantially degrade existing visual character or quality of the site and its surroundings. Mitigation Measures AES-1 and AES-2 are recommended to further reduce this less-than-significant impact.

Mitigation Measure AES-1: Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 1 below.

Table 1: Native Seed Mix

Scientific Name	Common Name	Rate (lbs/acre)	Minimum Percent Germination
<i>Artemisia douglasiana</i>	Mugwort	2.0	50
<i>Bromus carinatuscarinatus</i>	California brome	5.0	85
<i>Elymus trachycaulus</i>	Slender wheatgrass	2.0	60
<i>Elymus X triticum</i>	Regreen	10.0	80
<i>Eschscholzia californica</i>	California poppy	2.0	70
<i>Hordeum brachyantherum</i>	California barley	2.0	80
<i>Lupinus bicolor</i>	Bicolored lupine	4.0	80

Source: City of San Rafael 2017

Mitigation Measure AES-2: The City shall continue coordination with Project area residents throughout the planning and construction phases to document any aesthetic concerns or requests. To the extent feasible, incorporate as many of the

aesthetic parameters requested by residents into project design in order to minimize both temporary and permanent visual impacts.

- d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

LESS THAN SIGNIFICANT IMPACT. One street lamp currently exists on a utility pole on the south side of the bridge. The proposed Project would relocate this existing utility pole and lighting would either be reinstalled on the relocated pole or provided along the bridge railing. Lighting installed as part of the Project would be low-level lighting that would not diminish nighttime views. Changes from existing lighting conditions are anticipated to be minor. Materials utilized on the bridge structure would not produce glare. Therefore, the Project would not create new sources of substantial light or glare which would adversely affect day or nighttime views in the area and impacts would be less than significant.

3.2 AGRICULTURE AND FORESTRY RESOURCES

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.2.1 Environmental Setting

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California’s agricultural resources based on soil information documented by the United States (U.S.) Department of Agriculture Natural Resources Conservation Service (NRCS). Agricultural land is rated by the NRCS according to soil quality and irrigation status. Lands with soils best suited for agricultural production are designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance and are collectively known as Important Farmland. The FMMP maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. FMMPs statistical and mapping information syncs with modern soil surveys developed by the U.S. Department of Agriculture. The FMMP designates land into the following categories within Marin

County: Prime Farmland; Farmland of Statewide Importance; Unique Farmland; Farmland of Local Importance; Farmland of Local Potential; Grazing Land; Urban and Built-Up Land; Other Land; and, Water. The following provides definitions of each of these designations:

- **Prime Farmland** – Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Lands designated as Prime Farmland must have been used for irrigated agricultural production at some time during the four years prior to the mapping date;
- **Farmland of Statewide Importance** – Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Lands with a “Farmland of Statewide Importance” designation must have been used for irrigated agricultural production at some time during the four years prior to the mapping date;
- **Unique Farmland** – Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance** – Land of importance to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee. In Yolo County, this includes cultivated farmland having soils which meet the criteria for Prime or Statewide, except that the land is not presently irrigated, and other non-irrigated farmland;
- **Farmland of Local Potential** – Prime or Statewide soils which are presently not irrigated or cultivated;
- **Grazing Land** – Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattleman’s Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities;
- **Urban and Built-Up Land** – Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes;
- **Other Land** – Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped under this designation; and,

- **Water** – Perennial water bodies with an extent of at least 40 acres.

The proposed Project footprint is 0.34 acres in size and is located in eastern Marin County just south of central San Rafael. The most recent (2014) FMMP Marin County Important Farmland Map designates the Project site and surrounding area as Urban and Built-Up Land (DOC 2016a). According to the DOC's most recent Marin County Williamson Act Map (2010/2011), no Williamson Act parcels are located in the vicinity of the Project site (DOC 2016b). Land uses in the vicinity of the Project site are designated as Hillside Residential, Residential – Low Density, and Open Space (City of San Rafael 2004). No forest or timberland is located within or adjacent to the proposed Project site.

As no farmland is located on the Project site, LESA Model analysis is not warranted.

3.2.2 Impact Analysis

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

NO IMPACT. The proposed Project site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, no impacts to Important Farmland would occur.

- b. *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

NO IMPACT. The proposed Project site is located in an area that is zoned as Single Family Residential and Parks/Open Space. No Williamson Act parcels are located in the Project vicinity. Therefore, the Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impacts would occur.

- c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

NO IMPACT. The proposed Project site is located in an area that is zoned as Single Family Residential and Parks/Open Space. No forest land or timberland is located within or adjacent to the Project site. Therefore, the Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. No impacts would occur.

- d. *Would the project result in the loss of forest land or conversion of forestland to non-forest use?*

NO IMPACT. The proposed Project site does not contain designated forest land. Therefore, no impacts to forest land would occur.

- e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

NO IMPACT. The proposed Project would replace an existing bridge along Southern Heights Boulevard, which would not result in the conversion of designated farmland or forest land to non-agricultural or non-forest use, respectively. Therefore, no impacts would occur.

3.3 AIR QUALITY

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

The proposed Project is located in the City of San Rafael, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Livermore, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀, PM_{2.5}), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM_{2.5} 24-hour standard.

This analysis follows the methods outlined in the BAAQMD CEQA Air Quality Guidelines.¹

¹ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

3.3.2 Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

LESS THAN SIGNIFICANT IMPACT. The applicable air quality plan is the BAAQMD's 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan/Regional Climate Protection Strategy serves as a roadmap for the BAAQMD to reduce air pollution and protect public health and the global climate. The 2017 Clean Air Plan also includes measures and programs to reduce emissions of fine particulates and toxic air contaminants. In addition, the Regional Climate Protection Strategy is included in the 2017 Clean Air Plan, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases throughout the Bay Area.

Consistency with the 2017 Clean Air Plan is determined by whether or not the proposed Project would result in significant and unavoidable air quality impacts or hinder implementation of control measures (e.g., excessive parking or preclude extension of transit lane or bicycle path). As previously noted, the proposed Project would replace an existing structurally deficient bridge. The proposed roadway alignment and grade will remain unchanged and would not result in an increase in vehicle trips or vehicle miles traveled (VMT). Therefore, the proposed Project would not hinder implementation of the BAAQMD's initiatives to reduce vehicle trips and vehicle miles traveled.

In addition, as indicated in the analysis that follows, the proposed Project would not result in significant operational or construction-period emissions, with implementation of Mitigation Measure AIR-1. Therefore, the proposed Project supports the goals of the Clean Air Plan and would not conflict with any of the control measures identified in the Clean Air Plan or measures designed to bring the region into attainment. Additionally, the proposed Project would not substantially increase the population, vehicle trips, or vehicle miles traveled. The proposed Project would not hinder the region from attaining the goals outlined in the Clean Air Plan. Therefore, the proposed Project would not hinder or disrupt implementation of any control measures from the Clean Air Plan. This impact would be less than significant.

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria pollutants: CO, O₃, NO₂, SO₂, Pb, and suspended particulate matter (PM). These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

According to the BAAQMD's CEQA Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the Project must not:

- Generate average daily construction emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), or PM_{2.5} greater than 54 pounds per day or PM₁₀ exhaust emissions greater than 82 pounds per day;
- Contribute to CO concentrations exceeding the State ambient air quality standards; or

- Generate operation emissions of ROG, NO_x, or PM_{2.5} of greater than 10 tons per year or 54 pounds per day or PM₁₀ emissions greater than 15 tons per year or 82 pounds per day.

Construction and operation emissions associated with the proposed Project are analyzed below. As discussed, the proposed Project would not generate significant operation-period emissions and, with implementation of Mitigation Measure AIR-1, the Project would not generate construction-period emissions in excess of established standards. Therefore, the Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

Construction Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter (PM_{2.5} and PM₁₀), and toxic air contaminants (TAC) such as diesel exhaust particulate matter.

Site preparation and Project construction would involve grading, paving, and other activities. Construction-related effects on air quality from the proposed Project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM₁₀). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the Project using the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model, Version 8.1.0 (Roadmod) as recommended by the BAAQMD for linear construction projects. Construction-related emissions are presented in Table 2. Detailed calculations are provided in Appendix A.

Table 2: Unmitigated Project Construction Emissions in Pounds Per Day

Project Construction Phase	ROG	NO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Grubbing/Land Clearing	1.2	13.9	0.6	0.5
Grading/Excavation	11.1	125.4	5.6	5.1
Drainage	7.9	83.8	4.0	3.7
Paving	1.3	12.9	0.8	0.7
Maximum Daily	11.1	125.4	5.6	5.1
Average Daily	5.6	60.8	2.8	2.5
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	No	Yes	No	No

Source: LSA (February 2018).

As shown in Table 2, construction emissions associated with the Project would be less than significant for ROG and PM_{2.5} and PM₁₀ exhaust emissions, however NO_x emissions would exceed the BAAQMD threshold resulting in a significant impact. The BAAQMD requires the implementation of Basic Construction Mitigation Measures to reduce construction dust impacts to a less than significant level. Implementation of Mitigation Measure AIR-1, which includes the Basic Construction Measures and an additional measure to require cleaner engines, would reduce construction dust and NOx emissions to a less-than-significant level.

Mitigation Measure AIR-1: Consistent with the Basic Construction Mitigation Measures required by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the Project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Structural pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the

California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the City of San Rafael regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations.
- The City and/or the Project contractor shall require all off-road diesel-powered construction equipment of greater than 50 horsepower used for the Project meet the California Air Resources Board Tier 4 emissions standards.

Table 3 shows the proposed Project’s mitigated construction emissions.

Table 3: Mitigated Project Construction Emissions in Pounds Per Day

Project Construction Phase	ROG	NO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Grubbing/Land Clearing	0.6	1.8	0.1	0.1
Grading/Excavation	4.8	10.0	0.6	0.5
Drainage	3.1	7.0	0.4	0.4
Paving	0.6	1.8	0.1	0.1
Maximum Daily	4.8	10.0	0.6	0.5
Average Daily	2.3	5.1	0.3	0.2
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	No	No	No	No

Source: LSA (February 2018).

As indicated in Table 3, with implementation of Mitigation Measure AIR-1, construction of the proposed Project would not exceed daily emissions thresholds. Therefore, air quality impacts associated with construction of the proposed Project would be less than significant.

Operational Emissions – Regional Emissions Analysis

Operational air emission impacts are typically associated with stationary and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips. The proposed Project would replace an existing bridge to improve safety and efficiency. No stationary sources are associated with the proposed Project. In addition, the proposed Project would not result in new vehicle trips or significantly increase VMT.

Therefore, once completed, the proposed Project would not generate significant operational emissions. Long-term operation of the proposed Project would not contribute substantially to an existing or projected air quality violation. Operational impacts would be less than significant.

Localized CO Impacts

Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD 2017 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed transportation projects (BAAQMD 2017). A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the Plan. The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.
- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project would not increase traffic volumes at affected intersections 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, or below-grade roadway).

Implementation of the proposed Project would not conflict with the Transportation Authority of Marin (TAM) for designated roads or highways, a regional transportation plan, or other agency plans. The Project site is not located in an area where vertical or horizontal mixing of air is substantially limited. As identified above, the proposed Project would not result in an increase in vehicle trips or VMT. Therefore, the proposed Project would not increase traffic volumes at intersections to more than 44,000 vehicles per hour and intersection level of service would not decline with implementation of the proposed Project. Therefore, the proposed Project not result in localized CO concentrations that exceed State or federal standards and this impact would be less than significant.

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

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. As discussed above, with implementation of Mitigation Measure AIR-1, construction of the proposed Project would not result

in significant levels of criteria air pollutants or pollutant precursors, while operation of the Project would not generate air emissions. Therefore, construction and operation of the proposed Project would not significantly contribute to cumulative levels of pollution in the Air Basin. This impact would be less than significant.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient PM_{2.5} increase greater than 0.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). A significant cumulative impact would occur if the project, in combination with other projects located within a 1,000-foot radius of the project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient PM_{2.5} increase greater than 0.8 $\mu\text{g}/\text{m}^3$ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below and would be less than significant.

The closest sensitive receptors include single-family residential uses located approximately 30 feet east of the proposed Project. Construction of the proposed Project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, due to the linear nature of the proposed Project, emissions would not be concentrated in any one area. Additionally, construction contractors would be required to implement Mitigation Measure AIR-1, which would further reduce potential impacts. Project construction emissions would be below the BAAQMD significance thresholds and once the Project is constructed, the Project would not be a source of substantial emissions. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during Project construction or operation, and potential impacts would be considered less than significant.

e. Would the project create objectionable odors affecting a substantial number of people?

LESS THAN SIGNIFICANT IMPACT. Land uses commonly considered to be potential sources of obnoxious odorous emissions include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. Some objectionable odors could be generated from the operation of diesel-powered construction equipment during the Project construction period. However, these odors would be short-term in

nature and would not result in permanent impacts to surrounding land uses, including sensitive receptors in the vicinity of the Project site. Implementation of the proposed Project would not create objectionable odors affecting a substantial number of people or subject persons to objectionable odors. Therefore, this impact would be less than significant.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4.1 Environmental Setting

LSA prepared a Natural Environmental Study (Minimal Impacts) for the proposed Project in August 2017 (see Appendix B). The information for the following section is based on this study.

3.4.1.1 Methods

Prior to conducting any field studies, the limits of the Biological Study Area (BSA) were established, totaling approximately 0.36 acres, including portions of Southern Heights Boulevard and adjacent lands both east and west of the bridge. The BSA consists of the project footprint, temporary access areas, and lands beyond the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

The studies required to fully document the environmental conditions of the BSA included a general biological survey, habitat mapping, and tree inventory.

A list of sensitive wildlife and plant species potentially occurring within the BSA and vicinity was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDDB 2017), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation Trust Resources (USFWS 2017), the California Native Plant Society (CNPS 2017) Online Inventory, and the National Marine Fisheries Service (NMFS) Google Earth Species list (NMFS 2017). Records were reviewed for the San Rafael U.S. Geological Survey 7.5-minute quadrangle.

For the NMFS Species list, the San Rafael quad was identified within the range of anadromous fish species. The NMFS species list is an intersection of Federal Endangered Species Act Listed Species, Critical Habitat, Essential Fish Habitat and Marine Mammal Protection Act Species Data within California. It should be noted that identified features may be present throughout the entire quadrangle or only a portion of it. All species lists are included in Appendix B.

The special status species lists obtained from the CNDDDB, CNPS, USFWS and NMFS were reviewed to determine which species could potentially occur within the vicinity of the BSA. The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within and adjacent to the BSA, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDDB. Those species that could potentially occur in the BSA from habitat suitability or on known occurrences in or within the vicinity of the BSA are discussed below, as applicable.

A general biological survey of the BSA was conducted by LSA biologist Anna Van Zuuk on May 22, 2017. Mrs. Van Zuuk surveyed the BSA on foot. The naturally occurring vegetation in the BSA was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. Managed, disturbed, or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin, B. G., et. al., editors 2012). An inventory of native trees was also conducted by Mrs. Van Zuuk on May 22, 2017. Data was collected on species, diameter at breast height, and any notable characteristics.

No potential waters of the U.S. were identified in the BSA; therefore, a jurisdictional delineation was not conducted.

3.4.1.2 Results

The BSA is heavily disturbed and consists almost entirely of residential development, landscaping, and ruderal/disturbed areas. One natural community, California Bay Forest, occurs west of the existing bridge and extends downslope (see Figure 3). There are no aquatic features in the BSA. The bridge spans a steep ravine that slopes east to west with an elevation that ranges from approximately 260 to 300 feet above mean sea level.

Land uses in the immediate vicinity consist of moderate density residential housing scattered within steep canyons in Coastal oak woodlands. These communities give way to dense urban and suburban areas.



FIGURE 3



LEGEND



Biological Study Area

Natural Communities / Land Uses - (0.36 ac)



California Bay Forest - (0.12 ac)



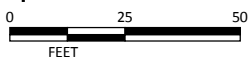
Ruderal/Disturbed - (0.07 ac)



Developed - (0.11 ac)



Landscaped - (0.06 ac)



*Southern Heights Bridge Replacement Project
City of San Rafael, Marin County, California
Bridge No. 27C0148; Caltrans District 4
Federal Project No. BRLO-5043(038)
Natural Communities / Land Uses*

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One natural community occurs within the BSA: California Bay Forest. Other habitat types not considered natural include ruderal/disturbed, landscaped, and developed.

The California bay forest community, totaling 0.12 acre, occurs west of the Southern Heights Bridge and continues downslope. This area has a tree canopy dominated by California bay (*Umbellularia californica*) with a few Coast live oak (*Quercus agrifolia*) intermixed. The understory is sparse and dominated by Upright veldt grass (*Ehrharta erecta*) with a few scattered toyon (*Heteromeles arbutifolia*), madrone (*Arbutus menziesii*), and California buckeye (*Aesculus californica*) shrubs.

The ruderal/disturbed community, totaling 0.07 acre, is likely a former natural community that has been subject to regular disturbance and now has a large component of ruderal species. The vegetation that grows in these areas typically consists of species that are able to quickly colonize following disturbance and can grow in poor soil conditions. In the BSA, ruderal/disturbed areas total 0.07 acre and occur west of Southern Heights Boulevard on roadsides and continuing downslope. Dominant plant species include: rattlesnake grass (*Briza maxima*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*), and French broom (*Genista monspessulana*); dogtail grass (*Cynosurus echinatus*), Italian ryegrass (*Festuca perennis*), foxtail barley (*Hordeum murinum*), hedge mustard (*Sisymbrium officinale*), and hedge parsley (*Torilis arvensis*) are also present.

Landscaping, totaling approximately 0.06 acre, is located east of Southern Heights Boulevard and the Southern Heights Bridge. Plants associated with this community are introduced and intensely managed by residential land owners. Species present include: agapanthus (*Agapanthus* sp.), century plant (*Agave americana*), yellow jade plant (*Crassula ovata*), jasmine (*Jasminum* sp.), paperwhites (*Narcissus papyraceus*), prickly pear cactus (*Opuntia* sp.), white bower vine (*Pandorea jasminoides*), rosemary (*Rosmarinus officinalis*), Mexican bush sage (*Salvia leucantha*) and calla lily (*Zantedeschia* sp.).

The developed areas in the BSA, totaling approximately 0.11 acre, consist of Southern Heights Boulevard, the Southern Heights Bridge, and private driveways and walkways.

No special status plant or animal species were observed or are expected to occur in the BSA. See Appendix B for more details.

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat. Undeveloped lands in the vicinity of the BSA are intermixed with developed lands and are highly fragmented; therefore, these lands do not provide suitable migration corridors for wildlife.

Runoff from Southern Heights Boulevard is collected and flows through a culvert downslope into an adjoining neighborhood, ultimately outletting into Corte Madera Creek which drains into San Francisco Bay. The ravine spanned by the Southern Heights Bridge may convey surface runoff during the wet season, flowing west, but shows no evidence of hydrology. Therefore, no aquatic resources were identified within the BSA.

3.4.2 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. No special status plant or animal species were observed or are expected to occur in the BSA. However, the Project would result in impacts to California bay forest and result in the removal of ten trees. Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in “take” which is prohibited under the Migratory Bird Treaty Act and Section 3513 of the California Fish and Game Code (CFGC). CFGC Section 3503 also prohibits take or destruction of bird nests or eggs. Since Project construction is located in the vicinity of trees and would result in the removal of ten trees, Mitigation Measure BIO-1 is recommended to reduce the potential for impacts to migratory birds. With implementation of Mitigation Measure BIO-1, impacts would be less than significant.

Mitigation Measure BIO-1: If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, the line of sight between the nest and the BSA, and the feasibility of establishing no-disturbance buffers.

Additionally, the California Department of Fish and Wildlife shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.

If work is allowed to proceed, a qualified biologist shall be on-site weekly during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

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

NO IMPACT. No riparian habitat or other sensitive natural communities occur in the BSA. Therefore, no impacts would occur.

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

NO IMPACT. No aquatic resources, including federally protected wetlands, are located within the BSA. Therefore, no impacts would occur.

- d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

NO IMPACT. Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another, in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

Undeveloped lands in the vicinity of the BSA are intermixed with developed lands and are highly fragmented; therefore, these lands do not provide suitable migration corridors for wildlife. No impact would occur.

- e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

NO IMPACT. The project will result in impacts to California bay forest, consisting of 0.02 ac of permanent impacts and 0.09 ac of temporary impacts. The Project will result in the removal of eight California bay trees, one oak, and one Pacific madrone. According to the City of San Rafael Tree Ordinance, any City employees acting under the scope of their employment by the City are not subject to the requirements of the Ordinance. The City of San Rafael is the proponent of this Project, and therefore mitigation for the loss of the trees is not required as the tree ordinance is not applicable. No impact would occur.

- f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

NO IMPACT. The Project is not subject to any adopted habitat conservation plan natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

LSA prepared a Historical Property Survey Report and Historical Resources Evaluation Report, and Evans & De Shazo, LLC (EDS) prepared an Archaeological Survey Report for the proposed Project (see Appendix C). These studies consisted of background research, consultation with potentially interested parties, and a field survey. The information for the following section was based on these three studies.

3.5.1.1 Cultural Resources

Research was conducted regarding historical properties and Native American cultural sites in an Area of Potential Effect (APE) associated with the proposed Project. For the purposes of this Project, two APEs were established: an Archaeological APE that includes all areas that will be directly affected by the Project’s proposed ground disturbing activities, and an Architectural History APE, which includes the area of direct effect but also takes into account all adjacent parcels that contain built environment resources which have the potential to be indirectly affected by the proposed Project. The Archaeological APE for the proposed Project is approximately 436 feet long and 60 feet wide, over approximately 0.6 acres. EDS conducted a record search of the Archaeological APE on March 30, 2017, at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University in Rohnert Park. The records search included the Archaeological APE and a ½-mile radius for previous cultural resource studies and cultural sites. Two cultural resources were recorded within the ½-mile search radius. According to the California Office of Historic Preservation Archaeological Determination of Eligibility List, neither resource has been evaluated to determine its eligibility for listing in the National Register of Historic Places (NRHP).

Consultation with the *Native American Heritage Commission* occurred on April 3, 2017, and the results indicated that a records search of the Sacred Lands File was negative. EDS contacted two local Native American Tribe representatives (both from the Federated Indians of Graton Rancheria) on April 19, 2017, regarding the location of the proposed Project. Buffy McQuillen, the Tribal Heritage Preservation Officer (THPO) for FIGR responded on May 10, 2017, stating that the Tribe would review the project within 10 business days. In a subsequent email on May 22, 2017, Ms. McQuillen stated that “the project is likely to impact tribal cultural resources important to the Tribe,

with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.” Sally Evans of EDS responded to Ms. McQuillen on May 24, 2017, stating that the field survey had already been conducted for the project, but provided a copy of the draft Archaeological Survey Report (ASR) for the Tribe to review, noting that she would incorporate the comments regarding the Tribe’s concerns that human remains may be nearby into the report. Ms. Evans also offered to arrange a field visit should the Tribe be interested in visiting the site. No response was received from Ms. McQuillen or another representative. Ms. Evans followed up with Ms. McQuillen on September 21, 2017 via email to ask if the ASR had been reviewed and offered continuing consultation regarding the Tribe’s concern that tribal cultural resources could be impacted by the Project. On October 2, 2017, Ms. Evans followed up with Ms. McQuillen via email and again provided the draft ASR, and requested a day and time for a phone call to ensure the Tribe’s concerns are fully addressed. No response has been received from Ms. McQuillen to date.

Archaeological Sensitivity

The archaeological resources study consisted of archival and background research, field survey of the APE on April 4, 2017, consultation with potentially interested parties, and an archaeological sensitivity assessment. EDS assessed the Archaeological APEs archaeological sensitivity based on the results of the records search, geological and soils research, and field survey. The records search identified two previously identified archaeological deposits within ½-mile of the Archaeological APE. The Jurassic-Cretaceous age of the landform, in addition to extensive erosion events associated with the landform, indicates that the Archaeological APE is not sensitive for surface or buried archaeological deposits. One isolated artifact was encountered within and adjacent to the APE, consisting of a 10-pound iron dumbbell that was observed on the ground surface under the existing bridge structure. This artifact meets the criteria for exemption in the Section 106 Programmatic Agreement and does not qualify as a property type eligible for listing on the NRHP or meet the definition of a historical resource under CEQA. No potentially significant archaeological resources, including prehistoric or historic archaeological sites, were identified within or adjacent to the Archaeological APE. The Archaeological APE was determined not to be sensitive for surface or buried archaeological deposits because the landform predates human occupation in North America and has experienced extensive erosion.

Built Environment Resources

Pre-field, background, and resource-specific research pertaining to the history of the Architectural History APE was conducted, as well as in-depth research related to historical themes and contexts associated with the surrounding planned environment and its development. EDS identified a total of six built environment resources that include five buildings dating between 1907 and 1951 and the Southern Heights Bridge (Bridge No. 27CO148) constructed circa 1930. All six built environment resources evaluated were determined to be ineligible for listing on the NRHP. Three of the built environment resources were previously identified as part of the City of San Rafael’s 1978 Historic Resources Inventory (HRI) and listed in the 1986 San Rafael Historical/Architectural Survey (City of San Rafael 1986); therefore, they are considered historical resources for purposes of CEQA per

§15064.5(a)(2). However, none of the six resources are eligible for listing in the California Register of Historic Resources (CRHR) or the NRHP.

Historic-era artifacts were observed during the survey of the Architectural History APE; however, these artifacts are outside of the Area of Direct Impact (ADI) and Archaeological APE and will be neither directly nor indirectly affected by the Project. There is no potential for indirect effects because they are located too far away to be impacted by vibration and the Project will not result in increased public access which would put it at risk for vandalism or looting.

3.5.2 Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As discussed above, three built environment resources are identified within the City's HRI and are considered historical resources for the purposes of CEQA because they were identified in the City's survey. The proposed Project includes the replacement of an existing bridge along Southern Heights Boulevard. The bridge replacement would be located within the City's ROW and would not require expansion of the existing ROW. Two of the resources listed in the City's HRI are properties significant for their architectural qualities that are located adjacent to the bridge. These two historical resources would not be affected by the Project as they are outside of the City's ROW and will not be physically altered, damaged, or destroyed by the Project. The remaining resource listed in the City's HRI is the Southern Heights Bridge itself. While the bridge is listed in the City's HRI, further research concluded that it is not eligible for listing in the CRHR or NRHP. As the City has listed the bridge in the HRI, the City has the jurisdiction to determine whether or not the bridge shall be considered an historical resource. The City uses the HRI as a guide for determining which properties may be considered historical resources for the purpose of CEQA. Based on the findings of the updated research and analysis conducted for the Historic Resources Evaluation Report, the City does not consider the bridge an historical resource for the purposes of CEQA. Therefore, impacts to known historical resources would be less than significant.

While unlikely, the possibility exists that previously unknown buried archaeological deposits could be discovered during grading and excavation work associated with construction. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt or quartzite tool making debris; bone tools; culturally darkened soil (e.g., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal and other refuse. Implementation of Mitigation Measure CULT-1 would reduce impacts to previously undiscovered resources to a less than significant level.

Mitigation Measure CULT-1: If any archaeological or paleontological deposits are encountered, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted, if one is not present, to assess the situation,

consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The City of San Rafael shall also be notified. Project personnel shall not collect or move any archaeological materials.

Any adverse impacts to the finds shall be avoided by Project activities. If avoidance is not feasible, the archaeological deposits shall be evaluated to determine if they qualify as a historical resource or unique archaeological resource, or as historic property. If the deposits do not so qualify, avoidance is not necessary. If the deposits do so qualify, adverse impacts on the deposits shall be avoided, or such impacts shall be mitigated. Mitigation may consist of, but is not limited to, recovery and analysis of the archaeological deposit; recording the resource; preparing a report of findings; and accessioning recovered archaeological materials at an appropriate curation facility. Educational public outreach may also be appropriate.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological deposits discovered. The report shall be submitted to the City of San Rafael.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. No archaeological resources, as defined by §15064.5, have been identified in the Project area. Archaeological resources are not anticipated to be discovered during Project activities. If, however, such resources are discovered, implementation of Mitigation Measure CULT-1 described above, would reduce potential impacts to a less than significant level.

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. No paleontological resources or unique geologic features are known to exist within the APE. However, should paleontological resources be discovered during Project construction, implementation of **Mitigation Measure PALEO-1** would reduce potential impacts to paleontological resources to a less than significant level.

Mitigation Measure PALEO-1: If paleontological resources are encountered during Project subsurface construction and no monitor is present, all ground-disturbing activities shall be redirected within 50 feet of the find until a qualified paleontologist can be contacted to evaluate the find and make recommendations. If found to be significant and proposed Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan, as described above, shall be implemented. Adverse impacts to paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the accession of all fossil material to a paleontological repository. Upon

completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. No human remains are known to exist within the APE. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of Marin County has determined whether or not the remains are subject to the coroner's authority. There is no indication that human remains are present within the Project site. Implementation of Mitigation Measure CULT-2 would ensure that potential impacts to human remains, should they be encountered, would be reduced to a less than significant level.

Mitigation Measure CULT-2: In the event that human remains are encountered, work within 50 feet of the discovery shall be redirected and the Marin County Coroner notified immediately. At the same time, a qualified archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission shall identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations of the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City of San Rafael.

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3.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 Environmental Setting

3.6.1.1 Geology

San Rafael is located within the Coast Range geomorphic province of California. According to the San Rafael General Plan 2020 Draft Environmental Impact Report (San Rafael General Plan EIR), the “regional bedrock geology consists of complexly folded, faulted, sheared, and altered sedimentary, igneous, and metamorphic rock of the Jurassic-Cretaceous age (65-190 million years ago) Franciscan Complex” (City of San Rafael 2004).

The Project site is located in an area with steep, sloping topography. Elevation on the Project site ranges from 230 to 300 feet above mean sea level.

3.6.1.2 Soils

The Project site is comprised of one soil: Tocaloma-McMullin complex, 30 to 50 percent slopes. Tocaloma is found on hills and its parent material is residuum weathered from sandstone and shale. McMullin is found on hills and its parent material is residuum weathered from conglomerate. Additional attributes of this soil are described in Table 4, some of which are explained in more detail below.

Table 4: Project Site Soils

Attribute	Tocaloma-McMullin complex, 30 to 50 percent slopes
Natural drainage class	Well drained
Runoff class	Tocaloma - medium; McMullin - high
Depth to water table	More than 80 inches
Frequency of flooding	None
Frequency of ponding	None
Hydrologic soil group	Tocaloma - B; McMullin - D
K factor, whole soil	.32
Linear Extensibility	1.5 percent

Source: NRCS 2018

Hydrologic Soil Group. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups based on the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Soils within the Project site are assigned to Hydrological Soil Group B or D, as the Tocaloma-McMullin complex is made up of two soils. Hydrologic Soil Group B is defined as “soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission” (NRCS 2018). Hydrologic Soil Group D is defined as “soils having a very slow infiltration (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Erosion Factor (K Factor), Whole Soil. Erosions factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Sheet erosion removes a layer of exposed surface soil (topsoil) by the action of rainfall splash and runoff. Rill erosion develops as flowing runoff concentrates in grooves, called rills, which cut several inches into the soil surface. Rills grow to deeper and wider gullies where concentrated flow of water moves over the soil. Loss of soil is also dependent on the soil type, surface slope and vegetative cover. Values of K range from 0.02 to 0.69 and in general, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Therefore, soils on the Project site have a low susceptibility to sheet and rill erosion by water (NRCS 2018).

Linear Extensibility. Linear extensibility (shrink-swell potential) is an expression of the volume change of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence volume change. When the soil takes on water, the volume change is reported as percent change for the whole soil. The linear extensibility rating for the Project site soils is 1.5 percent, which indicates a low shrink-swell potential.

3.6.1.3 Seismicity

According to the San Rafael General Plan EIR, San Rafael is located within a seismically active area that will experience effects of future earthquakes. However, there are no known active faults within the City of San Rafael’s planning area and the estimated historic earthquake accelerations

experienced in the area are relatively low compared to other cities in the San Francisco Bay Area (City of San Rafael 2004).

The California Geologic Survey Probabilistic Seismic Hazard Assessment calculates earthquake shaking hazards using historic seismic activity and fault slip rate data. Shaking from faults is expressed as the Peak Ground Acceleration (PGA) measured as a percentage (or fraction) of acceleration due to gravity (%g) from ground motion that has a 10 percent probability of being exceeded in 50 years. The Project site is located in an area with a PGA of 48.5 percent (0.485g) (DOC 2008).

The Alquist-Priolo Fault Zoning Act provides policies and criteria to assist cities, counties and State agencies in restricting development on active faults. The Alquist-Priolo Act requires the State geologist to delineate regulatory zones that encompass all potentially and recently active traces of named faults and other such faults, or fault segments that are deemed sufficiently active and well-defined as to constitute a potential hazard to structures from surface faulting or fault creep. The Project site is not located within an Alquist-Priolo Fault Zone. The closest Alquist-Priolo Fault Zone to the Project site is the San Andreas Fault Zone, located approximately 9 miles to the west.

Seismic Hazards

Liquefaction. Liquefaction is a process by which water-saturated sand and silt temporarily lose strength and act as a liquid during strong seismic shaking events. According to the USGS Earthquake Hazards Program, the Project area has very low liquefaction susceptibility (USGS n.d.).

Landslides. Landslides generally occur in areas with steep slopes, where underlying materials have become weak or fractured as a result of erosion, snowmelt or heavy rains, earthquakes, or other factors. The Project area may be susceptible to landslides due to the steep slopes in the Project vicinity.

3.6.2 Impact Analysis

- a. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

LESS THAN SIGNIFICANT IMPACT. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace. The Project site is located outside the designated Alquist-Priolo Fault Zones for active faulting and no mapped evidence of active or potentially active faulting was found for the site in the Preliminary Foundation Report (Parikh Consultants, Inc. 2017). Therefore, the potential for fault rupture at the site is low. Implementation

of the proposed Project would not adversely affect persons or structures due to rupture of a known earthquake fault. Impacts would be less than significant.

ii. Strong seismic ground shaking?

LESS THAN SIGNIFICANT IMPACT. The Project site is located in a seismically active part of California. Many faults existing in northern California are capable of producing earthquakes and may cause strong ground shaking at the site. However, the proposed Project would be engineered and designed based on the Caltrans Seismic Design Criteria, which includes measures for bridges to reduce their susceptibility to strong seismic shaking. Implementation of the proposed Project would not adversely affect persons or structures due to strong seismic ground shaking. Impacts would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

LESS THAN SIGNIFICANT IMPACT. The liquefaction potential at the Project site was evaluated based on boring data collected for the Preliminary Foundation Report. The Project site has a low potential for liquefaction (Parikh Consultants, Inc. 2017). Implementation of the proposed Project would not adversely affect persons or structures due to liquefaction. Impacts would be less than significant.

iv. Landslides?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would not alter slopes in the Project area in a manner that would increase the risk of landslides. Given the steep slopes in the Project vicinity, the new bridge associated with the proposed Project would be designed in accordance with modern engineering standards and supported on deep foundations. The new bridge structure would not increase landslide risk above existing conditions. Therefore, implementation of the proposed Project would not adversely affect persons or structures due to landslides. Impacts would be less than significant.

b. Would the project result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would replace the existing bridge with a new structure. Construction of the bridge would involve excavation for and construction of concrete abutments and piers. Construction activities could spur short-term wind-driven erosion. However, the proposed Project would be subject to the requirements set forth by the City, as well as the Regional Water Quality Control Board's best management practices, which will ensure that erosion within the Project area would be controlled. The proposed Project is also subject to the requirements set forth by the National Pollutant Discharge Elimination System Stormwater General Construction Permit, which requires a Stormwater Pollution Prevention Plan (SWPPP) to monitor and prevent soil erosion or the loss of top soil. Operations would have no impact on soil erosion or loss of topsoil. In summary, the proposed Project would have a less than significant impact on soil erosion and topsoil.

- c. Would the project 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?*

LESS THAN SIGNIFICANT IMPACT. As described above, the potential hazards from liquefaction events at the Project site are low, while the potential hazards from landslide events at the Project site are moderate given the steep slopes and potential for seismic activity. The proposed Project would be supported on deep foundations, and would not increase landslide risk in the Project area above existing conditions. Therefore, impacts associated with seismic-related ground failure, including liquefaction, subsidence, lateral spreading, and landslides would be less than significant.

- d. Would the project 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?*

LESS THAN SIGNIFICANT IMPACT. The Project site is located atop soils with a low shrink-swell potential. Therefore, impacts associated with expansive soils would be less than significant.

- e. Would the project 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?*

NO IMPACT. The Project does not propose the use or construction of septic tanks or alternative wastewater disposal systems. Such facilities are not needed, as the Project would be limited to bridge replacement. The Project would have no impacts on the area's ability to adequately support the use of septic tanks or alternative wastewater disposal systems.

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3.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

Greenhouse gases (GHG) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFC);
- Perfluorocarbons (PFC); and
- Sulfur Hexafluoride (SF₆).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO₂, methane, and N₂O, some gases, like HFCs, PFCs, and SF₆ are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular

GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

3.7.2 Impact Analysis

- a. *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

LESS THAN SIGNIFICANT IMPACT. This section describes the proposed Project’s construction- and operational-related GHG emissions and contribution to global climate change. The BAAQMD has not addressed emission thresholds for construction in their CEQA Guidelines; however, the BAAQMD encourages quantification and disclosure. Thus, construction emissions are discussed in this section.

Construction Activities

Construction activities associated with the proposed Project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed Project would generate approximately 637 metric tons of CO₂e. Implementation of Mitigation Measure AIR-1 would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, Project construction impacts associated with GHG emissions would be considered less than significant.

Operational Emissions

As discussed above, the proposed Project would replace an existing bridge to improve safety and efficiency. No stationary sources are associated with the proposed Project. The proposed Project would not result in new vehicle trips or significantly increase VMT. Once completed, the proposed Project would not generate substantial GHG emissions or result in substantial new vehicle trips that would contribute to an increase in GHG emissions. Therefore, GHG emissions generated by the proposed Project would be less than significant. No mitigation is required.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

LESS THAN SIGNIFICANT IMPACT. The City of San Rafael's Climate Change Action Plan² (CCAP), adopted in 2009, establishes recommended programs for achieving a 25 percent reduction of GHGs by 2020, and an 80 percent reduction by 2050 to meet State targets. The CCAP is broken down into several distinct areas of action: Lifestyles, Buildings, Environment, Economy, Community Outreach, and City Operations.

As discussed above, the long-term use of the Project is to replace an existing bridge to improve safety and efficiency. The proposed Project does not fall within or promote a specific program within the CCAP to reduce GHGs. However, the proposed Project would not result in new vehicle trips or significantly increase VMT and therefore would not result in a substantial increase in GHG emissions. Therefore, the proposed Project is consistent with the CCAP and would not generate emissions that would exceed the project-level significance criteria established by the BAAQMD. The Project would also not conflict with the programs included in the CCAP. Therefore, the proposed Project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

² San Rafael, City of. 2009. *San Rafael Climate Change Action Plan*. April 20.

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3.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

The Marin County Public Works Department enforces State regulations governing hazardous waste/substance generators, hazardous substance storage, and the inspection, enforcement, and removal of underground storage tanks (UST) in the County. Hazardous waste is defined in the California Code of Regulations 22 CCR 66261.3. In California, four main characteristics identify a hazardous waste:

- Ignitable
- Reactive
- Corrosive

- Toxic

Land uses around the Project site include low-density residential, hillside residential, and open space. Construction and development activities occurring at the Project site could potentially expose residents to hazardous materials.

The Project site and nearby land uses are not located in an area that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. A search of the California State Water Resources Control Board (SWRCB) GeoTracker website indicates no hazardous materials sites are located within 1,000 feet of the Project site (SWRCB 2018).

3.8.2 Impact Analysis

- a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed Project would not include the routine transport, use, or disposal of hazardous materials that could create a significant hazard to the public. Hazardous materials (such as oil, fuel, and solvents) would be used during construction activities for minor equipment maintenance. Any use of hazardous materials would comply with all applicable local, state, and federal standards associated with the handling of hazardous materials, to minimize the potential for exposure and hazards. All refueling of construction vehicles and equipment would occur within the designated staging areas for the proposed Project. The use of such hazardous materials would be temporary, and the proposed Project would not include a permanent use or source of hazardous materials. Implementation of Mitigation Measure HAZ-1 would reduce this impact to a less than significant level.

Mitigation Measure HAZ-1: The contractor shall prepare a Spill Prevention and Countermeasure Plan (SPCP) and submit the SPCP to the City for review and approval prior to the commencement of construction activities. The SPCP shall include information on the nature of all hazardous materials that would be used on-site. The SPCP shall also include information regarding proper handling of hazardous materials, and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCP.

- b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Hazardous materials (e.g., fuel, lubricant, concrete curing materials) may be used by construction equipment and for proposed Project improvements during construction. These materials would be used in accordance with all applicable laws and regulations, and, if used properly, would not pose a hazard to people, animals, or plants. The use of hazardous materials for construction equipment would be temporary, and the proposed Project would not include a permanent use or source of hazardous materials.

Implementation of Mitigation Measure HAZ-1 would reduce any potentially significant impacts associated with upset or accident conditions to a less than significant level.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Laurel Dell Elementary School is located approximately 0.16 miles to the northeast. After Project construction, the newly constructed bridge on Southern Heights Boulevard would operate similar to existing conditions; therefore, operation of the proposed Project would not result in hazardous emissions or the handling of hazardous materials, substances, or waste in the vicinity of an existing or proposed school. However, replacement of the existing bridge with a new bridge structure could potentially require the transport and use of hazardous materials. Implementation of Mitigation Measure HAZ-1 would reduce any potentially significant impacts to a less than significant level.

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

NO IMPACT. As described above, the proposed Project site is not on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, implementation of the proposed Project would not create a significant hazard to the public or the environment; no impacts would occur.

e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

NO IMPACT. The nearest public airport is Gness Field Airport, located over 12 miles north of the Project site. The Project site is not located within an airport land use plan or within 2 miles of a public airport or public use airport. No impact would occur.

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

NO IMPACT. No private airstrips are located in the Project vicinity. No impact would occur.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT IMPACT. The proposed Project includes the replacement of an existing bridge structure along Southern Heights Boulevard. Once complete, the newly constructed bridge would operate better than under existing conditions, as emergency service vehicle access would be provided with the Project; therefore, operation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

- h. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Residences in the immediate Project vicinity are listed on the City's Wildland-Urban Interface (WUI), which lists areas where homes are built near lands prone to wildland fire. Operation of the proposed Project would not increase the risk for wildland fires in the Project area, as no new housing or businesses would be constructed.

Construction of the proposed Project would occur on slopes that include potentially flammable vegetation, increasing the fire hazard risk. During construction, the most likely source of ignition would be by mechanical activities such as operation of excavators and bulldozers. However, the potential for ignition can be greatly reduced through equipment features, fuel treatment, and management of behavior. Mitigation Measure HAZ-2 is recommended to reduce the risk associated with fire hazards during Project construction. With implementation of Mitigation Measure HAZ-2, the proposed Project would result in a less than significant impact related to exposing people or structures to a significant risk of loss, injury or death involving wildland fires.

Mitigation Measure HAZ-2: The following measures shall be implemented throughout the construction period to reduce the potential risk associated with fire hazards:

- All construction workers shall undergo fire prevention training prior to working on the site. The training shall describe fire prevention practices included below.
- Upon notification from the City Fire Department that a "Red Flag Warning – High Fire Danger Alert" exists for the City, the contractor shall suspend any construction activities involving powered mechanical equipment and shall limit motorized vehicle access to construction staging areas.
- The contractor shall maintain fire suppression equipment, including water pumps and fire extinguishers onsite and on trucks and tractors.
- The contractor shall maintain communication equipment, including cell phones and radios on site during construction to allow for rapid contact of emergency responders.
- The contractor shall implement the following measures to reduce risk of fire resulting from the use and storage of fuel:
 - Refuel power equipment or tools in a cleared space;
 - Store fuel in a cleared space and, where possible, in the shade;
 - Turn off equipment while fueling;
 - Use a gas spout/funnel to avoid spills; and
 - Remove or dry any spilled fuel prior to starting equipment.

3.9 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

3.9.1.1 Surface Water

Major surface waters in the San Rafael Planning Area include the San Rafael and San Pablo Bays, San Rafael Creek, Las Gallinas Creek, and Miller Creek. Runoff from Southern Heights Boulevard is collected and flows through a culvert downslope into an adjoining neighborhood, ultimately outletting into Corte Madera Creek which drains into San Francisco Bay. The ravine spanned by the Southern Heights Bridge may convey surface runoff during the wet season, flowing west, but shows no evidence of hydrology. Therefore, no surface waters are located at or adjacent to the Project site. The nearest surface water is San Rafael Creek, located 0.3 miles north of the Project site.

3.9.1.2 Groundwater

According to the San Rafael General Plan EIR, groundwater resources in the San Rafael Planning Area are very limited and groundwater “is either found in fractures in the Franciscan Formation or in shallow alluvial deposits in valleys” (City of San Rafael 2004).

3.9.1.3 Floodplain

The Federal Emergency Management Agency has designated the Project area as Zone X (with no overlay), which indicates areas of minimal flood hazard (FEMA 2016).

3.9.2 Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements?

Construction Impacts

LESS THAN SIGNIFICANT IMPACT. While no surface waters are located within the Project site, runoff from Southern Heights Boulevard is collected and flows through a culvert downslope into an adjoining neighborhood, ultimately outletting into Corte Madera Creek which drains into San Francisco Bay. Proposed construction activities would disturb site soils, potentially resulting in soil erosion and sedimentation of downstream waterways. Additionally, construction activities would require the storage and use of hazardous materials and other urban pollutants such as gasoline, diesel fuel, oils, solvents, and trash, which could enter drainages and degrade downstream water quality and/or violate applicable water quality standards or waste discharge requirements.

The State Water Resources Control Board requires dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ). Effective July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The Construction General Permit requires the development and implementation of a SWPPP. The SWPPP must list best management practices (BMP) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of the BMPs.

In addition, measures would be included in the grading plans to minimize erosion potential and water quality degradation of the Project area in accordance with San Rafael Municipal Code Section 9.30.140 Construction-Phase Best Management Practices. Section 9.20.140 specifies that all construction activities within the City shall implement appropriate BMPs to prevent the discharge of construction wastes or contaminants from construction materials, tools, and equipment from entering the storm drain system or watercourse. The City would identify the appropriate BMPs for

the proposed Project. Compliance with the provisions of the SWPPP and with Municipal Code Section 9.30.140 would reduce impacts associated with water quality standards and discharge requirements to a less than significant level.

Operational Impacts

LESS THAN SIGNIFICANT IMPACT. Long-term water quality impacts usually occur due to changes in stormwater drainage or increases in impervious surfaces. The proposed Project would not significantly increase the bridge footprint and therefore changes in stormwater drainage are not expected. As a result, the proposed Project would not cause a permanent increase in degradation of water quality and operational impacts would be less than significant.

b. Would the project 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)?

LESS THAN SIGNIFICANT IMPACT. The Project would not significantly increase the bridge footprint. The small increase in impervious surfaces associated with the proposed Project is not anticipated to deplete groundwater supplies or substantially interfere with groundwater recharge. During construction, minimal amounts of water may be required for dust control activities. Water required during construction activities would be transported to the Project site by water trucks and stored in these trucks at the construction staging areas. Groundwater supplies would not be substantially depleted nor would interference of groundwater recharge occur due to water usage during construction. Once operational, the proposed Project would not require the use of water. Therefore, the proposed Project's impacts on groundwater recharge would be less than significant.

c. Would the project 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?

LESS THAN SIGNIFICANT IMPACT. The proposed Project includes the replacement of the existing bridge structure along Southern Heights Boulevard. Existing drainage patterns in the Project vicinity would not be substantially altered by construction of the proposed project. Onsite drainage patterns are anticipated to remain relatively unchanged compared to current conditions. As a result, the proposed Project would result in less than significant impacts from erosion or siltation caused by alteration of existing drainage patterns.

d. Would the project 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?

LESS THAN SIGNIFICANT IMPACT. See discussion under Question C above. Onsite drainage patterns are anticipated to remain relatively unchanged compared to current conditions. As a result, the

proposed Project would result in less than significant impacts from flooding caused by alteration of existing drainage patterns.

e. Would the project 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?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would not significantly increase the bridge footprint. Stormwater from Southern Heights Boulevard is currently collected and flows through a culvert downslope into an adjoining neighborhood. The proposed Project would not result in a substantial increase in stormwater generated onsite. Therefore, changes in stormwater drainage are not expected. The Project would have a less than significant impact on stormwater drainage systems and associated runoff.

f. Would the project otherwise substantially degrade water quality?

LESS THAN SIGNIFICANT IMPACT. See discussions under Questions A and C above. The Project would not substantially degrade water quality and impacts would be less than significant.

g. Would the project 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?

NO IMPACT. The proposed Project is not located within a 100-year flood hazard area, nor would it involve the construction of housing. No impacts to housing associated with flood hazards would occur.

h. Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

NO IMPACT. The proposed Project is not located within a 100-year flood hazard area, nor would the proposed bridge impede or redirect flood flows. No impacts associated with flood hazards would occur.

i. Would the project 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?

NO IMPACT. The proposed Project would not involve the development of residential or other sensitive land uses in or near these areas. Therefore, the Project would not expose people or structures to potential impacts involving flooding, including flooding as a result of the failure of a levee or dam.

j. Would the project be inundated by seiche, tsunami, or mudflow?

LESS THAN SIGNIFICANT IMPACT. As described in the San Rafael General Plan EIR, the San Rafael and western San Pablo Bay areas are partially protected and would not be subject to potential flooding due to the generation of seiches. While it is possible that a 100-year tsunami event could

possibly reach the City of San Rafael, the Project would not involve the development of residential or other sensitive land uses in this area. Further, it is likely that such a tsunami event would occur in the bayside areas of San Rafael, and the Project site is located approximately two miles inland. Additionally, the San Rafael General Plan EIR, that the San Rafael area has a moderate potential for small flow failures and a low potential for large flow failures. The proposed Project would be engineered and designed based on the Caltrans Seismic Design Criteria. As the Project includes the replacement of an existing bridge, and would not place residential or other sensitive land uses in hazard areas, impacts associated with inundation by seiche, tsunami, or mudflow would be less than significant.

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3.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.10.1 Environmental Setting

The proposed Project is located along an existing roadway in the City of San Rafael. Land uses surrounding the Project site include residential and open space.

The site is not located in the jurisdiction of a habitat conservation plan (HCP) or natural community conservation plan (NCCP) applicable to the Project.

3.10.2 Impact Analysis

a. Would the project physically divide an established community?

NO IMPACT. The proposed Project would not divide an established community as the Project includes the replacement of an existing bridge along an existing roadway. Therefore, the proposed Project would have no impacts associated with the division of an established community.

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

NO IMPACT. Land uses surrounding the proposed Project include Hillside Residential, Low-Density Residential, and Open Space. The proposed Project is consistent with the City of San Rafael 2020 General Plan and the San Rafael Municipal Code. Therefore, the proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project. No impact would occur.

c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

NO IMPACT. The site is not located in the jurisdiction of a HCP or NCCP applicable to the Project. As such, there would be no impact.

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3.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 Environmental Setting

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel, and earth are also considered minerals by the California Department of Conservation when extracted by surface mining operations. According to the San Rafael General Plan EIR, the only mineral resource in the San Rafael Planning Area is the San Rafael Rock Quarry, which is located over 3.5 miles to the northeast. No mines are located on or in the vicinity of the Project site.

3.11.2 Impact Analysis

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

NO IMPACT. The proposed Project is not located in a Mineral Resource Area, nor is one located near the site. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impact would occur.

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

NO IMPACT. The San Rafael Rock Quarry, located over 3.5 miles northeast of the Project site, is the only mineral resource located in the City with local, regional, or state significance. No mines are located on or in the vicinity of the Project site. Implementation of the proposed Project would not result in the loss of such locally-important mineral resources. No impact would occur.

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3.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 Environmental Setting

A Noise Technical Memorandum was prepared for the Project in July 2017. The information for the following section was based on this study.

3.12.1.1 Construction and Operational Noise

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. A specific pitch can be an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations or cycles per second of a wave, that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments.

Several noise measurement scales are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3.0 dB or less are only perceptible in laboratory environments. Audible increases in noise levels

generally refer to a change of 3.0 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive.

Noise impacts can be described in three categories. The first is audible impacts, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater, since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

As noise spreads from a source, it loses energy so that the further away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern. There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours. Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

The proposed Project is located in a residential area of the City of San Rafael along Southern Heights Boulevard. The closest sensitive receptors are existing single-family residential units located along the east and west side of Southern Heights Boulevard. Six sensitive receptors (closest to the Project site) have been identified that would potentially be exposed to Project related short-term construction noise impacts. Table 5 identifies the six closest sensitive receptors.

Table 5: Sensitive Receptors

Sensitive Receptor #	Address	Parcel Number	Distance from Project ¹ (in feet)
SR-1	136 Southern Heights Blvd	013-124-04	56
SR-2	126 Southern Heights Blvd	013-124-06	25
SR-3	122 Southern Heights Blvd	013-124-07	36
SR-4	116 Southern Heights Blvd	013-132-01	38
SR-5	108 Southern Heights Blvd	013-132-03	44
SR-6	131 Southern Heights Blvd	012-232-32	71

Source: LSA Associates May 2017

Notes:¹ The estimated distance is measured from the single-family residential structure on the parcel to the closest point of the Project footprint where construction activities are anticipated to occur.

The City of San Rafael has established noise standards in Chapter 8.13 of their Municipal Code declaring that it is the policy of the City, in the exercise of its police power, to protect the peace, health, safety, and general welfare of the citizens of San Rafael from excessive, unnecessary and unreasonable noises from any and all sources in the community. Section 8.13.050 (A) Standard exceptions to general noise limits, provides noise limits for construction as follows:

“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 or 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 between the hours of seven a.m. (7:00 a.m.) and six p.m. (6:00 p.m.), Monday through Friday, and nine a.m. (9:00 a.m.) and six p.m. (6:00 p.m.) on Saturdays, provided that the noise level at any point outside of the property plane of the project shall not exceed ninety (90) dBA. All such activities shall be precluded on Sundays and holidays. Violation of the foregoing may subject the permittee to suspension of work by the chief building official for up to two (2) days per violation.”

The construction contractor of the proposed Project would be required to comply with Section 8.13.050 (A) of the San Rafael Noise Ordinance during construction activities.

The City of Rafael Ordinance 8.13.060 Exceptions Allowed with Permit, states “...the director of community development 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 immediate compliance with the requirements of this chapter would be impracticable or unreasonable, or that no public detriment will result from the proposed exception...”

Groundborne Vibrations

Groundborne vibration can be a serious concern for residential areas and sensitive land uses; including areas with underground aquifers and springs supplying water. Some common sources of groundborne vibration include construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment. Vibration is an oscillatory motion which can be described in terms of the displacement, velocity, or acceleration. The response of humans, buildings, sensitive land use areas, and equipment vibration is more accurately described using velocity or acceleration. The Peak Particle Velocity (PPV) is used to describe construction-related vibrations. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration signal and is measured in inches/second. PPV is often used in monitoring of blasting vibration since it is related to the stresses that are experienced by buildings. Table 6 provides typical vibration levels generated by operating construction equipment as measured from 25 feet away.

Table 6: Vibration Source Levels for Construction Equipment

Type of Equipment	PPV at 25 feet (inches/second)	Approximate VdB at 25 feet
Pile Driver (Impact)	0.644 to 1.518	104 to 112
Pile Driver (sonic)	0.170 to 0.734	93 to 105
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall-in soil)	0.008	66
Hydromill (slurry wall-in rock)	0.017	75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, Table 12-2, pg. 12-12.

The City of San Rafael does not regulate vibration impacts from construction activity and thresholds are not discussed in the San Rafael General Plan or the City San Rafael Code of Ordinances. The Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment*³ guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

³ Federal Transit Administration (FTA). 2006. Office of Planning and Environment. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.

3.12.2 Impact Analysis

- a. *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Construction Noise

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Two types of short-term noise impacts would occur during Project construction, including (1) equipment delivery and construction worker commutes and (2) Project construction operations.

The first type of short-term construction noise would result from the transport of construction equipment and materials to the Project site and from construction worker commutes. These transportation activities would incrementally raise noise levels on roads leading to the Project site. Larger trucks used in equipment delivery are expected to generate higher noise impacts than trucks associated with worker commutes. The single-event noise from equipment trucks passing at a distance of 50 feet from a sensitive noise receptor would reach a maximum level of 84 dBA L_{max} . However, the pieces of heavy equipment for grading and construction activities would be moved on site just one time, and would remain for the duration of construction. This one-time trip, when heavy construction equipment is moved on- and off-site, would not add to the daily traffic noise in the Project vicinity. Furthermore, the projected traffic from the construction worker commutes would be minimal when compared to existing traffic volumes on roadways near the Project and other affected streets, and its associated long-term noise level change would not be perceptible. Therefore, equipment delivery noise and construction-related worker commute impacts would be short-term and would not be substantial.

The second type of short-term construction noise would be related to noise generated during Project construction. Construction is performed in discrete steps, each having its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases will change the character of the noise generated, as well as the noise levels in the study area as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 7 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments based on a distance of 50 feet between the equipment and a noise receptor.

Table 7: Typical Construction Equipment Noise Levels

Equipment Description ¹	Maximum Noise Level (L _{max}) at 50 Feet ²
Auger Drill Rig	84
Backhoes	80
Compactor (ground)	80
Cranes	85
Dozers	85
Dump Trucks	84
Excavators	85
Flat Bed Trucks	84
Front-end Loaders	80
Graders	85
Jackhammers	85
Pick-up Truck	55
Pneumatic Tools	85
Pumps	77
Rock Drills	85
Rollers	85
Scrapers	85
Tractors	84

Source: Federal Highway Administration Roadway Construction Noise Model (January 2006).

¹ Equipment shown in **bold** is expected to be used on site.

² Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston’s Noise Code for the “Big Dig” project.

Note: Noise levels reported in this table are rounded to the nearest whole number.

L_{max} = maximum instantaneous sound level

Normal construction operations, specifically during the site preparation phase, which includes excavation and grading, may generate high noise levels from an active construction area. Earthmoving equipment includes excavating machinery (e.g., backfillers, bulldozers, and front-end loaders). Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

Noise associated with the use of earthmoving construction equipment is estimated between 55 and 85 dBA L_{max} at a distance of 50 feet from each piece of equipment. As seen in Table 7, the maximum noise level generated by each excavator (with jack hammer attachment), bulldozer, crane, tractor, auger drill rig and truck is assumed to be approximately 85 dBA L_{max}, 85 dBA L_{max}, 85 dBA L_{max}, 84 dBA L_{max}, 84 dBA L_{max} and 55 dBA L_{max} at 50 feet, respectively. Each piece of construction equipment operates as an individual point source.

In general, doubling the distance would decrease noise levels by 6 dBA while a halving of the distance would increase noise levels by 6 dBA.

During construction, it is assumed that each piece of construction equipment operates at some distance from the other equipment. Table 8 shows the estimated L_{eq} and maximum noise levels each of the sensitive receptors are anticipated to be exposed to during construction activities.

Table 8: Estimated Noise Levels at Sensitive Receptors During Construction

Sensitive Receptors	Distance from Project ¹ (in feet)	Total dBA L_{eq} ²	Total dBA L_{max} ²
SR-1	56	86	89
SR-2	25	95	97
SR-3	36	91	93
SR-4	38	91	93
SR-5	44	89	91
SR-6	71	84	86

Source: LSA Associates, May 2017.

Notes:¹ The estimated distance is measured from the single-family residential structure on the parcel to the closest point of the Project footprint where construction activities are anticipated to occur.

² The L_{eq} and L_{max} noise levels are based on a worst case scenario where each of the pieces of construction equipment (excavator (with jack hammer attachment), bulldozer, crane, tractor, auger drill rig, and truck) are operating simultaneously, in close proximity to each other, at the closest point where construction would occur in comparison to the locations of the sensitive receptors.

Table 8 indicates that the sensitive receptors near the Project site could be exposed to equivalent continuous sound levels ranging from 84 to 95 dBA L_{eq} and maximum noise levels ranging from 86 to 97 dBA L_{max} . Such noise levels would exceed the thresholds established by Caltrans and locally by the City of San Rafael and therefore minimization measures would be needed to ensure compatibility with these established noise thresholds. It should be noted that construction activities along the western side of Southern Heights Boulevard (closest to the sensitive receptors) is anticipated to be temporary as construction proceeds. Construction activities would continue within the Project site gradually moving westward away from the sensitive receptors and down the slope thus providing additional attenuation of noise levels that the sensitive receptors would be exposed to. Mitigation Measure NOI-1 is recommended to reduce potentially significant impacts.

Mitigation Measure NOI-1: The proposed Project shall comply with the City of San Rafael Code of Ordinances Section 8.13.050 by ensuring that construction activities only occur between the hours of 7:00 AM and 6:00 PM Monday through Friday and 9:00 AM and 6:00 PM on Saturdays and that the noise level at any point outside of the property plane of the project would not exceed 90 dBA.

Based on the analysis presented above, noise levels when multiple pieces of equipment would operate simultaneously would exceed the City’s suggested maximum noise threshold of 90 dBA. Therefore, per Section 8.13.06 of the City of San Rafael Noise Ordinance, the project contractor may apply for a permit of exception through the City of San Rafael Director of Community Development or his/her designee. If no permit is granted, Mitigation Measure NOI-2 is recommended for implementation when construction activities occur within 100 feet of the western Project boundary:

Mitigation Measure NOI-2: The construction contractor shall permit only two pieces of construction equipment to operate at any single time within 100 feet of the

western boundary of the Project site. This strategy would reduce the construction noise level to meet the City's construction noise standard of 90 dBA L_{max} outside of the property plane of the Project.

The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from boundaries of the Project site.

The construction contractor shall also locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources, Project site boundaries, and noise-sensitive receptors nearest the Project site during all Project construction.

The contractor shall ensure that all construction equipment is equipped with manufacturers approved mufflers and baffles.

The City of San Rafael will continue public relations with residents near the proposed Project by providing construction information pamphlets which describe the type of construction activities that would occur, the duration of Project construction, indication that a temporary increase in ambient noise levels could occur during Project construction, and a phone number where concerned residents can call City Staff if noise levels from construction activities are exceeded during hours as specified by the City's Municipal Code. With implementation of Mitigation Measures NOI-1 and NOI-2, construction impacts would be less than significant.

Operational Noise

LESS THAN SIGNIFICANT IMPACT. The proposed Project would replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet and approximate length of 127 feet (a three-span reinforced concrete slab bridge). Additionally, the Project would result in smooth pavement and a structurally sound bridge that would ultimately reduce the noise levels experienced in the Project vicinity from usage of the existing bridge. The bridge on Southern Heights Boulevard would remain a one-lane road outside and inside of the Project boundary; therefore, it is not anticipated that vehicular trips through the Project area would increase in the future. Operational impacts would be less than significant.

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT IMPACT. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings

radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s, or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

Once constructed, the project pavement would be smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur.

Construction Vibration

LESS THAN SIGNIFICANT IMPACT. The proposed Project construction boundary is located approximately 25 feet from the closest sensitive receptors. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. As discussed above, FTA guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table 6 shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 6, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the project is expected to use a bulldozer, loaded truck and caisson drilling. The greatest levels of vibration are anticipated to occur during the site preparation and drilling phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the Project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_{\text{vdB}}(D) = L_{\text{vdB}}(25 \text{ ft}) - 30 \text{ Log}(D/25)$$

$$\text{PPV}_{\text{equip}} = \text{PPV}_{\text{ref}} \times (25/D)^{1.5}$$

For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer or caisson drilling, which would each generate 87 VdB at 25 feet. The closest residential structures are located 25 feet from the Project construction boundary. Therefore, the closest residences would experience vibration levels of up to 87 VdB (0.089 PPV [in/sec]). This vibration level at the closest residential structures from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. Therefore, groundborne vibration impacts from Project-related construction activities would be considered less than significant.

c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

NO IMPACT. The proposed Project would replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet and approximate length of 127 feet (a three-span reinforced concrete slab bridge). Additionally, the Project would result in smooth pavement and a structurally sound bridge that would ultimately reduce the noise levels experienced in the Project vicinity from usage of the existing bridge. The bridge on Southern Heights Boulevard would remain a one-lane road outside and inside of the Project boundary; therefore, it is not anticipated that vehicular trips through the Project area would increase in the future. Therefore, the proposed Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity. No impact would occur.

d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. As discussed under Question A, construction of the proposed Project would result in an increase to ambient noise levels in the Project vicinity above levels existing without the Project. Mitigation Measures NOI-1 and NOI-2 would reduce potential impacts associated with construction noise. With implementation of mitigation measures, temporary increases in ambient noise levels in the Project vicinity during construction would be less than significant.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. The nearest public airport is Gness Field Airport, located over 12 miles north of the Project site. The Project site is not located within an airport land use plan or within 2 miles of a public airport or public use airport. No impact would occur.

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

NO IMPACT. No private airstrips are located in the Project vicinity. No impact would occur.

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3.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 Environmental Setting

The Project site is located in southwestern San Rafael. Proximate land uses include residential and open space. The 2012-2016 American Community Survey 5-Year Estimates indicate a total population of 5,125 in Census Tract 1121 in Marin County, California, where the Project is located (U.S. Census Bureau 2016a). Data from the 2012-2016 American Community Survey 5-Year Estimates report that Census Tract 1121 had a total population of 5,114 people in housing units, of which 2,493 people lived in owner occupied units and 2,621 people lived in renter occupied units (U.S. Census Bureau 2016b).

3.13.2 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT. The proposed Project would replace an existing bridge within the low-density/hillside residential area of San Rafael. The proposed Project would not directly induce population growth in the San Rafael area as it does not include the development of new homes or businesses. The Project would not increase the number of lanes along the bridge. Therefore, the proposed Project would not indirectly induce substantial population growth in the Project area. Impacts would be less than significant.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT. Housing units are located adjacent to the existing bridge along Southern Heights Boulevard. Implementation of the proposed Project would not displace these housing units, necessitating the construction of replacement housing elsewhere. No impact would occur.

c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

NO IMPACT. Housing units are located adjacent to the existing bridge along Southern Heights Boulevard. These units are located outside of the Project site. Implementation of the proposed Project would not displace these tenants or owners, necessitating the construction of replacement housing elsewhere. Access would remain open for residents along the bridge during construction. No impact would occur.

3.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 Environmental Setting

The Project site is located in low-density/hillside residential area of San Rafael and is served by the public services as described below.

3.14.1.1 Fire Protection

The San Rafael Fire Department provides emergency services for the City of San Rafael and the Project area, though the Marin County Fire Department can also provide fire services to the San Rafael area because of joint powers agreements and standard mutual aid agreements that are in place to minimize response times in fire emergencies. The San Rafael Fire Department is an organization with 90 professionals trained in specialties including emergency medical care, firefighting, hazardous materials, and emergency preparedness. The closest station to the Project site is Fire Station 51, located 1039 C Street in San Rafael. Fire Station 1 is located about 0.8 mile north of the Project site. The Fire Department currently operates a Type I Engine, an Ambulance, an Air Unit, and an Office of Emergency Services Type 1 Engine.

3.14.1.2 Law Enforcement

The City of San Rafael Police Department provides law enforcement services to the City of San Rafael. The Department headquarters are located at 1400 Fifth Avenue, about 0.84 miles north of the Project site. The Department has an officer-to-resident service-standard ratio of 1.4 officers per 1,000 residents. There are 66 sworn police officers in the City of San Rafael Police Department.

3.14.1.3 School

Three school districts provide educational services in the City of San Rafael: Dixie Elementary School District, San Rafael City Elementary School District, and San Rafael High School District. Seventeen schools within these 3 school districts serve the community of San Rafael.

The school nearest to the Project area is Laurel Dell Elementary School, located approximately 0.16 miles to the northeast.

3.14.1.4 Parks

The City of San Rafael has 19 city parks, with the closest recreational facility at Gerstle Park, located approximately 0.38 miles to the northwest of the Project site

3.14.2 Impact Analysis

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

i, ii, iii, iv. Fire protection, Police protection, Schools, and Parks?

NO IMPACT. The proposed Project would include the replacement of an existing bridge on Southern Heights Boulevard. The proposed Project would not increase demand for public services, nor degrade the quality of existing public services. During construction, the construction contractor would coordinate with emergency service providers to ensure that construction activities would not impair emergency response times. During operation, the proposed Project would improve circulation on Southern Heights Boulevard by providing a safer bridge that would provide access for emergency service vehicles. The Project would have no impact related to public services including fire and police protection, schools, and parks.

v. Other public facilities?

NO IMPACT. No other public facilities are located within the Project Vicinity. No impact would occur.

3.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

The City of San Rafael has 19 parks, maintained by the City’s Community Services Division, for a total of 141 acres of parkland (City of San Rafael 2006). The nearest recreation facility to the Project site is Gerstle Park, located approximately 0.38 miles to the northwest. Gerstle Park includes picnic tables, barbeques, multiple group picnic areas, a basketball court, a tennis court, and a playground.

3.15.2 Impact Analysis

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

NO IMPACT. Implementation of the proposed Project would not increase the use of recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, because the Project would not encourage substantial population growth nor facilitate increased access to nearby parkland and other recreational resources. No impact would occur.

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

NO IMPACT. Recreational facilities would not be included as part of the Project, and the expansion of an existing recreational facility would not be required. No impact would occur.

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3.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 Environmental Setting

The proposed Project is located along Southern Heights Boulevard, a narrow one-lane roadway that provides local access to residential properties throughout the neighborhood. The existing bridge consists of a 162-foot long, multi-span, timber structure. The existing bridge was closed on December 28, 2017 due to severe deterioration.

The Project site is not located near any major intersections. As stated above, the roadway contains only one lane and provides local access to residential properties, so daily traffic is primarily limited to residents and visitors to the neighborhood.

The Project site is not located on an existing or proposed non-motorized transportation route (bicycle), bus transit service system route, or designated/eligible scenic roadway segment.

3.16.2 Impact Analysis

- a. *Would the project 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?*

LESS THAN SIGNIFICANT IMPACT. A small volume of traffic would be generated during construction of the proposed Project due to the increase in vehicle trips associated with construction equipment and trucks. However, the number of vehicles would be minimal (e.g., staging construction equipment at the Project site would eliminate vehicle trips during construction) and the demolition/construction period would be of a temporary duration (approximately six months). During construction, Southern Heights Bridge would continue to be closed to traffic; however, access would remain open for residents along the bridge. Prior to the bridge closure, average daily traffic along Southern Heights Boulevard was 150 vehicles per day. The closure has redirected traffic to other local roads. Therefore, no additional delays in traffic would occur during demolition and construction of the proposed Project. Construction-related impacts to traffic and circulation along Southern Heights Boulevard would be less than significant.

Once completed the proposed Project would not generate an increase in traffic volumes along Southern Heights Boulevard as the proposed bridge would restore one lane access for motorists. Furthermore, the proposed Project is not near any major intersections and would not impact local intersection traffic volumes. Operational-related impacts to traffic and circulation along Southern Heights Boulevard would be less than significant.

- b. *Would the project 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?*

LESS THAN SIGNIFICANT IMPACT. Construction activities associated with the proposed Project would generate only a small increase in vehicular traffic associated with construction equipment/trucks and personnel traveling to and from the Project site. However, the increase in traffic would be minimal during construction activities. Once completed, the proposed Project would not generate an increase in the traffic volume along Southern Heights Boulevard as the Project is a bridge replacement project and is not traffic-inducing or capacity-increasing. Therefore, the Project would not conflict with an applicable congestion management program and impacts would be less than significant.

- c. *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?*

NO IMPACT. The proposed Project does not include any towers or any tall structures that would result in a change in air traffic patterns, including either an increase in air traffic levels or change in location that would result in substantial air safety risks. No impact would occur.

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

NO IMPACT. Development of the proposed Project would use updated design features that would reduce hazards for vehicles and pedestrians traveling along Southern Heights Boulevard. The proposed Project would not be incompatible with surrounding uses. The proposed Project would not substantially increase hazards due to design feature or incompatible uses. No impact would occur.

e. Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT IMPACT. The proposed Project is located on Southern Heights Boulevard, a local roadway in a low-density/hillside residential area of San Rafael. The existing bridge does not allow for emergency service vehicles as it is too narrow; this situation would remain unchanged during Project construction.

During operation, access to the local roadway network would be improved compared to existing conditions. The bridge structure would be widened to allow access for emergency service vehicles. Impacts to emergency access would be less than significant.

f. Would the project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

NO IMPACT. Southern Heights Boulevard is not located on an existing or proposed non-motorized transportation route or bus transit service system route, though the roadway is utilized as a pedestrian route for local residents along the roadway. The proposed Project would enhance the safety of the roadway as the bridge would be widened. No impact would occur.

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3.17 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

Assembly Bill (AB) 52, a new state law recently (2014) signed by the governor, amended the California Environmental Quality Act (CEQA) to require Tribal Cultural Resources to be considered as potentially significant cultural resources under the CEQA environmental review process. The new procedures under AB 52 offer the tribes an opportunity to take an active role in the CEQA process in order to protect tribal cultural resources.

Letters requesting consultation pursuant to AB 52 were sent to two FIGR representatives on April 19, 2017. Buffy McQuillen, the Tribal Heritage Preservation Officer (THPO) for FIGR responded on May 10, 2017, stating that the Tribe would review the project within 10 business days. In a subsequent email on May 22, 2017, Ms. McQuillen stated that “the project is likely to impact tribal cultural resources important to the Tribe, with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.” Sally Evans of Evans & De Shazo, LLC responded to Ms. McQuillen on May 24, 2017, stating that the field survey had already been conducted for the project, but provided a copy of the draft Archaeological Survey Report (ASR) for the Tribe to review, noting that she would incorporate the comments regarding the Tribe’s concerns that human remains may be nearby into the report. Ms. Evans also offered to arrange a field visit should the Tribe be interested in visiting the site. No response was received from Ms. McQuillen or another representative. Ms. Evans followed up with Ms. McQuillen on September 21, 2017 via email to ask if the ASR had been reviewed and offered continuing consultation regarding the Tribe’s concern that tribal cultural resources could be

impacted by the Project. On October 2, 2017, Ms. Evans followed up with Ms. McQuillen via email and again provided the draft ASR, and requested a day and time for a phone call to ensure the Tribe's concerns are fully addressed. No response has been received from Ms. McQuillen to date. As no response has been received, the City considers consultation with FIGR pursuant to Public Resource Code section 21080.3.1 complete.

3.17.2 Impact Analysis

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
 - i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or*
 - ii. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. FIGR did not identify specific tribal cultural resources; however, they stated that the Project site is likely to impact tribal cultural resources that are important to the Tribe, with additional concern that human remains may be nearby. No additional information or responses were provided by FIGR. As described above, research was conducted to determine if sensitive historical or Native American sites were located within the APE or surrounding the Project site. No tribal cultural resources were identified within or adjacent to the APE that are listed or eligible for listing in the CRHR, in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k), or have been determined by the City of San Rafael to be significant pursuant to PRC Section 5024.1.

Implementation of Mitigation Measures CULT-1 and CULT-2, as presented in the Cultural Resources section above, would reduce any potentially significant impacts from the proposed Project to tribal cultural resources, including human remains, which may be inadvertently discovered during construction activities, to a less than significant level.

3.18 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.18.1 Environmental Setting

The Project site is located in a low-density/hillside residential area of San Rafael where utilities are available. San Rafael is within the jurisdiction of the San Francisco Regional Water Quality Control Board – Region 2 (SFRWQCB).

3.18.1.1 Water

San Rafael is supplied water by the Marin Municipal Water District (MMWD), a public utility governed by an elected board. The primary water source for the MMWD is rainfall stored in two area reservoirs. MMWD facilities include six area reservoirs, two water treatment plants, storage tanks, pumps, and lines (City of San Rafael 2004).

3.18.1.2 Wastewater

The San Rafael Sanitation District provides sanitary collection and wastewater treatment to the Project area. The San Rafael Sanitation District is one of the three member service districts that comprise the Central Marin Sanitation Agency (CMSA). Wastewater from all three districts flows to the CMSA plant, which is located in San Rafael (City of San Rafael 2004).

3.18.1.3 Solid Waste

The Marin Sanitary Service oversees solid waste disposal and recycling services in the Project area. Solid waste collection is provided through commercial collectors. Marin Sanitary Service operates a transfer station where waste from commercial collectors is taken and then hauled by transfer truck to Redwood Landfill (City of San Rafael 2004). The landfill is permitted to accept a capacity of 2,300 tons of waste per day. The estimated closure date for this landfill is July 1, 2024 (CalRecycle 2018).

3.18.1.4 Power

Pacific Gas and Electric (PG&E) is the electricity service purveyor in the City of San Rafael. Overhead power and communication are located within the Project site.

3.18.2 Impact Analysis

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

NO IMPACT. The proposed Project would replace the existing bridge along Southern Heights Boulevard with a new structure. No components of the proposed construction would generate wastewater or an increased demand for wastewater treatment. Therefore, the Project would not exceed the wastewater treatment requirements of the SFRWQCB, and no impact would occur.

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

LESS THAN SIGNIFICANT IMPACT. During construction activities at the Project site, water associated with dust controlling activities would be expected to be used in minimal amounts. The water that would be used during construction would be provided by the contractor. The contractor may coordinate directly with MMWD to obtain a meter that can be connected to a fire hydrant at the site. Any wastewater that is generated at the Project site during construction would be hauled off-site for processing.

The proposed Project would require water and would generate wastewater only during construction. The amount of water required and wastewater anticipated to be generated during construction would be minimal and would occur on a temporary basis for the duration of construction activities. No new water treatment or wastewater treatment facilities would have to be provided in association with construction of the proposed Project. Operation of the proposed Project would not result in any new residences or businesses, and would therefore not impact wastewater treatment. Impacts would be less than significant.

- c. *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

LESS THAN SIGNIFICANT IMPACT. Runoff from Southern Heights Boulevard currently collects at and flows through a culvert downslope into an adjoining neighborhood. The proposed Project would not substantially increase the bridge footprint and existing drainage facilities are anticipated to be sufficient for the Project. Therefore, no new or expanded stormwater drainage facilities would be required and impacts would be less than significant.

- d. *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

LESS THAN SIGNIFICANT IMPACT. Water demand for dust control operations would be minimal. It is anticipated that MMWD has sufficient water supplies to serve the Project. No further water supplies would be required to serve the proposed Project, and operation would not require water service. As such, no impacts would occur.

- e. *Would the project 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?*

NO IMPACT. During construction of the proposed Project, workers on-site would generate a nominal amount of wastewater. Any amount of wastewater generated by construction workers would be hauled and treated off-site. No impacts would occur to wastewater treatment requirements, nor would new wastewater facilities or sewage systems need to be constructed. Operations would have no impact on wastewater. The Project would have no impact.

- f. *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

LESS THAN SIGNIFICANT IMPACT. The proposed Project would temporarily generate construction and demolition debris as the existing bridge is demolished and the new bridge is constructed. Construction-related solid waste generated by the proposed Project would include wood and concrete debris, inert materials, and mixed municipal solid waste from construction workers on the Project site. Once operational, the proposed Project would not generate solid waste. The amount of solid waste that would be generated during construction of the proposed Project would be minimal compared to the existing daily intake at the Redwood Landfill. The landfill would be able to intake material from the Project site during the temporary construction period and would still have remaining daily intake capacity to serve other solid waste disposal requirements. Considering that solid waste would be generated during construction only and no solid waste would be generated during the operation of the Project, disposal operations at Redwood Landfill would not be impacted by the proposed Project. Therefore, impacts would be less than significant.

- g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

NO IMPACT. The proposed Project would comply with Federal, State, and local regulations related to solid waste. No impact would occur.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.19.1 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed Project would include the replacement of an existing bridge along Southern Heights Boulevard. As described in this Initial Study, implementation of the proposed Project would have the potential to adversely impact migratory birds and previously undiscovered cultural resources and/or human remains. With implementation of the mitigation measures recommended in this Initial Study, compliance with City of San Rafael requirements, and application of standard practices, development of the proposed Project would not: 1) degrade the quality of the environment; 2) substantially reduce the habitat of fish or wildlife species; 3) cause a fish or wildlife population to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or, 6) eliminate important examples of the major periods of California history or prehistory.

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

LESS THAN SIGNIFICANT IMPACT. The impacts of the proposed Project would be individually limited and would not be cumulatively considerable. The proposed Project would include the replacement of an existing bridge along Southern Heights Boulevard. All environmental impacts that could occur as a result of the proposed Project would be reduced to a less than significant level with implementation of the mitigation measures recommended throughout this Initial Study. When viewed in conjunction with other closely-related past, present or reasonably foreseeable future projects, development of this Project would not cumulatively contribute to impacts.

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

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The purpose of the proposed Project is to replace the structurally-deficient bridge and to widen the bridge structure to improve safety and provide access for emergency response vehicles. As described in this Initial Study, implementation of the proposed Project could result in temporary aesthetic, air quality, geology and soils, hazardous waste, hydrology, noise, and transportation and traffic impacts during the construction period. Implementation of the mitigation measures recommended in this Initial Study, compliance with City of San Rafael regulations, and application of standard construction practices would ensure that the proposed Project would not result in environmental impacts that would cause substantial direct or indirect adverse impacts on human beings.

4.0 LIST OF PREPARERS

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Stephanie Powers, Document Management

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5.0 RESPONSE TO COMMENTS

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Responses to Comments: Letter A

Governor's Office of Planning and Research State Clearinghouse and Planning Unit (Dated July 17, 2018)

A-1: The commenter discusses the review process for the environmental document and acknowledges that the document has complied with CEQA review requirements. Comment noted.

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EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH



KEN ALEX
DIRECTOR

July 17, 2018

Hunter Young
City of San Rafael
111 Morphew St
San Rafael, CA 94901

Subject: Southern Heights Bridge Replacement Project
SCH#: 2018062022

Dear Hunter Young:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on July 16, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

A-1

**Document Details Report
State Clearinghouse Data Base**

SCH# 2018062022
Project Title Southern Heights Bridge Replacement Project
Lead Agency San Rafael, City of

Type MND Mitigated Negative Declaration
Description The proposed project will replace the existing bridge with a new structure accommodating one 12-ft wide lane and bridge railings, resulting in an approx bridge width of 15 ft. The new bridge will be a three-span, reinforced concrete slab structure, approx 127 ft long. The roadway alignment and grade will remain unchanged. The existing ROW width is 20 ft.

Lead Agency Contact

Name Hunter Young
Agency City of San Rafael
Phone 415 485-3408 **Fax**
email
Address 111 Morpew St
City San Rafael **State** CA **Zip** 94901

Project Location

County Marin
City San Rafael
Region
Lat / Long 37° 57' 44.9" N / 122° 31' 44.6" W
Cross Streets Southern Heights Blvd and Meyer Rd
Parcel No. 012-282-17, -36, -37
Township

Range **Section** **Base**

Proximity to:

Highways 101, 580
Airports
Railways
Waterways San Rafael Bay, San Rafael Creek, Corte Madera Creek
Schools James B Davidson MS
Land Use single fam res and parks/OS

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Noise; Toxic/Hazardous

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Native American Heritage Commission; Department of Fish and Wildlife, Marine Region

Date Received 06/14/2018 **Start of Review** 06/15/2018 **End of Review** 07/16/2018

6.0 MITIGATION AND MONITORING PROGRAM

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MITIGATION MONITORING AND REPORTING PROGRAM

SOUTHERN HEIGHTS BRIDGE REPLACEMENT PROJECT

This Mitigation and Monitoring Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the proposed Southern Heights Bridge Replacement Project (proposed project). The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the project. The MMRP includes the following information:

- A list of mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency/city department responsible for monitoring the implementation; and
- The monitoring action and frequency.

The City of San Rafael must adopt this MMRP, or an equally effective program, if it approves the Southern Heights Bridge Replacement Project with the mitigation measures that were adopted or made conditions of project approval.

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
1	<u>AES-1</u>	Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 1 below.	Following Construction	Construction Contractor	City of San Rafael	Following Construction	All areas disturbed by project restored and revegetated
2	<u>AES-2</u>	The City shall continue coordination with Project area residents throughout the planning and construction phases to document any aesthetic concerns or requests. To the extent feasible, incorporate as many of the aesthetic parameters requested by residents into project design in order to minimize both temporary and permanent visual impacts.	Prior to, During, and Following Construction	City of San Rafael, Construction Contractor, Design Engineer	City of San Rafael	During Design, During and Following Construction	Documentation of any aesthetic-related public comments, incorporation of resident requests into project aesthetic design
3	<u>AIR-1</u>	Consistent with the Basic Construction Mitigation Measures required by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the Project: <ul style="list-style-type: none"> All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with 	Prior to, During, and After Construction	Construction Contractor, City of San Rafael	City of San Rafael	Consistently throughout construction	All necessary areas and materials watered, speeds limited, suspended activity during high winds, proper actions taken in case of hazardous materials

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		reclaimed water, if available. <ul style="list-style-type: none"> ● All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ● All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ● All vehicle speeds on unpaved roads shall be limited to 15 mph. ● All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. ● Structural pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ● Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. ● All construction equipment shall be maintained and properly 					

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. <ul style="list-style-type: none"> ● A publicly visible sign shall be posted with the telephone number and person to contact at the City of San Rafael regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations. ● The City and/or the Project contractor shall require all off-road diesel-powered construction equipment of greater than 50 horsepower used for the Project meet the California Air Resources Board Tier 4 emissions standards. 					
4	<u>BIO-1</u>	If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior	Prior to, During, and After Construction	Construction Contractor, Qualified Biologist	City of San Rafael, CDFW	Prior to construction and continually during	Surveys completed and evaluations of any active nests reviewed by CDFW; ongoing monitoring

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		<p>to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, the line of sight between the nest and the BSA, and the feasibility of establishing no-disturbance buffers. Additionally, the California Department of Fish and Wildlife shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities. If work is allowed to proceed, a qualified biologist shall be on-site weekly during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.</p>				construction	as necessary
5	<u>CULT-1</u>	If any archaeological or paleontological deposits are encountered, all work within 25	During Construction	Qualified archaeologist	City of San Rafael	Continually during construction	Appropriate handling of any archaeological or

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		<p>feet of the discovery shall be redirected and a qualified archaeologist contacted, if one is not present, to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The City of San Rafael shall also be notified. Project personnel shall not collect or move any archaeological materials.</p> <p>Any adverse impacts to the finds shall be avoided by Project activities. If avoidance is not feasible, the archaeological deposits shall be evaluated to determine if they qualify as a historical resource or unique archaeological resource, or as historic property. If the deposits do not so qualify, avoidance is not necessary. If the deposits do so qualify, adverse impacts on the deposits shall be avoided, or such impacts shall be mitigated.</p> <p>Mitigation may consist of, but is not limited to, recovery and analysis of the archaeological deposit; recording the resource; preparing a report of findings; and accessioning recovered archaeological materials at an</p>				as needed	paleontological deposits discovered

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		appropriate curation facility. Educational public outreach may also be appropriate. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological deposits discovered. The report shall be submitted to the City of San Rafael.					
6	<u>CULT-2</u>	In the event that human remains are encountered, work within 50 feet of the discovery shall be redirected and the Marin County Coroner notified immediately. At the same time, a qualified archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission shall identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper	During Construction	Construction Contractor, Coroner	City of San Rafael	During construction as needed	Appropriate handling of any human remains encountered

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations of the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City of San Rafael.					
7	<u>PALEO-1</u>	If paleontological resources are encountered during Project subsurface construction and no monitor is present, all ground-disturbing activities shall be redirected within 50 feet of the find until a qualified paleontologist can be contacted to evaluate the find and make recommendations. If found to be significant and proposed Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan, as described above, shall be implemented. Adverse impacts to paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the	During Construction	Construction Contractor and qualified paleontologist	City of San Rafael	Continually during construction as needed	Appropriate handling of any paleontological deposits discovered

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		accession of all fossil material to a paleontological repository. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.					
8	<u>HAZ-1</u>	The contractor shall prepare a Spill Prevention and Countermeasure Plan (SPCP) and submit the SPCP to the City for review and approval prior to the commencement of construction activities. The SPCP shall include information on the nature of all hazardous materials that would be used on-site. The SPCP shall also include information regarding proper handling of hazardous materials, and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCP.	Prior to Construction	Construction Contractor, City of San Rafael	City of San Rafael	Prior to Construction	Successful preparation of SPCP
9	<u>HAZ-2</u>	The following measures shall be implemented throughout the construction period to reduce the potential risk associated with fire hazards: <ul style="list-style-type: none"> All construction workers shall undergo fire prevention training 	Prior to and During Construction	Construction Contractor	City of San Rafael	Continually during construction as needed	Successful implementation of worker education and training; appropriately handling an

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		<p>prior to working on the site. The training shall describe fire prevention practices included below.</p> <ul style="list-style-type: none"> ● Upon notification from the City Fire Department that a “Red Flag Warning – High Fire Danger Alert” exists for the City, the contractor shall suspend any construction activities involving powered mechanical equipment and shall limit motorized vehicle access to construction staging areas. ● The contractor shall maintain fire suppression equipment, including water pumpers and fire extinguishers onsite and on trucks and tractors. ● The contractor shall maintain communication equipment, including cell phones and radios on site during construction to allow for rapid contact of emergency responders. ● The contractor shall implement the following measures to reduce risk of fire resulting from the use and storage of fuel: <ul style="list-style-type: none"> ● Refuel power equipment or tools in a cleared space; ● Store fuel in a cleared space and, where possible, in the 					hazardous materials that may be encountered

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		shade; ● Turn off equipment while fueling; ● Use a gas spout/funnel to avoid spills; and ● Remove or dry any spilled fuel prior to starting equipment.					
10	<u>NOI-1</u>	The proposed Project shall comply with the City of San Rafael Code of Ordinances Section 8.13.050 by ensuring that construction activities only occur between the hours of 7:00 AM and 6:00 PM Monday through Friday and 9:00 AM and 6:00 PM on Saturdays and that the noise level at any point outside of the property plane of the project would not exceed 90 dBA.	During Construction	Construction Contractor	City of San Rafael	Continually during construction	Successfully implement noise minimization measures; successful limitation of construction hours
11	<u>NOI-2</u>	The construction contractor shall permit only two pieces of construction equipment to operate at any single time within 100 feet of the western boundary of the Project site. This strategy would reduce the construction noise level to meet the City's construction noise standard of 90 dBA Lmax outside of the property plane of the Project. The construction contractor shall place all stationary construction equipment so that emitted noise is	During Construction	Construction Contractor	City of San Rafael	Continually during construction	Successful restriction of noise emitted by construction equipment

Monitoring Item Number	Initial Study Mitigation Measure	Mitigation Measure	Timing	Implementing Party	Monitoring Party	Frequency And Duration of Monitoring	Performance Criteria
		<p>directed away from boundaries of the Project site.</p> <p>The construction contractor shall also locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources, Project site boundaries, and noise-sensitive receptors nearest the Project site during all Project construction.</p> <p>The contractor shall ensure that all construction equipment is equipped with manufacturers approved mufflers and baffles.</p>					

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APPENDIX A

AIR QUALITY EMISSIONS MODELS

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Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Southern Heights Bridge Replacement Project - Mitigated														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.63	13.33	1.78	1.08	0.11	0.96	0.29	0.09	0.20	0.02	2,175.78	0.58	0.02	2,197.44
Grading/Excavation	4.75	90.34	9.99	1.57	0.60	0.96	0.69	0.49	0.20	0.16	15,729.21	4.65	0.15	15,889.55
Drainage/Utilities/Sub-Grade	3.11	59.38	7.02	1.39	0.42	0.96	0.55	0.35	0.20	0.11	10,574.53	2.71	0.10	10,671.49
Paving	0.62	14.77	1.77	0.12	0.12	0.00	0.09	0.09	0.00	0.02	2,196.48	0.56	0.02	2,217.79
Maximum (pounds/day)	4.75	90.34	9.99	1.57	0.60	0.96	0.69	0.49	0.20	0.16	15,729.21	4.65	0.15	15,889.55
Total (tons/construction project)	0.21	3.99	0.46	0.08	0.03	0.05	0.03	0.02	0.01	0.01	695.63	0.19	0.01	702.45

Notes: Project Start Year -> 2019
 Project Length (months) -> 6
 Total Project Area (acres) -> 0
 Maximum Area Disturbed/Day (acres) -> 0
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	1,120	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	0	0	0	320	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Southern Heights Bridge Replacement Project - Mitigated														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.09	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	14.36	0.00	0.00	13.16
Grading/Excavation	0.13	2.38	0.26	0.04	0.02	0.03	0.02	0.01	0.01	0.00	415.25	0.12	0.00	380.55
Drainage/Utilities/Sub-Grade	0.07	1.37	0.16	0.03	0.01	0.02	0.01	0.01	0.00	0.00	244.27	0.06	0.00	223.63
Paving	0.01	0.15	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.75	0.01	0.00	19.92
Maximum (tons/phase)	0.13	2.38	0.26	0.04	0.02	0.03	0.02	0.01	0.01	0.00	415.25	0.12	0.00	380.55
Total (tons/construction project)	0.21	3.99	0.46	0.08	0.03	0.05	0.03	0.02	0.01	0.01	695.63	0.19	0.01	637.26

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Southern Heights Bridge Replacement Project - Unmitigated														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.23	10.18	13.93	1.57	0.61	0.96	0.74	0.54	0.20	0.02	2,175.78	0.58	0.02	2,197.44
Grading/Excavation	11.10	80.86	125.43	6.57	5.60	0.96	5.29	5.09	0.20	0.16	15,729.21	4.65	0.15	15,889.55
Drainage/Utilities/Sub-Grade	7.85	60.63	83.77	4.95	3.99	0.96	3.88	3.68	0.20	0.11	10,574.53	2.71	0.10	10,671.49
Paving	1.31	13.17	12.85	0.78	0.78	0.00	0.70	0.70	0.00	0.02	2,196.48	0.56	0.02	2,217.79
Maximum (pounds/day)	11.10	80.86	125.43	6.57	5.60	0.96	5.29	5.09	0.20	0.16	15,729.21	4.65	0.15	15,889.55
Total (tons/construction project)	0.50	3.73	5.47	0.31	0.25	0.05	0.24	0.23	0.01	0.01	695.63	0.19	0.01	702.45

Notes: Project Start Year -> 2019
 Project Length (months) -> 6
 Total Project Area (acres) -> 0
 Maximum Area Disturbed/Day (acres) -> 0
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	1,120	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	0	0	0	320	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

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Total Emission Estimates by Phase for -> Southern Heights Bridge Replacement Project - Unmitigated														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.07	0.09	0.01	0.00	0.01	0.00	0.00	0.00	0.00	14.36	0.00	0.00	13.16
Grading/Excavation	0.29	2.13	3.31	0.17	0.15	0.03	0.14	0.13	0.01	0.00	415.25	0.12	0.00	380.55
Drainage/Utilities/Sub-Grade	0.18	1.40	1.93	0.11	0.09	0.02	0.09	0.09	0.00	0.00	244.27	0.06	0.00	223.63
Paving	0.01	0.13	0.13	0.01	0.01	0.00	0.01	0.01	0.00	0.00	21.75	0.01	0.00	19.92
Maximum (tons/phase)	0.29	2.13	3.31	0.17	0.15	0.03	0.14	0.13	0.01	0.00	415.25	0.12	0.00	380.55
Total (tons/construction project)	0.50	3.73	5.47	0.31	0.25	0.05	0.24	0.23	0.01	0.01	695.63	0.19	0.01	637.26

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

APPENDIX B

NATURAL ENVIRONMENT STUDY (MINIMAL IMPACTS)

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Southern Heights Boulevard Bridge Replacement Project



Natural Environment Study

(Minimal Impacts)

City of San Rafael

Marin County, California

Federal Project No. BRLO-5043(038)

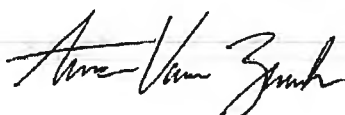
August 2017

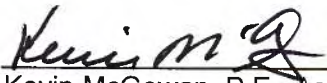



Natural Environment Study


(Minimal Impacts)

STATE OF CALIFORNIA
Department of Transportation
City of San Rafael
U.S. Department of Transportation
Federal Highway Administration

Prepared By:  Date: 8/17/2017
Anna Van Zuuk, Assistant Biologist/Botanist
LSA
916-772-7450

Prepared For:  Date: 9/6/17
Kevin McGowan, P.E., Assistant Public Works Director
City of San Rafael
415-485-3355

Recommended
for Approval By:  Date: 09/14/17
Hugo Ahumada, Associate Environmental Planner
California Department of Transportation
District 4
510-622-8790

Approved By:  Date: 14 Sep 2017
Thomas Holstein, Environmental Branch Chief
California Department of Transportation
District 4
510-286-6371

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audio cassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write Kevin McGowan at the City of San Rafael, 1400 Fifth Avenue, San Rafael, CA 94901; (415) 485-3355 (Voice).

Summary

The City of San Rafael (City), in conjunction with the California Department of Transportation (Caltrans), is proposing to design and construct a new bridge on Southern Heights Boulevard, located in eastern Marin County just south of central San Rafael. The project site is located just north of the intersection of Meyer Road and Southern Heights Boulevard in the Southern Heights neighborhood of San Rafael (Figures 1–3).

The purpose of this Project is to increase driver safety and maintain neighborhood access. The existing bridge has been given a sufficiency rating of 32.0 and a status of structurally deficient due to its reduced load carrying capacity. The bridge width does not meet current American Association of State Highway and Transportation Officials (AASHTO) standards due to its narrow width, and the wooden bridge railings and lack of approach guardrail is substandard.

The Biological Study Area (BSA), totaling 0.36 acres (ac), extends along Southern Heights Boulevard for approximately 315 feet (ft) and includes areas 10 ft east and 20 ft west of the roadway to accommodate temporary construction access.

The BSA is heavily disturbed and consists almost entirely of residential development, landscaping, and ruderal/disturbed areas. One natural community, California Bay Forest, occurs west of the existing bridge. Land uses in the immediate vicinity consist entirely of residential development and landscaping.

The BSA does not contain suitable habitat for any special status species, including federally listed species and critical habitat. Consequently, the project will not affect any special status plant or wildlife species, and consultation pursuant to Section 7 of the Federal Endangered Species Act (FESA) will not be required. There are no aquatic features in the BSA; consequently, the project will not affect jurisdictional waters and regulatory permits will not be required.

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List of Abbreviated Terms

AASHTO	American Association of State Highway and Transportation Officials
ACOE	Army Corps of Engineers
ac	acre(s)
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
City	City of San Rafael
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNPS	California Native Plant Society
CNDDDB	California Natural Diversity Database
CWA	Clean Water Act
dbh	diameter at breast height
EFH	Essential Fish Habitat
EO	Executive Order
FESA	Federal Endangered Species Act
ft	foot/feet
MBTA	Migratory Bird Treaty Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Oceanic & Atmospheric Administration, National Marine Fisheries Service
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
U.S.	United States
USFWS	United States Fish and Wildlife Service

Chapter 1 – Introduction

The City, in conjunction with Caltrans, is proposing to design and construct a new bridge on Southern Heights Boulevard, located in eastern Marin County just south of central San Rafael. The Southern Heights Boulevard Bridge is located just north of the intersection of Meyer Road and Southern Heights Boulevard in the Southern Heights neighborhood of San Rafael (Figures 1–3).

1.1 Project History

The existing Southern Heights Bridge was constructed in 1958 and reconstructed in 1981. It is a narrow one-lane roadway that provides local access to residential properties throughout the neighborhood. The hillside crossing consists of a 162-ft, multi-span timber structure.

1.1.1 PURPOSE AND NEED

The purpose of this Project is to increase driver safety and maintain neighborhood access. The existing bridge (Bridge No. 27C0148) has been given a sufficiency rating of 32.0 and a status of structurally deficient due to its reduced load carrying capacity. The bridge width does not meet current AASHTO standards due to its narrow width, and the wooden bridge railings and lack of approach guardrail is substandard.

1.2 Project Description

The proposed project will replace the existing bridge with a new structure accommodating one 12-ft wide lane and bridge railings, resulting in an approximate bridge width of 15 ft. The new bridge type has not been determined, but the structure is expected to be a 100-ft long, multi-span concrete or steel bridge.

The roadway alignment and grade will remain unchanged. The southern roadway approach and retaining wall will begin approximately 20 ft south of the existing southern bridge abutment. The new southern bridge abutment will be shifted north of the driveway to 116 Southern Heights. The northern roadway approach will begin 45 ft north of the existing northern bridge abutment. The new northern bridge abutment will be shifted south of the walking access path to 122 Southern Heights. A 115-ft long retaining wall will be constructed to the west of the existing retaining wall to allow for the widened bridge. The new retaining wall is expected to be a soldier pile wall with steel H-piles and timber lagging with a concrete structural section on the outside face.

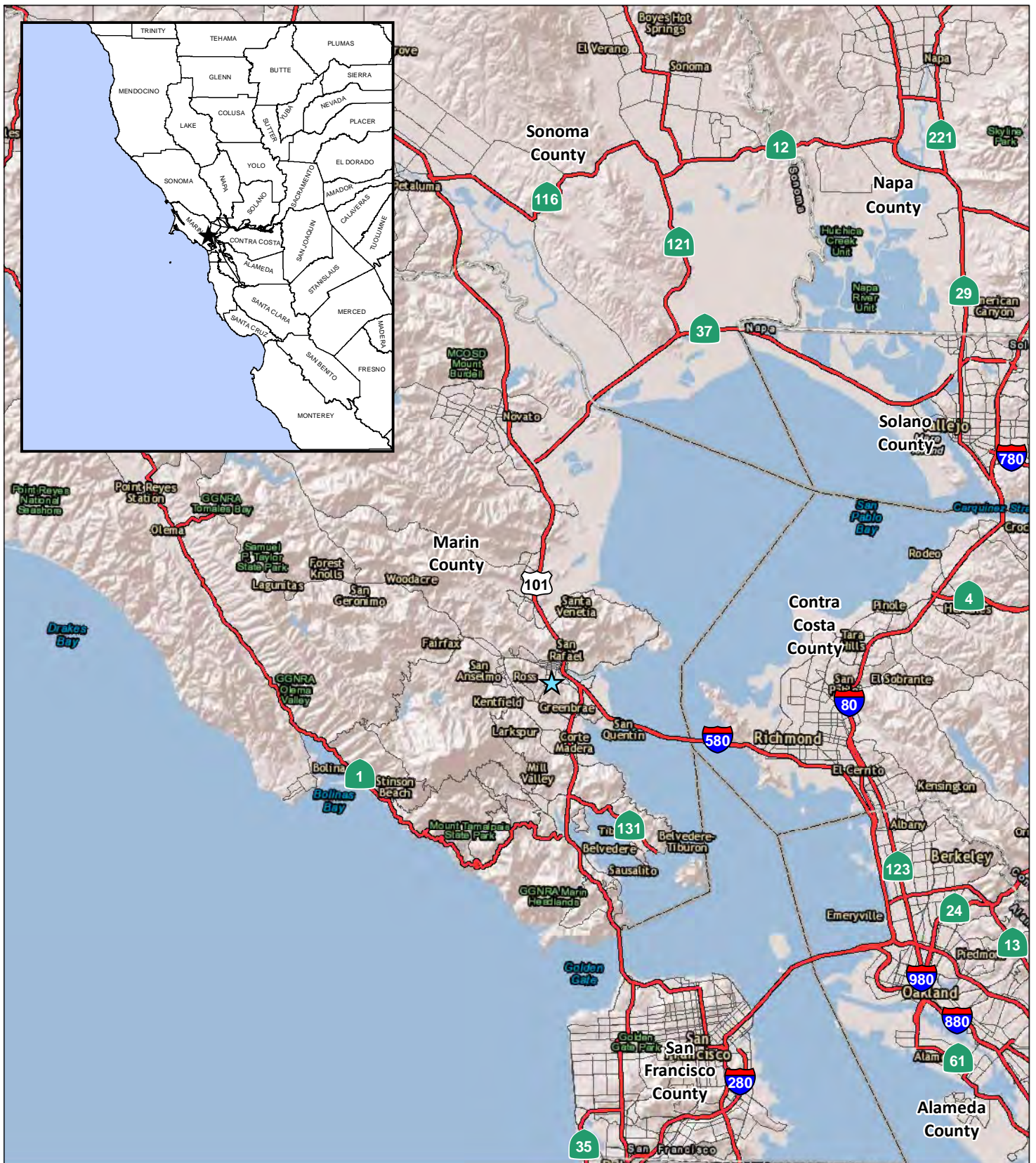
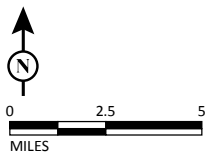


FIGURE 1



LEGEND

Project Location

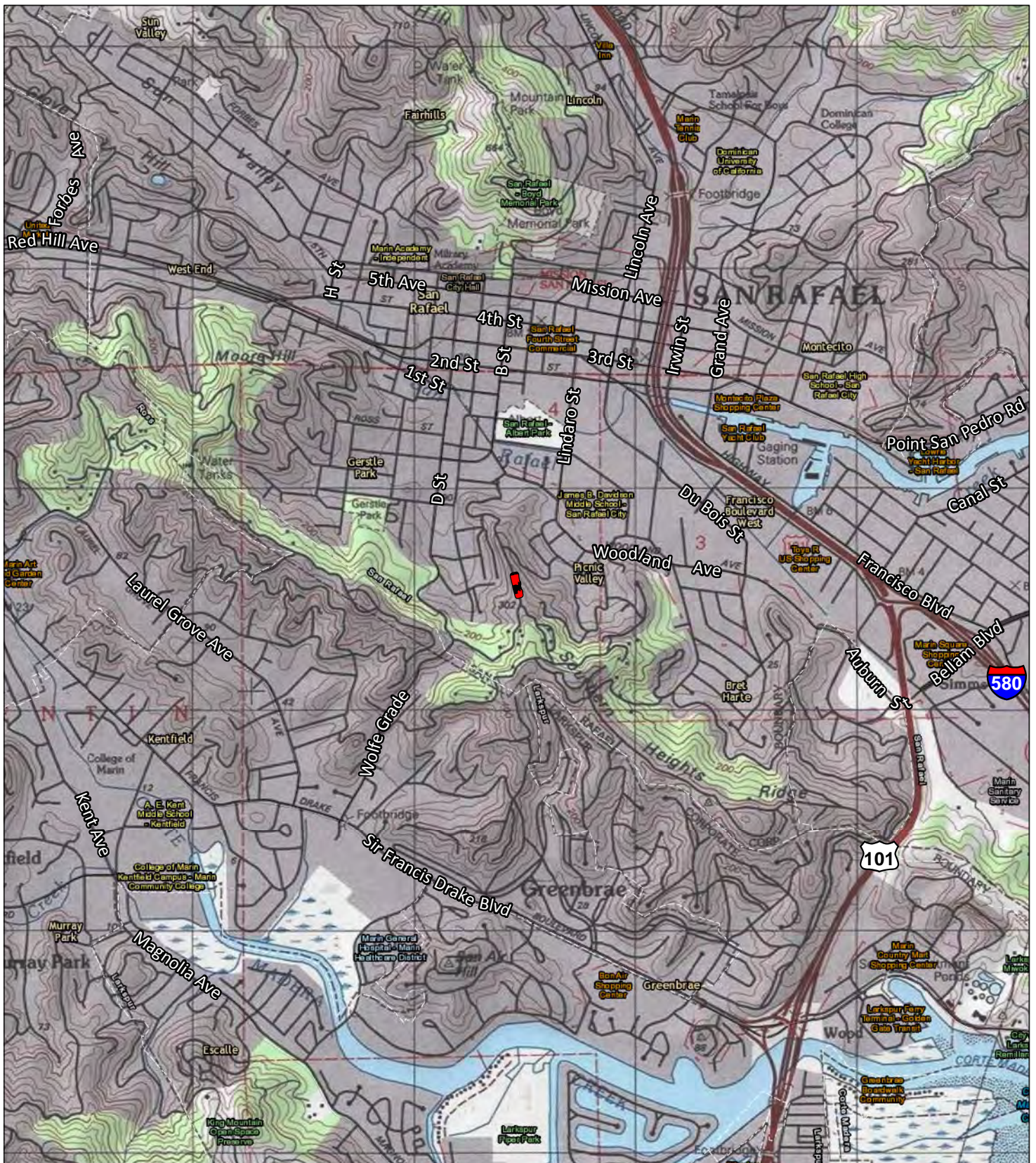


SOURCE: ESRI Imagery (4/2008)


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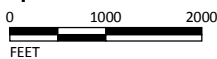
Southern Heights Bridge Replacement Project
 City of San Rafael, Marin County, California
 Bridge No. 27C0148; Caltrans District 4
 Federal Project No. BRLO-5043(038)

Regional Location



LEGEND

 Biological Study Area

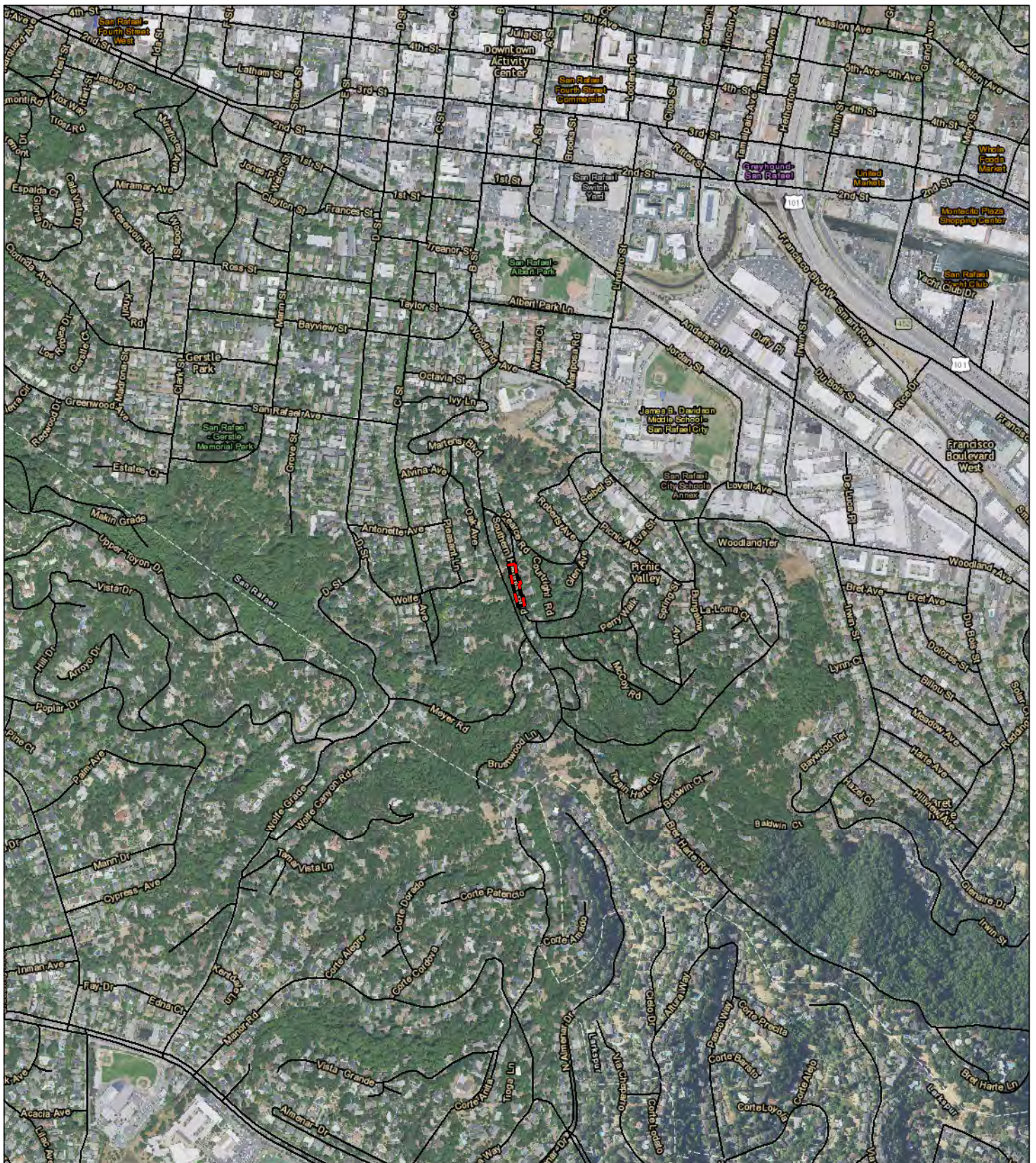


SOURCE: USGS 7.5-Minute Quadrangle (San Rafael)


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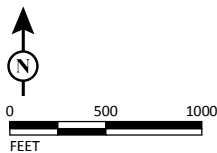
FIGURE 2

Southern Heights Bridge Replacement Project
 City of San Rafael, Marin County, California
 Bridge No. 27C0148; Caltrans District 4
 Federal Project No. BRLO-5043(038)
 Project Vicinity on Topographic Base



LEGEND

 Biological Study Area



SOURCE: NAIP Aerial Imagery (7/2016)

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FIGURE 3

*Southern Heights Bridge Replacement Project
 City of San Rafael, Marin County, California
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The existing right-of-way width is 20 ft. No new right-of-way will be required for the new bridge or retaining walls. Temporary construction easements are anticipated on the east and west sides of the bridge to provide construction access. Utilities, including overhead power and communication and underground water and natural gas, have been identified and will need to be relocated with the project. It is not yet clear if the overhead utility relocations can be accommodated within the existing right-of-way or if utility easements will be needed for the utility poles and wires. The water and gas lines will be relocated onto the new bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on cast-in-drilled-hole piles. There is no waterway beneath the bridge but a corrugated metal storm drain pipe will need to be temporarily relocated away from the structure during the excavation. Construction of the roadway approaches will involve the removal of existing pavement, retaining walls, fences, and the placement of fill material, aggregate base, hot mix asphalt pavement, soldier pile and concrete retaining walls, and new guard rails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

During construction, Southern Heights Boulevard will be closed to traffic and a detour route will be provided. Construction is anticipated to begin in spring 2019 and will have a duration of approximately 6 months.

The project design plans are included in Appendix A.

Chapter 2 – Study Methods

2.1 Regulatory Requirements

2.1.1 SPECIAL STATUS SPECIES

Special status species include plants and animals that are: 1) listed as rare, threatened, or endangered by United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) under State or federal endangered species acts; 2) are on formal lists as candidates for listing as threatened or endangered; 3) are on formal lists as species of concern; or 4) are otherwise recognized at the State, federal, or local level as sensitive.

2.1.1.1 Federal and California Endangered Species Acts

Under the FESA, it is unlawful to “take any species listed as threatened or endangered”. “Take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as “take” even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration, National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project “may affect” a listed species.

When a species is listed, USFWS and/or NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or NMFS is required for projects that include a federal action or federal funding if the project may affect designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to “take” any species listed as rare, threatened, or endangered. Under CESA, “take” means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”. CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project will result in “take” of a listed species.

2.1.1.2 Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan.

EFH includes “...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The MSA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.

2.1.2 WATERS OF THE UNITED STATES AND OTHER JURISDICTIONAL WATERS

2.1.2.1 Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States (U.S.). Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 Code of Federal Regulations 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

Wetlands

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions”.

Non-wetland Waters

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

2.1.2.2 Regional Water Quality Control Board

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these activities and issues water quality certifications for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the State pursuant to the Porter-Cologne Water Quality Control Act.

2.1.2.3 California Department of Fish and Wildlife

CDFW, through provisions of Section 1602 of the California Fish and Game Code (CFGC), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral or intermittent flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Riparian communities may not fall under ACOE jurisdiction unless they are below the OHWM or classified as wetlands.

2.1.2.4 Executive Order 11990: Protection of Wetlands

Executive Order (EO) 11990 mandates leadership on the part of federal agencies to reduce loss and degradation of wetlands and to preserve and enhance the beneficial values and functions of wetlands. Each federal agency “shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds that: (1) there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use”.

2.1.3 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the CFGC.

2.1.4 CALIFORNIA FISH AND GAME CODE (BREEDING BIRDS)

Section 3503 of the CFGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the CFGC or other regulation.

2.1.5 EXECUTIVE ORDER 13112: INVASIVE SPECIES

Under EO 13112, an invasive species is defined as “an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health”. Invasive species are determined by the Invasive Species Council.

In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to “not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species”.

2.1.6 EXECUTIVE ORDER 11988: FLOODPLAIN MANAGEMENT

EO 11989 mandates leadership on the part of federal agencies to minimize the adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of federal lands, and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including, but not limited to, water and related land resources planning, regulating, and licensing activities.

2.1.7 CITY OF SAN RAFAEL TREE ORDINANCE (CODE OF ORDINANCES CHAPTER 11.12)

The City of San Rafael Tree Ordinance (Code of Ordinances Chapter 11.12) states:

- In the erection or repair of any building or structure, the owner thereof, or the contractor, if the work is being done by contract, shall place such guards around all nearby trees in, upon or along the public streets, sidewalks and walkways within the city as shall prevent injury to them. (11.12.060)
- The provisions of Sections 11.12.030 to 11.12.080, inclusive, shall not be applicable to any employee of the city who is acting within the scope of his employment by the city. (11.12.085)

2.2 Studies Required

Prior to conducting any field studies, the limits of the BSA were established, totaling approximately 0.36 ac, including portions of Southern Heights Boulevard and adjacent lands both east and west of the bridge. The BSA consists of the project footprint, temporary access areas, and lands beyond the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

The studies required to fully document the environmental conditions of the BSA included a general biological survey, habitat mapping, and tree inventory.

2.2.1 LITERATURE REVIEW

A list of sensitive wildlife and plant species potentially occurring within the BSA and vicinity was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDDB 2017), the USFWS Information for Planning and Conservation Trust Resources (USFWS 2017), the California Native Plant Society (CNPS 2017) Online Inventory, and the NMFS Google Earth Species list (NMFS 2017). Records were reviewed for the following United States Geological Survey 7.5-minute quadrangles: San Rafael.

For the NMFS Species list, the San Rafael quad was identified within the range of anadromous fish species. The NMFS species list is an intersection of FESA Listed Species, Critical Habitat, EFH and Marine Mammal Protection Act Species Data within California. It should be noted that identified features may be present throughout the entire quadrangle or only a portion of it.

All species lists are included in Appendix B.

The special status species lists obtained from the CNDDDB, CNPS, USFWS and NMFS were reviewed to determine which species could potentially occur within the vicinity of the BSA. The cumulative list (shown in Table 2, Section 3.2) includes numerous species representing a variety of habitat types. The list includes each species' protection status, habitat information, status in the BSA, and supporting comments as necessary. Figures 4 and 5 show special status species occurrences within a 5-mile radius of the BSA.

The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within and adjacent to the BSA, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDDB. Those species that could potentially occur in the BSA from habitat suitability or on known occurrences in or within the vicinity of the BSA are discussed in Sections 4.2 and 4.3, as applicable.

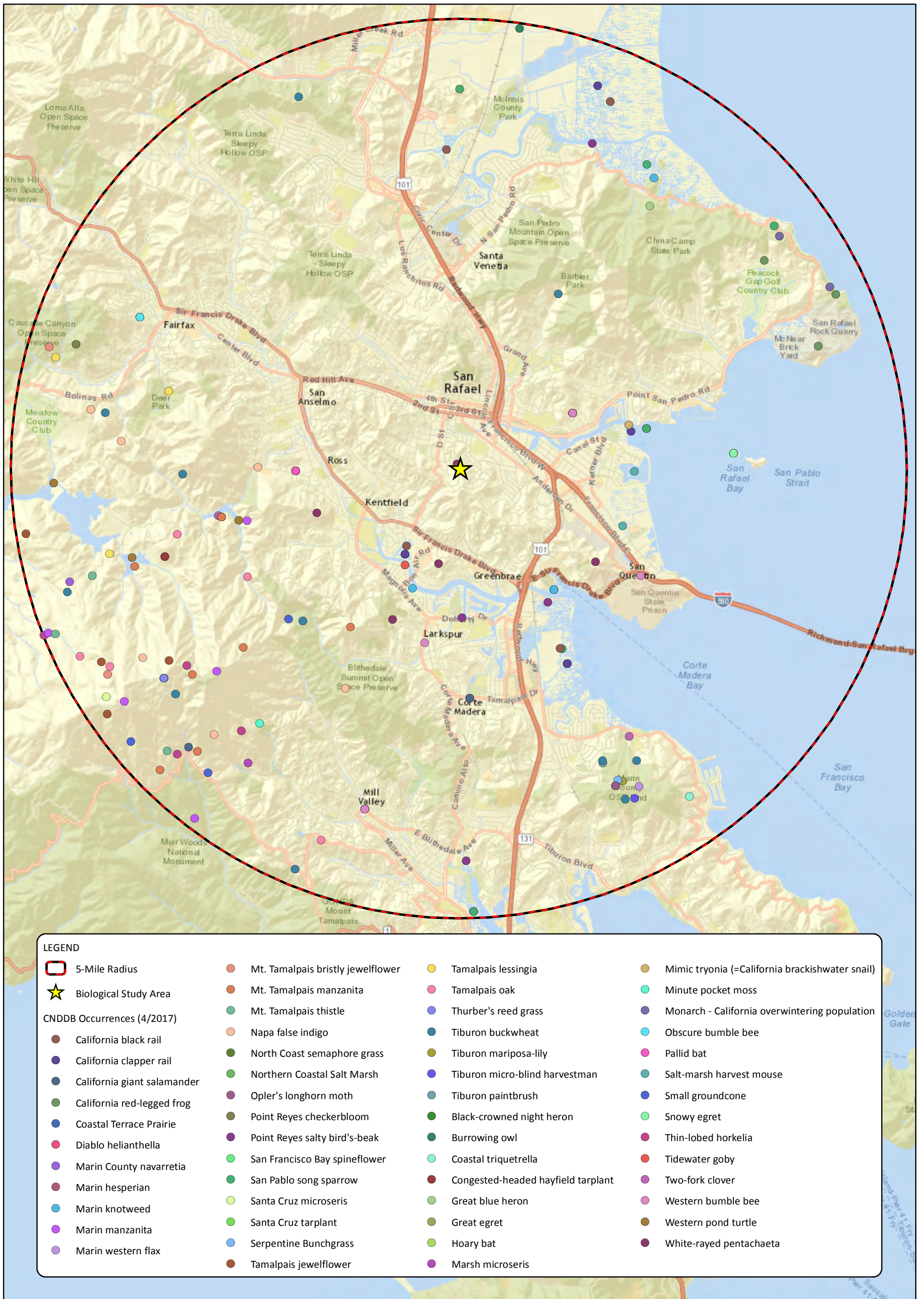
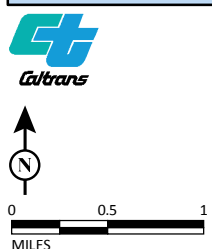


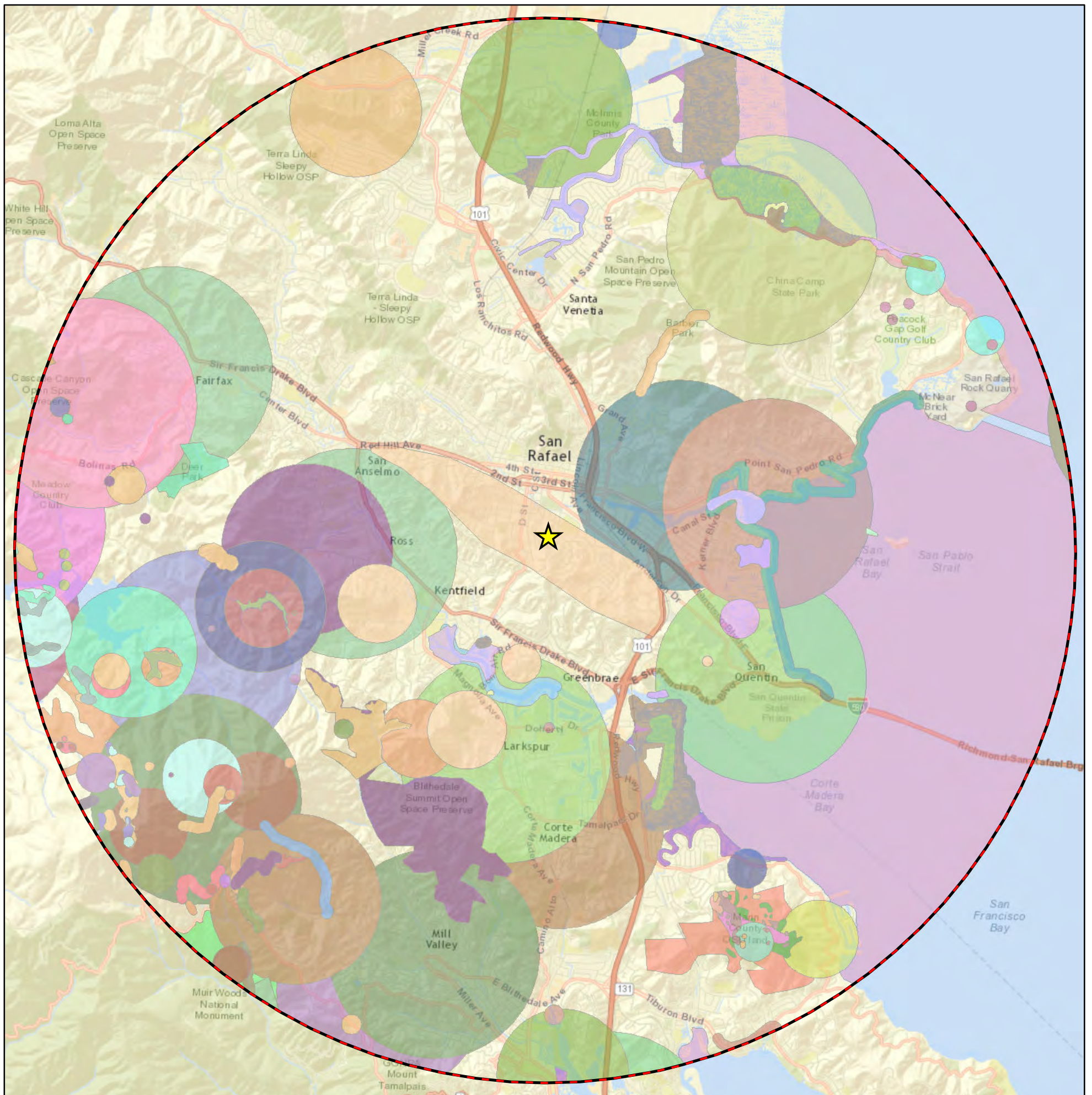
FIGURE 4



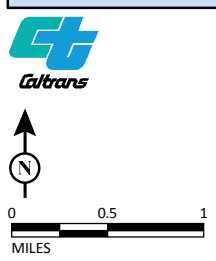
SOURCE: Basemap - ESRI Street Maps (2017); Mapping - CNDB (4/2017)
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CNDB Point Occurrences within a 5-mile Radius



LEGEND			
	5-Mile Radius		Project Location
CNDDB Occurrences (4/2017)			
	California black rail		Napa false indigo
	California clapper rail		North Coast semaphore grass
	California giant salamander		Northern Coastal Salt Marsh
	California red-legged frog		Opler's longhorn moth
	Coastal Terrace Prairie		Point Reyes checkerbloom
	Diablo helianthella		Point Reyes salty bird's-beak
	Marin County navarretia		San Bruno elfin butterfly
	Marin hesperian		San Francisco Bay spineflower
	Marin knotweed		San Pablo song sparrow
	Marin manzanita		Santa Cruz microseris
	Marin western flax		Santa Cruz tarplant
	Mt. Tamalpais bristly jewelflower		Serpentine Bunchgrass
	Mt. Tamalpais manzanita		Tamalpais jewelflower
	Mt. Tamalpais thistle		Tamalpais lessingia
			Tamalpais oak
			Thurber's reed grass
			Tiburon buckwheat
			Tiburon mariposa-lily
			Tiburon micro-blind harvestman
			Tiburon paintbrush
			Black-crowned night heron
			Burrowing owl
			Coastal triquetrella
			Coho salmon - central California coast ESU
			Congested-headed hayfield tarplant
			Dark-eyed gilia
			Eulachon
			Great blue heron
			Great egret
			Hairless popcornflower
			Hoary bat
			Longfin smelt
			Marsh microseris
			Mimic tryonia (=California brackishwater snail)
			Minute pocket moss
			Monarch - California overwintering population
			Obscure bumble bee
			Pallid bat
			Robust walker
			Salt-marsh harvest mouse
			Small groundcone
			Snowy egret
			Thin-lobed horkelia
			Tidewater goby
			Two-fork clover
			Western bumble bee
			Western pond turtle
			White-rayed pentachaeta



SOURCE: Basemap - ESRI Street Maps (2017); Mapping - CNDDB (4/2017)
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FIGURE 5

Southern Heights Bridge Replacement Project
 City of San Rafael, Marin County, California
 Bridge No. 27C0148; Caltrans District 4
 Federal Project No. BRLO-5043(038)
 CNDDB Area Occurrences within a 5-mile Radius

2.2.2 FIELD SURVEYS

2.2.2.1 General Biological Survey/ Vegetation Mapping

A general biological survey of the BSA was conducted by LSA biologist Anna Van Zuuk on May 22, 2017. Mrs. Van Zuuk surveyed the BSA on foot. The naturally occurring vegetation in the BSA was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. Managed, disturbed, or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin, B. G., et. al., editors 2012).

2.2.2.2 Potential Jurisdictional Waters Determination and Delineation

No potential waters of the U.S. were identified in the BSA; therefore a jurisdictional delineation was not conducted.

2.2.2.3 Tree Inventory

An inventory of native trees was conducted by Mrs. Van Zuuk on May 22, 2017. Data was collected on species, diameter at breast height, and any notable characteristics. The results of the tree survey are included in Appendix C.

2.3 Agency Coordination and Professional Contacts

No agency coordination has occurred for this project.

2.4 Limitations That May Influence Results

No problems or limitations were encountered during the research, fieldwork, or document preparation that influenced the results presented herein.

Chapter 3 – Results: Environmental Setting

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 BIOLOGICAL STUDY AREA

The Biological Study Area (BSA), totaling approximately 0.36 ac, extends along Southern Heights Boulevard for approximately 315 ft (including the Southern Heights bridge), and includes areas 10 ft east and 20 ft west of the roadway to accommodate temporary construction access. The BSA is located just north of the intersection of Meyer Road and Southern Heights Boulevard in the Southern Heights neighborhood of San Rafael.

3.1.2 PHYSICAL CONDITIONS

The BSA is heavily disturbed and consists almost entirely of residential development, landscaping, and ruderal/disturbed areas. One natural community, California Bay Forest, occurs west of the existing bridge and extends downslope. There are no aquatic features in the BSA. The bridge spans a steep ravine that slopes east to west with an elevation that ranges from approximately 260 to 300 feet above mean sea level.

Land uses in the immediate vicinity consist of moderate density residential housing scattered within steep canyons in Coastal oak woodlands. These communities give way to dense urban and suburban areas.

Representative photos of the BSA are shown in Appendix D.

3.1.3 BIOLOGICAL CONDITIONS IN THE BIOLOGICAL STUDY AREA

3.1.3.1 Natural Communities and Other Habitat Types

As noted above, vegetation communities were classified based on the descriptions in Sawyer, Keeler-Wolf, and Evans (2008), as applicable. One natural community occurs within the BSA: California Bay Forest. Other habitat types not considered natural include ruderal/disturbed, landscaped, and developed. Habitat types in the BSA are shown in Figure 6 and summarized in Table 1.



FIGURE 6



LEGEND



Biological Study Area

Natural Communities / Land Uses - (0.36 ac)



California Bay Forest - (0.12 ac)



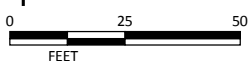
Ruderal/Disturbed - (0.07 ac)



Developed - (0.11 ac)



Landscaped - (0.06 ac)



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Natural Communities / Land Uses*

Table 1: Natural Communities and Other Habitat Types in the BSA

Natural Communities	Acres
California Bay Forest	0.12
Subtotal	0.12
Other Habitat Types	
Ruderal/Disturbed	0.07
Landscaped	0.06
Developed	0.11
Subtotal	0.24
Total	0.36

California Bay Forest

The California bay forest community, totaling 0.12 ac, occurs west of the Southern Heights Bridge and continues downslope. This area has a tree canopy dominated by California bay (*Umbellularia californica*) with a few Coast live oak (*Quercus agrifolia*) intermixed. The understory is sparse and dominated by Upright veldt grass (*Ehrharta erecta*) with a few scattered toyon (*Heteromeles arbutifolia*), madrone (*Arbutus menziesii*), and California buckeye (*Aesculus californica*) shrubs.

Ruderal/Disturbed

The ruderal/disturbed community is likely a former natural community that has been subject to regular disturbance and now has a large component of ruderal species. The vegetation that grows in these areas typically consists of species that are able to quickly colonize following disturbance and can grow in poor soil conditions. In the BSA, ruderal/disturbed areas total 0.07 ac and occur west of Southern Heights Boulevard on roadsides and continuing downslope. Dominant plant species include: rattlesnake grass (*Briza maxima*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*), and French broom (*Genista monspessulana*); dogtail grass (*Cynosurus echinatus*), Italian ryegrass (*Festuca perennis*), foxtail barley (*Hordeum murinum*), hedge mustard (*Sisymbrium officinale*), and hedge parsley (*Torilis arvensis*) are also present.

Landscaped

Landscaping, totaling approximately 0.06 ac, is located east of Southern Heights Boulevard and the Southern Heights Bridge. Plants associated with this community are introduced and intensely managed by residential land owners. Species present include: agapanthus (*Agapanthus* sp.), century plant (*Agave americana*), yellow jade plant

(*Crassula ovata*), jasmine (*Jasminum* sp.), paperwhites (*Narcissus papyraceus*), prickly pear cactus (*Opuntia* sp.), white bower vine (*Pandorea jasminoides*), rosemary (*Rosmarinus officinalis*), Mexican bush sage (*Salvia leucantha*) and calla lily (*Zantedeschia* sp.).

Developed

The developed areas in the BSA, totaling approximately 0.11 ac, consist of Southern Heights Boulevard, the Southern Heights Bridge, and private driveways and walkways.

3.1.3.2 Description of Common Animal Species

The sections below discuss animal species observed and/or likely to occur within the BSA.

Mammals

Mammals observed during the May 2017 survey include Eastern fox squirrel (*Sciurus niger*) and mule deer (*Odocoileus hemionus californicus*). Other common species likely to occur in the BSA include California ground squirrel (*Otospermophilus beecheyi*), cottontail rabbit (*Sylvilagus* sp.), coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*).

Birds

Bird species observed during the May 2017 survey include: western scrub jay (*Aphelocoma californica*) and northern mockingbird (*Mimus polyglottos*). These species were either observed, overhead, or within trees located directly in or adjacent to the BSA. Other common bird species expected to occur in the BSA include: band-tailed pigeon (*Columba fasciata*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), western bluebird (*Sialia mexicana*), European starling (*Sturnus vulgaris*), American robin (*Turdus migratorius*), and mourning dove (*Zenaida macroura*).

Amphibians and Reptiles

No amphibians were observed during the May 2017 survey. Amphibian species likely to occur in the BSA include: Sierran tree frog (*Pseudacris sierra*) and Western toad (*Anaxyrus boreas*).

One reptile species was observed during the May 2017 survey – western fence lizard (*Sceloporus occidentalis*). Other reptile species likely to occur in the BSA include: western terrestrial garter snake (*Thamnophis elegans elegans*), western rattlesnake (*Crotalus oreganus*), and common gopher snake (*Pituophis catenifer*).

3.1.3.4 Invasive Species

Many non-native species have been part of the California landscape for the past 150 years. The BSA supports a number of noxious weed species including: black acacia (*Acacia melanoxylon*), rattlesnake grass, ripgut brome, Italian thistle, upright veldt grass, Italian ryegrass, French broom, English ivy (*Hedera helix*), foxtail barley, Himalayan blackberry (*Rubus armeniacus*), hedge parsley, and periwinkle (*Vinca major*). While most of these species are limited to moderately invasive, three seriously invasive species – French broom, English ivy, and Himalayan blackberry – were observed in the BSA.

3.1.3.5 Migration Corridor

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

Undeveloped lands in the vicinity of the BSA are intermixed with developed lands and are highly fragmented; therefore, these lands do not provide suitable migration corridors for wildlife.

3.1.3.6 Aquatic Resources

Runoff from Southern Heights Boulevard is collected and flows through a culvert downslope into an adjoining neighborhood, ultimately outletting into Corte Madera Creek which drains into San Francisco Bay. The ravine spanned by the Southern Heights Bridge may convey surface runoff during the wet season, flowing west, but shows no evidence of hydrology. Therefore, no aquatic resources were identified within the BSA.

3.2 Regional Species and Habitats of Concern

Table 2 provides a list of special status species that could potentially occur in the region, and therefore in the BSA. This list was compiled as described in Section 2.2.1. A review was conducted of the specific habitats required by each species listed in Table 2, and the specific habitats and habitat conditions present in the BSA. Based on this evaluation, it was determined whether the species listed in Table 2 had potential to occur in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors such as plucking posts, scat, nests, dens, etc., are discussed more fully in Sections 4.2 and 4.3 of this report, as applicable. Species determined unlikely to occur in the BSA based on these same factors are documented accordingly in the table and not discussed further in this report.

Table 2: Special Status Species and Natural Communities of Special Concern Potentially Occurring in the BSA

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Mammals					
<i>Antrozous pallidus</i>	Pallid bat	CSC	Found in variety of habitats, including grassland, chaparral, woodland, and forest. Most common in open, dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, hollow trees, buildings. Very sensitive to disturbance of roosting sites.	A	Suitable habitat is not present in the BSA; there are no rocky areas for roosting and the area is frequently disturbed by humans. This species may occasionally fly over the BSA.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	CSC	Occurs in a variety of habitats including valley oak savannah, riparian forest, and prairie. Roosts in caves, tunnels, buildings, mines, or other human-made structures, such as bridges. Requires roosting, maternity sites free from human disturbance.	A	Suitable habitat is not present in the BSA; there are no caves, mines or suitable openings in the bridge structure to support roosting areas. This species may occasionally fly over the BSA.
<i>Lasiurus cinereus</i>	Hoary bat	CA SA	Found in open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Requires water.	A	Suitable habitat is not present in the BSA; tree canopy is not dense enough to support roosting and no water source is present within the BSA.
<i>Reithrodontomys raviventris</i>	Salt-marsh harvest mouse	FE; SE; FP	Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is the primary habitat for the species. Does not burrow, rather builds loosely organized nests. Requires access to higher ground for flood escape.	A	Suitable habitat is not present in the BSA; there are no saline emergent wetlands within the BSA.
Birds					
<i>Ardea herodias</i>	Great blue heron	(Rookeries only)	Usually nests in trees, but also on large bushes, poles, reedbeds, and even on the ground. Frequents a wide range of wetland habitats at other times of year.	A	No rookeries or suitable wetland habitats are present within the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Brachyramphus marmoratus</i>	Marbled murrelet	FT; SE	Feeds near shore; nests inland along the Pacific coast, from Eureka to the Oregon border, and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland. Nests often built in Douglas-fir or redwood stands containing platform-like branches.	A	Suitable habitat is not present in the BSA; there are no suitable evergreen trees for nesting within the BSA.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	FT; CSC	Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees, and shores of alkali lakes. Require sandy, gravelly, or friable soils for nesting.	A	Suitable habitat is not present in the BSA; there are no beaches, salt ponds, or alkali lakes in the BSA.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST; FP	Requires shallow water in salt marshes, freshwater marshes, wet meadows, or flooded grassy vegetation. Prefers areas of moist soil vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges, with scattered small pools. Known from coastal California, northwestern Baja California, the lower Imperial Valley, and the lower Colorado River of Arizona and California. Now extirpated from virtually all of coastal Southern California.	A	Suitable habitat is not present in the BSA due to the lack of marshes, wet meadows, and flooded grassy vegetation.
<i>Melospiza melodia samuelis</i>	San Pablo song sparrow	CSC	Resident of salt marshes along the north side of San Francisco and San Pablo Bays. Inhabits tidal sloughs in the <i>Salicornia</i> marshes; nests in <i>Grindelia</i> bordering slough channels.	A	Suitable habitat is not present in the BSA; there are no salt marshes or tidal sloughs within the BSA.
<i>Phoebastria (=Diomedea) albatrus</i>	Short-tailed albatross	FE; CSC	Highly pelagic; comes to land only when breeding. Nests on remote Pacific islands. A rare non-breeding visitor to the eastern Pacific.	A	This species is rare in pelagic waters off the coast of California. It has no potential to occur in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE; SE; FP	Resident in tidal marshes of the San Francisco Bay Estuary. Require tidal sloughs and mud flats for foraging, and dense vegetation for nesting. Associated with abundant growth of cordgrass and pickleweed. Largest population in south San Francisco Bay.	A	Suitable habitat is not present in the BSA; there are no tidal sloughs or mud flats in the BSA.
<i>Sterna antillarum browni</i>	California least tern	FE; SE	Colonial breeder on barren or sparsely vegetated, flat substrates near water. Breeding colonies in San Francisco Bay along estuarine shores and in abandoned salt ponds.	A	Suitable habitat is not present in the BSA; there are no water bodies within or near the BSA.
<i>Strix occidentalis caurina</i>	Northern spotted owl	FT; CSC	Year-round resident in dense, structurally complex forests, primarily those with old-growth or otherwise mature conifers. In Marin County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	A	Suitable habitat is not present in the BSA; there are no suitable coniferous or mixed coniferous forests within the BSA.
Reptiles					
<i>Emys marmorata</i>	Western pond turtle	CSC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. Lay eggs in upland habitat consisting of sandy banks or grassy, open fields.	A	Suitable habitat is not present in the BSA; there are no permanent or semi-permanent water sources in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Amphibians					
<i>Dicamptodon ensatus</i>	California giant salamander	CSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	A	Suitable habitat is not present in the BSA; there are no streams or coniferous habitats within the BSA.
<i>Rana boylei</i>	Foothill yellow-legged frog	CSC	Partly-shaded, shallow streams and riffles with a rocky (at least some cobble-sized) substrate for egg-laying, and with water for at least 15 weeks until metamorphosis.	A	Suitable habitat is not present in the BSA; there are no streams within the BSA.
<i>Rana draytonii</i>	California red-legged frog	FT; CSC	Found in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Require 11 to 20 weeks of inundation for larval development. Must have access to estivation habitat.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.
Fish					
<i>Acipenser medirostris</i>	Green Sturgeon	FT; CSC	Spawn in the Sacramento River and the Klamath River. Spawn at temperatures between 8 to 14 degrees C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA and the BSA is outside of this species known range.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE; CSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in willow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.
<i>Hypomesus transpacificus</i>	Delta Smelt	FT; SE	Lives in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.
<i>Oncorhynchus kisutch</i>	Coho salmon – Central California coast ESU	FE; SE	State listing is limited to Coho south of San Francisco Bay. Federal listing is limited to naturally spawning populations in streams between Humboldt County and Santa Cruz County. Spawn in coastal streams 1-14C. Prefers beds of loose, silt-free, coarse gravel and cover nearby.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.
<i>Oncorhynchus mykiss</i>	Steelhead – Central California coast DPS	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Oncorhynchus mykiss</i>	Steelhead - Central Valley DPS	FT	Population occurs and spawns in the Sacramento and San Joaquin rivers and their tributaries. This distinct population segment is known to occur in the Butte Sink Wildlife Management Area, North Central Valley Wildlife Management Area, Sacramento River National Wildlife Refuge, and Sutter National Wildlife Refuge.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA and the BSA is outside of this species known range.
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon – Central Valley spring-run ESU	FT; ST	Occurs in the Feather River and the Sacramento River and its tributaries, including Butte, Mill, Deer, Antelope, and Beegum Creeks. Adults enter the Sacramento River from late March through September. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams from mid-August through early October. Juveniles migrate soon after emergence as young-of-the-year, or remain in freshwater and migrate as yearlings.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA and the BSA is outside of this species known range.
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon – Sacramento winter-run ESA	FE; SE	Occurs in the Sacramento River below Keswick Dam. Spawns in the Sacramento River but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 degrees C for spawning. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles typically migrate to the ocean soon after emergence from the gravel.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA and the BSA is outside of this species known range.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Spirinchus thaleichthys</i>	Longfin smelt	FT; ST; CSC	Euryhaline, nektonic, and anadromous. Found in open waters and estuaries, mostly in the middle or bottom water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA.
Invertebrates					
<i>Adela oplerella</i>	Opler's longhorn moth	None	Found in Marin County and the Oakland area on the inner coast ranges south to Santa Clara County (one record in Santa Cruz County) in serpentine grassland habitat. Larvae feed on <i>Platystemon californicus</i> .	A	Suitable serpentine grassland habitat is not present in the BSA.
<i>Bombus caliginosus</i>	Obscure bumble bee		Found in coastal areas from Santa Barbara county north to Washington state. Inhabits open grassy coastal prairies and meadows. Feeds on plants from the genera <i>Baccharis</i> , <i>Cirsium</i> , <i>Lupinus</i> , <i>Lotus</i> , <i>Grindelia</i> , and <i>Phacelia</i> .	A	Plants from the genus <i>Phacelia</i> are present in the BSA and could provide suitable foraging for this species, however the BSA does not contain suitable coastal prairie or meadow habitat.
<i>Callophrys mossii bayensis</i>	San Bruno elfin butterfly	FE	Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco peninsula, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes within the fog belt. Larval host plant is <i>Sedum spathulifolium</i> .	A	Suitable coastal scrub habitat and rocky outcrops are not present in the BSA. Additionally, there are no <i>Sedum spathulifolium</i> host plants to support larval development.
<i>Icaricia icarioides missionensis</i>	Mission blue butterfly	FE	Inhabits coastal chaparral and coastal grasslands of the San Francisco peninsula, mainly in the vicinity of San Bruno Mountain. Three larval host plants: <i>Lupinus albifrons</i> , <i>L. varicolor</i> , and <i>L. formosus</i> , of which <i>L. albifrons</i> is favored.	A	Suitable coastal chaparral or grassland habitat is not present in the BSA. Additionally, no larval host <i>Lupinus sp.</i> occurs in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Pomatiopsis binneyi</i>	Robust walker	None	Semi-aquatic; found in freshwater in high flow protection areas of perennial seeps, rivulets, mud banks, and marsh seepages in Marin County.	A	Suitable habitat is not present in the BSA; there are no aquatic features in the BSA suitable to support this species.
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot butterfly	FE	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval food plant is thought to be <i>Viola adunca</i> .	A	Suitable habitat is not present in the BSA; no coastal dune habitat occurs in the BSA.
<i>Trachusa gummifera</i>	San Francisco Bay Area leaf-cutter bee	None	Very little information available for this species. Range limited to areas west of San Francisco Bay. Nests in underground tunnels in sandy soils.	A	Based on available information, habitat within the BSA is not suitable due to the lack of sandy soils for nesting tunnels.
<i>Tryonia imitator</i>	California brackishwater snail	None	Inhabits coastal lagoons, estuaries, and salt marshes from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	A	Suitable habitat is not present in the BSA; there are no coastal lagoons, estuaries, or salt marshes in the BSA.
<i>Vespericola marinensis</i>	Marin hesperian	None	Found in moist spots in coastal scrub and chaparral in Marin County. Usually under leaves of Cow-parsnip, around spring seeps, in leaf mold along streams, and in alder woods and mixed evergreen forest.	A	Suitable habitat is not present in the BSA; there BSA does not contain coastal scrub, chaparral, alder or mixed evergreen forest, or sufficiently moist places suitable to support this species.
Plants					
<i>Amorpha californica var. napensis</i>	Napa false indigo	List 1B.2	Found in broadleaved upland forest (openings), chaparral, and cismontane woodland (390 to 6560 ft). Blooms April – July.	A	Suitable habitat is present in the BSA; however focused surveys during the blooming period for this species did not identify any individuals within the BSA. Furthermore, the nearest CNDDDB record, dated 1875, is considered extirpated.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Arabis blepharophylla</i>	Coast rockcress	List 4.3	Found in broadleaved upland forest, coastal bluff scrub, coastal prairie, and coastal scrub on rocky outcrops, bluffs, and grassy slopes (10 to 3610 ft). Blooms February – May.	A	Suitable habitat is not present in the BSA; there are no rocky outcrops, bluffs, or grassy slopes within the BSA.
<i>Arctostaphylos montana ssp. montana</i>	Mt. Tamalpais manzanita	List 1B.3	Found in chaparral and valley grassland, often on serpentine substrate (820 to 2625 ft). Only found on Mt. Tamalpais in Marin County. Blooms February – April.	A	Suitable habitat is not present in the BSA; the BSA does not contain serpentine substrate and the BSA is outside this species known range.
<i>Arctostaphylos virgata</i>	Marin manzanita	List 1B.2	Found in closed-cone coniferous forest, chaparral, and mixed evergreen forest on sandstone or granitic substrates (200 to 2300 ft). Blooms January – March.	A	Suitable habitat is not present in the BSA; the BSA does not contain closed-cone coniferous forest, chaparral, or mixed evergreen forest suitable to support this species.
<i>Aspidotis carlotta-halliae</i>	Carlotta Hall's lace fern	List 4.2	Found in foothill woodland and chaparral, usually on serpentine slopes, crevices, or outcrops (330 to 4590 ft). Blooms January – December.	A	Suitable habitat is not present in the BSA; the BSA does not contain serpentine substrate.
<i>Astragalus breweri</i>	Brewer's milk-vetch	List 4.2	Found in chaparral, cismontane woodland, and valley and foothill grassland on open slopes or grassy areas (300 to 2400 ft). Blooms April – June.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, grasslands, or open or grassy areas.
<i>Calamagrostis crassiglumis</i>	Thurber's reed grass	List 2B.1	Found in northern coastal scrub and freshwater wetlands. Occurs almost always in wetlands. Blooms May – August.	A	Suitable habitat is not present in the BSA; there are no wetlands in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Calamagrostis ophitidis</i>	Serpentine reed grass	List 4.3	Found in chaparral on open, often north-facing slopes, as well as lower montane coniferous forest, meadows and seeps, and valley and foothill grasslands on rocky, serpentine substrates (30 to 4000 ft). Blooms April – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain serpentine substrates, chaparral, coniferous forests, meadows or seeps, or grasslands.
<i>Calandrinia breweri</i>	Brewer's calandrinia	List 4.2	Found in chaparral, coastal scrub on sandy or loamy substrates in disturbed areas and burns (300 to 3490 feet). Blooms (January) March – June.	A	The BSA does not contain chaparral or coastal scrub suitable to support this species. Additionally, the BSA does not contain sandy substrates and is not significantly disturbed.
<i>Calochortus umbellatus</i>	Oakland star-tulip	List 4.2	Found in chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland, often on serpentine substrates (330 to 2300 ft). Blooms March – May.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, coniferous forest, grasslands, or serpentine substrate.
<i>Castilleja ambigua</i> var. <i>ambigua</i>	Johnny-nip	List 4.2	Found in coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grasslands, and vernal pool margins (0 to 1430 ft). Blooms March – August.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coastal prairie, coastal scrub, marshes, swamps, grasslands, or vernal pool margins.
<i>Ceanothus gloriosus</i> var. <i>exaltatus</i>	Glory bush	List 4.3	Found in chaparral on sandy and rocky substrates (100 to 2000 ft). Blooms March – June (August).	A	The BSA does not contain chaparral habitat or sandy or rocky substrates suitable to support this species.
<i>Ceanothus pinetorum</i>	Kern ceanothus	List 4.3	Found in lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest on rocky granitic substrates (5250 to 9010 ft). Blooms May – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forests or granitic substrates and is well below the elevational range of the species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Ceanothus rigidus</i>	Monterey ceanothus	List 4.2	Found in closed-cone coniferous forests, chaparral, and coastal scrub on sandy substrates (10 to 1800 ft). Blooms February – April (June).	A	Suitable habitat is not present in the BSA; the BSA does not contain closed-cone coniferous forest, chaparral, coastal scrub, or sandy substrate.
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak	List 1B.2	Found in marshes and swamps influenced by coastal salt (0 to 30 ft). Blooms June – October.	A	The BSA does not contain marshes or swamps suitable to support his species and is well above the elevational range for the species.
<i>Chorizanthe cuspidate</i> var. <i>cuspidata</i>	San Francisco Bay spineflower	List 1B.2	Found in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub on sandy substrates (10 to 710 ft). Blooms April – July (August).	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, or sandy substrate.
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	Mt. Tamalpais thistle	List 1B.2	Found in mixed evergreen forest, chaparral, and meadows and seeps on serpentine substrates (790 to 2030 ft). Limited to Mount Tamalpais. Blooms May – August.	A	Suitable habitat is not present in the BSA; the BSA does not contain mixed evergreen forest, chaparral, or serpentine substrate and the BSA is outside this species known range.
<i>Cistanthe maritima</i>	Seaside cistanthe	List 4.2	Found in coastal bluff scrub, coastal scrub, and valley and foothill grasslands on sandy substrates (20 to 980 ft). Blooms (February) March – June (August).	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coastal scrub, valley or foothill grassland, or sandy substrate.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Cypripedium californicum</i>	California lady's-slipper	List 4.2	Occurs in riparian habitat, streambanks, seeps, and bogs and fens. Usually occurs under natural conditions in wetlands. Found in yellow pine forest, freshwater wetlands, and wetland-riparian communities. Blooms January – March (April).	A	Suitable habitat is not present in the BSA; the BSA does not contain riparian habitat, streambanks, seeps, bogs, fens, or other aquatic features.
<i>Elymus californicus</i>	California bottle-brush grass	List 4.3	Found in closed-cone pine forest, redwood forest, mixed evergreen forest, north coast coniferous forest, and riparian woodland (50 to 1540 ft). Blooms May – August (November).	A	The BSA does not contain coniferous forest habitats suitable to support this species.
<i>Eriogonum luteolum</i> var. <i>caninum</i>	Tiburon buckwheat	List 1B.2	Found in chaparral, cismontane woodland, coastal prairie, and valley and foothill grasslands on serpentine, sandy, or gravelly substrate (0 to 2300 ft). Blooms May – September.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, cismontane woodland, coastal prairie, valley or foothill grasslands, or serpentine substrate.
<i>Erysimum franciscanum</i>	San Francisco wallflower	List 4.2	Found in chaparral, coastal dunes, coastal scrub, and valley and foothill grasslands often on serpentine or granitic substrate, sometimes roadsides (0 to 1800 ft). Blooms March – June.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, coastal dunes, coastal scrub, valley or foothill grasslands, or granitic or serpentine substrate.
<i>Fissidens pauperculus</i>	Minute pocket moss	List 1B.2	Occurs in the north coast coniferous forest habitat. Grows in damp soil in dry streambeds and on stream banks.	A	The BSA does not contain coniferous forest suitable to support this species.
<i>Fritillaria lanceolata</i> var. <i>tristulis</i>	Marin checker lily	List 1B.1	Found in coastal bluff scrub, coastal prairie, and coastal scrub (50 to 490 ft). Blooms February – May.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coastal prairie, or coastal scrub.
<i>Gilia capitata</i> ssp. <i>chamissonis</i>	Blue coast gilia	List 1B.1	Found in coastal dunes and coastal scrub (10 to 660 ft). Blooms April – July.	A	The BSA does not contain coastal dunes or coastal scrub suitable to support this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Gilia capitata</i> ssp. <i>tomentosa</i>	Woolly-headed gilia	List 1B.1	Found in coastal bluff scrub and valley and foothill grasslands on rocky serpentine outcrops (30 to 720 ft). Blooms May – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, valley or foothill grasslands, rocky outcrops, or serpentine substrate.
<i>Gilia millefoliata</i>	Dark-eyed gilia	List 1B.2	Occurs in coastal dunes (10 to 100 ft). Blooms April – July.	A	The BSA does not contain coastal dunes suitable to support this species.
<i>Grindelia hirsutula</i> var. <i>maritima</i>	San Francisco gumplant	List 3.2	Found in coastal bluff scrub, coastal scrub, and valley and foothill grasslands on sandy or serpentine substrate (50 to 1310 ft). Blooms June – September.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coastal scrub, valley or foothill grasslands, or sandy or serpentine substrate.
<i>Helianthella castanea</i>	Diablo helianthella	List 1B.2	Found in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland (200 to 4270 ft). Blooms March – June.	A	Suitable habitat is not present in the BSA; the BSA does not contain broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, or valley or foothill grassland suitable to support this species.
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	Congested-headed hayfield tarplant	List 1B.2	Found in valley and foothill grasslands, sometimes on roadsides (70 to 1840 ft). Blooms April – November.	A	The BSA does not contain grasslands suitable to support this species.
<i>Hesperolinon congestum</i>	Marin western flax	FT; ST; List 1B.1	Found in chaparral and valley and foothill grasslands on serpentine substrates (20 to 1210 ft). Blooms April – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral or grasslands suitable to support this species.
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT; SE; List 1B.1	Found in coastal prairie, coastal scrub, and valley and foothill grasslands, often on clay or sandy substrates (30 to 720 ft). Blooms June – October.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal prairie, coastal scrub, or grasslands.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Horkelia tenuiloba</i>	Thin-lobed horkelia	List 1B.2	Found in broadleaved upland forest, chaparral, and valley and foothill grasslands in mesic openings on sandy substrate (160 to 1640 ft). Blooms May – July (August).	A	Suitable habitat is not present in the BSA; the BSA does not contain broadleaved upland forest, chaparral, valley or foothill grassland, or sandy substrate.
<i>Kopsiopsis hookeri</i>	Small groundcone	List 2B.3	Occurs in north coast coniferous forest (300 to 2900 ft). Blooms April – August.	A	The BSA does not contain coniferous forest suitable to support this species.
<i>Leptosiphon acicularis</i>	Bristly leptosiphon	List 4.2	Found in chaparral, cismontane woodland, coastal prairie, and valley and foothill grasslands (180 to 4920 ft). Blooms April – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, cismontane woodland, coastal prairie, or valley or foothill grasslands.
<i>Leptosiphon grandiflorus</i>	Large-flowered leptosiphon	List 4.2	Found in coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, and valley and foothill grasslands, usually on sandy substrates (20 to 4000 ft). Blooms April – August.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal bluff scrub, coniferous forest, cismontane woodland, coastal dunes, coastal prairie, valley or foothill woodlands, or sandy substrate.
<i>Lessingia hololeuca</i>	Woolly-headed lessingia	List 3	Found in broadleaved upland forest, coastal scrub, lower montane coniferous forest, and valley and foothill grasslands on clay and serpentine substrates (50 to 1000 ft). Blooms June – October.	A	Suitable habitat is not present in the BSA; the BSA does not contain coastal scrub, coniferous forest, or serpentine substrate.
<i>Lessingia micradenia</i> var. <i>micradenia</i>	Tamalpais lessingia	List 1B.2	Found in chaparral and valley and foothill grasslands, usually on serpentine substrate and often on roadsides (330 to 1640 ft). Blooms (June) July – October.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, grasslands, or serpentine substrate.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Microcarpus amphibolus</i>	Mt. Diablo cottonweed	List 3.2	Found in broadleaved upland forest, chaparral, cismontane woodland, and valley and foothill grasslands on rocky substrate (150 to 2710 ft). Blooms March – May.	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, grasslands, or rocky substrate.
<i>Microseria paludosa</i>	Marsh microseris	List 1B.2	Found in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grasslands (20 to 1160 ft). Blooms April – June (July).	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest, coastal scrub, or grasslands.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	List 1B.1	Found in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grasslands, and vernal pools in mesic conditions (20 to 5710 ft). Blooms April – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest, seeps, or vernal pools.
<i>Navarretia rosulata</i>	Marin County navarretia	List 1B.2	Found in closed-cone coniferous forest and chaparral on rocky serpentine substrate (660 to 2080 ft). Blooms May – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest, chaparral, or serpentine substrate.
<i>Pentachaeta bellidiflora</i>	White-rayed pentachaeta	FE; SE; List 1B.1	Found in cismontane woodland and valley and foothill grasslands, often on serpentine substrate (110 to 2030 ft). Blooms March – May.	A	Suitable habitat is not present in the BSA; the BSA does not contain grasslands or serpentine substrate.
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	List 4.2	Found in broadleaved upland forest, chaparral, coastal prairie, valley and foothill grassland, and vernal pools – places that are vernal mesic (0 to 2000 ft). Blooms June – October.	A	Suitable habitat is not present in the BSA; the BSA is comprised of California bay forest and developed/disturbed areas that are not suitable for this species.
<i>Plagiobothrys glaber</i>	Hairless popcornflower	List 1A	Found in alkaline meadows and seeps and coastal salt marshes and swamps (50 to 590 ft). Blooms March – May.	A	Suitable habitat is not present in the BSA; the BSA does not contain meadow, seeps, marshes, or swamps.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Pleuropogon hooverianus</i>	North Coast semaphore grass	ST; List 1B.1	Found in broadleaved upland forest, meadows and seeps, and north coast coniferous forest in mesic openings (30 to 2200 ft). Blooms April – June.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest, meadows or seeps.
<i>Polygonum marinense</i>	Marin knotweed	List 3.1	Found in coastal salt or brackish marshes and swamps (0 to 30 ft). Blooms (April) May – August (October).	A	Suitable habitat is not present in the BSA; the BSA does not contain marshes or swamps.
<i>Quercus parvula</i> var. <i>tamalpaisensis</i>	Tamalpais oak	List 1B.3	Found in lower montane coniferous forest (330 to 2460 ft). Blooms March – April.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest.
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	List 4.2	Found in cismontane woodland, north coast coniferous forest, valley and foothill grasslands, and vernal pools in mesic conditions (50 to 1540 ft). Blooms February – May.	A	Suitable habitat is not present in the BSA; the BSA is comprised of CA bay forest and developed/disturbed areas that are not suitable for this species.
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Point Reyes checkerbloom	List 1B.2	Found in freshwater marshes and swamps near the coast (10 to 250 ft). Blooms April – September.	A	Suitable habitat is not present in the BSA; the BSA does not contain marshes or swamps.
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	List 1B.2	Found in broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland in open areas, sometimes on serpentine substrate (30 to 1640 ft). Blooms April – May.	A	Suitable habitat is not present in the BSA; the BSA is comprised of CA bay forest and developed/disturbed areas that are not suitable for this species.
<i>Streptanthus batrachopus</i>	Tamalpais jewelflower	List 1B.3	Occurs in closed-con coniferous forest and chaparral on serpentine substrate (1000 to 2130 ft). Blooms April – July.	A	Suitable habitat is not present in the BSA; the BSA does not contain coniferous forest, chaparral, or serpentine substrate.
<i>Streptanthus glandulosa</i> ssp. <i>pulchellus</i>	Mt. Tamalpais bristly jewelflower	List 1B.2	Found in chaparral and valley and foothill grasslands on serpentine substrate (490 to 2620 ft). Blooms May – July (August).	A	Suitable habitat is not present in the BSA; the BSA does not contain chaparral, grasslands, or serpentine substrate.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Trifolium amoenum</i>	Showy Indian clover	FE; List 1B.1	Found in coastal bluff scrub, and valley and foothill grasslands, sometime on serpentine substrates (20 to 1360 ft). Blooms April – June.	A	Suitable habitat is not present in the BSA; the BSA does not contain scrub or grassland habitat.
Natural Communities of Concern					
Northern Coastal Salt Marsh			Wetlands that are regularly flooded, irregularly flooded, or permanently saturated with a shallow water table. Dominant plant species include cordgrass, pickleweed, and saltgrass.	A	Habitat is not present; the BSA does not contain wetlands or any members of the dominant plant species.

Status Codes

Federal California Native Plant Society designations:

FE: Federally listed; Endangered

FT: Federally listed; Threatened

FPE: Federally Proposed for Listing as Endangered

FPT: Federally Proposed for Listing as Threatened

FPD: Federally Proposed for Delisting

FC: Federal Candidate

FD: Federal Delisted

NMFS SC: National Marine Fisheries Service Species of Concern

0.3: Plants not very threatened in California

State

ST: State listed; Threatened

SE: State listed; Endangered

SFP: State Fully Protected

SCT: State Candidate; Threatened

SWL: State Watch List

SR: State Rare

CSC: California Species of Special Concern

CA SA: Special Animal: General term that refers to taxa that the CNDDB is interested in tracking regardless of legal or protection status: Includes the following categories in addition to those listed above:

- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines.
- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring.
- Populations in California that may be on the periphery of a taxon's range, but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.)
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization.

List 1A: Plants presumed extirpated in California, either rare or extinct elsewhere

List 1B: Plants rare, threatened, or endangered in California and elsewhere

List 2A: Plants presumed extirpated in California but common elsewhere

List 2B: Plants rare, threatened or endangered in California but common elsewhere

List 3: Plants about which we need more information; a review list.

List 4: Plants of limited distribution; a watch list

0.1: Plants seriously threatened in California

0.2: Plants fairly threatened in California

Habitat Presence:

HP: Habitat is, or may be present

SP: Species is present

A: No habitat present and no further work needed

CH: Project footprint is located within a designated critical habitat unit.

EFH: Essential Fish Habitat

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

The project will result in impacts to California bay forest, consisting of 0.02 ac of permanent impacts and 0.09 ac of temporary impacts (Table 3). The project will also result in the removal of three trees, including two California bay trees, one 13 inches (in) diameter at breast height (dbh) and another multi-trunked with a cumulative dbh of 46.5 in. Trees to be removed are listed in the Tree Inventory provided in Appendix C.

Table 3: Summary of Impacts to Natural Communities

Vegetation Community	Impacts (acres)	
	Permanent	Temporary
Natural Communities		
California Bay Forest	0.02	0.09
Total	0.02	0.09

4.1 Habitats and Natural Communities of Special Concern

Natural communities of concern (i.e. riparian, wetlands, and oak woodlands) are considered sensitive under CEQA and may be regulated by CDFW pursuant to Section 1602 of the CFGC, as described in Section 2.1.2.3. Riparian communities and wetlands may also be regulated by ACOE and/or RWQCB if the community is determined to be waters of the U.S., or waters of the State, as described in Sections 2.1.2.1 and 2.1.2.2. Potential permitting requirements for impacts to these resources are discussed in Section 5.4.

No natural communities of concern occur in the BSA.

4.2 Special Status Plant Species

No special status plant species were observed or are expected to occur in the BSA, as shown in Table 2; therefore, no impacts are expected to occur to special status plants.

4.3 Special Status Animal Species Occurrences

No special status animal species were observed or are expected to occur in the BSA, as shown in Table 2; therefore, no impacts are expected to occur to special status animals.

Chapter 5 – Conclusions and Regulatory Determinations

5.1 Federal Endangered Species Act Consultation Summary

The proposed project will have no effect on any federally listed or candidate species under FESA. Therefore, consultation within the USFWS and/or NMFS pursuant to Section 7 of the FESA will not be required.

5.2 Essential Fish Habitat Consultation Summary

EFH was identified within all eight quadrangles of the NMFS Species list search; however, no waterways were identified in the BSA. Therefore, EFH consultation with NMFS will not be required.

5.3 California Endangered Species Act Consultation Summary

The proposed project will not impact any State listed species; therefore, no Incidental Take Permit pursuant to Section 2081 of the California Fish and Game Code will be required for this project.

5.4 Wetlands and Other Waters Coordination Summary

There are no wetlands or other waters of the U.S. in the BSA under the jurisdiction of ACOE, RWQCB or CDFW. The project will not result in impacts to wetlands or other waters.

5.5 Executive Order 11990 – Protection of Wetlands

There are no wetlands in the BSA. The project will not result in impacts to wetlands.

5.6 Migratory Bird Treaty Act and California Fish and Game Code (Breeding Birds)

Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in “take” which is prohibited under the MBTA and Section 3513 of the CFGC. CFGC Section 3503 also prohibits take or destruction of bird nests or eggs.

The following seasonal work restrictions will be implemented during construction to minimize the potential for take of nesting birds:

1. If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project

to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, the line of sight between the nest and the BSA, and the feasibility of establishing no-disturbance buffers.

2. Additionally, CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.
3. If work is allowed to proceed, a qualified biologist shall be on-site weekly during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

5.7 Executive Order 13112: Invasive Species

To avoid the introduction of invasive species into the BSA during project construction, contract specifications shall include, at a minimum, the following measures.

1. All earthmoving equipment to be used during project construction shall be cleaned thoroughly before arrival on the project site.
2. All seeding equipment (i.e. hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.
3. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.
4. To avoid introduction of additional non-native species to the site, all fill dirt brought onto the site must be weed free.

5.8. Executive Order 11988: Floodplain Management

The proposed project would not have significant adverse impacts to the existing floodplain or significantly alter the hydraulics in the area. Therefore, the project would not increase the risk of flooding.

5.9. City of San Rafael Tree Ordinance (Code of Ordinances Chapter 11.12)

The project will result in the removal of two California bay trees and one black acacia. According to the City of San Rafael Tree Ordinance, any City employees acting under the scope of their employment by the City are not subject to the requirements of the Ordinance. The City of San Rafael is the proponent of this Project, and therefore mitigation for the loss of the trees is not required, since the tree ordinance is not applicable.

Chapter 6 – References

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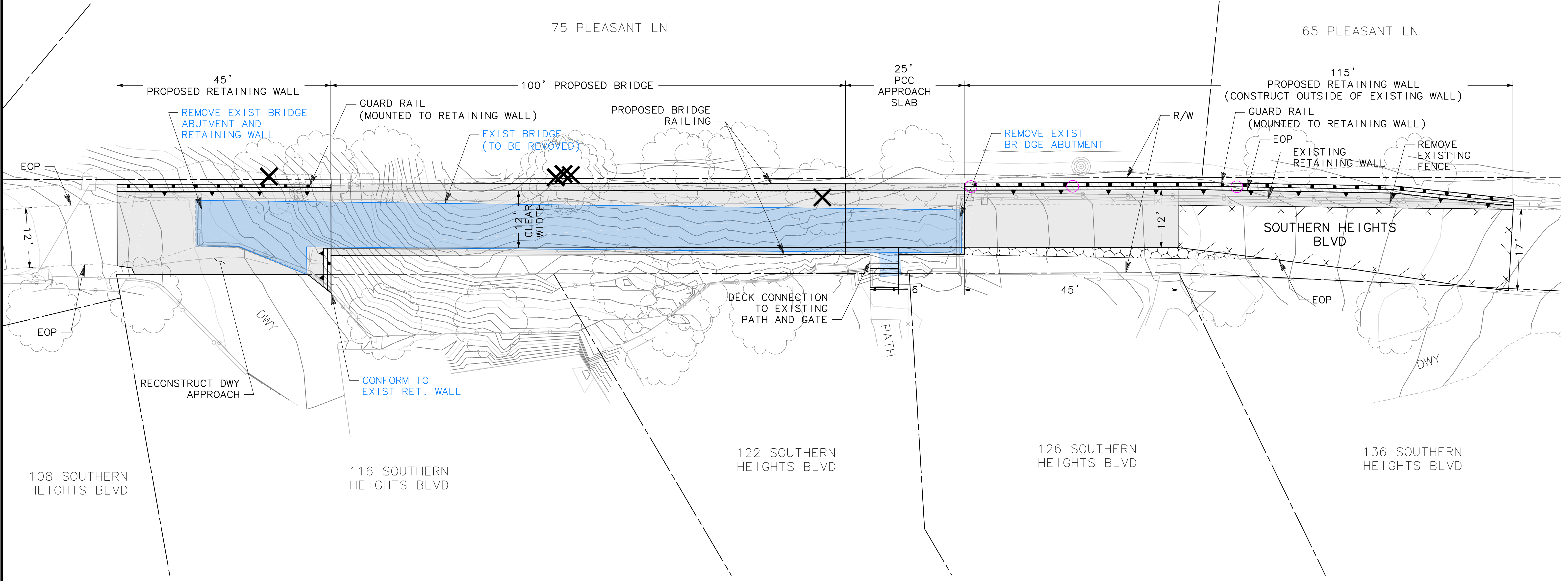
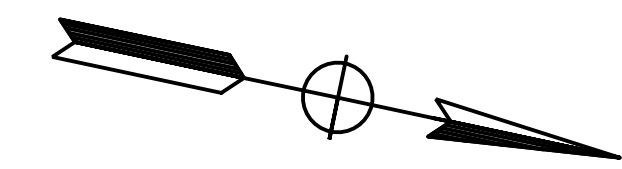
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U.S. Fish and Wildlife Service. 2017. Online Threatened and Endangered Species Lists. Sacramento Fish and Wildlife Office. Records search executed June 1, 2017. Sacramento, California: Sacramento Fish and Wildlife Office.

Appendix A – Project Design

LEGEND

- EXISTING BRIDGE DECK
- PROPOSED RECONSTRUCTION
- REMOVE SURFACING
- GRIND & OVERLAY
- ✕ REMOVE TREE



CONCEPT PLAN
FOR REVIEW ONLY

NOTE
THE RIGHT-OF-WAY AND PROPERTY LINES SHOWN HEREON ARE A GIS PRODUCT AND ARE PRELIMINARY IN NATURE, BASED UPON AVAILABLE RECORDS. THEY SHOULD NOT BE RELIED UPON AS DEFINITIVE AND DO NOT REPRESENT AN ON-THE-GROUND SURVEY. THESE LINES MAY CHANGE UPON COMPLETION OF BOUNDARY SURVEY CONDUCTED BY A LICENSED SURVEYOR.

SCALE: 1" = 10'

<p>SAN RAFAEL SOUTHERN HEIGHTS BRIDGE REPLACEMENT MAINTAIN EXIST ROW</p>	
<p>FEBRUARY 2017</p>	<p>MARK THOMAS & COMPANY <small>Providing Engineering, Surveying & Planning Services</small></p>

Appendix B – CNDDDB, USFWS, NMFS and CNPS Lists



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (San Rafael (3712285))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Adela oplerella</i> Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Arctostaphylos montana</i> ssp. <i>montana</i> Mt. Tamalpais manzanita	PDERI040J5	None	None	G3T3	S3	1B.3
<i>Arctostaphylos virgata</i> Marin manzanita	PDERI041K0	None	None	G2	S2	1B.2
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	PMPOA17070	None	None	G3Q	S2	2B.1
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	IILEPE2202	Endangered	None	G4T1	S1	
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i> Mt. Tamalpais thistle	PDAST2E1G2	None	None	G2T1	S1	1B.2
<i>Coastal Brackish Marsh</i> Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
<i>Coastal Terrace Prairie</i> Coastal Terrace Prairie	CTT41100CA	None	None	G2	S2.1	
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Dicamptodon ensatus</i> California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	PDPGN083S1	None	None	G5T2	S2	1B.2
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
<i>Fritillaria lanceolata</i> var. <i>tristulis</i> Marin checker lily	PMLIL0V0P1	None	None	G5T2	S2	1B.1
<i>Gilia millefoliata</i> dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
<i>Helianthella castanea</i> Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
<i>Hemizonia congesta</i> ssp. <i>congesta</i> congested-headed hayfield tarplant	PDAST4R065	None	None	G5T1T2	S1S2	1B.2
<i>Hesperolinon congestum</i> Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
<i>Holocarpha macradenia</i> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<i>Horkelia tenuiloba</i> thin-lobed horkelia	PDROS0W0E0	None	None	G2	S2	1B.2
<i>Kopsiopsis hookeri</i> small groundcone	PDORO01010	None	None	G4?	S1S2	2B.3
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Lateralus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<i>Lessingia micradenia</i> var. <i>micradenia</i> Tamalpais lessingia	PDAST5S063	None	None	G2T2	S2	1B.2
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<i>Navarretia rosulata</i> Marin County navarretia	PDPLM0C0Z0	None	None	G2	S2	1B.2
<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Oncorhynchus kisutch</i> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G4	S2?	
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
<i>Plagiobothrys glaber</i> hairless popcornflower	PDBOR0V0B0	None	None	GH	SH	1A
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	PMPOA4Y070	None	Threatened	G2	S2	1B.1
<i>Polygonum marinense</i> Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Pomatiopsis binneyi</i> robust walker	IMGASJ9010	None	None	G1	S1	
<i>Quercus parvula var. tamalpaisensis</i> Tamalpais oak	PDFAG051Q3	None	None	G4T2	S2	1B.3
<i>Rallus longirostris obsoletus</i> California clapper rail	ABNME05016	Endangered	Endangered	G5T1	S1	FP
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
<i>Serpentine Bunchgrass</i> Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
<i>Sidalcea calycosa ssp. rhizomata</i> Point Reyes checkerbloom	PDMAL11012	None	None	G5T2	S2	1B.2
<i>Sidalcea hickmanii ssp. viridis</i> Marin checkerbloom	PDMAL110A4	None	None	G3TH	SH	1B.1
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<i>Streptanthus batrachopus</i> Tamalpais jewelflower	PDBRA2G050	None	None	G2	S2	1B.3
<i>Streptanthus glandulosus ssp. pulchellus</i> Mt. Tamalpais bristly jewelflower	PDBRA2G0J2	None	None	G4T2	S2	1B.2
<i>Trachusa gummifera</i> San Francisco Bay Area leaf-cutter bee	IIHYM80010	None	None	G1	S1	
<i>Trifolium amoenum</i> two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<i>Vespericola marinensis</i> Marin hesperian	IMGASA4140	None	None	G2	S2	

Record Count: 57



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

June 01, 2017

Consultation Code: 08ESMF00-2017-SLI-2229

Event Code: 08ESMF00-2017-E-06033

Project Name: Southern Heights Boulevard Bridge Replacement Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-2229

Event Code: 08ESMF00-2017-E-06033

Project Name: Southern Heights Boulevard Bridge Replacement Project

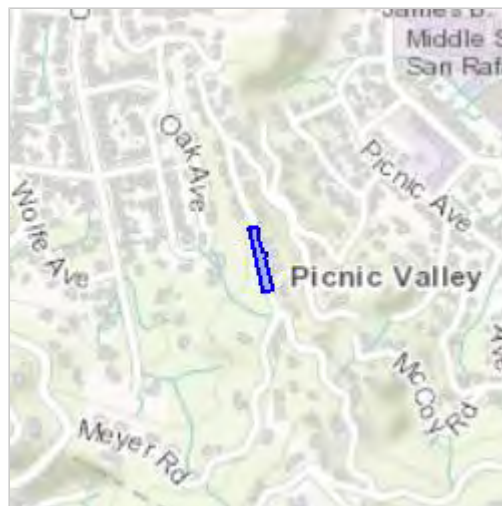
Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: MKT1604

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/37.96250110423151N122.52907562708157W>



Counties: Marin, CA

Endangered Species Act Species

There is a total of 18 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse (<i>Reithrodontomys raviventris</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

Birds

NAME	STATUS
California Clapper Rail (<i>Rallus longirostris obsoletus</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern (<i>Sterna antillarum browni</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet (<i>Brachyramphus marmoratus</i>) Population: U.S.A. (CA, OR, WA) There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl (<i>Strix occidentalis caurina</i>) There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Short-tailed Albatross (<i>Phoebastria (=Diomedea) albatrus</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/433	Endangered
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>) Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Amphibians

NAME	STATUS
<p>California Red-legged Frog (<i>Rana draytonii</i>)</p> <p>There is a final critical habitat designated for this species. Your location is outside the designated critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/2891</p>	Threatened

Fishes

NAME	STATUS
<p>Delta Smelt (<i>Hypomesus transpacificus</i>)</p> <p>There is a final critical habitat designated for this species. Your location is outside the designated critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/321</p>	Threatened
<p>Steelhead (<i>Oncorhynchus</i> (= <i>Salmo</i>) <i>mykiss</i>)</p> <p>Population: Northern California DPS</p> <p>There is a final critical habitat designated for this species. Your location is outside the designated critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/1007</p>	Threatened
<p>Tidewater Goby (<i>Eucyclogobius newberryi</i>)</p> <p>There is a final critical habitat designated for this species. Your location is outside the designated critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/57</p>	Endangered

Insects

NAME	STATUS
<p>Mission Blue Butterfly (<i>Icaricia icarioides missionensis</i>)</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/6928</p>	Endangered
<p>Myrtle's Silverspot Butterfly (<i>Speyeria zerene myrtleae</i>)</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/6929</p>	Endangered
<p>San Bruno Elfin Butterfly (<i>Callophrys mossii bayensis</i>)</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/3394</p>	Endangered

Flowering Plants

NAME	STATUS
<p>Marin Dwarf-flax (<i>Hesperolinon congestum</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5363</p>	Threatened
<p>Santa Cruz Tarplant (<i>Holocarpha macradenia</i>) There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6832</p>	Threatened
<p>Showy Indian Clover (<i>Trifolium amoenum</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459</p>	Endangered
<p>White-rayed Pentachaeta (<i>Pentachaeta bellidiflora</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7782</p>	Endangered

Critical habitats

There are no critical habitats within your project area.

Quad Name **San Rafael**

Quad Number **37122-H5**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) - **X**

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) - **X**

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat - **X**

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat - **X**

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat - **X**

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) - **X**

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat - **X**

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - **X**

Olive Ridley Sea Turtle (T/E) - **X**

Leatherback Sea Turtle (E) - **X**

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - **X**

Fin Whale (E) - **X**

Humpback Whale (E) - **X**

Southern Resident Killer Whale (E) - **X**

North Pacific Right Whale (E) - **X**

Sei Whale (E) - **X**

Sperm Whale (E) - **X**

ESA Pinnipeds

Guadalupe Fur Seal (T) - **X**

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH - **X**

Coastal Pelagics EFH - **X**

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Plant List

Inventory of Rare and Endangered Plants

53 matches found. Click on scientific name for details

Search Criteria

Found in Quad 3712285

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	1B.2	S2	G4T2
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
Arctostaphylos montana ssp. montana	Mt. Tamalpais manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.3	S3	G3T3
Arctostaphylos virgata	Marin manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.2	S2	G2
Aspidotis carlotta-halliae	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	4.2	S3	G3
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	4.2	S3	G3
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	2B.1	S2	G3Q
Calamagrostis ophitidis	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	4.3	S3	G3
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
Calochortus umbellatus	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	4.2	S4	G4
Castilleja ambigua var. ambigua	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S4	G4T5
Ceanothus gloriosus var. exaltatus	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	4.3	S4	G4T4
Ceanothus pinetorum	Kern ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S3	G3
Ceanothus rigidus	Monterey ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr(Jun)	4.2	S4	G4
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
Chorizanthe cuspidata var. cuspidata	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	1B.2	S1	G2T1
Cirsium hydrophilum var. vaseyi	Mt. Tamalpais thistle	Asteraceae	perennial herb	May-Aug	1B.2	S1	G2T1
Cistanthe maritima	seaside cistanthe	Montiaceae	annual herb	(Feb)Mar-Jun(Aug)	4.2	S3	G3G4
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	4.2	S4	G4

<u>Elymus californicus</u>	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	4.3	S4	G4
<u>Eriogonum luteolum var. caninum</u>	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	1B.2	S2	G5T2
<u>Erysimum franciscanum</u>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	4.2	S3	G3
<u>Fissidens pauperculus</u>	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?
<u>Fritillaria lanceolata var. tristulis</u>	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	1B.1	S2	G5T2
<u>Gilia capitata ssp. tomentosa</u>	woolly-headed gilia	Polemoniaceae	annual herb	May-Jul	1B.1	S1	G5T1
<u>Gilia millefoliata</u>	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2
<u>Grindelia hirsutula var. maritima</u>	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	3.2	S1	G5T1Q
<u>Helianthella castanea</u>	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<u>Hemizonia congesta ssp. congesta</u>	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S1S2	G5T1T2
<u>Hesperolinon congestum</u>	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
<u>Holocarpha macradenia</u>	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1
<u>Horkelia tenuiloba</u>	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul(Aug)	1B.2	S2	G2
<u>Kopsiopsis hookeri</u>	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	2B.3	S1S2	G4?
<u>Leptosiphon acicularis</u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S3	G3
<u>Leptosiphon grandiflorus</u>	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	4.2	S3	G3
<u>Lessingia hololeuca</u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S3?	G3?
<u>Lessingia micradenia var. micradenia</u>	Tamalpais lessingia	Asteraceae	annual herb	(Jun)Jul-Oct	1B.2	S2	G2T2
<u>Micropus amphibolus</u>	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	1B.2	S2	G2
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
<u>Navarretia rosulata</u>	Marin County navarretia	Polemoniaceae	annual herb	May-Jul	1B.2	S2	G2
<u>Pentachaeta bellidiflora</u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
<u>Perideridia gairdneri ssp. gairdneri</u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	4.2	S4	G5T4
<u>Plagiobothrys glaber</u>	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH
<u>Pleuropogon hooverianus</u>	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	1B.1	S2	G2
<u>Polygonum marinense</u>	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	3.1	S2	G2Q
<u>Quercus parvula var. tamalpaisensis</u>	Tamalpais oak	Fagaceae	perennial evergreen shrub	Mar-Apr	1B.3	S2	G4T2

<u>Ranunculus lobbii</u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4
<u>Sidalcea calycosa ssp. rhizomata</u>	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	1B.2	S2	G5T2
<u>Stebbinsoseris decipiens</u>	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
<u>Streptanthus batrachopus</u>	Tamalpais jewelflower	Brassicaceae	annual herb	Apr-Jul	1B.3	S2	G2
<u>Streptanthus glandulosus ssp. pulchellus</u>	Mt. Tamalpais bristly jewelflower	Brassicaceae	annual herb	May- Jul(Aug)	1B.2	S2	G4T2
<u>Trifolium amoenum</u>	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 20 June 2017].

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Information

[About the Inventory](#)[About the Rare Plant Program](#)[CNPS Home Page](#)[About CNPS](#)[Join CNPS](#)

Contributors

[The Calflora Database](#)[The California Lichen Society](#)

Appendix C – Tree Inventory

Tree Inventory

Tree #	Scientific Name	Common Name	dbh (in)	To be Removed?	Health	Notes
1	<i>Aesculus californica</i>	California buckeye	5.2, 5, 4.3	N	3	Multi-trunked.
2	<i>Acacia melanoxylon</i>	Black acacia	14.8	Y	3	Leaning towards road.
3	<i>Acacia melanoxylon</i>	Black acacia	20.9	N	3	Growing with/into #4.
4	<i>Acacia melanoxylon</i>	Black acacia	23.8	N	3	Topped.
5	<i>Acacia melanoxylon</i>	Black acacia	9.8	N	3	
6	<i>Acacia melanoxylon</i>	Black acacia	6.8, 14, 7.5	N	3	Multi-trunked.
7	<i>Acacia melanoxylon</i>	Black acacia	4.7	N	3	
8	<i>Acacia melanoxylon</i>	Black acacia	18.2	N	3	
9	<i>Umbellaria californica</i>	California bay	8.3	N	3	
10	<i>Acacia melanoxylon</i>	Black acacia	7.9	N	3	Right next to power pole.
11	<i>Umbellaria californica</i>	California bay	9.25, 10.9 (incl. ivy stem)	N	2	Multi-trunked. Giant English ivy climbing, dragging tree down.
12	<i>Quercus sp.</i>	Oak species	10.1	N	0	Dead.
13	<i>Umbellaria californica</i>	California bay	15.9	N	3	
14	<i>Umbellaria californica</i>	California bay	13.2	N	3	
15	<i>Umbellaria californica</i>	California bay	11	N	3	
16	<i>Umbellaria californica</i>	California bay	5.5	N	3	
17	<i>Umbellaria californica</i>	California bay	11.1, 8.7, 10.7, 16	Y	3	Multi-trunked.
18	<i>Aesculus californica</i>	California buckeye	5.5	N	3	
19	<i>Acacia melanoxylon</i>	Black acacia	14.2	N	3	Growing against retaining wall.
20	<i>Quercus agrifolia</i>	Coast live oak	11.4, 18.1	N	2	Only one live trunk.
21	<i>Acer sp.</i>	Maple species	19.8	N	4	Leaning strongly west towards bridge.
22	<i>Prunus sp.</i>	Plum species	6.1, <4	N	1	Multi-trunked.
23	<i>Umbellaria californica</i>	California bay	8.9	N	3	
24	<i>Quercus agrifolia</i>	Coast live oak	16.7	N	3	
25	<i>Umbellaria californica</i>	California bay	6.2	N	3	
26	<i>Umbellaria californica</i>	California bay	5.1	N	3	
27	<i>Arbutus menziesii</i>	Madrone	6.5	N	2	
28	<i>Umbellaria californica</i>	California bay	13	Y	3	
29	<i>Umbellaria californica</i>	California bay	8.4	N	3	
30	<i>Quercus agrifolia</i>	Coast live oak		N	4	Directly adjacent to road in garden.

Appendix D – Representative Photos



Photo from below bridge, facing north.



Photo from below bridge, facing south.

APPENDIX D



*Southern Heights Bridge Replacement Project
City of San Rafael, Marin County, California
Bridge No. 27C0148; Caltrans District 4
Federal Project No. BRLO-5043(038)*

Representative Photos



View from east edge of bridge, facing east.



Photo of north end of bridge, facing south.



Photo of south end of bridge, facing north.



View from western edge of bridge, facing west.



APPENDIX D

*Southern Heights Bridge Replacement Project
City of San Rafael, Marin County, California
Bridge No. 27C0148; Caltrans District 4
Federal Project No. BRLO-5043(038)*

Representative Photos

APPENDIX C

HISTORIC PROPERTIES SURVEY REPORT

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Memorandum

*Making Conservation
a California Way of Life.*

To: TOM HOLSTEIN
Senior Environmental Planner
Office of Local Assistance, District 4

Date: February 7, 2018
File: 04-MRN
City of San Rafael
Southern Heights Blvd
Bridge Replacement

Attn: Hugo Ahumada

From: KAREN (CARRIE) REICHARDT 
Senior Environmental Planner
Office of Local Assistance, District 4

Federal Aid #: BRLO-5043 (038)

Subject: Completion of Section 106 for the Proposed Southern Heights Boulevard Bridge (Bridge No. 27C-0148) Replacement Project in the City of San Rafael in Marin County.

This memorandum serves to memorialize the completion of Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, compliance for the proposed Southern Heights Boulevard Bridge (Bridge No. 27C-0148) replacement project in the City of San Rafael in Marin County. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by the California Department of Transportation (Caltrans) pursuant to 23 U.S.C. 326 and the Memorandum of Understanding executed by the Federal Highway Administration and Caltrans.

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

Caltrans, District 4, in cooperation with the City of San Rafael, in accordance with Stipulation X.B.1 of the PA, determined that a Finding of No Historic Properties Affected is appropriate for the undertaking as there are no historic properties within the project Area of Potential Effect (APE). The Historic Property Survey Report (HPSR) and Archaeological Survey Report (ASR) for the proposed project were approved by Caltrans Professionally Qualified Staff (PQS) on January 18, 2018. The following properties have been determined **not eligible** for inclusion in the National Register of Historic Places (NRHP) as a result of this study:

Address

- Southern Heights Boulevard Bridge/Southern Heights Sidehill Viaduct (Bridge No. 27C-0148; P-21-001009)
- 116 Southern Heights Boulevard, San Rafael (APN: 013-132-01; P-21-001008)
- 122 Southern Heights Boulevard, San Rafael (APN: 013-124-07; P-21-001010)
- 126 Southern Heights Boulevard, San Rafael (APNs: 013-124-05, 013-124-06)
- 136 Southern Heights Boulevard, San Rafael (APN: 013-124-04)

04-MRN Southern Heights Blvd Bridge Replacement, City of San Rafael

BRLO-5043 (038)

February 7, 2018

Page 2

- 10 Meyer Road, San Rafael (APN: 012-282-17)

The State Historic Preservation Officer (SHPO) concurred with this determination on February 6, 2018.

No further archaeological or architectural history studies are required at this time. Additional studies may be required if the project plans change. In the event of the unexpected discovery of cultural material, all guidelines outlined in the Caltrans Standard Specifications (2015), Section 14-2.03A, Archaeological Resources, will be followed.

If you have any questions or need clarification on this review, please contact Carrie Reichardt at (510) 286-5530 or via email sent to karen.reichardt@dot.ca.gov.

c: OLA files



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

February 6, 2018

VIA EMAIL

In reply refer to: FHWA_2018_0122_001

Ms. Karen Reichardt, Senior Environmental Planner
Office of Local Assistance
Caltrans District 4
111 Grand Avenue, MS-8A
Oakland, CA 94612

Subject: Determinations of Eligibility for the Proposed Southern Heights Boulevard Bridge (Bridge No. 27C-0148) Replacement Project, San Rafael, Marin County, CA

Dear Ms. Reichardt:

Caltrans is initiating consultation for the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*. As part of your documentation, Caltrans submitted a Historic Property Survey Report, an Archaeological Survey Report, and a Historical Resources Evaluation Report (HRER) for the proposed project.

Caltrans proposes to replace the Southern Heights Boulevard Bridge in San Rafael. A full project description is located on Pages 1-2 of the HRER.

Caltrans determined that the following properties are not eligible for the National Register of Historic Places (NRHP):

- Southern Heights Boulevard Bridge/Southern Heights Sidehill Viaduct
- 116 Southern Heights Boulevard, San Rafael
- 122 Southern Heights Boulevard, San Rafael
- 126 Southern Heights Boulevard, San Rafael
- 136 Southern Heights Boulevard, San Rafael
- 10 Meyer Road, San Rafael

Based on my review of the submitted documentation, I concur.

Ms. Reichardt
February 6, 2018
Page 2

FHWA_2018_0122_001

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov or Alicia Perez at (916) 445-7020 with e-mail at alicia.perez@parks.ca.gov .

Sincerely,



Julianne Polanco
State Historic Preservation Officer

HISTORIC PROPERTY SURVEY REPORT**1. UNDERTAKING DESCRIPTION AND LOCATION**

District	County	Route	Post Miles	Unit	E-FIS Project Number	Phase
<i>District</i>	<i>County</i>	<i>Federal Project Number. (Prefix, Agency Code, Project No.)</i>		<i>Location</i>		
04	Mrn	BRL0-5043(038)		City of San Rafael		

Project Description:

The proposed Southern Heights Bridge Replacement Project is located in the City of San Rafael, Marin County, California (Attachment 1: Figures 1 and 2), within Caltrans District 4. The project area includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard situated between Meyer Road and Pearce Road. The project area is located approximately 0.5 miles south of downtown San Rafael, 0.9-miles west of Highway 101, and 19-mile north of Greenbrae.

The project consists of the demolition of the existing bridge (Bridge No. 27CO148) and the construction of a new bridge along Southern Heights Boulevard. The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge type has not yet been determined, but the structure is expected to be a 100-foot long, multi-span concrete or steel bridge.

The roadway alignment and grade will remain unchanged. The southern roadway approach and retaining wall will begin approximately 20 feet south of the existing southern bridge abutment. The new southern bridge abutment will be shifted north of the driveway to 116 Southern Heights Boulevard. The northern roadway approach will begin 45 feet north of the existing northern bridge abutment. The new northern bridge abutment will be shifted south of the walking access path to 122 Southern Heights Boulevard. A 115-foot long retaining wall will be constructed to the west of the existing retaining wall to allow for the widened bridge. The new retaining wall is expected to be a solid pile wall with steel H-piles and timber lagging with a concrete structural section on the outside face.

No new right-of-way will be required for the new bridge or retaining walls. Temporary construction easements (TCEs) are anticipated on the east and west sides of the bridge to provide construction access. Utilities, including overhead power and communication and underground water and natural gas, will be relocated.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on cast-in-drilled-hole piles. There is no waterway beneath the bridge, but a corrugated metal storm drain pipe that will need to be temporarily relocated away from the structure during the construction. Construction of the roadway approaches will involve the removal of existing

HISTORIC PROPERTY SURVEY REPORT

pavement, retaining walls and fences and the placement of fill material, aggregate base, hot mix asphalt pavement, soldier pile and concrete retaining walls, and new guard rails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

2. AREA OF POTENTIAL EFFECTS

In accordance with Section 106 Programmatic Agreement Stipulation VIII.A, the Area of Potential Effects (APE) for the project was established in consultation with Karen Reichardt, PQS Principal Investigator—Prehistoric and Historical Archaeology, Helen Blackmore, PQS Principal Architectural Historian, and Louis Schuman, Local Assistance Engineer, on March 14, 2017. The APE maps are in Attachment 2 of this Historic Property Survey Report.

The horizontal APE for Archaeology is bounded by the existing right-of-way and includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard. The Archaeological APE includes 274 feet of paved roadway and 162 feet of existing bridge, as well the land under the bridge and on either side of the roadway for 20 feet. This area totals approximately 0.6 acres. The Archaeological APE incorporates the project footprint that consists of the footprint of the existing bridge that is 162 feet long and 9 feet wide, the footprint of the proposed bridge that is 133 feet long and 16 feet wide, and areas not included in the existing right-of-way including a staging area at the north end of the proposed bridge footprint that is 114 feet long and approximately 16 feet wide, and a staging area at the south end of the proposed bridge footprint that is 124 feet long and approximately 17.5 feet wide. Depth of excavation is expected to reach 4-inches. Vertical APE is 30 feet below surface, which includes all ground disturbing activities such as removal and installation of bridge abutments, piers, footings, and railings.

The Architectural History APE includes the Archaeological APE and eleven adjacent parcels that include Marin County Assessor Parcel Numbers (APN) 013-124-04 at 136 Southern Heights Boulevard, APN 013-124-05 (no physical address), APN 013-124-06 at 126 Southern Heights Boulevard, APN 013-124-07 at 122 Southern Heights Boulevard, APN 013-132-01 at 116 Southern Heights Boulevard, APN 013-132-03 at 108 Southern Heights Boulevard, APN 013-132-04 at 104 Southern Heights Boulevard, APN 012-282-36 at 65 Pleasant Lane, APN 012-282-37 at 75 Pleasant Lane, APN 012-282-40 at 90 Pleasant Lane, and APN 012-282-17 at 10 Meyer Road. The Architectural History APE includes eleven built-environment resources and totals 3.3 acres.

HISTORIC PROPERTY SURVEY REPORT**3. CONSULTING PARTIES / PUBLIC PARTICIPATION****X Native American Tribes, Groups and Individuals**

- Greg Sarris, Chairperson, Federated Indians of Graton Rancheria (FIGR)
A certified letter was sent on April 19, 2017 with preliminary project information to initiate Section 106 consultation and as formal notification of the proposed project.
- Gene Buvelot, FIGR
A certified letter was sent on April 19, 2017 with preliminary project information to initiate Section 106 consultation and as formal notification of the proposed project.
- Buffy McQuillen, Tribal Historic Preservation Officer (THPO) responded on behalf of both Greg Sarris and Gene Buvelot for FIGR. On May 20, 2017 Ms. McQuillen conveyed their thanks for the notification and stated that the project will be reviewed. On May 22, 2017 Ms. McQuillen stated that the project will likely affect tribal cultural resources and that the tribe would like to participate in the survey phase if it has not yet been completed.
- Ms. Evans replied on May 24, 2017 stating that the survey had been completed already and provided the draft ASR for their review and offered the FIGR a field visit.
- On September 21, 2017 Ms. Evans followed up via e-mail with Ms. McQuillen to ask if the ASR had been reviewed and offered continuing consultation regarding the Tribe's concern that Tribal Resources could be impacted by the Project.
- On October 2, 2017 Ms. Evans followed up via e-mail with Ms. MsQuillen and again provided the draft ASR, and requested a day and time for a phone call to ensure the Tribe's concerns are fully addressed.
- No response has been received from Ms. McQuillen to date.

X Native American Heritage Commission

- The Native American Heritage Commission (NAHC) in Sacramento, California was contacted on March 31, 2017 to request a Sacred Lands inventory and a list of Native American organization and individuals to contact for further information. The results of the Sacred Lands inventory were received on April 11, 2017 with negative results and a list of two contacts.

HISTORIC PROPERTY SURVEY REPORT**X Local Historical Society / Historic Preservation Group**

- Marin History Museum: Consultation with Marcie Miller in the Research Department was conducted on April 7, 10, 11, 25, 27 and May 3rd, 2017. Consultation was conducted via email, phone calls and in person. Consultation resulted in Additional research information that was provided to EDS to assist with the historic context and themes related to the Architectural APE. The Marin History Museum did not have any specific comments related to the project.

X Other

- Mary Turner, owner of the property at 126 Southern Heights Boulevard. Consultation occurred in-person on April 4th and 5th, 2017. Ms. Turner advised that she grew up in the house at 126 Southern Heights Boulevard and advised that the bridge is original and was not replaced in 1981. She stated that her parents Marian and Earl Turner bought the house in 1947.
- Kitty Henderson, Executive Director of the Historic Bridge Foundation, was called on January 3, 2018 and a voicemail was left for her, specifying the bridge to be removed, location, and providing callback information. Ms. Henderson returned the call on January 3, 2018 and requested additional information about the project and bridge. The information was e-mailed to her on January 3, 2018 with an invitation to reply if the Historic Bridge Foundation has any concerns or input. Ms. Henderson called on January 5, 2018 and said that her organization would like to be included earlier in the planning process when initial discussions of bridge removal occur, so they can be involved in the decision-making process regarding alternatives and/or removal of bridge(s). In her January 5, 2018 e-mail Ms. Henderson stated that the Historic Bridge Foundation does “not have sufficient information on the significance of the bridge or the Section 106 process and any alternatives that may have been discussed.”
- Janice Calpo, Caltrans Headquarters Staff Architectural Historian, was contacted via e-mail on August 10, 2017. Ms. Calpo stated that there are no notes or red flags that would alert Caltrans to further evaluate Bridge #27CO148.

HISTORIC PROPERTY SURVEY REPORT**4. SUMMARY OF IDENTIFICATION EFFORTS**

- | | |
|---|--|
| <input checked="" type="checkbox"/> National Register of Historic Places | <input checked="" type="checkbox"/> California Points of Historical Interest |
| <input checked="" type="checkbox"/> California Register of Historical Resources | <input checked="" type="checkbox"/> California Historical Resources Information System (CHRIS) |
| <input checked="" type="checkbox"/> California Inventory of Historic Resources | <input checked="" type="checkbox"/> Caltrans Historic Highway Bridge Inventory |
| <input checked="" type="checkbox"/> California Historical Landmarks | |
| <input checked="" type="checkbox"/> Other Sources consulted | |

- California Office of Historic Preservation (OHP) Archaeological Determination of Eligibility list, dated 04-05-12.
- OHP Directory of Properties in the Historic Property Data File for San Rafael, Marin County, dated 04-05-12.
- Marin History Museum, Novato, California
- Marin County Assessor/Recorder Office, San Rafael, California
- Marin County Library, California Room, San Rafael, California
- www.newspapers.com
- www.ancestry.com
- www.calisphere.com
- www.srchamber.com
- <http://www.sanrafaelheritage.org/>
- <https://www.cityofsanrafael.org/>
- Mary Turner, owner of the property at 126 Southern Heights Boulevard.

 Results:

- The record search indicates that there have been 13 cultural resource studies conducted within a ½-mile of the Archaeological APE that cover less than 10% of the land within that radius. The Archaeological APE has not been previously studied for cultural resources; however, one archaeological study was conducted adjacent to the Archaeological APE on the south (S-10445) that did not result in the identification of any archaeological resources (Holman 1988). The study included the portion of the Architectural History APE that includes the property at 10 Meyer Road.
- There are two cultural resources recorded on Department of Parks and Recreation (DPR) 523 forms within a ½-mile of the Archaeological APE (P-21-000594 and P-21-000645). P-21-000594 (CA-MRN-626/H) is a prehistoric

HISTORIC PROPERTY SURVEY REPORT

Native American shell midden site situated on an alluvial plain near the historic San Francisco Bay margins that also contains a historic house (Solomon and Campbell 1996). P-21-000645 (CA-MRN-313) represents the general location of a prehistoric Native American “shell-ground” site that appears to have been destroyed prior to 1910 (Nelson 1910). Neither site has been evaluated to determine eligibility for listing on the National Register of Historic Places.

- There are three cultural resources listed in the OHP's Directory of Properties in the Historic Property Data File for San Rafael, Marin County located within the Architectural History APE, one of which is also located in the Architectural APE. These include the houses at 116 Southern Heights Boulevard (P-21-001008) and 122 Southern Heights Boulevard (P-21-001010), and the ca. 1930 Southern Heights Bridge (P-21-001009), all of which have a National Register Status code of 7N, meaning that they need to be re-evaluated to determine eligibility for listing on the National Register of Historic Places. The Caltrans Structure Maintenance & Investigations list of Local Agency Bridges with Historical Significance lists the Southern Heights Bridge (sidehill viaduct) as a Category 5 - Ineligible for a National Register listing.
- A field survey of the APE for archaeological resources was conducted by Sally Evans, M.A, RPA on April 4, 2017. One historic isolated artifact was identified within the APE and burned historic-era artifacts were observed at 116 Southern Heights Boulevard outside of the Archaeological APE. An older house at 116 Southern Heights Boulevard burned down on the property prior to the existing house built in 1971. Please see Attachment 4 ASR.
- The built environment survey was conducted by Stacey De Shazo, M.A., on April 4, 5, 14, and 24, 2017. Ms. De Shazo evaluated the six built environment resources over 50 years of age within the APE. Three of the built environment resources are currently listed in the San Rafael Historic Resources Inventory, but these three had not yet been evaluated for listing in the California Register or National Register of Historic Places. All six built environment resources were determined not eligible for listing in the National Register of Historic Places as a result of this study. Please see Attachment 5 HRER.
- Historic-era artifacts were observed during survey of the Architectural History APE at 116 Southern Heights Boulevard/APN 013-132-03 where the property owner confirmed that an older house had burned down on the property prior to the existing house built in 1971. The historic-era artifacts are outside of the Area of Direct Impact (ADI) and Archaeological APE and will be neither directly nor indirectly affected by the Project. There is no potential for indirect effects because they are located too far away to be impacted by vibration and

HISTORIC PROPERTY SURVEY REPORT

the Project will not result in increased public access which would put it at risk for vandalism or looting. The historic-era artifacts are located outside of the Archaeological APE that includes all areas that will be directly affected by the Project's proposed ground disturbing activities. They are located within the Architectural History APE, which is larger than the Archaeological APE because it includes the ADI but also takes into account all adjacent parcels that contain built environment resources that have the potential to be indirectly affected (i.e. visual, vibration, or noise impacts) by the proposed Project. The historic-era artifacts are outside of the Archaeological APE and will not be affected directly or indirectly by the Project; therefore, further consideration of the historic-era artifacts is not warranted for purposes of this Project.

- Additionally, pursuant to Section 5020.1(k) of the California Public Resources Code, there are three built-environment resources within the APE that are considered historical resource for the purposes of CEQA because they are listed in the OHP's Directory of Properties in the Historic Property Data File for San Rafael, Marin County. The two resources located adjacent to the APE include the houses at 116 Southern Heights Boulevard (P-21-001008) and 122 Southern Heights Boulevard (P-21-001010), both of which have a National Register Status code of 7N, meaning that they need to be re-evaluated to determine eligibility for listing on the NRHP. The resource located within the APE includes the ca. 1930 Southern Heights Bridge (P-21-001009) that also has a National Register Status code of 7N. The Caltrans Structure Maintenance & Investigations list of Local Agency Bridges with Historical Significance that is on file at the NWIC includes the Southern Heights Bridge (sidehill viaduct), which is listed as not eligible for the NRHP.
- According to Caltrans' geoarchaeological overview of the region and preliminary soil analysis, the Archaeological APE is not sensitive for surface or buried archaeological deposits based on the age of the landform which predates human occupation in North America in addition to extensive erosion events associated with the landform (Byrd et al. 2017; Meyer and Rosenthal 2007).

5. PROPERTIES IDENTIFIED

- X Katie Vallaire, M.A., RPA, who meets the Professionally Qualified Staff Standards in Section 106 Programmatic Agreement Attachment 1 as a(n) Architectural Historian, has determined that the only other properties present within the APE meet the criteria for Section 106 Programmatic Agreement

HISTORIC PROPERTY SURVEY REPORT

Attachment 4 (**Properties Exempt from Evaluation**). These properties include:

- **65 Pleasant Lane** (APN 012-282-36) exempt as Property Type 1.
- **75 Pleasant Lane** (APN 012-282-37) exempt as Property Type 1.
- **90 Pleasant Lane** (APN 012-282-40) exempt as Property Type 4.
- **104 Southern Heights Blvd** (APN 013-132-04) exempt as Property Type 4.
- **108 Southern Heights Blvd** (APN 013-132-03) exempt as Property Type 4.

X Bridges listed as **Category 5 in the Caltrans Historic Highway Bridge Inventory** are present within the APE. Appropriate pages from the Caltrans Historic Bridge Inventory are attached.

- The **Southern Heights Sidehill Viaduct (Bridge No. 27CO148) (P-21-001009)** is listed on the Caltrans Structure Maintenance & Investigations list of Local Agency Bridges with Historical Significance as a Category 5 - Ineligible for a National Register listing. The bridge was re-evaluated for this project, and it remains not eligible for the National or California Registers. See Attachment 6, Caltrans Bridge History.

X The following cultural resources within the APE are **not eligible** for inclusion in the National Register of Historic Places:

- **136 Southern Heights Boulevard** within APN 013-124-04 (MR #5 in Attachment 3, Figure 4).
- **126 Southern Heights Boulevard** within APN 013-124-06 and APN 013-124-05 (MR #4 in Attachment 3, Figure 4).
- **122 Southern Heights Boulevard (P-21-001010)** within APN 013-124-07 (MR #3 in Attachment 3, Figure 4). This house is listed on the Office of Historic Preservation's Historic Property Data File for San Rafael, Marin County, dated 04-05-12, as P-21-001010.
- **116 Southern Heights Boulevard (P-21-001008)** within APN 013-132-01 (MR #1 in Attachment 3, Figure 4). This house is listed on the Office of Historic Preservation's Historic Property Data File for San Rafael, Marin County, dated 04-05-12, as P-21-001008.
- **10 Meyer Road** within APN 012-282-17 (MR #6 in Attachment 3, Figure 4).
- **Southern Heights Bridge (Southern Heights Sidehill Viaduct) (Bridge No. 27CO148) (P-21-001009)** (MR #2 in Attachment 3, Figure 4). This structure is listed on the Office of Historic Preservation's Historic Property Data File for San Rafael, Marin County, dated 04-05-12, as P-21-001009. It is also listed on the Caltrans Structure Maintenance & Investigations list of Local Agency Bridges

HISTORIC PROPERTY SURVEY REPORT

with Historical Significance as a Category 5 - Ineligible for the National Register.

The following are **historical resources for the purposes of CEQA** because they are locally designated under a local government ordinance or were identified as significant in a survey that meets the Office of Historic Preservation standards.

- **P-21-001008: 116 Southern Heights Boulevard** within APN 013-132-01.
- **P-21-001010: 122 Southern Heights Boulevard** within APN 013-124-06.
- **P-21-001009: Southern Heights Bridge (Southern Heights Sidehill Viaduct; Bridge No. 27CO148).**

6. HPSR to District File

Not applicable.

7. HPSR to SHPO

Caltrans has determined there are properties within the APE that were evaluated as a result of the project that are not eligible for inclusion in the National Register of Historic Places; see Section 5. Under Section 106 Programmatic Agreement Stipulation VIII.C.6, Caltrans requests SHPO's concurrence in this determination.

Caltrans, pursuant to Section 106 Programmatic Agreement Stipulation IX.A, has determined a Finding of No Historic Properties Affected is appropriate for this undertaking and is notifying SHPO of this determination.

8. HPSR to CSO

Not applicable.

9. Findings for State-Owned Properties

Findings to District File

HISTORIC PROPERTY SURVEY REPORT

- Not applicable; project does not involve Caltrans right-of-way or there are no Caltrans-owned cultural resources within the APE.

Findings to SHPO

- Not applicable.

Findings to CSO

- Not applicable.

10. CEQA Considerations

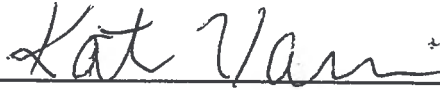
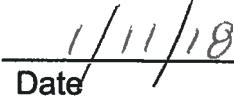
- Not applicable; Caltrans is not the lead agency under CEQA.

11. List of Attached Documentation

- Project Vicinity, Location, and APE Maps
- Project Vicinity Map: **Attachment 1**, Figure 1
 - Project Location Map: **Attachment 1**, Figure 2
 - APE Maps: **Attachment 2**
- Historical Resources Evaluation Report (HRER) (**Attachment 3**)
- Attachment 3: *Historical Resources Evaluation Report, Southern Heights Bridge Replacement Project, City of San Rafael, Marin County, California*. Report prepared by Katie Vallaire, M.A., LSA, Roseville, CA. October 2017.
- Archaeological Survey Report (ASR) (**Attachment 4**)
- Attachment 4: *Archaeological Survey Report, Southern Heights Bridge Replacement Project, City of San Rafael, Marin County, California*. Report prepared by Sally Evans, M.A., RPA, Principal Investigator – Archaeology, Evans & De Shazo, LLC, 6876 Sebastopol Avenue, Sebastopol, CA. May 2017.
- Other
- **Attachment 5**: Native American Consultation Correspondence (letter to NAHC, Results of Sacred Lands Inventory by NAHC, Native American Contact List, Letters to Native American individuals/organizations on Native American Contact List to initiate consultation and initial response from Federated Indians of Graton Rancheria).
 - **Attachment 6**: Caltrans Historic Bridge Inventory

HISTORIC PROPERTY SURVEY REPORT**12. HPSR Preparation and Caltrans Approval**

Prepared by:

Consultant /
discipline:
AffiliationKatie Vallaire, RPA
Architectural History and Archaeology
LSA, Roseville, CA

Date

Reviewed for
approval by:District 4 Caltrans
PQS discipline/level:Karen Reichardt
PQS Principal Investigator—
Prehistoric and Historical
Archaeology

Date

Approved by:

District 4 EBC:

Tom Holstein, Environmental Branch
Chief, Office of Local Assistance

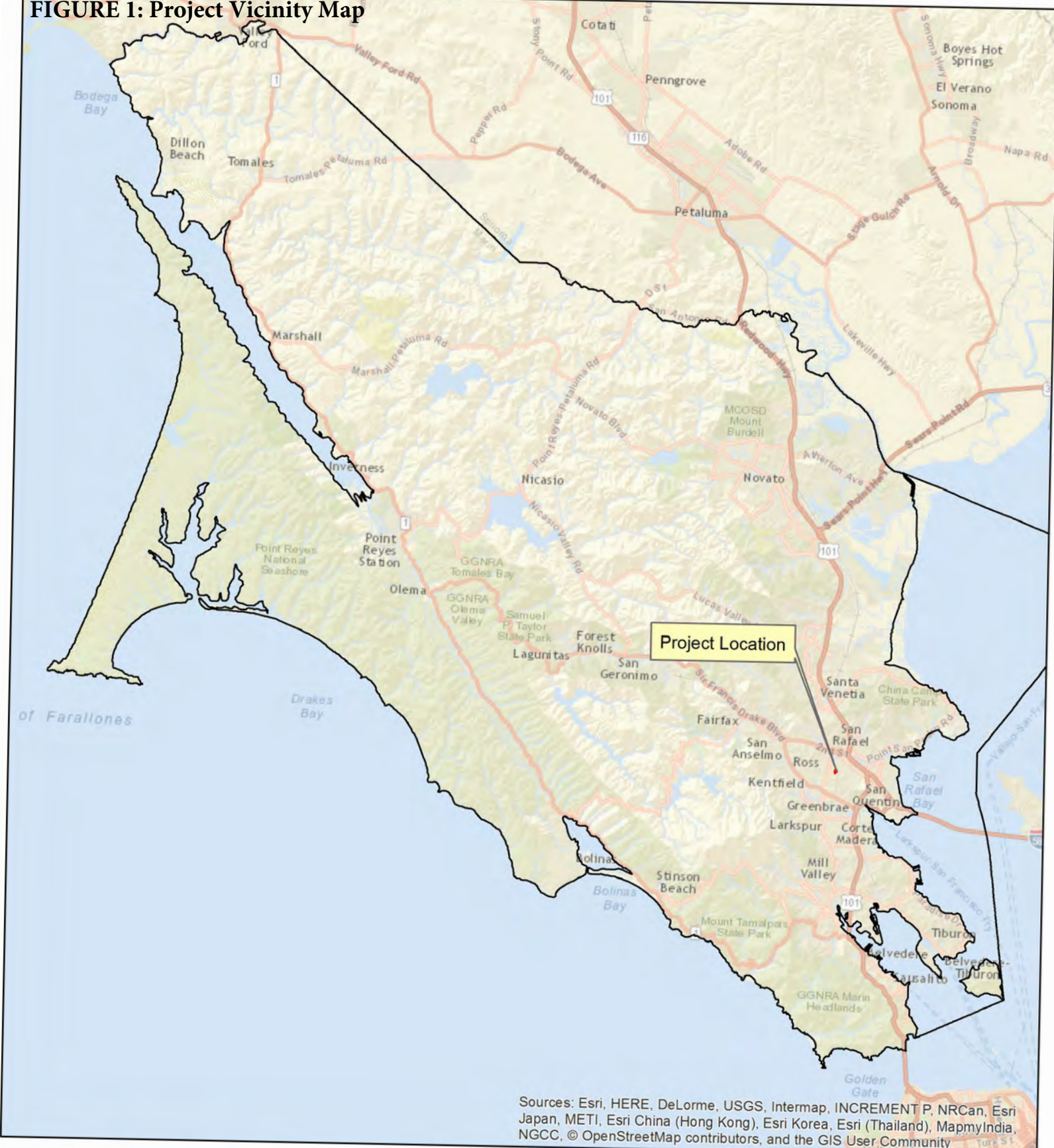
Date

Attachment 1:

Figure 1: Project Vicinity Map

Figure 2: Project Location Map

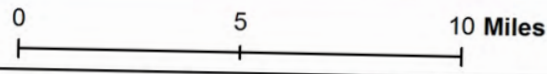
FIGURE 1: Project Vicinity Map



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



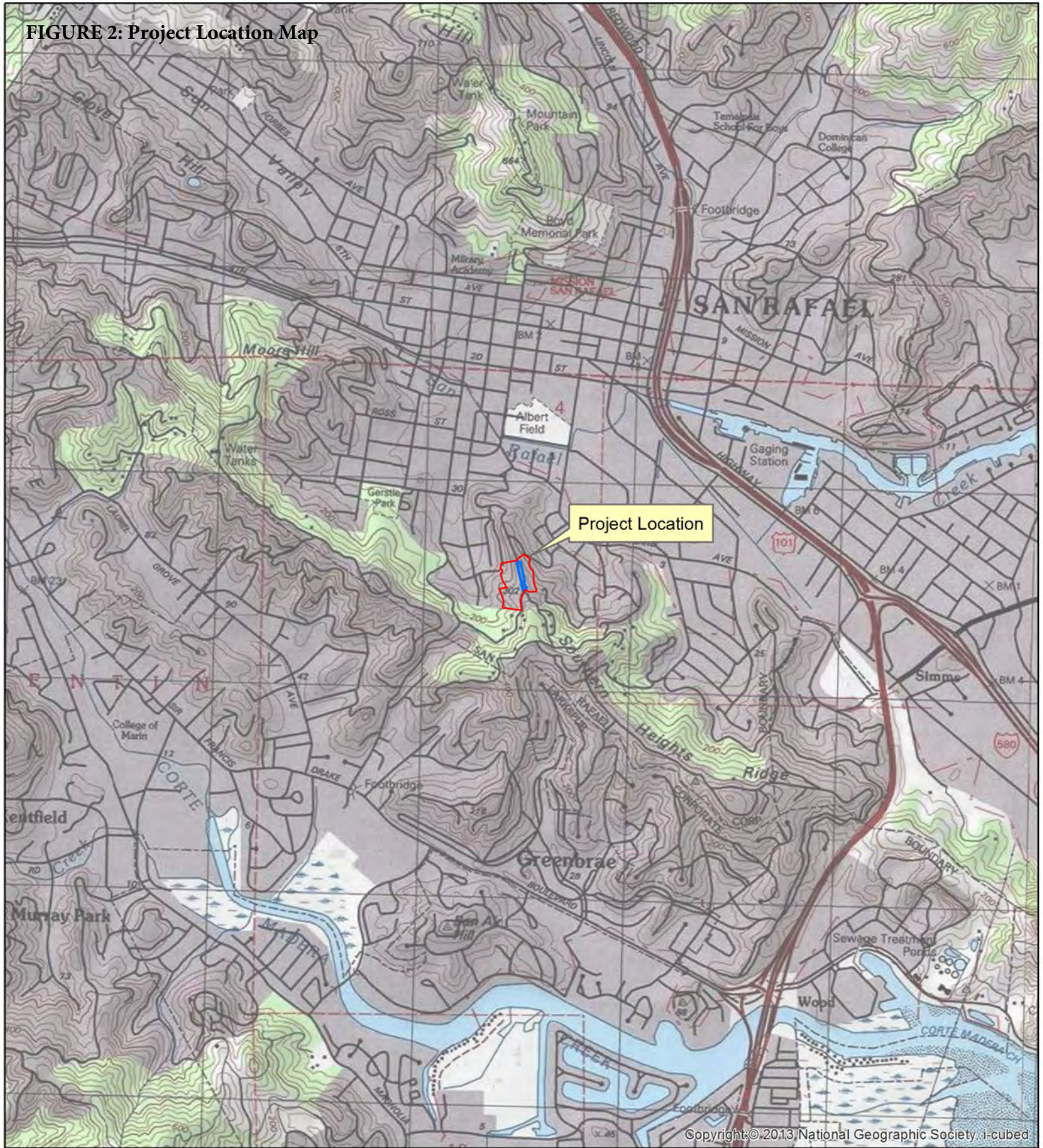
Marin County



1:275,000

<p>Southern Heights Bridge Replacement Project Southern Heights Boulevard, San Rafael Marin County, California</p>		<p>Legend</p> <ul style="list-style-type: none"> Project Location Marin County
<p>EVANS & DE SHAZO, LLC ARCHAEOLOGY & HISTORIC PRESERVATION</p>		

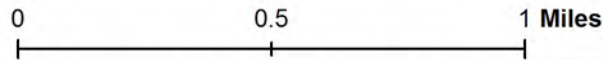
FIGURE 2: Project Location Map



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Marin County



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**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

Legend

- Architectural History APE
- Archaeological APE



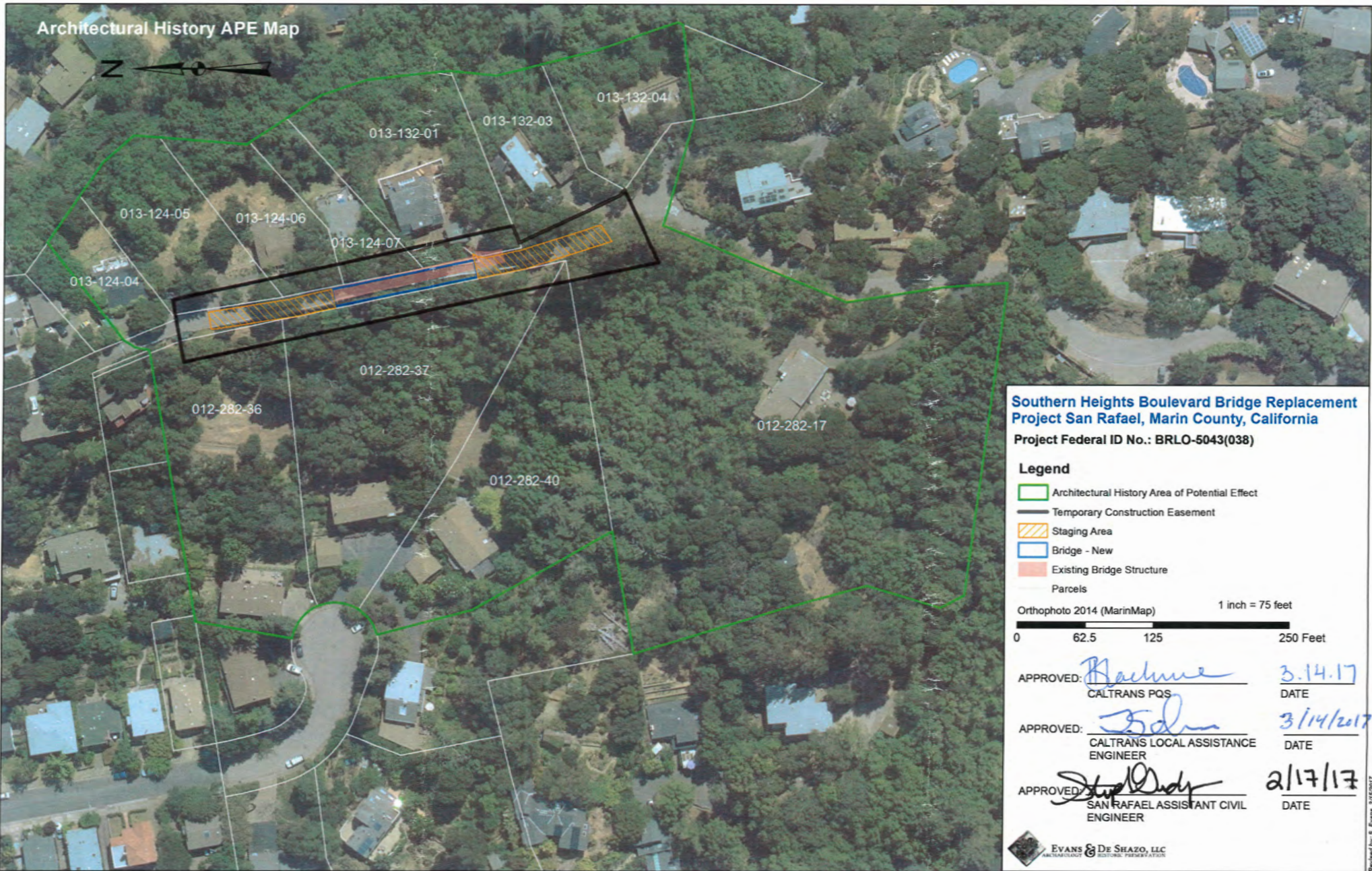
USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

Map Projection:
NAD 83 UTM Zone 10N

Attachment 2:

**Architectural History APE Map
Archaeological APE Map**

Architectural History APE Map



Southern Heights Boulevard Bridge Replacement Project San Rafael, Marin County, California
 Project Federal ID No.: BRLO-5043(038)

Legend

- Architectural History Area of Potential Effect
- Temporary Construction Easement
- Staging Area
- Bridge - New
- Existing Bridge Structure
- Parcels

Orthophoto 2014 (MarinMap) 1 inch = 75 feet

0 62.5 125 250 Feet

APPROVED:	3.14.17
CALTRANS PQS	DATE
APPROVED:	3/14/2017
CALTRANS LOCAL ASSISTANCE ENGINEER	DATE
APPROVED:	2/17/17
SAN RAFAEL ASSISTANT CIVIL ENGINEER	DATE



Archaeological APE Map



**Southern Heights Boulevard Bridge Replacement
Project San Rafael, Marin County, California**

Project Federal ID No.: BRLO-5043(038)

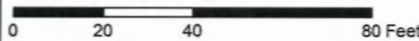


Legend

- Archaeological Area of Potential Effect
- Temporary Construction Easement
- Staging Area
- Bridge - New
- Existing Bridge Structure
- Parcels

Orthophoto 2014 (MarinMap)

1 inch = 27 feet



APPROVED: 
CALTRANS PQS

03/17/2017
DATE

APPROVED: 
CALTRANS LOCAL ASSISTANCE
ENGINEER

3/14/2017
DATE

APPROVED: 
SAN RAFAEL ASSISTANT CIVIL
ENGINEER

2/17/17
DATE

Reviewed by: S. Evans, 2/16/2017

Attachment 3:

Historic Resource Evaluation Report (HRER): Southern Heights Bridge Replacement Project, City of San Rafael, Marin County, California (2017).

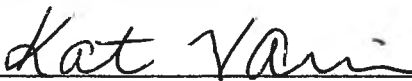
Prepared by Katie Vallaire, M.A.
Principal Investigator - Architectural History
LSA


HISTORICAL RESOURCES EVALUATION REPORT

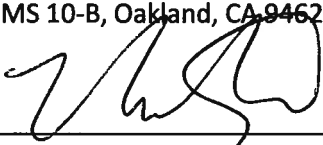
SOUTHERN HEIGHTS BRIDGE REPLACEMENT PROJECT

SAN RAFAEL, MARIN COUNTY, CALIFORNIA

BRLO-5043(038)

Prepared by 
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Reviewed by 
Helen Blackmore
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Approved by 
Noah M. Stewart, Environmental Branch Chief
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Contributing Author:
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6876 Sebastopol Avenue, Sebastopol, CA. 95472

January 2018

SUMMARY OF FINDINGS

The City of San Rafael is proposing the Southern Heights Bridge Replacement Project (Project) under the Highway Bridge Program administered for the Federal Highway Association by the California Department of Transportation (Caltrans), District 4. The project consists of the demolition of the existing bridge, constructed in ca. 1930, and the construction of a new bridge along Southern Heights Boulevard. The existing ca. 1930 bridge is a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings that was first rehabilitated in 1958, which included concrete piers and retaining walls and replacement of defective wooden members; and in 1981 the bridge was again reinforced with concrete wall abutments. The bridge (Bridge No. 27CO148; MR #2) has a width of nine feet and is 162 feet long with a wood deck and wood railings. The project includes the demolition of the existing bridge, which is being replaced due to structural deficiencies and its overall poor condition. The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge type has not yet been determined, but the structure is expected to be a 100-foot long, multi-span concrete or steel bridge. The work will occur within a section of the Southern Heights Boulevard that traverses north/south through a hilly residential area on the northeast slope of the Southern Heights Ridge, and carries local traffic.

The Area of Potential Effects (APE) is located approximately 0.5 mile south of downtown San Rafael, 0.9 mile west of Highway 101, and 19 miles north of Greenbrae. The Architectural History APE was delineated to incorporate all built environment resources that may be directly or indirectly affected by the proposed Project. The APE includes City right-of-way as well as all parcels immediately adjacent to the bridge (See Appendix A for Architectural History APE map).

Evans & De Shazo, LLC (EDS) conducted the research to address the built environment resources within the Architectural History APE. EDS identified a total of six built environment resources that include five buildings dating between 1907 and 1951 and the Southern Heights Bridge (Bridge No. 27CO148) constructed circa 1930. Each of these built environment resources required formal evaluation. The circa 1930 bridge is currently listed in the Caltrans Historic Bridge Survey as a category 5 bridge that is not eligible for listing in the NRHP; however, the bridge is also currently listed on the City of San Rafael Historic Resource Inventory (HRI) and the Office of Historic Preservation's Historic Property Directory with a National Register Status code of 7N, meaning it needs to be reevaluated.

LSA determined that of the six built environment resources evaluated, none appear to meet the criteria for listing in the National Register of Historic Places (NRHP). This conclusion is pursuant to Stipulation VIII.C of the *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA) (Caltrans 2014).

Additionally, although three of the six resources are currently listed in the San Rafael HRI (116 Southern Heights Blvd [MR #1], 122 Southern Heights Blvd [MR #3], and the Southern Heights Bridge

[MR #2]), none appear to meet the criteria for listing in the California Register of Historical Resources (CRHR). The DPR 523 forms for all six resources are in Appendix C.

Historic-era artifacts were observed during survey of the Architectural History APE at 116 Southern Heights Boulevard/APN 013-132-03 where the property owner confirmed that an older house had burned down on the property prior to the existing house built in 1971. The historic-era artifacts are outside of the Area of Direct Impact (ADI) and Archaeological APE and will be neither directly nor indirectly affected by the Project. There is no potential for indirect effects because they are located too far away to be impacted by vibration and the Project will not result in increased public access which would put it at risk for vandalism or looting. The historic-era artifacts are located outside of the Archaeological APE that includes all areas that will be directly affected by the Project's proposed ground disturbing activities. They are located within the Architectural History APE, which is larger than the Archaeological APE because it includes the ADI but also takes into account all adjacent parcels that contain built environment resources that have the potential to be indirectly affected (i.e. visual, vibration, or noise impacts) by the proposed Project. The historic-era artifacts are outside of the Archaeological APE and will not be affected directly or indirectly by the Project; therefore, further consideration of the historic-era artifacts is not warranted for purposes of this Project.

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1.0 PROJECT DESCRIPTION

The proposed Southern Heights Bridge Replacement Project is located in the City of San Rafael, Marin County, California (Attachment 1: Figures 1 and 2), within Caltrans District 4. The project area includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard situated between Meyer Road and Pearce Road. This section of Southern Heights Boulevard traverses north/south through a mountainous residential area on the northeast slope of the Southern Heights Ridge, which divides San Rafael from the communities of Larkspur, Greenbrae and Ross, and carries local traffic. The project area is located approximately 0.5 miles south of downtown San Rafael, 0.9-miles west of Highway 101, and 19-mile north of Greenbrae.

The project consists of the demolition of the existing bridge (Bridge No. 27CO148) and the construction of a new bridge along Southern Heights Boulevard. The existing bridge is a ca. 1930 one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments. The concrete piers and retaining walls, as well as defective wooden deck members were replaced in 1958, and in 1981 the bridge was again reinforced with concrete wall abutments. The bridge has a width of 9 feet and is 162 feet long with a wood deck and wood railings. The bridge is being replaced due to structural deficiencies and its overall poor condition. The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge type has not yet been determined, but the structure is expected to be a 100-foot long, multi-span concrete or steel bridge.

The roadway alignment and grade will remain unchanged. The southern roadway approach and retaining wall will begin approximately 20 feet south of the existing southern bridge abutment. The new southern bridge abutment will be shifted north of the driveway to 116 Southern Heights. The northern roadway approach will begin 45 feet north of the existing northern bridge abutment. The new northern bridge abutment will be shifted south of the walking access path to 122 Southern Heights. A 115-foot long retaining wall will be constructed to the west of the existing retaining wall to allow for the widened bridge. The new retaining wall is expected to be a soldier pile wall with steel H-piles and timber lagging with a concrete structural section on the outside face.

Neither the new bridge nor retaining walls will require new right-of-way. Temporary construction easements (TCEs) are anticipated on the east and west sides of the bridge to provide construction access. Utilities, including overhead power and communication and underground water and natural gas, will be relocated. It is not yet clear if the overhead utility relocations will be accommodated within the existing right-of-way or if utility easements will be needed for the overhead piles and wires. The water and gas lines will be relocated onto the new bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on cast-in-drilled-hole piles. There is no waterway beneath the bridge, but a corrugated metal storm drain pipe that will need to be temporarily relocated away from the structure during the construction. Construction of the roadway approaches will involve the removal of existing pavement, retaining walls and fences and the placement of fill material, aggregate base, hot mix asphalt pavement, soldier pile and concrete retaining walls, and new guard

rails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

1.1 AREA OF POTENTIAL EFFECTS

For purposes of this Project, two APEs were established: an Archaeological APE that includes all areas that will be directly affected by the Project's proposed ground disturbing activities, and an Architectural History APE which includes the area of direct effect but also takes into account all adjacent parcels that contained built environment resources that have the potential to be indirectly affected (i.e. visual, vibration, or noise impacts) by the proposed Project. Please see Appendix A for the APE map.

2.0 RESEARCH METHODS

Pre-field, background, and resource-specific research pertaining to the history of the Architectural History APE was conducted, as well as in-depth research related to historical themes and contexts associated with the surrounding planned environment and its development.

2.1 RECORDS SEARCH AND ARCHIVAL RESEARCH

Research included a record search at the Northwest Information Center (NWIC) of the California Historical Resources Information Systems (CHRIS) (File# 16-1500) located in Rohnert Park, California to determine the presence or absence of previously recorded historical resources located within a half-mile of the Architectural History APE, and to identify areas of previous cultural resource evaluations. Details regarding the NWIC research are provided within the Archaeological Survey Report (ASR) prepared for this project (EDS 2017). Of the six properties identified by EDS as needing evaluation, three of the resources were previously identified as part of the City of San Rafael's 1978 Historic Resources Inventory and listed in the 1986 San Rafael Historical/Architectural Survey; therefore, they are considered historical resources for purposes of CEQA per §15064.5(a)(2). Further detailed historic research utilizing primary and secondary documentation available at local repositories and online was also conducted. Information obtained was used to support the development of historic themes and contexts related to the history of the area and the planned built environment associated with built environment resources within the Architectural History APE. This additional in-person and on-line research also provided further understanding of the architectural style, chronology of ownership, construction and alteration history, and potentially significant events associated with the built environment resources located within the Architectural History APE to determine eligibility for listing on the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR).

EDS reviewed the following:

- National Register of Historic Places
- California Register of Historical Resources
- California Inventory of Historic Resources
- California Historical Landmarks
- California Points of Historical Interest
- Caltrans Historic Highway Bridge Inventory
- Caltrans Historic Bridge Inventory

EDS visited the following local research facilities and repositories:

- Marin History Museum, Novato, California
- Marin County Assessor/Recorder Office, San Rafael, California
- Marin County Library/California Room, San Rafael, California

The following online resources were accessed:

- www.newspapers.com
- www.ancestry.com
- www.calisphere.com
- www.srchamber.com
- <http://www.sanrafaelheritage.org/>
- <https://www.cityofsanrafael.org/>

2.2 CONSULTATION

This section serves to document public participation and consultation to date, including contacts with local historical societies, planning agencies, or interested individuals, and interviews with knowledgeable persons in accordance with the Caltrans HRER guidelines.

Table 1 below provides the details and contact information, dates, and type of communication undertaken as part of the HRER.

Table 1: Consultation Details

Contacts	Date(s)	Email	Telephone	In person	Results
Marin History Museum, Marcie Miller - Research Department	April 7, 10, 11, 25, 27 and May 3 and May 4, 2017.	x	x	X	Additional research information was provided to EDS to assist with the historic context and themes related to the Architectural History APE.
Mary Turner, owner of 126 Southern Heights Boulevard	April 4 and April 5, 2017			x	Mary advised that she grew up in the house at 126 Southern Heights Boulevard and that the bridge is original and was not replaced in 1981. She stated that her parents Marian and Earl Turner “bought the house in 1947.”
Janice Calpo, Caltrans Headquarters Staff Architectural Historian	August 10, 2017	X			Ms. Calpo stated that there are no notes or red flags that would alert Caltrans to further evaluate Bridge #27CO148.
Kitty Henderson, Executive Director, Historic Bridge Foundation (HBF)	January 3 and 5, 2018	X	X		Ms. Henderson said that her organization would like to be included earlier in the planning process when initial discussions of bridge removal occur, so they can be involved in the decision-making process regarding alternatives and/or removal of bridge(s). Ms. Henderson requested additional project information from LSA. LSA provided Ms. Henderson with the information requested through e-mail. Via phone, LSA conveyed that the bridge was evaluated as not eligible for the National or California Registers, but that it was listed

Table 1: Consultation Details

Contacts	Date(s)	Email	Telephone	In person	Results
					locally by the City. Additionally, the City does not know why it was ever included in the first place and the City has stated that they will likely remove it from their local inventory. In her January 5, 2018 e-mail Ms. Henderson, referring the Foundation’s records, the Foundation does “not have sufficient information on the significance of the bridge or the Section 106 process” and because the Foundation was not included in the planning stages, they lack information on “any alternatives that may have been discussed” during those planning stages that preceded this consultation effort. As a result, the Foundation has no comment on the Project. LSA closed this consultation loop with thanks and assurance that her wish to be included in the decision-making process in the initial planning stages will be conveyed.

2.3 HISTORICAL THEMES IDENTIFIED

The built environment cultural resources identified in the APE reflect the historic theme of growth and development that occurred in San Rafael; however, development in and around the city was heavily influenced by other historical themes such as transportation. The themes identified were used to establish the historical context in which these resources were evaluated in order to determine their eligibility for listing in the NRHP and the CRHR. Please see Section 4 for an historical overview that focuses on the themes identified which includes the planned development of Southern Heights and the Good Roads Movement.

3.0 FIELD METHODS

Section 106 regulations require a "reasonable and good faith effort" to identify historic properties (36 CFR § 800.4[b][1]). The purpose of the historic resource field survey was to identify, record, and evaluate all built environment resources within the Architectural History APE that have the potential to meet the NRHP and the CRHR criteria. During the field survey, EDS considered built environment resources such as buildings, structures, objects, districts, and non-archaeological sites within the Architectural History APE for eligibility to be listed on the NRHP/CRHR under criteria A/1, B/2, and C/3, and in rare circumstances, under Criterion D/4. Field methods followed the Caltrans' Volume 2 - Standard Environmental Reference, *Chapter 7: Built-Environment Resources Evaluation and Treatment and the Caltrans Code of Safe Surveying Practices*.

Stacey De Shazo, M.A. who qualifies as a PQS Principal Architectural Historian, conducted the field survey of the Architectural History APE on April 4, April 5, and April 24, 2017. During the field survey, EDS Principal Architectural Historian, Stacey De Shazo, M.A., identified six properties that consist of five built environment resources that date from 1907 to 1951, and one structure, identified as the Southern Heights Bridge that warranted evaluation. Five built environment cultural resources identified within the Architectural History APE located at 108 Southern Heights Blvd, 104 Southern Heights Blvd, 65 Pleasant Lane, 75 Pleasant Lane, and 90 Pleasant Lane were determined to be exempt from further evaluation under the category of "between 30 and 50 years old" pursuant to Attachment 4 of the Section 106 PA. During the field survey, EDS assessed, photographed, and documented the built environment resources on DRP 523 forms (See Appendix C).

EDS also talked with the property owners of 136, 126, 122, 108, and 104 Southern Heights Boulevard, as well as the property owner at 10 Meyer Road. Each property owner provided details regarding their property and the surrounding neighborhood, as well as information regarding the history of the Southern Heights Bridge.

4.0 HISTORICAL OVERVIEW

4.1 EARLY HISTORY OF SAN RAFAEL

In the early nineteenth century, Spanish explorers, missionaries, and settlers lived in the area that is now known as San Rafael. The mission fathers chose the area to build an *asistencia* (assistance) hospital to treat the Native Americans from Mission Dolores in San Francisco that were sick. On December 14, 1817, in what is now downtown San Rafael. Mission San Rafael Arcángel was founded by Father Vicente de Sarria under the patronage of San Rafael Arcángel, the angel of bodily healing. It was the 20th mission in the Spanish colonial province of Alta California, and by the end of the first year, the *asistencia* had a population of over 300 and became the first permanent Spanish establishment north of the San Francisco Bay. On October 19, 1822, San Rafael was declared independent of Mission Dolores and received full mission status. In 1821, following the Mexican War of Independence, Mexico had declared its independence from Spain and Alta California was soon under the control of Mexico. During this time, San Rafael was a small village that consisted of the adobe Mission San Rafael building, an adobe mission church, adobe mission walls, small houses for the “neophytes”, mission guest houses, a kitchen, an adobe Indian house, a cemetery, and several adobe buildings used for unknown purposes.¹

In 1833, the Mexican government secularized the missions of Alta California, stripping them of their wealth and redistributing vast landholdings to favored Mexican citizens, who were often soldiers loyal to Mexico during the Mexican War of Independence. In 1840, Governor Juan Bautista Alvarado granted an 8,877-acre rancho, called Rancho *Punta de Quentin Cañada San Anselmo*, to Juan (John) B.R. Cooper. The Rancho encompassed the southern portion of San Rafael, the San Quentin peninsula, and the present-day towns of Ross, Kentfield, and part of San Anselmo. Cooper was married to General Mariano Vallejo’s sister, Encarnacion, and became a naturalized Mexican citizen in 1830. Cooper, who spent little time at his rancho, hired Timothy Murphy to look after his cattle and manage local Native Americans that were supplying the labor force on the rancho (Mason 1971:48). In 1847, Cooper sold logging rights on the rancho to the U.S. military for payment of \$5 per 1,000 board feet cut (Spitz 2006:34). In 1844, Governor Micheltorena awarded Timothy Murphy three contiguous parcels – *San Pedro* that included portions of present-day San Rafael, *Santa Margarita*, and *Las Gallinas* – as a single land grant that totaled 21,678-acres. In 1847, Murphy was appointed the administrator of the Mission San Rafael, acting as an agent for over 1,400 Native Americans still living in and around the mission (Marin History Museum 2008).

4.1.1 Early American Period (1848 – 1900)

By 1848, the once small village of San Rafael had become an agricultural center within the lands that had been developed by Murphy. In 1849, Murphy built an adobe house between present-day Fourth and Fifth Streets that faced C Street. The adobe was the first private dwelling built in San Rafael and was located within the original town plat, which later became the center of the town (Spitz 2006:38). The adobe was occupied by Don Antonio Osio, as Murphy continued to reside in the Mission Buildings (Munro-Frasier 1880:323). After California achieved statehood in 1850, Marin County was established as one of the state’s first 27 counties, and San Rafael was one the county’s

¹ As depicted on a map adapted by Dewey Livingston on file at *Marin County Library, California Room*).

four original townships, as well as the county seat. In 1850, the first town lots were laid out and by 1851 a post office was established. In 1866, the editor of the *Marin County Journal* published the following recollection of San Rafael from 1851 (Marin County Library 2017),

“San Rafael boasted ten houses besides the Mission buildings; one store, one boarding house, and one whiskey mill. The buildings were all makeshifts except the residence of the late Timothy Murphy now owned and used by the county as a Court House; no fencing or other improvements were visible save a corral or two.”

Murphy died in 1853, and his adobe was sold to Timothy Mahon. Mahon either donated or leased the building to the city and it served as the county courthouse until a new one was constructed in 1872 (Kyle 2002). San Rafael was officially incorporated in 1874, and at the time of incorporation, it included 160 acres, centered at Fourth and B streets, and 600 residences (Spitz 2006:112). During this time, San Rafael grew slowly due its lack of industry and isolation from San Francisco. This all changed with the coming of the ferry and the railroad in 1870 when the San Rafael & San Quentin Railroad (SR&SQ) was established on March 21, 1870 that allowed quick travel from downtown San Rafael southeast to the ferry terminal at Point San Quentin. The coming railroad changed the character of San Rafael from a small isolated town of approximately 841 people in 1870 to approximately 2,276 in 1880.

In 1873, the Architectural History APE was part of a 549-acre property owned by William Tell Coleman. Coleman was born in Kentucky and came to California during the Gold Rush. Coleman never wielded an axe or a pick, instead he earned his fortune by selling tools, wares and other supplies to miners in Sacramento and Placerville before moving to San Francisco in 1850 and starting the William T. Coleman & Company. Coleman was extremely successful in the merchandising business, and was a prominent local figure. In 1851, he founded the Committee of Vigilance in San Francisco, which was established to restore order to the city during a time when vigilante justice was common. In 1856, he established a steamship line between New York and San Francisco, and moved to New York to manage his new business. He came to San Rafael in 1871 and paid \$84,000 for 1,100 acres of land that included the 549-acre property within the Architectural History APE and 915 acres north of the SR&SQ railroad. Coleman hired Golden Gate Park superintendent and civil engineer William Hammond Hall (1846 – 1934) to lay out the Coleman subdivision and he planted thousands of trees and well-nursed gardens. Coleman was influential in the success of many developments in San Rafael including the Marin County Water & Power Company, promoting the railroad, and partner to building the Hotel Rafael. By the 1880s, due in part to the efforts of Coleman, San Rafael was an established town with major institutions and business, but it also remained a resort town that catered not only to the wealthy, but to working-class travelers as well. Accommodations included luxury hotels, cottages, summer homes, and boarding houses. A photograph taken in the 1870s appears to have been taken from Meyer Road or Southern Heights Boulevard and is looking down “D” Street towards the town of San Rafael (Image 1). Growth during this time was supported by Hansen & Lund Lumber Yard and Isaac Shaver’s Pioneer Planning Mill & Lumber, Co. According to Diana Painter (Painter 2013), during this time “Architects from San Francisco were hired by wealthy clients in San Rafael to design their mansions and by investors to design their hotels”.



Image 1: Photo looking down “D” Street towards the town of San Rafael, likely taken from Meyer Road or Southern Heights Boulevard (Courtesy of the Ann T. Kent Room, Marin County Library).

The 1906 earthquake shook San Rafael, jolting many homes off their foundations and knocking over chimneys and rooftops; but the biggest effect of the earthquake was the dramatic increase in population as people fled San Francisco (Spitz 2006). The rail line via the ferry continued to be the only way to travel between San Francisco and San Rafael until the construction of the Golden Gate Bridge in 1937, which greatly improved access to San Rafael (Kyle 2002; Miller 1958; Spitz 2006).

4.2 PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land that encompasses the Architectural History APE. According to the 1892 Marin County Map, 252 acres of the 549 acres of land owned by Coleman, where the Architectural History APE is located, was purchased by business partners John William Mackay and James C. Flood. Mackay and Flood were two of the “Big Four” that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James’ son, James L. Flood. In 1907, James L. Flood sold a portion of the 252 acres of land to William L. Courtright and his wife Eloisa Courtright, which included the Architectural History APE, the land along Southern Heights Boulevard, as well as land east and north of Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern

Heights Boulevard. An advertisement in the San Francisco Call newspaper, dated May 15, 1910, states,



Image 2: Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

“SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric streetlights, gas, and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS”, “BUY NOW AND PROFIT BY JUNE ADVANCE”

Go to either office and make arrangements to see the property at once

W.L. COURTRIGHT. Owner”

The 1924 Sanborn Fire Insurance map shows the development of Southern Heights Boulevard, including the four buildings evaluated in this study, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard.

The 1924 Sanborn map shows additional development in the area as well as the addition of the garage located within Assessor Parcel Number (APN) 013-124-05 and associated with the property at 126 Southern Heights Boulevard. During this time, the two lots, which are adjacent and south of the property located at 116 Southern Heights Boulevard remained undeveloped. However, according to a conversation with the property owner of the 1971 house at 108 Southern Heights Boulevard (APN 013-132-03), there was an older house that burned down on the property. The field survey of this property revealed evidence of a fire in the form of burned historic-era artifacts, and was confirmed again during a personal conversation with the property owner. The updated 1950 Sanborn map reveals that most of the housing development along Southern Heights Boulevard occurred prior to 1924, and that by 1950 the two lots that include 104 and 108 Southern Heights Boulevard were vacant; however, as previously indicated, the lot at 108 Southern Heights Boulevard may have contained older house that was replaced by the current 1971 house.

4.3 THE GOOD ROADS MOVEMENT

During the late 1890s and early 1900s, transportation reform efforts throughout the country took place and the national “Good Roads Movement” emerged with the goal of improving the condition of local roads. The popularity of bicycling gave impetus to the movement, and bicyclers aligned with the farmers in demanding smooth, all-weather roads. It was essentially a rural grass roots movement in which cyclists, farmers and their families lobbied for better roads. States began to heed the public outcry for better roads and formed statewide “Good Roads” organizations. In Iowa, for example, the Governor called the first Iowa Good Roads Association meeting in April of 1903, a meeting which signaled a shift in control of roads from local to state governments.

The Southern Heights Bridge, although constructed primarily to allow for one-way auto traffic, was also utilized as a local footbridge and as a way to access downtown San Rafael by avoiding the more heavily trafficked “D” Street that is below and west of Southern Heights Boulevard (Painter 2013). The City of San Rafael constructed the timber stringer bridge along Southern Heights Boulevard in ca. 1930 to also link the developing neighborhoods of Picnic Valley and “Bush’s Tract”, which includes Southern Heights Boulevard, to provide a faster route to reach downtown San Rafael. During the early twentieth century, the growth of the City of San Rafael was dependent upon community planning and development enhancements that served the increased population and communities living further from the downtown. As a part of city improvements to the planned development along Southern Heights Boulevard, the City of San Rafael set out to construct access roads to downtown and roads that could be used by those who moved to San Rafael and commuted into San Francisco via the ferry. The San Francisco Bay Area ferry services played an important role in the development of San Rafael and Marin County. The ferry service at one point constituted the greatest water transit system in the world. From the Gold Rush until the completion of the Golden Gate Bridge in 1935, ferries provided the only transportation across the San Francisco Bay to San Rafael.

"In 1930, forty-three ferryboats, the largest number to have ever operated on the bay, carried a total of forty-seven million passengers and more than six million automobiles from shore to shore. Each day, fifty to sixty thousand people crossed the bay between San Francisco and Alameda; 25 percent of them rode in automobiles" (Nancy and Roger Olmstead papers, 1847 -2007).

The construction of Southern Heights Boulevard allowed for further development of the land, as it provide additional access to residents in the area and was used to market lots being sold for housing development along Southern Heights, which included vacation homes for the wealthy and commuters. Several houses are located directly adjacent to the bridge, and the property located at 122 Southern Heights Boulevard (MR #3) has a front gate that opens directly onto the bridge, providing a unique association with the bridge and surrounding houses. When the Southern Heights Bridge was constructed, timber stringer bridges were the standardized type of bridge constructed throughout the country. Since it was a lower cost bridge to build with easy working characteristics and materials were in plentiful supply, the stringer style bridge made a logical choice for many local small bridge projects, including the Southern Heights Bridge. "Although in the 20th century concrete and steel replaced wood as the major materials for bridge construction, wood is still widely used for short-and medium-span bridges" (Ritter 1990:1-1).

By the early 1950s, the Southern Heights Bridge had seen at least 20 years of automobile traffic and survived several local earthquakes and fires. However, in 1954 a fire that destroyed a home along Southern Heights Boulevard was in-part blamed on the Southern Heights Bridge's inability to support the local fire departments ten- to twelve-ton fire engines. By 1955, the City of San Rafael street superintendent recommended that the bridge be repaired or torn down, and closed the bridge to pedestrian and vehicular traffic until the city could decide on its fate. Ultimately, the City Council decided that the amount of vehicular traffic did not warrant any spending for reconstruction let alone repairing the guard rails (Daily Independent Journal 1954; Daily Independent Journal 1955).

In 1958, after the bridge was closed for over two years due to it being deemed "unsafe", the City Council voted to rehabilitate the bridge. The city awarded the contract to Howard R. Bru construction, who won the project based on the lowest bid at \$21,781 (Daily Independent Journal 1958). The work included installing concrete piers, replacing defective wooden members of the deck, and rebuilding the approaches. The bridge was in service another 23 years prior to its second rehabilitation that occurred in 1981. The 1981 rehabilitation included new concrete abutments and additional support. Today, the existence of new materials and technology has made steel and concrete the materials of choice for constructing bridges.

4.4 ARCHITECTURAL CONTEXT

4.4.1 Architectural Styles

The Southern Heights Boulevard neighborhood, which is historically referred to in deeds dated from the early twentieth century as Bush's Tract, was originally marketed in the early 1900s as "a paradise on earth" to build a "manor" style house that served as a "summer home" (Petaluma Daily Courier, February 28, 1918). During the early 1900s, the houses that were constructed within the Architectural History APE included a single Dutch Colonial Revival style house and several Vernacular

style houses with Craftsman-style details. As the community of San Rafael grew following-World War II, the neighborhood grew as well, and parcels that were previously vacant were improved with single-family houses. During this time, additional architectural styles within the Architectural History APE included a Contemporary house and two Neo-Mansard houses. This eclectic mix of styles represents the origins of the neighborhood as a developed community with "retreat"-style homes, and its later development from the 1950s through the 1970s as a neighborhood with a mix of architectural styles. That mix represents the periods of growth within the broader community, and also the pattern of individually designed and built houses within the City of San Rafael and Marin County. The mix of architectural styles—which is typical within developing neighborhoods and communities throughout California—is often based on personal preference and can derived from a combination of styles.

4.4.1.1 Vernacular

A useful approach to understanding what vernacular style is, can begin by defining what it is *not*. That is, vernacular architecture is not overly formal or monumental in nature, but rather is represented by relatively unadorned construction that is not designed by a professional architect. Vernacular architecture is the commonplace or ordinary building stock that addresses a practical purpose with a minimal amount of flourish or otherwise traditional or ethnic influences (Upton and Vlach 1986:xv-xxi, 426-432).

The historical roots of the Vernacular style in the United States dates from colonial settlement during the 16th and 17th centuries. European immigrants, either of modest independent means, or financed with corporate backing, brought with them a wood-based building tradition. From this combination came a new building tradition associated with unsettled and heavily forested land and a young population. This new style, vernacular style, was "characterized by short-lived or temporary dwellings focused on the family and distinct from the place of work" (Jackson 1984:85-87). Typically associated with older, hand-built rural buildings in remote or rural, agricultural settings, vernacular architecture can also include modern, pre-fabricated, general purpose steel buildings used as shop space, warehouses, discount-clearance centers and many other uses (Gottfried and Jennings 2009:9-16).

4.4.1.2 Craftsman (1900-1940)

"Craftsman" is a style associated with early an early-20th century architectural and design movement. Seeking to emphasize hand-made products that harkened to a pre-industrial past, the Craftsman styles residential buildings suited tourist families seeking an inexpensive second or vacation home suited to the environment of an alpine lake. As applied to a small residence, typically a bungalow, its general rustic qualities, small building footprint, and open floor plan created an affordable and easily reproduced was affordable and easy to construct. This style was popularized by Pasadena architects and brothers Charles and Henry Greene. Sourcing their initial design from the bungalows of the South Pacific, the Greenes began around 1900 to design simple residential buildings that captured California's al fresco lifestyle. Several style influences—notably the English Arts and Crafts movement—stressed the superior qualities of hand-made craftsmanship from a pre-industrial era. Unnecessary ornament was removed to reveal a more authentic form and shape using locally-based materials, such as pine and fir. In the Lake Tahoe Basin, local builders incorporated these concepts broadly to design modest, simple, wood-framed houses clad in

unpainted or lightly stained shingles to develop an organic, rusticated architecture that used local materials in ways sensitive to the local setting. The Craftsman Bungalow was given wide exposure via magazines and pattern books, with some books offering kits of pre-cut lumber and an assembly plan. As a result, the one-story Craftsman Bungalow was the most popular small house in the country (Lancaster 1986:79-106; McAlester and McAlester 2003:454).

4.4.1.3 Dutch Colonial Revival (1890 – 1915)

The term "Colonial Revival" refers to a rebirth of interest in the early English and Dutch houses of the Atlantic Seaboard. The style was re-introduced at the Philadelphia Exposition of 1876, which marked the centennial of the signing of the Declaration of Independence. Many of the buildings designed for the exposition were based on historically significant colonial designs. At about the same time, several national organizations published a series of articles on eighteenth century American architecture, which appeared in *American Architect* and *Harpers* magazines. The renewed interest in colonial architecture fueled by the centennial and the exposure received by the Dutch Colonial Revival style in national publications helped to make it popular throughout the country. The style was found in both urban and rural environments, though most examples that survived into the late nineteenth century were rural. Dutch Colonial Revival residential architecture often displays regional variations that reflect available local resources that include the stone, brick, and wood as building materials. Dutch Colonial Revival architecture is widely recognized by the gambrel roof, although this roof type was not used exclusively. Gambrel roofs were often found in New Jersey and the Hudson River Valley early in the colonial period, and later in New York. The earliest Dutch Colonial Revival houses were constructed one-room deep and with steeply pitched roofs.

As homes became larger, these steeply pitched roofs proved vulnerable to wind stresses and precipitation. As such, some houses featured an upper and lower portion of different pitches. Character-defining features of the Dutch Colonial Revival style include clapboard or brick exterior cladding, front or side gambrel roofs, full-width recessed or projecting porches, and simple building forms. They are typically, one or two stories in height. Roof dormers are typically wide with shed roofs. Classical detailing is often restrained and includes pediments, columns or pilasters, multi-paned double-hung sash windows, and fixed shutters. In California, early examples of Dutch Colonial Revival architecture were often blended with the influences of the Shingle or other Victorian era styles.

4.4.1.4 Contemporary (1945 – 1975)

Contemporary architecture is widely recognized by its clean lines, geometric planes and surfaces, exposed post and roof beams, and lack of applied ornamentation. Stone and wood are often used to add warmth, but form and structure are paramount. Frank Lloyd Wright-influenced buildings are considered a variant of this style along with examples influenced by Joseph Eichler. The landscape of the property is also important, as it provides the style's setting. By 1951, the key elements of the Contemporary style include a shed roof, split-level, warm, natural, stained wood, and large picture windows that extend the interior living spaces. By the late 1940s and early 1950s, builders began to recognize the value of well-designed, affordable houses in attracting the middle-class consumer, and many began working with architects to develop new looks for their model homes.

Along with the traditional Spanish and Colonial Revival styles of architecture, the clean lines and simple geometry of the Contemporary style proved to be well-suited to the low, horizontal massing of the prefabricated Ranch House. These qualities became quite popular with fashion-conscious homebuyers of the period. Architects also began to incorporate modern open floor plans into their interior designs, often merging the dining, living room, and kitchen areas into one common living space. Among the most distinctive early Contemporary style Ranch houses was the “Eichler house,” which was first designed by Stephen Allen and Robert Anshen in 1949 for builder Joseph Eichler and was later modified by Los Angeles architects A. Quincy Jones and Frederick Emmons (Hess 2004:67). Primarily a California-based developer, Eichler placed an emphasis on providing well-crafted, modern residential design for middle-class homebuyers. Lacking in architectural ornament, ‘Eichler houses’ were generally characterized by low and wide front gable roofs, exposed post-and-beam construction, spacious open floor plans, and the use of floor-to-ceiling glass. Taking a cue from Eichler, David Bohannon contracted architects Harwell Hamilton Harris and Edwin A. Wadsworth to design Contemporary and Traditional Ranch model homes that were featured in *House Beautiful* magazine in 1950. Bohannon’s 1951 tract developments in San Mateo and San Jose were comprised entirely of Contemporary -style Ranch home designed by his in-house architect Mogen Mogenson (Hess 2004:69). Even Cliff May joined in on the Contemporary Ranch movement in 1952 by designing low cost Contemporary style Ranch Houses for suburban markets. Developed along with business partner and architect Chris Choate, his “Cliff May Homes” branded models were built of simple, exposed post and beam construction with ready to assemble materials and retained very little of the romanticized Spanish historicism of his earlier custom houses (Gregory 2008:130-138).

4.4.2 Timber Stringer Bridges

Timber stringer bridges were the standard type of bridge built in many areas of the country in the first half of the twentieth century and during the time when the Southern Heights Bridge was constructed in ca. 1930 (Parsons Brinkerhoff and Engineering and Industrial Heritage 2005). The Southern Heights Timber Stringer Bridge was constructed during the first growth phase within the planned “Southern Heights” community, and was also rehabilitated during a second time of growth within the surrounding neighborhood in the 1950s. The following section describes the history and importance of wood stringer bridges in California and specifically the North Bay.

4.4.2.1 History and Description

“Wood stringer (or beam) bridges are a very old type of design that date back to the origins of bridge building. Ancus Martius’ Roman Pons Sublicius (third to fourth century, B.C.) was a wood pile and stringer structure. In the United States, timber stringer bridges were amongst the earliest built, simple waterway crossings. Long after wood truss bridges had ceased to be competitive with metal truss bridges for use in short spans in the nineteenth century, timber beam bridges were still being built. Because of the structure’s simplicity and readily available material (wood), the timber beam has endured to the present day in the form of rot-resistant timber laminated stringer, or beam, bridges. Today, these structures are built on low-trafficked, rural backcountry roads, private roads, or in national forests and parks.” (Parsons Brinkerhoff and Engineering and Industrial Heritage 2005.)

Engineers in California preferred constructing roadway bridges with steel and concrete in the 1930s through the 1950s; however, timber bridges were still constructed because of the availability of local materials, specifically wood. The timber bridges constructed in California during this time were primarily timber stringer or girder bridges constructed on secondary roadways as utilitarian structures. Central California contains the highest concentration of timber stringer bridges (JRP 2003:59; JRP 2004:20).

Other than the Southern Heights Bridge (Bridge 27C0148), Marin County contains at least three other timber stringer bridges. The Enterprise Concourse over Coyote Creek Tributary (Bridge 27C0129) was constructed in 1950 and the San Geronimo National Golf Course Pedestrian Overcrossing (Bridge 27C0099) was constructed in 1960. Both are listed as Category 5 “Bridge not eligible for NRHP” bridges in the October 2017 Caltrans Historic Bridge Inventory. The Bellam Boulevard Underpass (Bridge 27C0075) was constructed in 1930 and is listed as a Category 4 “Historical Significance not determined” bridge in the October 2017 Caltrans Historic Bridge Inventory. Of all four, the Bellam Boulevard bridge appears to retain the most integrity of design, workmanship, and materials – the aspects important for conveying significance of the timber stringer architectural style.

4.4.2.2 Construction Methods and Materials of Timber Stringer Bridges

According to NPS’s 2004 listed, multiple property, *Historic Highway Bridges of California* document,

“California's earliest bridges were built using local materials and a minimum of labor. Labor was in short supply in the mountainous areas of California. Often truss and suspension bridges were used to cross rugged terrain. Occasionally, simple timber stringer bridges, incorporated masonry work in piers, abutments, or wingwalls. Here stone from nearby fields or the streambed was utilized.”

Timber stringer (beam) bridges consist of a wood plank deck supported by heavy, square or rectangular, solid-sawn wood beams. Short span timber stringer bridges in the 10- to 30-foot range were and are built in areas that do not carry a high level of traffic and in parks. They are built as approach spans to metal truss, beam or girder bridges or as trestles. The timber beam (stringer) bridge is different from wood trestle bridges related to the type of substructure employed. According to *Historic Bridges in North Dakota*, whereas the ends of the stringers in a timber stringer bridge rest on a single vertical support constructed of stone, concrete, wood, or steel piles, the stringers of a timber trestle bridge rest on a framework of vertical members joined together with horizontal and diagonal bracing. These differences are important to understanding the construction of these two types of bridges

5.0 DESCRIPTION OF CULTURAL RESOURCES

All six built-environment resources evaluated were determined to be ineligible for listing on the NRHP. Three are of the six built environment resources are listed in the San Rafael HRI; however, none of the six resources are eligible for listing in the CRHR or the NRHP. The following table (Table 2) provides a summary of the built environment resources within the Architectural APE. Figure 4 in Appendix A provides an overview map depicting the Map Reference number. All six evaluated resources were documented on DPR forms that are included in Appendix C.

Table 2: Summary of Cultural Resources within the APE

Address	APN	Year Built	Eligibility Criteria	Architectural Style	Currently Listed in HRI	Map Reference #
116 Southern Heights Boulevard	013-132-01	1909	N/A	Dutch Colonial Revival	Yes (Architecture)	MR #1
Southern Heights Bridge (Bridge No. 27CO148)	N/A	Ca. 1930	N/A	Timber Stringer	Yes (Architecture)	MR #2
122 Southern Heights Blvd	013-124-07	1914	N/A	Vernacular	Yes (Architecture)	MR #3
126 Southern Heights Blvd	013-124-06	1914	N/A	Vernacular with Craftsman elements	No	MR #4
136 Southern Heights Blvd	013-124-04	1907	N/A	Craftsman	No	MR #5
10 Meyer Road	012-282-17	1951	N/A	Contemporary Ranch	No	MR #6

6.0 FINDINGS AND CONCLUSION

The NRHP and CRHR criteria state that usually a property must be at least 50 years old to be considered for historical significance. This standard is used to ensure that sufficient time has passed to gain an adequate historical perspective of the property’s significance. Six properties (five buildings and one bridge) were identified within the Architectural History APE as being at least 50 years old, or older. All six were evaluated for listing on the NRHP and the CRHR. All six resources appear ineligible for NRHP or CRHR listing (Table 3, 4). Three of these resources are currently listed in a local HRI (Table 4). Details of the evaluation of all six resources are provided on the DPR 523 forms in Appendix C. The following section details the findings of the evaluation.

Table 3: Resources Not Eligible for Inclusion in NRHP as a Result of This Study

Name	APN	Community	OHP Status Code	Map Reference #
116 Southern Heights Blvd	013-132-01	San Rafael	6Z	MR #1
Southern Heights Bridge (Bridge No. 27CO148)	N/A	San Rafael	6Z	MR #2
122 Southern Heights Blvd	013-124-07	San Rafael	6Z	MR #3
126 Southern Heights Blvd	013-124-06	San Rafael	6Z	MR #4
136 Southern Heights Blvd	013-124-04	San Rafael	6Z	MR #5
10 Meyer Road	012-282-17	San Rafael	6Z	MR #6

Table 4: Resources Currently Listed in the San Rafael HRI but Not Eligible for Inclusion in the CRHR as a Result of This Study

Name	APN	Community	OHP Status Code	Map Reference #
116 Southern Heights Blvd	013-132-01	San Rafael	5S1	MR #1
Southern Heights Bridge (Bridge No. 27CO148)	N/A	San Rafael	5S1	MR #2
122 Southern Heights Blvd	013-124-07	San Rafael	5S1	MR #3

Stacey De Shazo and Katie Vallaire, who both meet the Professionally Qualified Staff Standards in Section 106 PA Attachment 1 as an Architectural Historian or above, have determined that the only other properties present within the APE, including state-owned resources, meet the criteria for Section 106 PA (Properties Exempt from Evaluation). The properties include:

- 108 Southern Heights Boulevard (APN 013-132-03) was constructed in 1971 and is exempt as a Property Type 4.

-
- 104 Southern Heights Boulevard (APN 013-132-04) was constructed in 1971 and is exempt as a Property Type 4.
 - 90 Pleasant Lane (APN 012-282-40) was constructed in 1981 and is exempt as a Property Type 4.
 - APN 013-124-05 is a vacant lot and is exempt as a Property Type 1.
 - APN 012-282-37 is a vacant lot and is exempt as a Property Type 1.
 - APN 012-282-36 is a vacant lot and is exempt as a Property Type 1.

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APPENDIX A

Maps

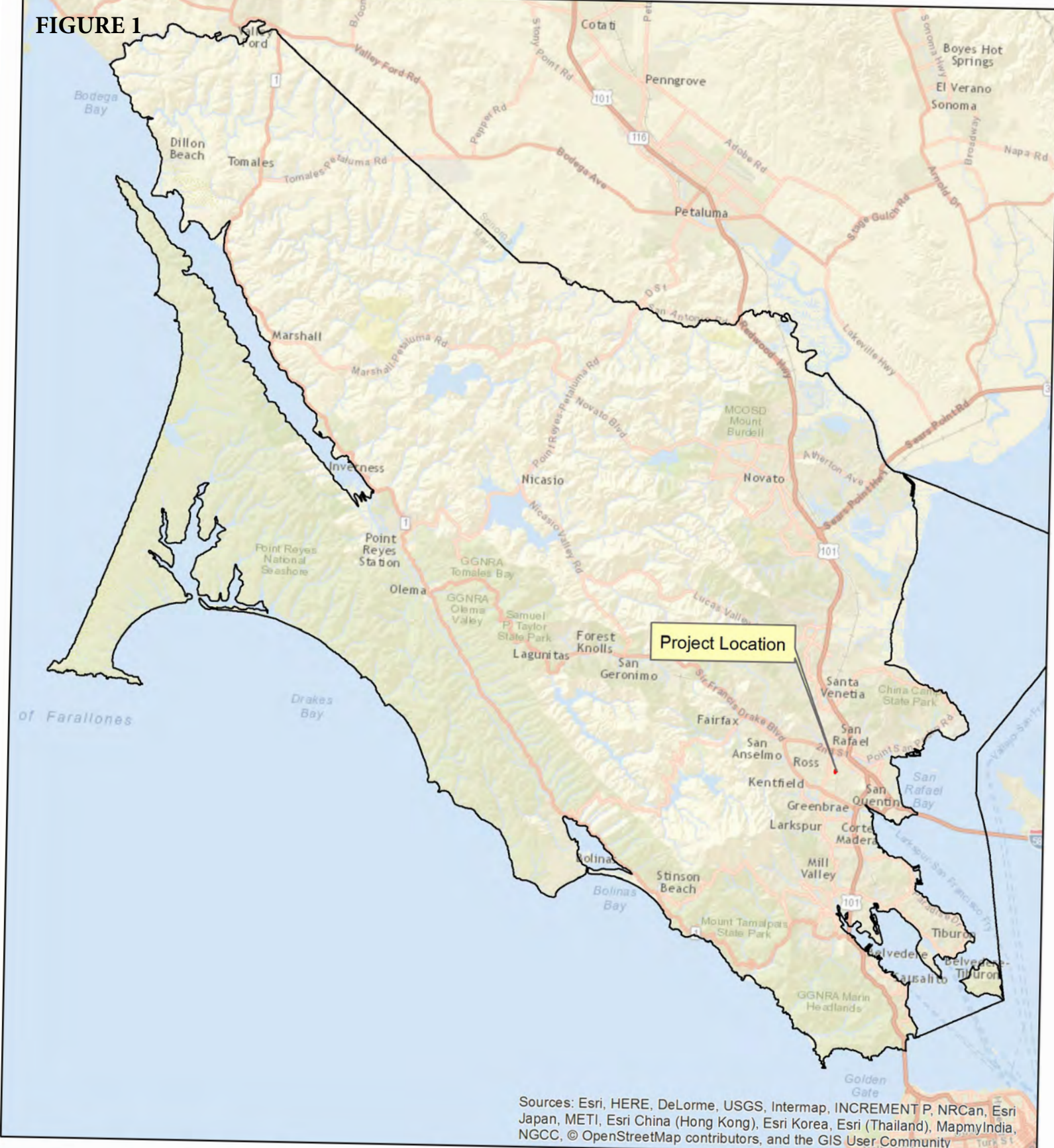
Figure 1: Study Vicinity

Figure 2: Study Location

Figure 3: Area of Potential Effects

Figure 4: Resources within the APE

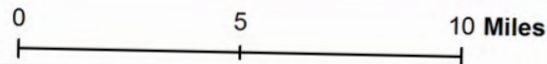
FIGURE 1



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Marin County



1:275,000

<p>Southern Heights Bridge Replacement Project Southern Heights Boulevard, San Rafael Marin County, California</p>		<p>Legend</p> <ul style="list-style-type: none"> Project Location Marin County
<p>EVANS & DE SHAZO, LLC ARCHAEOLOGY & HISTORIC PRESERVATION</p>		

FIGURE 2



Copyright © 2013 National Geographic Society, i-cubed



Marin County

0 0.5 1 Miles



1:24,000

**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

Legend

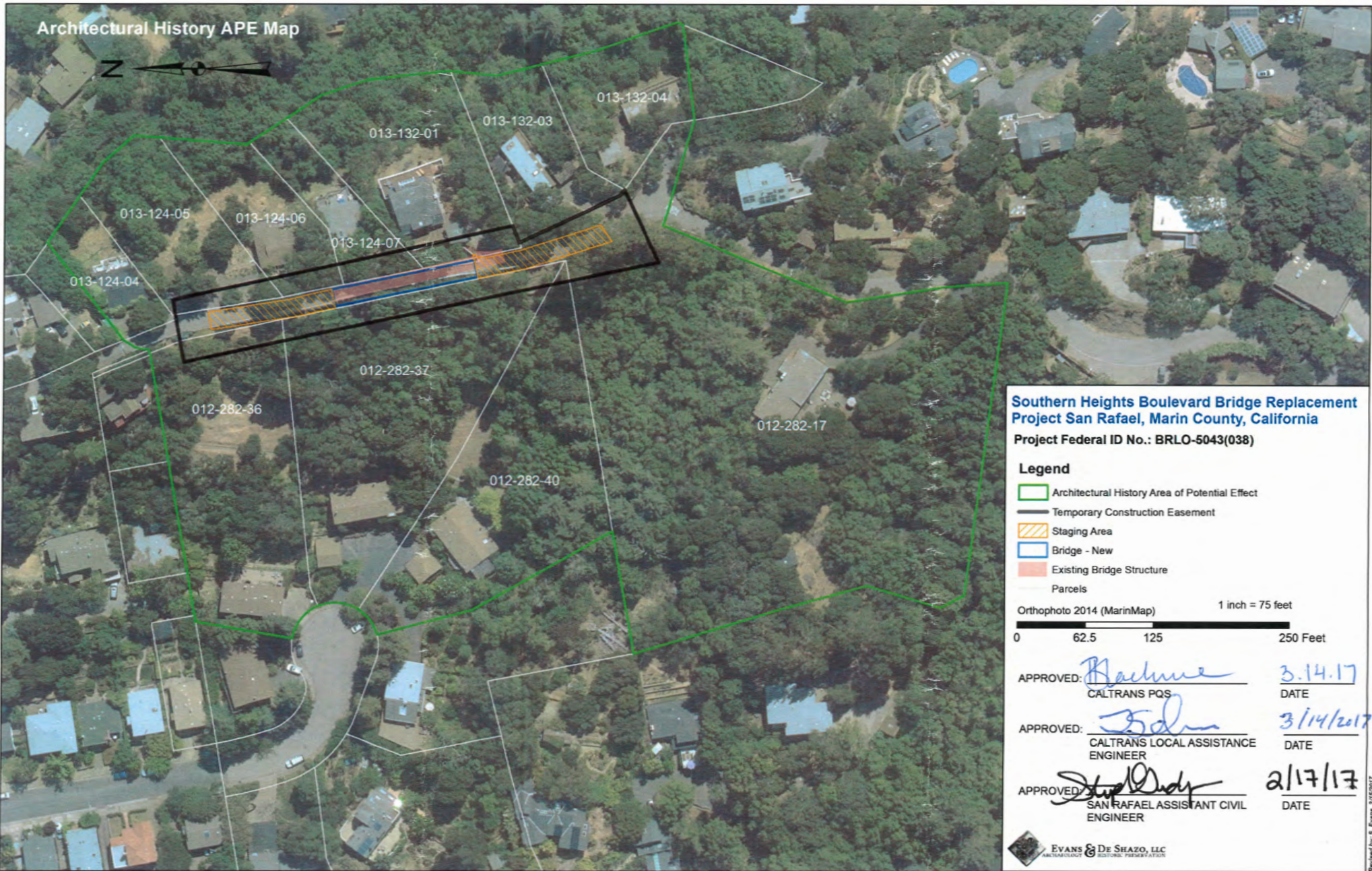
- Architectural History APE
- Archaeological APE

EVANS & DE SHAZO, LLC
ARCHAEOLOGY & HISTORIC PRESERVATION

USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

Map Projection:
NAD 83 UTM Zone 10N

Architectural History APE Map



**Southern Heights Boulevard Bridge Replacement
Project San Rafael, Marin County, California**
Project Federal ID No.: BRLO-5043(038)

Legend

- Architectural History Area of Potential Effect
- Temporary Construction Easement
- Staging Area
- Bridge - New
- Existing Bridge Structure
- Parcels

Orthophoto 2014 (MarinMap) 1 inch = 75 feet

0 62.5 125 250 Feet

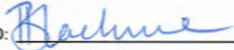
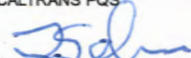
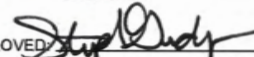



APPROVED: 	3.14.17
CALTRANS PQS	DATE
APPROVED: 	3/14/2017
CALTRANS LOCAL ASSISTANCE ENGINEER	DATE
APPROVED: 	2/17/17
SAN RAFAEL ASSISTANT CIVIL ENGINEER	DATE







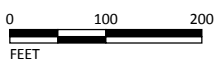
FIGURE 4

LSA

-  Archaeological APE
-  Architectural APE
-  Parcel

Historical Resource

-  Not NRHP-Eligible or CRHR-Eligible
-  Not NRHP-Eligible or CRHR-Eligible but currently listed in the San Rafael HRI



SOURCE: Basemap- NAIP (2016); Mapping- LSA (10/2017)

I:\MKT1604\GIS\Reports\Cultural_Fig4_Resources.mxd (10/6/2017)

*Southern Heights Bridge Replacement Project
in San Rafael, Marin County, California
Caltrans District 4
Federal Project No. BRLO- 5043 (038)
Resources within the APE*

APPENDIX B

Preparer's Qualifications

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LSA Senior Cultural Resources Manager Katie Vallaire prepared this report and evaluated some of the resources, with major contributions from EDS. Ms. Vallaire holds a M.A. in Public History from California State University, Sacramento and has over 13 years of cultural resources management experience throughout California. Ms. Vallaire meets the Secretary of the Interior's Professional Qualification Standards in Archeology, Architectural History, and History, and is Registered Professional Archaeologist 32791044.

EDS Co-owner and Principal Architectural Historian Stacey De Shazo conducted archival research, the field survey, prepared the majority of the historical overview and historical context sections of this report, and prepared the majority of the DPR records. She holds an M.A. in Historic Preservation from Savannah College of Art and Design and exceeds the Secretary of the Interior's Professional Qualification Standards in Architectural History and History. Ms. De Shazo has over 17 years of experience in the survey, identification, and evaluation of cultural resources in California. Ms. De Shazo currently serves as Chair of the City of Santa Rosa's Cultural Heritage Board and is also an Adjunct Lecturer at Sonoma State University teaching the graduate level class *Practicum in the National Register of Historic Places*.

APPENDIX C

Department of Parks and Recreation 523 Series Form Records

State of California & The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
 HRI #
 Trinomial
NRHP Status Code

Other Listings
 Review Code _____ Reviewer _____ Date _____

Page 1 of 14 *Resource Name or #: 10 Meyer Road

P1. Other Identifier: _____

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N; R 6W; of of Sec Un; MD B.M.

c. Address 10 Meyers Road City San Rafael Zip 94901

d. UTM: Zone 10, 541343 mE/ 4201636 mN

e. Other Locational Data: The property is located at 10 Meyer Road within Assessor Parcel Number (APN) 012-282-17, located north/northwest of the intersection of Meyer Road and Southern Heights Boulevard, approximately 0.7 miles south of the southern approach to the Southern Heights Bridge, and approximately 0.75 miles south of downtown San Rafael.

*P3a. **Description:** 10 Meyer Road comprises a 1951 Contemporary style, split level house situated within a 2.69-acre parcel along a west-facing hillside, accessed by a long, curved driveway. The building has an irregular planned design with a lower level that is not visible from the primary elevation. The building consists of a low shed roof with wide overhanging eaves with exposed rafter beams. The house is clad in stained horizontal redwood cladding that are laid flush. The northeast elevation consists of a recessed side entry door and extended roof with exposed rafters that serves as a porch "awning". There are six windows of varying sizes along the primary elevation that have been replaced within the last 15 years with vinyl windows. The is also a wide, brick chimney that is constructed in the common bond pattern. (see Continuation Sheet Page 3)

P5a. Photograph or Drawing



*P3b. **Resource Attributes:**

HP2, Single Family Property

P4. Resources Present: Building
 Structure Object Site District
 Element of District Other
 (Isolates, etc.)

P5b. Description of Photo:
Photo facing south/southwest,
4/4/2017

*P6. **Date Constructed/Age and Source:** Historic Prehistoric
 Both
1951

*P7. **Owner and Address:**
Don and Marta Daglow
10 Meyer Road
San Rafael, CA 94901

*P8. **Recorded by:**
Stacey De Shazo, M.A., Evans & De
Shazo, LLC. 6876 Sebastopol Avenue,
Sebastopol, CA, 95472

*P9. **Date Recorded:** April 4, 2017

*P10. **Survey Type:**
Intensive

*P11. **Report Citation:** Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # 10 Meyer Road *NRHP Status Code _____
 Page 2 of 14

B1. Historic Name: 10 Meyer Road
 B2. Common Name: 10 Meyer Road
 B3. Original Use: Residence B4. Present Use: Residence
 *B5. Architectural Style: Modern Movement: Contemporary
 *B6. Construction History: The building was constructed in 1951, and there have been no significant changes. The house contains modern vinyl windows.
 *B7. Moved? No Yes Unknown Date: _____ Original Location: _____
 *B8. Related Features:
 B9a. Architect: Unknown b. Builder: Charles Daglow
 *B10. Significance: Theme NA Area San Rafael Property Type Residential
 Period of Significance NA Applicable Criteria NA

10 Meyer Road does not appear eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) under any criteria. Although this building is a good example of a Contemporary ranch house, San Rafael is well-known for containing better examples of Contemporary architecture, including Contemporary Ranch residences designed by famous architects that specialized in this style including Joseph Eichler, David Beverly Thorne, and Aaron Greene.

Contemporary architecture is widely recognized by its clean lines, geometric planes and surfaces, exposed post and roof beams, and lack of applied ornamentation. Stone and wood are often used to add warmth, but form and structure are paramount. Wright-influenced buildings are considered a variant of this style along with examples influenced by Joseph Eichler. The landscape of the property is also important, as it provides a linkage to the style. 10 Meyer Road consists of key elements of the Contemporary style that include a shed roof, split-level, warm natural stained wood, and large picture windows that extend the interior living spaces (see Continuation Sheet, Page 10-13).

Historic Context:
 (see Continuation Sheet, Page 10-13)

B11. Additional Resource Attributes:
 *B12. References:
 B13. Remarks:
 B14. Evaluator: Katie Vallaire, M.A.
 *Date of Evaluation: October 2, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 3 of 14

P3a. Description (Continued from Primary)

There is simple porch that leads to the recessed front entry and an original wood paneled door along the northeast elevation. The split-level (lower level) is also visible along this elevation and consists of three vinyl windows of varying sizes that appear to be awning style. The foundation is a perimeter foundation constructed of board formed concrete. There are sections of the foundation along the lower-level that appear to be new, while areas along the main floor of the house appear to be original.



Photo showing the recessed front entry along the northeast elevation, facing southwest.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 4 of 14



Photo showing the northeast elevation, facing west.



Photo showing the northeast elevation foundation, facing east.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 5 of 14

Southeast Elevation

The southeast elevation consists of a shed roof with wide overhanging eaves and an extended fascia board that breaks-up the dominant windowless façade that is clad in horizontal, redwood shiplap.



Photo showing the southeast elevation, facing north.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 6 of 14



Photo showing the southeast elevation ground floor, facing southwest.

Southwest Elevation

The southwest elevation consists of a terraced design with a projecting eave that extends the interior living space outside through simple lines and large picture windows, and a sliding glass door that is topped by a series of fixed rectangular transom windows.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 7 of 14



Photo showing the ground floor along the east elevation, facing south.

Northwest Elevation

The northwest elevation was not accessible during the survey.

Carport

There is a small, one-room accessory building that is situated along the primary elevation of the house. The building has a flat roof and French doors along the north elevation and is accessed through a privacy gate along the driveway of the property.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 8 of 14



Photo showing the carport, facing north.

Landscape Setting

The landscape of Contemporary style architecture that serves as an important component in conveying the style. The landscape of 10 Meyer Road includes the integration of existing trees, foundation plantings, the long winding driveway, and an open front “yard” and a backyard that serve as an extension of the interior.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 9 of 14



Photo showing the drive-way, north/northwest.



Photo showing the backyard, facing west.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 10 of 14

B10. Significance (Continued from BSO, page 2)

Contemporary Architectural Style (AKA Contemporary Ranch) (1945 - 1975)

By the late 1940s and early 1950s, builders began to recognize the value of well-designed, affordable houses in attracting the middle-class consumer, and many began working with architects to develop new looks for their model homes. Along with the traditional Spanish and Colonial Revival styles of architecture, the clean lines and simple geometry of the Contemporary Style proved to be well suited to the low, horizontal massing of the prefabricated Ranch House and became quite popular with fashion-conscious homebuyers of the period. Architects also began to incorporate modern open floor plans into their interior designs, often merging the dining, living room, and kitchen areas into one common living space. Among the most distinctive early Contemporary Style Ranch houses was the 'Eichler house,' which was first designed by Stephen Allen and Robert Anshen in 1949 for builder Joseph Eichler and was later modified by Los Angeles architects A. Quincy Jones and Frederick Emmons (Hess 2004:67). Primarily a California-based developer, Eichler placed an emphasis on providing well-crafted, modern residential design for middle-class homebuyers. Lacking in architectural ornament, 'Eichler houses' were generally characterized by low and wide front gable roofs, exposed post-and-beam construction, spacious open floor plans, and the use of floor-to-ceiling glass. Taking a cue from Eichler, David Bohannon contracted architects Harwell Hamilton Harris and Edwin A. Wadsworth to design Contemporary and Traditional Ranch model homes that were featured in *House Beautiful* magazine in 1950. Bohannon's 1951 tract developments in San Mateo and San Jose were comprised entirely of Contemporary Style Ranch home designed by his in-house architect Mogen Mogenson (Hess 2004:69). Even Cliff May joined in on the Contemporary Ranch movement in 1952, by designing low cost Contemporary Style Ranch Houses for suburban markets. Developed along with business partner and architect Chris Choate, his "Cliff May Homes" branded models were built of simple, exposed post-and-beam construction with ready to assemble materials and retained very little of the romanticized Spanish historicism of his earlier custom houses (Gregory 2008:130-138).

10 Meyer Road is a good example for Contemporary architecture from the 1950s with its ground-hugging form that integrates the house to site, and its clean lines, which are features that define this architectural style.

Historic Context (Continued from BSO, page 2)

PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

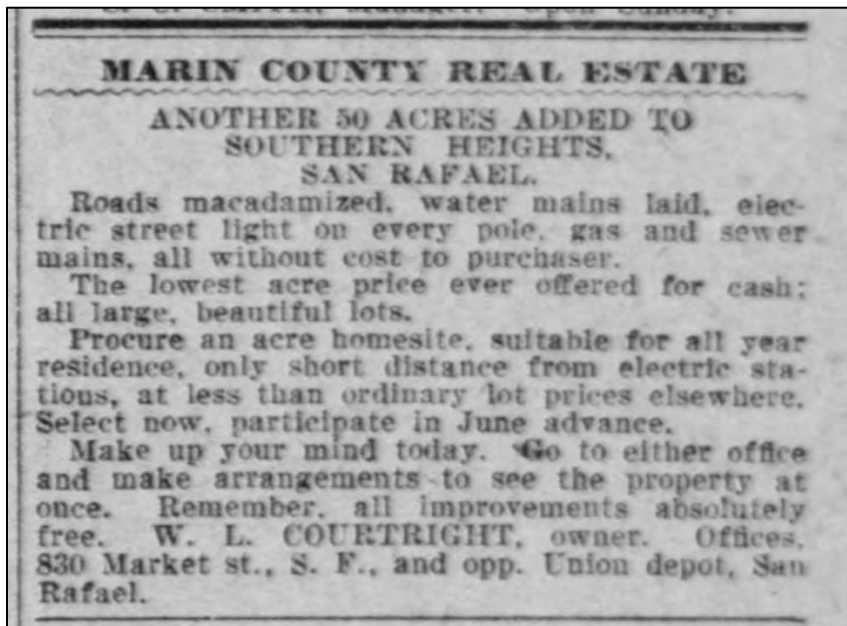
Although 10 Meyer Road was not constructed until 1951, it is important to understand the history of Southern Heights and the development of the neighborhood. As such the following section is provided to contextualize the development of this property.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 11 of 14

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the subject property. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman, where the Architectural History APE is located, was purchased by business partners John William Mackay and James C. Flood. Mackay and Flood were two of the "Big Four" that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James' son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. An advertisement in the San Francisco Call newspaper, dated May 15, 1910, states,



Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

"SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 13 of 14

San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS”, “BUY NOW AND PROFIT BY JUNE ADVANCE”

*Go to either office and make arrangements to see the property at once
W.L. COURTRIGHT. Owner”*

Over the years, neighborhood development included residential houses with a mix of architectural styles such as the Contemporary house at 10 Meyer Road.

Summary of Land Ownership

The house was built in 1951 by Charles Daglow. Charles was born in 1906 in San Francisco. He attended college and was a public accountant. He died in 1989 and the property was deeded to his son Don Daglow, who is the current owner.

Significance Statement:

According to National Register Bulletin No. 15, “How to Apply the National Register Criteria for Evaluation,” to be eligible for listing in the National Register of Historic Places, a resource must be significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

In addition, the 1951 house must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

10 Meyer Road does not appear to be eligible for listing on the NRHP or CRHR under any criteria.

CONTINUATION SHEET

Property Name: 10 Meyer Road

Page 13 of 14

10 Meyer Road is not significant under Criterion A of the NRHP and Criterion 1 of the CRHR for its association with an important event in history. Although this residence was associated with the gradual growth of San Rafael, background research indicates that the building's contribution to this pattern of events was not important or exceptional.

10 Meyer Road is not significant under Criterion B of the NRHP and Criterion 2 of the CRHR for its association with any owners or occupants that appeared to be prominent figures or whose achievements were considered exceptional. The resource is not associated with a significant person in national, state, or local history.

10 Meyer Road is not significant under Criterion C of the NRHP and Criterion 3 of the CRHR as a great example of the Contemporary style; for its type, period, or method of construction; it is not a work of master; and it does not possess high artistic value. Though the building possesses the general aspects of Contemporary-style architecture, background research did not identify a master architect or builder associated with the building. This resource is a good example of Contemporary-style architecture in San Rafael; however, many other Contemporary-style residences that are better representations of this style, some of which were designed by famous architects, can be found throughout the city. Specifically, San Rafael contains more Eichler homes than any other area in Marin County.

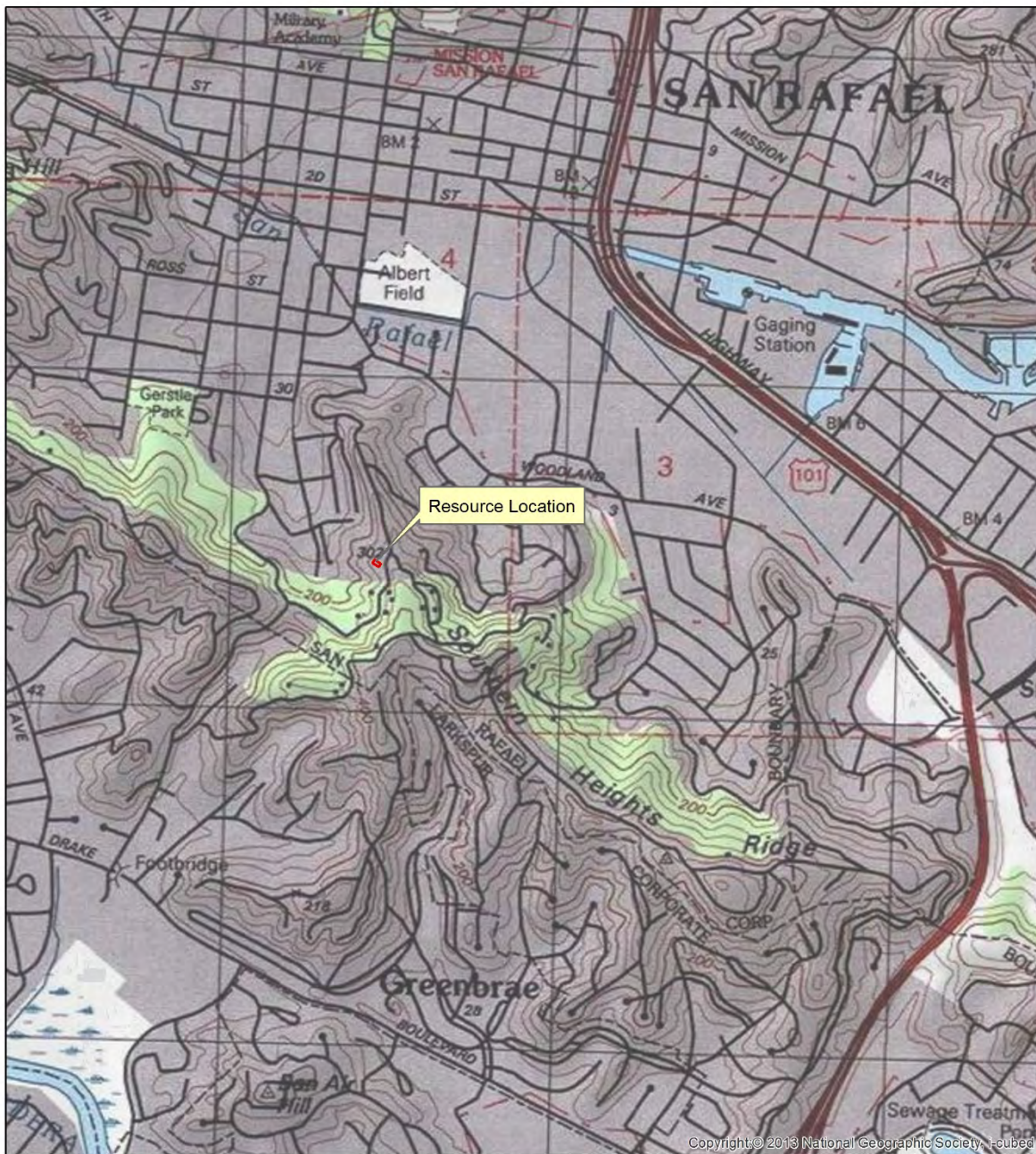
10 Meyer Road is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

Integrity

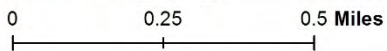
Within the concept of integrity, the National Register Criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. Integrity of 10 Meyer Road was not assessed because it was not found eligible under any criteria.

Conclusions

The property at 10 Meyer Road is not significant under any of the National Register nor California Register Criteria and is not a historic resource under Public Resource Code 5024.



Marin County



1:15,000

Resource Location Map Historic Resources Evaluation 10 Meyer Road, San Rafael, CA APN 012-282-17		Resource 10 Meyer Road
EVANS & DE SHAZO, LLC <small>ARCHAEOLOGY HISTORIC PRESERVATION</small>	USGS 7.5' Quadangle: San Rafael (1993) T 1 North / R 6 West	Map Projection: NAD 83 UTM Zone 10N

Map by: BAIN, SHAW, & ASSOCIATES

State of California ♦ **The Resources Agency**
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-21-001008
 HRI # 4902-0277-000
 Trinomial
NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 15 *Resource Name or #: 116 Southern Heights Boulevard
 P1. Other Identifier: _____

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N ; R 6W ; of of Sec Un ; MD B.M.

c. Address 116 Southern Heights Boulevard City San Rafael Zip 94901

d. UTM: Zone 10 541388 mE/ 4201744 mN

e. Other Locational Data: The property is located at 116 Southern Heights Boulevard with Assessor Parcel Number (APN) 013-132-01, between Meyer Road and Pearce Road, approximately 0.75 miles south of downtown San Rafael and east of the north approach to the Southern Heights Bridge.

*P3a. Description: 116 Southern Heights Boulevard comprises a 1909 two-story, Dutch Colonial Revival style house situated on a 0.5-acre lot with an asphalt driveway, and a small accessory building that is situated at the front of the house. The house consists of character-defining features of the Dutch Colonial Revival style that include clapboard exterior cladding, a side gambrel roof clad in asphalt shingles, a full-width, columned porch, and wide shed roof dormers. The west elevation (primary façade) consists of a symmetrical façade that includes classical columns as porch supports, decorative pilasters, a centered double-front door crowned with a Palladian window, and flanked by a ribbon of windows on side of the door. There is a wide shed dormer along the second story of the west elevation that consists of two windows, which appear to be double casement windows. (see Continuation Sheet, Page 3)

P5a. Photograph or Drawing



*P3b. Resource Attributes:

HP2, Single Family Property

P4. Resources Present:
 Building Structure Object Site
 District Element of District
 Other (Isolates, etc.)

P5b. Description of Photo:

Photo facing north/northeast,
4/4/2017

*P6. Date Constructed/Age and Source: Historic Prehistoric
 Both

1909

*P7. Owner and Address:

Julie Shemano
116 Southern Heights Blvd,
San Rafael, CA 94901

*P8. Recorded by:

Stacey De Shazo, M.A., Evans & De
Shazo, LLC. 6876 Sebastopol Avenue,
Sebastopol, CA, 95472

*P9. Date Recorded: April 4, 2017

*P10. Survey Type:

Intensive

*P11. Report Citation: Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List): _____

*Resource Name or # (Assigned by recorder) 116 Southern Heights Boulevard *NRHP Status Code _____
 Page 2 of 15

B1. Historic Name: 116 Southern Heights
 B2. Common Name: 116 Southern Heights
 B3. Original Use: Residence B4. Present Use: Residence

*B5. Architectural Style: Dutch Colonial Revival

*B6. Construction History: The building was constructed in 1909, and there are changes to the house that appear to have occurred in recent years (dates unknown) that include new windows and new primary and rear elevation decks.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown b. Builder: Unknown

*B10. Significance: Theme NA Area San Rafael Property Type Residential
 Period of Significance NA Applicable Criteria NA

116 Southern Heights Boulevard was previously identified through a local historical resource inventory adopted by the City of San Rafael; therefore, it is considered a "Historical Resource" in accordance with Section 21084.1 of the California Environmental Quality Act, Section 15064.5.

116 Southern Heights Boulevard does not appear to be eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). Although 116 Southern Heights Boulevard consists of key elements of the Dutch Colonial Revival style that include a gambrel roof, dormers, a full-width porch, and wood cladding, the house has been substantially altered and contains modern elements that compromise its integrity. The term "Colonial Revival" refers to a rebirth of interest in the early English and Dutch colonial houses of the Atlantic Seaboard. The style was re-introduced to America at the Philadelphia Exposition of 1876, which marked the centennial of the signing of the Declaration of Independence. Many of the buildings designed for the Exposition were based on historically significant colonial designs. At about the same time, several national organizations publicized a series of articles on eighteenth century American architecture, which appeared in the American Architect and Harpers magazines. The renewed interest in colonial architecture fueled by the centennial and the exposure of the Colonial Revival style received in national publications helped to make it popular throughout the country. From about 1890 through 1915, Dutch Colonial Revival architecture was an important style in residential architecture; however, the Dutch Colonial Revival style is a unique style in the City of San Rafael (see Continuation Sheet, Page 8-14).

Historic Context:

(see Continuation Sheet, Page 8-14)

B11. Additional Resource Attributes: (List attributes and codes)

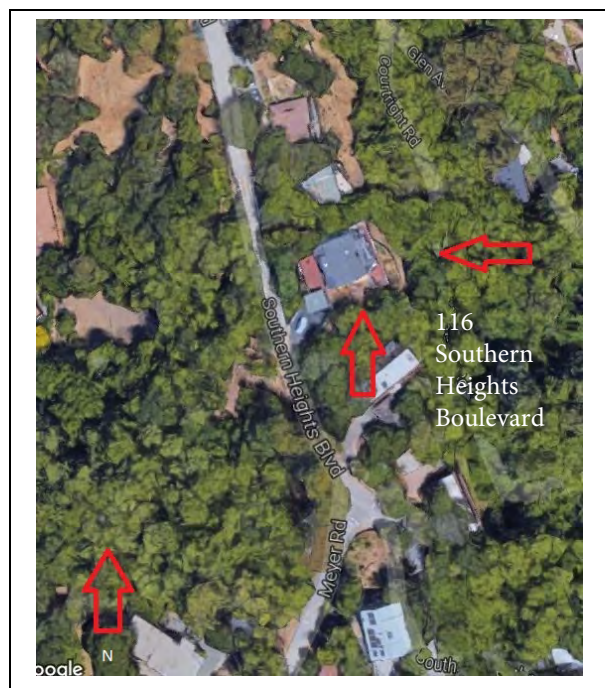
*B12. References:

B13. Remarks:

B14. Evaluator: Katie Vallaire, M.A.

*Date of Evaluation: October 5, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 3 of 15

P3a. Description (Continued from Primary)

North Elevation

The north elevation consists of clapboard exterior cladding and a second story overhang. There are four narrow, double-casement windows along the second story. There is a square bay window along the first story near the northeast elevation and stairs that lead down to the lower ground floor. The ground floor consists of a small square door, a metal vent, and a door that allows access to the interior of the house. There is access to the ground floor from this façade; however, access has been blocked with wire, which is likely to keep animals out.



Photo showing the north elevation, second story overhang.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 4 of 15



Photo showing the north elevation ground floor, facing southeast.

East Elevation

The east elevation consists of three stories that include a lower elevation ground floor, a first story, and a second story. The ground floor appears to have a concrete perimeter foundation and plywood siding with a series of vents. There is a deck that extends out from the first story that is supported by square columns along this elevation. The current deck is not original to the construction of the house, and was likely added in the past 30 years, but it is in good condition. There is a berm that abuts the house along this elevation that likely provides additional support for the house along the steep hillside. The first story along the east elevation consists of two sets of French doors with a single fixed side transom window that flanks the doors, and two horizontal rectangular windows. All the windows along the first floor appear to be wood replacement windows. The second story consists of an extended shed dormer with a curved, multi-light window that appears to have been cut-out of the center of the dormer, which has been altered. The window appears to be metal and is not original to the house. There is a wide deck that extends the length of the house, and a wood and wire railing system.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 5 of 15



Photo showing the ground floor along the east elevation, facing south.



Photo showing the ground floor, berm and deck along the east elevation, facing north/northwest.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 6 of 15



Photo showing the first story, facing north/northwest. Doors, windows, and second-story addition appear to be modern.



Photo showing the second story of the east elevation, facing north/northwest.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 7 of 15

South Elevation

The south elevation consists of a first story that includes two, fixed horizontal rectangular windows and two square bay windows along the second story that are divided by an exterior fireplace that is clad in wood and extends into the eaves of the house.



Photo showing the south elevation, facing north/northwest.

Accessory Building

There is a small, one-room accessory building that is situated along the primary elevation of the house. The building has a flat roof and French doors along the north elevation and is accessed through a privacy gate along the driveway of the property.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 8 of 15



Photo showing accessory building, facing north/northwest.

B10. Significance (Continued from BSO)

Dutch Colonial Revival Style (1890 – 1915)

The “American” Dutch Colonial Revival style was popular in the late nineteenth and early twentieth centuries, from approximately 1890 to 1915; however, Dutch Colonial architecture was originally based on the architecture and housing types from the Netherlands dating back to the medieval period. The style was initially associated with the northeast, and was widely utilized in Pennsylvania and New York after the Philadelphia Exposition of 1876. The style was found in both urban and rural environments, though most examples that survived into the late nineteenth century were rural. Dutch Colonial residential architecture often displays regional variations that reflect available local resources that includes the use of stone, brick, and wood as building materials. Dutch Colonial Revival architecture is widely recognized by the gambrel roof, although this roof type was not used exclusively. Gambrel roofs were often found in New Jersey and the Hudson River Valley early in the colonial period, and later in New York. The earliest Dutch houses were constructed one-room deep and with steeply pitched roofs. As homes became larger, these steeply pitched roofs proved vulnerable to wind stresses and precipitation. As such, some houses featured an upper and lower portion of different pitches. Character-defining features of the Dutch Colonial Revival style include clapboard or brick exterior cladding, front or side gambrel roofs, full-width recessed or projecting porches, and simple building forms. They are

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

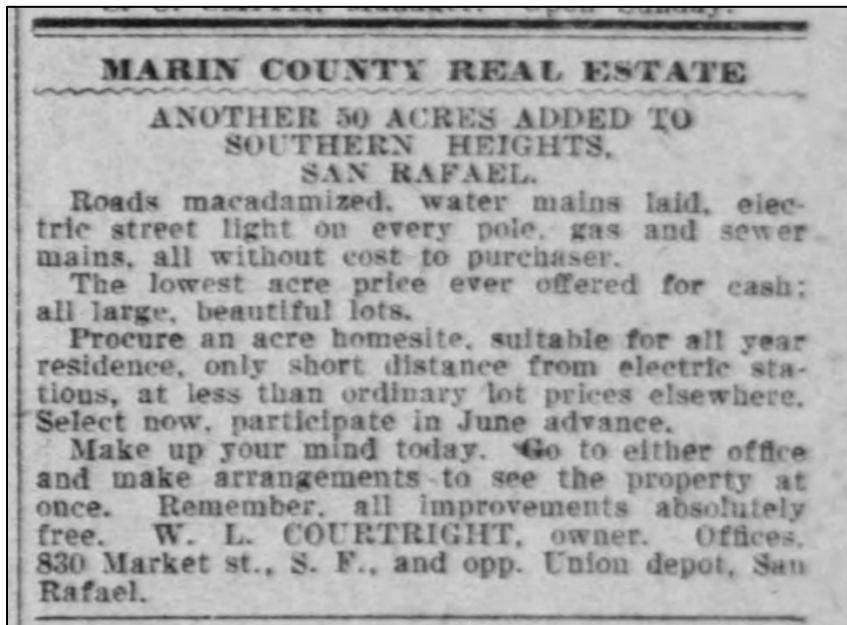
Page 9 of 15

typically, one or two stories in height. Roof dormers are typically wide with shed roofs. Classical detailing is often restrained and includes pediments, columns or pilasters, multi-paned double-hung sash windows, and fixed shutters. In California, early examples of Dutch Colonial Revival architecture were often blended with the influences of the Shingle or other Victorian era styles.

Historic Context (Continued from BSO)

PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land that encompasses the subject property. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman, where the property is located, was purchased by business partners John William Mackay and James C. Flood. MacKay and Flood were two of the “Big Four” that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James’ son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. An advertisement in the *San Francisco Call* newspaper, dated May 15, 1910, states,



Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 10 of 15

"SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

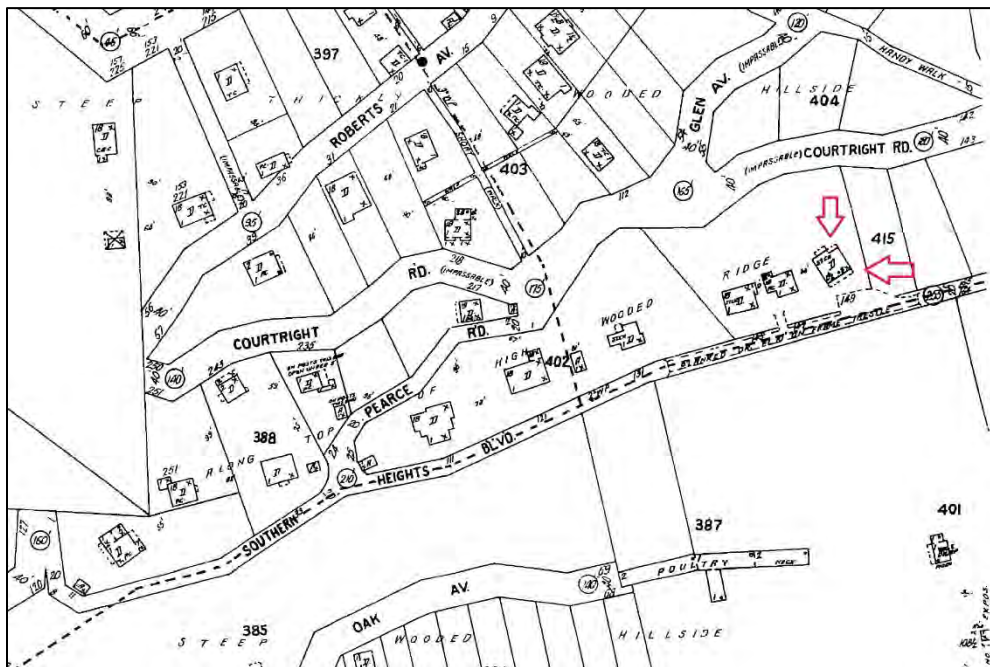
Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS", "BUY NOW AND PROFIT BY JUNE ADVANCE"

Go to either office and make arrangements to see the property at once

W.L. COURTRIGHT. Owner"

The 1924 Sanborn Fire Insurance map shows the house on Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard. The map shows the house having a small porch that extends along the rear that is no longer present. The accessory building is not shown on the 1924 map either.



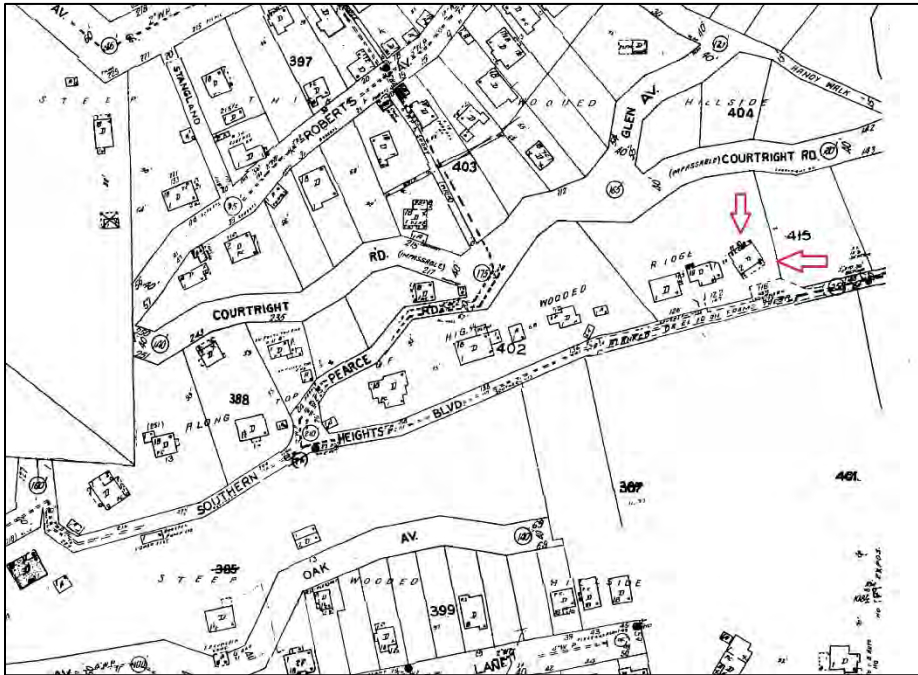
1924 Sanborn Fire Insurance map showing the 1904 house.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 11 of 15

The 1924 Sanborn map, updated in 1950, shows the house located at 116 Southern Heights Boulevard. The house does not appear to have changed at all since the 1924 map, as it still shows a small porch that extended along the rear; and the assessor's building is not present.



Updated 1950 Sanborn Fire Insurance map showing the 1904 house.

Summary of Land Ownership

116 Southern Heights Boulevard was constructed by Robert and Emily Boot in 1909. Robert Boot was born in the city of Nottingham, England on January 10, 1839. His parents were Isaac and Rebecca Sutton Boot who were Quakers. Robert received his early training at Ackworth High School, from which he entered an accounting house in his native city where he was employed for two years. During the ensuing four years he served his apprenticeship in the dry goods business in Hempstead. In 1859, Robert immigrated to the Toronto, Canada and worked as the manager of Manchester Department, a wholesale dry goods business. He soon left Canada and came to the U.S. where he engaged in farming in Baltimore County, Maryland. When the Civil War began, he left the farm and joined the Union Army and was part of the "commissariat" department that transported provisions to the northern armies. In 1863, Robert left the U.S. and returned to England, but he soon set sail from London to Auckland, New Zealand. He lived in Auckland for several years, where he worked in the manufacture and export of Kauri pine lumber and spar timber. In 1880, Robert and his wife Emily, along with their children moved from

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 12 of 15

Auckland to Fresno County where they lived for 20 years and owned of tracts of land in Fresno, Kings, and Tulare Counties. Robert's extensive knowledge of agriculture led him to become the president of the largest fruit grower's organization in the West - the California Raisin Growers Association - from which he eventually retired. He began his retirement in Alameda, then moved to San Rafael where he built the house at 116 Southern Heights Boulevard. Robert, his wife Emily, their daughter Margaret Powers, and her son George A. Powers lived at the property until Robert died in 1934 at the age of 99.



Photo of Robert Boot (date unknown) (courtesy of Ancestry.com).

The family sold the property in the late 1930s to Dean Hall and his wife Winifred Hellen Hall. Dean was a painter who lived in the house with his wife until his death in the early 1950s. Winifred continued to live in the house until at least 1957.

Significance Statement:

According to National Register Bulletin No. 15, "How to Apply the National Register Criteria for Evaluation," to be eligible for listing in the National Register of Historic Places, a building must be

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 13 of 16

significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

In addition, 116 Southern Heights Boulevard must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

116 Southern Heights Boulevard is not significant under Criterion A of the NRHP and Criterion 1 of the CRHR for its association with an important event in history. Although this residence was associated with the gradual growth of San Rafael, background research indicates that the building's contribution to this pattern of events was not important or exceptional.

116 Southern Heights Boulevard is not significant under Criterion B of the NRHP and Criterion 2 of the CRHR for its association with any owners or occupants that appeared to be prominent figures or whose achievements were considered exceptional. The resource is not associated with a significant person in national, state, or local history.

116 Southern Heights Boulevard is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

The term "Colonial Revival" refers to a rebirth of interest in the early English and Dutch colonial houses of the Atlantic Seaboard. The style was re-introduced to America at the Philadelphia Exposition of 1876, which marked the centennial of the signing of the Declaration of Independence. Many of the buildings designed for the Exposition were based on historically significant colonial designs. At about the same time, several national organizations publicized a series of articles on eighteenth century American architecture, which appeared in the American Architect and Harpers magazines. The renewed interest in colonial architecture fueled by the centennial and the exposure of the Colonial Revival style received in national publications helped to make it popular throughout the country. From about 1890 through 1915, Dutch Colonial Revival architecture was an important style in residential architecture; however, the Dutch Colonial Revival style is a unique style in the City of San Rafael. 116 Southern Heights Boulevard is one of a few Dutch Colonial-style houses in this area.

CONTINUATION SHEET

Property Name: 116 Southern Heights Boulevard

Page 14 of 15

Although 116 Southern Heights Boulevard embodies distinct characteristics of Dutch Colonial Revival architecture (NRHP Criterion C and CRHR Criterion 3), character defining features such as multi-paned double-hung sash windows and fixed shutters are not present. Furthermore, a consideration of integrity is necessary to determine whether 116 Southern Heights Boulevard is eligible for listing in the NRHP or CRHR.

Integrity

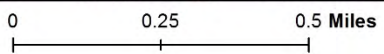
Within the concept of integrity, the National Register Criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association were considered and are listed below. The historic integrity of location has been retained as the property has not been moved. The integrity of association also remains as it is still within the Southern Heights neighborhood. The integrity of design, materials and workmanship has been lost due to the addition of the sunroom with curved windows on the east elevation, which is out of character for this style and detracts from the character-defining gambrel roof. Furthermore, the other second-story additions and modifications, including the expansive modern decking, the window replacements throughout, and the east elevation's doors which appear modern, compromise the building's integrity of design, workmanship, and materials. The integrity of feeling and setting of the property has been compromised due to these alterations.

Conclusions

116 Southern Heights Boulevard is significant under Criterion C of the NRHP and Criterion 3 of the CRHR but does not retain enough historic integrity and therefore is not eligible for the National or California Registers. 116 Southern Heights Boulevard was previously identified through a local historical resource inventory adopted by the City of San Rafael; therefore, it is considered a "Historical Resource" in accordance with Section 21084.1 of the California Environmental Quality Act, Section 15064.5.



Marin County



1:15,000

Resource Location Map Historic Resources Evaluation 116 Southern Heights Blvd., San Rafael, CA APN 013-132-01		Resource 116 Southern Heights Boulevard
EVANS & DE SHAZO, LLC ARCHAEOLOGY & HISTORIC PRESERVATION	USGS 7.5' Quadangle: San Rafael (1993) T 1 North / R 6 West	Map Projection: NAD 83 UTM Zone 10N

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-21-001010

HRI # 4902-0279-0000

Trinomial

NRHP Status Code

Other Listings
Review Code

Reviewer

Date

Page 1 of 13 *Resource Name or #: 122 Southern Heights Boulevard

P1. Other Identifier: _____

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N ; R 6W ; of of Sec Un ; MD B.M.

c. Address 122 Southern Heights Boulevard City San Rafael Zip 94901

d. UTM: Zone 10 541380 mE/ 4201764 mN

e. Other Locational Data: The property is located at 122 Southern Heights Boulevard with Assessor's Parcel Number (APN) 013-124-06, between Meyer Road and Pearce Road, approximately 0.75 miles south of downtown San Rafael and east of the north approach to the Southern Heights Bridge. Access to the house is via a front entrance gate located along Southern Heights Bridge.

*P3a. Description: 122 Southern Heights Boulevard is situated within an 8,500 square-foot lot along a steep east facing slope. Originally constructed in a Craftsman style, it has undergone alterations and no longer demonstrates the style. The building is a two-story over a ground floor "basement" plan with a low-pitched, gabled roof that is flanked by two flat roofs. The west elevation (primary façade) is clad in redwood vertical boards and there is a recessed front entry door that positioned in line with the bridge access front entry gate. There is one divided light window along this elevation, but the façade is dominated gabled section is windowless. (see Continuation Sheet, Page 3)

*P3b. Resource Attributes:

HP2, Single Family Property _____

P4. Resources Present:
Building Structure Object Site
 District Element of District
Other (Isolates, etc.) _____

P5b. Description of Photo:

Photo of primary façade, facing east,
4/4/2017

*P6. Date Constructed/Age and

Source: Historic Prehistoric

Both

1914

*P7. Owner and Address:

Arthur Feidler

122 Southern Heights Blvd,

San Rafael, CA 94901

*P8. Recorded by:

Stacey De Shazo, M.A., Evans & De

Shazo, LLC. 6876 Sebastopol Avenue,

Sebastopol, CA, 95472

*P9. Date Recorded: April 4, 2017

*P10. Survey Type:

P5a. Photograph or Drawing



Intensive

*P11. Report Citation: Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List): _____

*Resource Name or # (Assigned by recorder) 122 Southern Heights Boulevard *NRHP Status Code _____
 Page 2 of 13

B1. Historic Name: 122 Southern Heights
 B2. Common Name: 122 Southern Heights
 B3. Original Use: Residence B4. Present Use: Residence

*B5. Architectural Style: Vernacular (originally Craftsman)

*B6. Construction History: The building was constructed in 1914, and has been significantly modified through the years (dates unknown).

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown b. Builder: Unknown

*B10. Significance: Theme N/A Area N/A
 Period of Significance N/A Property Type N/A Applicable Criteria N/A

Although 122 Southern Heights Boulevard was previously identified as a historical resource through a local historical resource inventory that was adopted by the City of San Rafael in 1986, the building had not been previously evaluated for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR).

On April 4, 2017, EDS Principal Architectural Historian, Stacey De Shazo, M.A., evaluated the house and determined that it does not meet any of the four criteria for listing in the NRHP or the CRHR.

Historic Context:
 (see Continuation Sheet, Page 8-11)

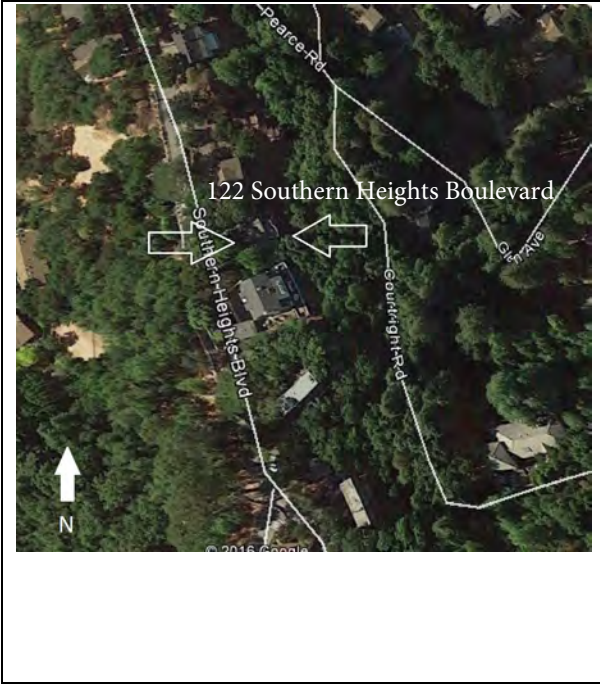
B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

B13. Remarks:

B14. Evaluator: Stacey De Shazo, M.A.
 *Date of Evaluation: April 4, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 3 of 13

P3a. Description (Continued from Primary)

The primary elevation consists of a front garden and work shed. The garden consists of cement, stone, and rock walls and paths. There is a small garden shed south of the house that is constructed of wood and appears to be less than 30 years in age.



Photo showing the landscape and shed in front of the house facing the Southern Heights Bridge, facing west.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 4 of 13

North Elevation

The north elevation consists of two stories over the ground floor “basement” that are clad in a variety of vertical wood siding and T-11 siding; however, the material is difficult to confirm due to limited access along the steep east-facing slope. Also, the cladding is not original to the house and was likely modified within the last 30 years. There is a wooden staircase that allows access to “basement” floor along the north elevation that includes older sections and newer sections; however, the staircase does not appear to be original to the house. There are three vinyl windows of varying size along the north elevation and a bay window that is clad in vertical wood siding.



Photo showing the north elevation, facing east/southeast.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 5 of 13



Photo showing the north elevation staircase, facing east/southeast.



Photo showing the north elevation, facing west/southwest.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 6 of 13

East Elevation

The east elevation was not assessable during the field survey and was only viewed from the property at 116 Southern Heights Boulevard. From this limited view, there appears to be two wood decks with railings, and the exterior is vertical wood cladding. The addition was constructed prior to 1950, according to Sanborn maps.



Due to limited access, photo was taken from 116 Southern Heights, facing north.

South Elevation

The south elevation consists of what appears to be the original wood shingle cladding. There are two square-shaped vinyl windows along this elevation and exposed board-formed concrete walls just below the windows. There is also a concrete retaining wall and stairs that appear over 50 years in age.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 7 of 13



Photo showing the east elevation, facing west.



Photo showing the east elevation, facing west.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 8 of 13



Photo showing the south elevation, facing north/northeast.

B10. Significance (Continued from BSO)

Vernacular Architectural Style

The term vernacular architecture is often referred to as the “architectural language of the people” with its ethnic, regional and local influences and the product of non-experts. Since the rise of modernism in the twentieth century, architectural writers have tended to admire what they regarded as traditional buildings for the immediate relationship between form and function is thought to be designed in response to the needs of the “local” environment. Vernacular buildings can be residential, industrial or agricultural (like barns) and usually they are *not* designed by a famous architect or builder. Vernacular architecture is also associated with the unique use of materials and conditions of a local environment, but can also be seen as a ‘reason’ for the design such as the landscape like the mass-produced architecture of a Route 66 gas station.

122 Southern Heights Boulevard has been altered from its original Craftsman style and designed in a Vernacular style that is sensitive to the surrounding setting of the hillside along Southern Heights Boulevard and takes advantage of the views along the rear that face the San Francisco Bay.

CONTINUATION SHEET

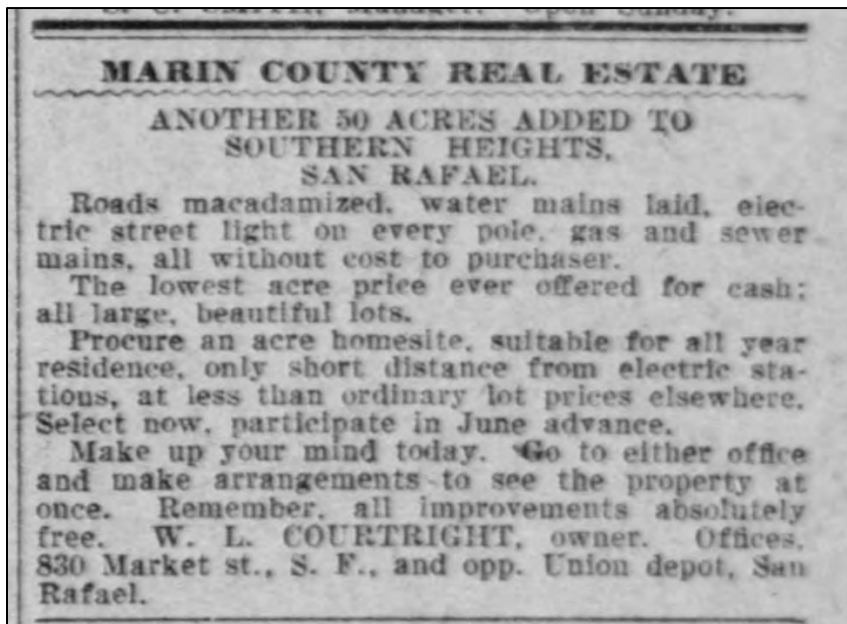
Property Name: 122 Southern Heights

Boulevard Page 9 of 13

Historic Context (Continued from BSO)

PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land where 122 Southern Heights Boulevard is located. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman was purchased by business partners John William Mackay and James C. Flood. MacKay and Flood were two of the “Big Four” that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James’ son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. An advertisement in the San Francisco Call newspaper, dated May 15, 1910, states,



Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

“SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

CONTINUATION SHEET

Property Name: 122 Southern Heights

Boulevard Page 10 of 13

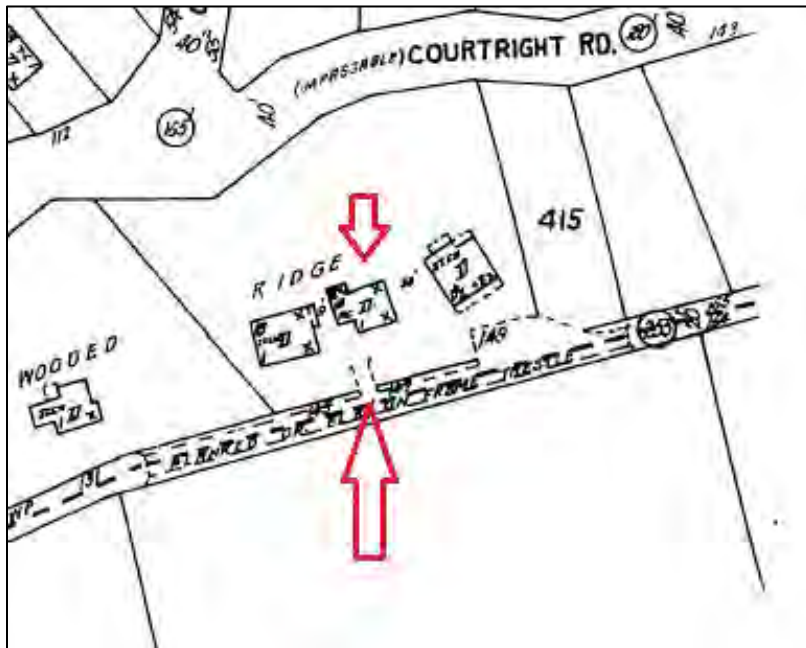
Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS”, “BUY NOW AND PROFIT BY JUNE ADVANCE”

Go to either office and make arrangements to see the property at once

W.L. COURTRIGHT. Owner”

The 1924 Sanborn Fire Insurance map shows 122 Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard.



1924 Sanborn Fire Insurance map showing 122 Southern Heights Boulevard and access along the bridge.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 11 of 13



1950 Sanborn Fire Insurance map showing 122 Southern Heights Boulevard with an addition along the south elevation.

Summary of Land Ownership

It is not known who owned the house when it was built in 1914; however, by 1920s it was owned by James W. Milner and his wife Charlotte, both were originally from Iowa. According to the 1930s U.S. Federal Census, James was a freight agent and Charlotte was a "housewife". After James died in the late 1930s, Charlotte continued to live at the house until the late 1940s. The house was purchased in the early 1950s by John C. and Laura B. Spence. John was born in 1909 in Pennsylvania. He was a barber and owned the "Central Barber Shop" in San Rafael. Laura was born in Canada and was a "housewife". After John died in 1980 the house was sold to Edith Rousseau, who appears to have owned it as an investment property along with Ted Remak. Records show that Ted was the sole owner of the property in 1986. In 1988, Ted sold the property to Brendan Ankers and Francis (Cotter) Ankers. In 2007, the Ankers sold the house to Mary Louie Neupauer, and in 2013 the property was sold to Arthur Feidler (who also currently also owns the property at 136 Southern Heights Boulevard).

Significance Statement:

According to National Register Bulletin No. 15, "How to Apply the National Register Criteria for Evaluation," to be eligible for listing in the National Register of Historic Places, a building must be significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

CONTINUATION SHEET

Property Name: 122 Southern Heights Boulevard

Page 12 of 13

In addition, 122 Southern Heights Boulevard must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

The Vernacular style house does not appear to meet any of the four criteria of significance for listing in the NRHP, or the CRHR.

122 Southern Heights Boulevard is not significant under Criterion A of the NRHP and Criterion 1 of the CRHR for its association with an important event in history. Although this residence was associated with the gradual growth of San Rafael, background research indicates that the building's contribution to this pattern of events was not important or exceptional.

122 Southern Heights Boulevard is not significant under Criterion B of the NRHP and Criterion 2 of the CRHR for its association with any owners or occupants that appeared to be prominent figures or whose achievements were considered exceptional. The resource is not associated with a significant person in national, state, or local history.

122 Southern Heights Boulevard is not significant under Criterion C of the NRHP and Criterion 3 of the CRHR as a unique or exemplary vernacular-style house; for its type, period, or method of construction; it is not a work of master; and it does not possess high artistic value. Background research did not identify a master architect or builder associated with the building.

122 Southern Heights Boulevard is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

Integrity

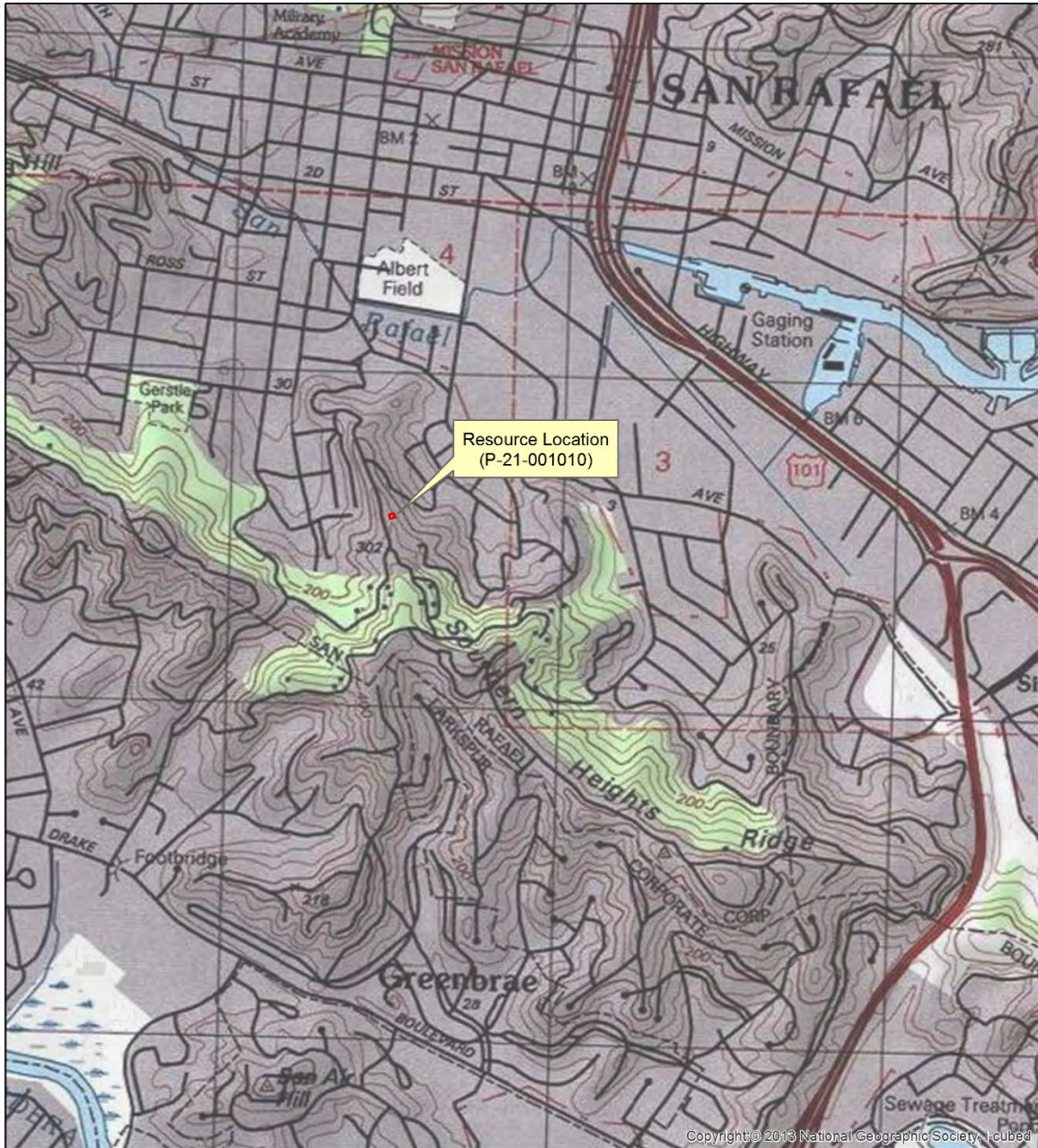
Within the concept of integrity, the National Register Criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. Integrity of 122 Southern Heights Boulevard was not assessed because it was not found eligible under any criteria.

Conclusions

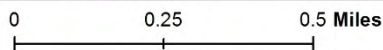
The property at 122 Southern Heights Boulevard is not significant under any of the NRHP or CRHR Criteria and is not a historic resource under Public Resource Code 5024.

Page 13 of 13 *Resource Name or # 122 Southern Heights Boulevard

*Map Name: San Rafael *Scale: 1:24,000 *Date of map: 1993



Marin County



1:15,000

Resource Location Map Historic Resources Evaluation 122 Southern Heights Blvd., San Rafael, CA APN 013-124-07		Resource 122 Southern Heights Boulevard
EVANS & DE SHAZO, LLC ARCHAEOLOGY & HISTORIC PRESERVATION	USGS 7.5' Quadangle: San Rafael (1993) T 1 North / R 6 West	Map Projection: NAD 83 UTM Zone 10N

PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY-NAME	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
000659	21-000794	OLIVE AVE	ANGELICO HALL	SAN RAFAEL	P	1922	PROJ.REVW.	FCC040901G	12/02/04	6Y	
000658	21-000793	PALM AVE	MEADOWLANDS	SAN RAFAEL	P	1888	HIST.SURV.	4902-0063-0000		3S	
000651	21-000786	PALM AVE	FANJEAUX HALL	SAN RAFAEL	P	1926	HIST.SURV.	4902-0062-0000		3S	
000656	21-000791	PALM AVE	EDGEHILL	SAN RAFAEL	P	1887	HIST.SURV.	4902-0055-0000		3S	
000858	21-000993	11 PALM AVE		SAN RAFAEL	P	1908	HIST.SURV.	4902-0060-0000		3S	
000834	21-000969	19 PALM AVE		SAN RAFAEL	P	1906	HIST.SURV.	4902-0262-0000		5S2	
000835	21-000970	31 PALM AVE		SAN RAFAEL	P	1907	HIST.SURV.	4902-0238-0000		5S2	
000836	21-000971	49 PALM AVE	EDEN, EDWARD, HOUSE	SAN RAFAEL	P	1896	NAT.REG.	21-0051	11/23/10	7J	
							HIST.SURV.	4902-0240-0000		7N	
000837	21-000972	50 PALM AVE		SAN RAFAEL	P	1906	HIST.SURV.	4902-0241-0000		7N	
000838	21-000973	122 PALM AVE		SAN RAFAEL	P	1895	HIST.SURV.	4902-0242-0000		3S	
000839	21-000974	130 PALM AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0243-0000		3S	
000840	21-000975	134 PALM AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0244-0000		7N	
000841	21-000976	160 PALM AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0245-0000		3S	
000842	21-000977	178 PALM AVE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0246-0000		7N	
000843	21-000978	321 PALOMA AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0247-0000		7N	
000844	21-000979	172 PICNIC AVE		SAN RAFAEL	P	1880	HIST.SURV.	4902-0248-0000		7N	
000857	21-000992	225 PICNIC AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0261-0000		5S2	
000845	21-000980	25 QUARRY RD		SAN RAFAEL	P	1890	HIST.SURV.	4902-0249-0000		7N	
000846	21-000981	27 QUARRY RD		SAN RAFAEL	P	1882	HIST.SURV.	4902-0250-0000		3S	
065629	21-001835	4460 REDWOOD HWY		SAN RAFAEL	U		PROJ.REVW.	HUD881215B	01/11/89	6Y	
000847	21-000982	5 ROBERTS AVE		SAN RAFAEL	P	1920	HIST.SURV.	4902-0251-0000		5S2	
186925		87 ROBINHOOD DR		SAN RAFAEL	P		PROJ.REVW.	HUD111031I	11/15/11	6Y	
000848	21-000983	19 ROSS ST		SAN RAFAEL	P	1880	HIST.SURV.	4902-0252-0000		7N	
000849	21-000984	23 ROSS ST		SAN RAFAEL	P	1884	HIST.SURV.	4902-0253-0000		7N	
000850	21-000985	32 ROSS ST		SAN RAFAEL	P	1915	HIST.SURV.	4902-0254-0000		5S2	
000851	21-000986	109 ROSS ST		SAN RAFAEL	P	1870	HIST.SURV.	4902-0255-0000		7N	
000852	21-000987	112 ROSS ST		SAN RAFAEL	P	1885	HIST.SURV.	4902-0256-0000		5S2	
000854	21-000989	127 SAN RAFAEL AVE		SAN RAFAEL	P	1886	HIST.SURV.	4902-0258-0000		3S	
000855	21-000990	136 SAN RAFAEL AVE		SAN RAFAEL	P	1910	HIST.SURV.	4902-0259-0000		3S	
000856	21-000991	210 SAN RAFAEL AVE	DAVIDSON HOUSE	SAN RAFAEL	P	1875	HIST.SURV.	4902-0260-0000		3S	
000861	21-000996	230 SAN RAFAEL AVE	ELLIOTT HOUSE	SAN RAFAEL	P	1865	HIST.SURV.	4902-0265-0000		3S	
000862	21-000997	10 SANTA MARGARITA DR		SAN RAFAEL	U	1929	HIST.SURV.	4902-0266-0000		7N	
000863	21-000998	21 SANTA MARGARITA DR		SAN RAFAEL	P	1928	HIST.SURV.	4902-0267-0000		7N	
000864	21-000999	100 SANTA MARGARITA DR		SAN RAFAEL	P	1927	HIST.SURV.	4902-0268-0000		5S2	
000865	21-001000	120 SANTA MARGARITA DR		SAN RAFAEL	P	1929	HIST.SURV.	4902-0269-0000		7N	
000866	21-001001	200 SANTA MARGARITA DR		SAN RAFAEL	P	1925	HIST.SURV.	4902-0270-0000		5S2	
000871	21-001006	14 SENTINEL CT		SAN RAFAEL	P	1880	HIST.SURV.	4902-0275-0000		3S	
000872	21-001007	37 SIRARD LANE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0276-0000		5S2	
000874	21-001009	SOUTHERN HEIGHTS BLVD		SAN RAFAEL	M	1930	HIST.SURV.	4902-0278-0000		7N	
000873	21-001008	116 SOUTHERN HEIGHTS BLVD		SAN RAFAEL	P	1900	HIST.SURV.	4902-0277-0000		7N	
000875	21-001010	122 SOUTHERN HEIGHTS BLVD		SAN RAFAEL	D	1925	HIST.SURV.	4902-0279-0000		7N	
000876	21-001011	138 SOUTHERN HEIGHTS BLVD	COURTWRIGHT TRACT	SAN RAFAEL	P	1908	HIST.SURV.	4902-0280-0000		5S2	
088628	21-002274	108 SPRING GROVE AVE		SAN RAFAEL	P	1927	PROJ.REVW.	HUD940218J	03/24/94	6Y	
000877	21-001012	205 SPRING GROVE AVE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0281-0000		7N	
000853	21-000988	1 ST FRANCIS LANE		SAN RAFAEL	P	1930	HIST.SURV.	4902-0257-0000		5S2	
112972	21-002435	ST VINCENT DR	ST VINCENT'S SCHOOL FOR BOYS	SAN RAFAEL	P		HIST.RES.	SHL-0630-0000	01/29/58	7L	
000878	21-001013	33 SUNSET WY		SAN RAFAEL	P	1928	HIST.SURV.	4902-0282-0000		3S	
000879	21-001014	927 TAMALPAIS AVE	BARREL HOUSE	SAN RAFAEL	P	1925	HIST.SURV.	4902-0283-0000		5S2	
000880	21-001015	930 TAMALPAIS AVE	NORTHWEST PACIFIC RAILROAD DEPOT,	SAN RAFAEL	P	1929	HIST.SURV.	4902-0284-0000		3S	
000881	21-001016	22 TERRADILLO AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0285-0000		7N	
000883	21-001018	229 UPPER TOWN DR		SAN RAFAEL	P	1939	HIST.SURV.	4902-0287-0000		7N	
094589	21-002292	34 VILLA AVE		SAN RAFAEL	P		PROJ.REVW.	HUD950113E	02/06/95	6Y	
000884	21-001019	48 VILLA AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0288-0000		7N	
000886	21-001021	241 W END AVE		SAN RAFAEL	P	1869	HIST.SURV.	4902-0290-0000		3S	

HISTORIC RESOURCES INVENTORY

(State use only)

Ser _____ Site _____ Mo. _____ Yr. _____
 UTM _____ Q _____ NR SHL _____
 Lat _____ Lon _____ Era _____ Sig _____
 Adm _____ T2 _____ T3 _____ Cat _____ HABS _____ HAER _____ Fed _____
 UTM 10/541500/4 201590

IDENTIFICATION

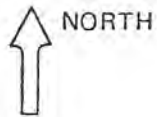
- Common name: _____ 21-6723 279
- Historic name, if known: _____
- Street or rural address: 122 Southern Heights
 City: San Rafael ZIP: 94901 County: Marin
- Present owner, if known: Agnes Moore/Edith Rousseau % J. Spence Address: same
 City: _____ ZIP: _____ Ownership is: Public Private
- Present Use: Residence Original Use: Single family
 Other past uses: _____

DESCRIPTION

6. Briefly describe the present physical appearance of the site or structure and describe any major alterations from its original condition:

Two story, wood frame Craftsman Style. Gable roof, hip roof over wing, full porch with timber construction. Dark stained shingles, painted trim. Homemade garden walls and brick aquaducts. Lush trees, shrubs, flowers. Has informal country charm. Corrugated fiberglass porch roof has been added.

7. Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



8. Approximate property size:

Lot size (in feet) Frontage _____'
 Depth _____';
 or approx. acreage _____.

9. Condition: (check one)

- a. Excellent b. Good c. Fair
 d. Deteriorated e. No longer in existence

10. Is the feature a. Altered? b. Unaltered?

11. Surroundings: (Check more than one if necessary)

- a. Open land b. Scattered buildings
 c. Densely built-up d. Residential
 e. Commercial f. Industrial
 g. Other _____

12. Threats to site:

- a. None known b. Private development
 c. Zoning d. Public Works project
 e. Vandalism f. Other _____

NOTE: The following (Items 14-19) are for structures only.

14. Primary exterior building material: a. Stone b. Brick c. Stucco d. Adobe e. Wood
f. Other Shingles

15. Is the structure: a. On its original site? b. Moved? c. Unknown?

16. Year of initial construction 1925 This date is: a. Factual b. Estimated

17. Architect (if known): _____

18. Builder (if known): _____

19. Related features: a. Barn b. Carriage house c. Outhouse d. Shed(s) e. Formal garden(s)
f. Windmill g. Watertower/tankhouse h. Other _____ i. None

SIGNIFICANCE

20. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site when known)

According to the survey architect the house is of good rating architecturally and of major environmental significance, because of the Craftsman Style with timbered construction; and it sits well in the neighborhood of similar stylistic characteristics.

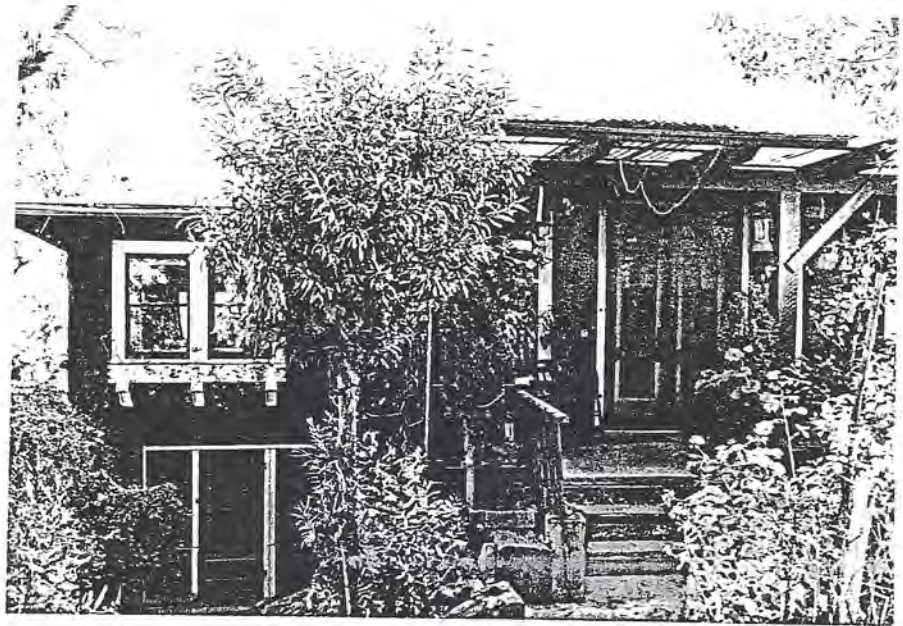
21. Main theme of the historic resource: (Check only one): a. Architecture b. Arts & Leisure
c. Economic/Industrial d. Exploration/Settlement e. Government f. Military
g. Religion h. Social/Education

22. Sources: List books, documents, surveys, personal interviews, and their dates:

23. Date form prepared: 1/13/78 By (name): Niki Simons
Address: 23 Scenic City San Rafael ZIP: 94901
Phone: (415) 454-2168 Organization: City of San Rafael

(State Use Only)

#20 201 #6



State of California & The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
 HRI #
 Trinomial
NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 14 *Resource Name or #: (Assigned by recorder) 126 Southern Heights Boulevard

P1. Other Identifier: _____

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N ; R 6W ; of of Sec Un ; MD B.M.

c. Address 126 Southern Heights Boulevard City San Rafael Zip 94901

d. UTM: Zone 10 541375 mE/ 42017857 mN

e. Other Locational Data:

126 Southern Heights Boulevard is located within Assessor Parcel Number (APN) 013-124-06, between Meyer Road and Pearce Road, approximately 0.72 miles south of downtown San Rafael and east of the north approach to the Southern Heights Bridge. The garage is located approximately 65 feet north within an adjacent parcel (APN 013-124-05).

P3a. Description: 126 Southern Heights Boulevard is designed in a "local" Vernacular style and is situated within a 9600 square-foot parcel along a steep east-facing slope that faces the San Francisco Bay. The building is a side gable, two-story over a ground floor "basement" design with a low-pitched, hip roof with wide overhanging eaves, and an exterior wall stone chimney. The west elevation (primary façade) is clad in wood shingles and consists of five aluminum replacement windows that vary in size, two entry doors, one that is centered and one that is situated along northwest portion of the primary façade. (see Continuation Sheet, Page 3)

*P3b. Resource Attributes:

HP2, Single Family Property

P4. Resources Present:
 Building Structure Object Site
 District Element of District
 Other (Isolates, etc.)

P5b. Description of Photo:
 Photo facing south/southeast,

4/4/2017

*P6. Date Constructed/Age and Source: Historic Prehistoric
 Both

1914, House; ca. 1950 garage

*P7. Owner and Address:

Mary Turner

126 Southern Heights Blvd,

San Rafael, CA 94901

*P8. Recorded by: Stacey De Shazo,
M.A., Evans & De Shazo, LLC. 6876
Sebastopol Avenue, Sebastopol, CA,
95472

*P9. Date Recorded: April 4, 2017

*P10. Survey Type:
Intensive

P5a. Photograph or Drawing



*P11. Report Citation: Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge
Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List): _____

State of California & The Resources Agency Primary #
 DEPARTMENT OF PARKS AND RECREATION HRI#
BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # 126 Southern Heights Boulevard *NRHP Status Code _____
 Page 2 of 14

B1. Historic Name: 126 Southern Heights
 B2. Common Name: 126 Southern Heights
 B3. Original Use: Residence B4. Present Use: Residence

*B5. Architectural Style: Vernacular

*B6. Construction History: The house was constructed in 1914 and the garage was constructed in ca. 1950. The house has been modified through the years (dates unknown); however, the garage remains intact from the date of construction.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:
 B9a. Architect: Unknown b. Builder: Unknown

*B10. Significance: Theme N/A Area N/A
 Period of Significance N/A Property Type N/A Applicable Criteria N/A

126 Southern Heights Boulevard does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

Historic Context:
 (see Continuation Sheet, Page 9-13)

B11. Additional Resource Attributes: (List attributes and codes)
 *B12. References:
 B13. Remarks:
 B14. Evaluator: Stacey De Shazo, M.A.
 *Date of Evaluation: April 4, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 3 of 14

P3a. Description (Continued from Primary)

The is brick veneer cladding, which was likely added in the 1960s, covers the lower portion of the original wood shingle cladding along the west elevation and a trellis that extends from the porch, which also not original to the house.

North Elevation

The north elevation consists of a hipped addition, of which a portion has been modified. It appears that the section along the northwest corner of the house was enclosed sometime after 1950, which includes the additional west elevation front door. The shingles appears to be original to the house; however, there are areas that have been re-shingled. There is a recessed ground floor entry door, two aluminum slider windows, and a ribbon of aluminum windows with decorative trim detail. There exposed eave brackets that appear to be decorative. The north elevation is in fair condition.



Photo showing the north elevation, facing east/southeast.

CONTINUATION SHEET

Property Name: ___ 126 Southern Heights Boulevard

Page 4 of 14



Photo showing the north elevation second story, facing east.

East Elevation

The east elevation consists of two main stories and a lower ground floor “basement” that is located beneath wood deck. The façade includes a variety of window openings and materials that include vinyl and aluminum windows. There is a second story balcony, and a first story door and stairway that allow access to the rear deck. The east elevation has been modified extensively.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 5 of 14



Photo showing the additions along the east elevation, facing west.



Photo showing the east elevation, facing west.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 6 of 14

South Elevation

The south elevation consists of a first story that includes a shed addition and side entry door. There are two aluminum windows long this elevation and an aluminum picture window that are not original to the house. There is a large tree that is leaning south and east from the house that appears to, in part, be under the foundation of the house.



Photo showing the south elevation, facing west.

Garage

There is an ca. 1950 garage located to the north of the house that is associated with 126 Southern Heights Boulevard; however, an easement granted by the previous owner of the 1914 house allows for the use of this garage by the owner of the property located at 122 Southern Heights Boulevard. The garage is constructed of redwood horizontal boards and is elevated on posts along the rear elevation. The garage consists of a front low-pitched front gabled roof with exposed rafters. There are original double sliding barn doors that are situated on a curved railing system. There is one four-light fixed wood window along the east elevation.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 7 of 14



Photo showing the east and north elevation, facing south.



Photo showing the west elevation, facing east.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 8 of 14



Photo showing the interior of the garage and the original sliding barn-door and track railing.

B10. Significance (Continued from BSO)

Vernacular Architectural Style

The term vernacular architecture is often referred to as the “architectural language of the people” with its ethnic, regional and local influences and the product of non-experts. Since the rise of modernism in the twentieth century, architectural writers have tended to admire what they regarded as traditional buildings for the immediate relationship between form and function is thought to be designed in response to the needs of the “local” environment. Vernacular buildings can be residential, industrial or agricultural (like barns) and usually they are *not* designed by a famous architect or builder. Vernacular architecture is also associated with the unique use of materials and conditions of a local environment, but can also be seen as a ‘reason’ for the design like the mass-produced architecture of a Route 66 gas station.

126 Southern Heights Boulevard is designed in a local Vernacular style that is sensitive to the surrounding setting of the hillside along Southern Heights Boulevard and takes advantage of the views along rear that face the San Francisco Bay.

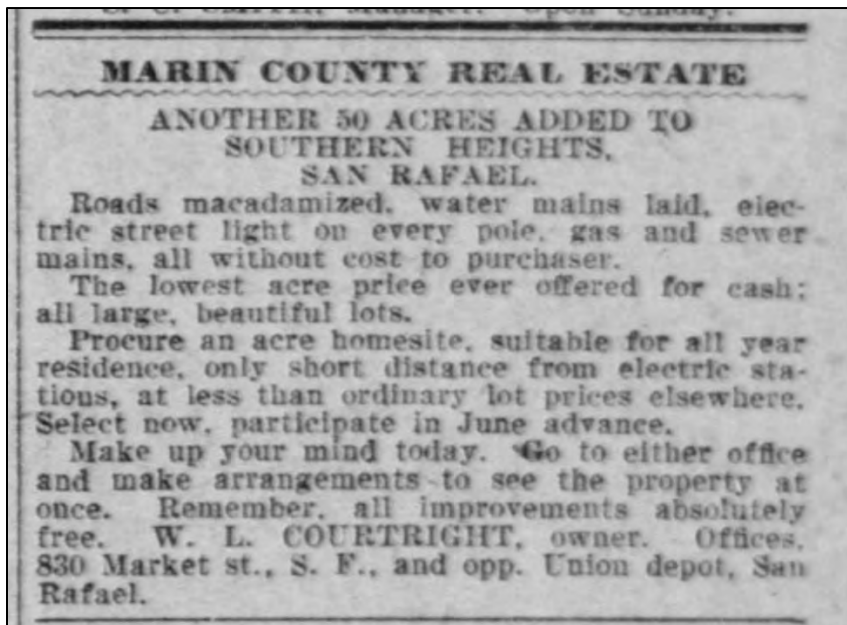
CONTINUATION SHEET

Property Name: _____ 126 Southern Heights Boulevard

Page 9 of 14

PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land that encompasses the subject property. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman, where the property is located, was purchased by business partners John William Mackay and James C. Flood. MacKay and Flood were two of the “Big Four” that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James’ son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the subject property, the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. An advertisement in the San Francisco Call newspaper, dated May 15, 1910, states,



Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

“SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 10 of 14

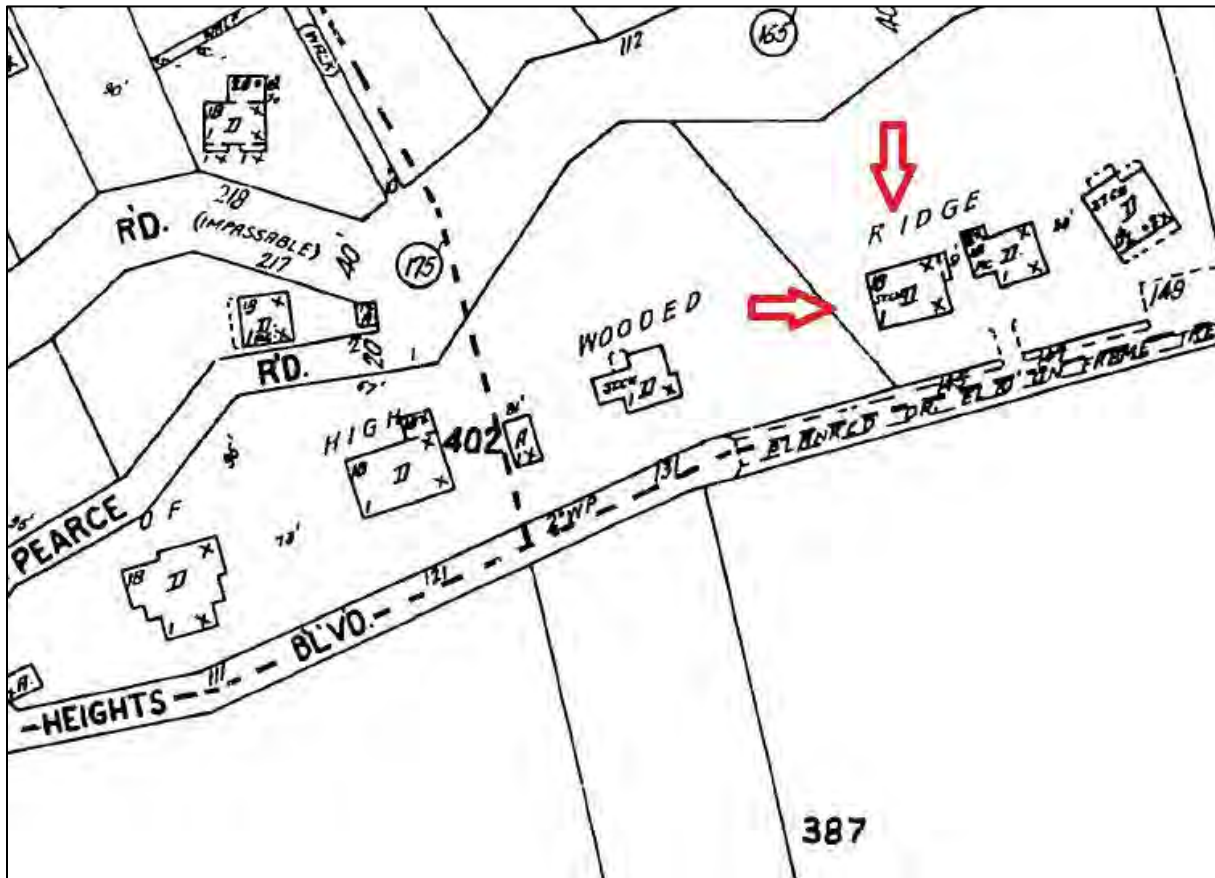
Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS”, “BUY NOW AND PROFIT BY JUNE ADVANCE”

Go to either office and make arrangements to see the property at once

W.L. COURTRIGHT. Owner”

The 1924 Sanborn Fire Insurance map shows 126 Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard.

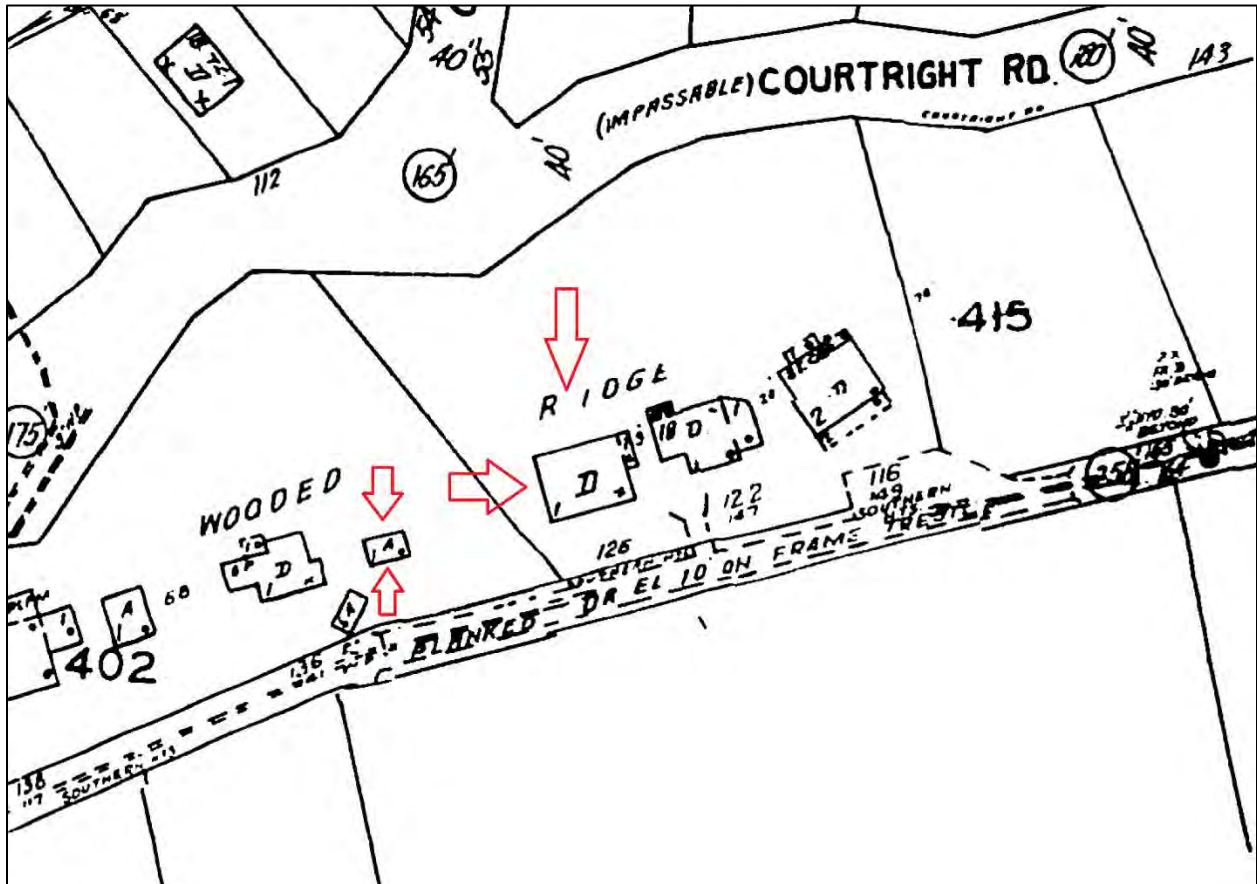


1924 Sanborn Fire Insurance map showing 126 Southern Heights Boulevard.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 11 of 14



1924 Sanborn Fire Insurance map showing 126 Southern Heights Boulevard and ca. 1950 garage buildings at 126 Southern Heights Boulevard.

Summary of Land Ownership

126 Southern Heights Boulevard was originally owned by Robert Boot and Emily Boot. Robert and Emily were both born in England and immigrated to the U.S. in 1880. In the 1920s they lived at the house with their daughter Margaret Powers, and their grandson George Powers. In 1947, the house was sold to Earl and Marion Turner, who owned the house until 2001. The house was deeded to their children Noel and Mary after Mary's death in 2001 and several years later. Mary Turner currently lives at the house.

Significance Statement:

According to National Register Bulletin No. 15, "How to Apply the National Register Criteria for Evaluation," to be eligible for listing in the National Register of Historic Places, a building must be

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 12 of 14

significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

In addition, the 1914 house and ca. 1950 garage at 126 Southern Heights Boulevard must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

126 Southern Heights Boulevard does not appear to be eligible for listing on the NRHP or the CRHR under any of the four Criteria.

126 Southern Heights Boulevard is not significant under Criterion A of the NRHP and Criterion 1 of the CRHR for its association with an important event in history. Although this residence was associated with the gradual growth of San Rafael, background research indicates that the building's contribution to this pattern of events was not important or exceptional.

126 Southern Heights Boulevard is not significant under Criterion B of the NRHP and Criterion 2 of the CRHR for its association with any owners or occupants that appeared to be prominent figures or whose achievements were considered exceptional. The resource is not associated with a significant person in national, state, or local history.

126 Southern Heights Boulevard is not significant under Criterion C of the NRHP and Criterion 3 of the CRHR as a unique or exemplary vernacular-style house; for its type, period, or method of construction; it is not a work of master; and it does not possess high artistic value. Background research did not identify a master architect or builder associated with the building.

126 Southern Heights Boulevard is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

CONTINUATION SHEET

Property Name: 126 Southern Heights Boulevard

Page 13 of 14

Integrity

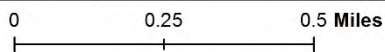
Within the concept of integrity, the National Register Criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. Integrity of 126 Southern Heights Boulevard was not assessed because it was not found eligible under any criteria.

Conclusions

The property at 126 Southern Heights Boulevard is not significant under any of the NRHP or CRHR Criteria and is not a historic resource under Public Resource Code 5024.



Marin County



1:15,000

Resource Location Map Historic Resources Evaluation 126 Southern Heights Blvd., San Rafael, CA APN 013-124-06		Resource 126 Southern Heights Boulevard
EVANS & DE SHAZO, LLC ARCHAEOLOGY & HISTORIC PRESERVATION		USGS 7.5' Quadangle: San Rafael (1993) T 1 North / R 6 West Map Projection: NAD 83 UTM Zone 10N

Map by Brian Ehlers 5/20/2017

State of California & The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

Page 1 of 12 *Resource Name or #: 136 Southern Heights Boulevard

P1. Other Identifier: _____

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N ; R 6W ; of of Sec Un ; MD B.M.

c. Address 136 Southern Heights Boulevard City San Rafael Zip 94901

d. UTM: Zone 10 541362 mE/ 4201827 mN

e. Other Locational Data: The property is located at 136 Southern Heights Boulevard with Assessor Parcel Number (APN) 013-124-04, between Meyer Road and Pearce Road, approximately 0.70 miles south of downtown San Rafael and east of the north approach to the Southern Heights Bridge.

*P3a. Description: 136 Southern Heights Boulevard is situated on a 6,760-square foot lot with a gently east sloping asphalt and paved driveway that cover the area directly in front of and west of the house. The house is an irregular-shaped plan and consists of a significantly modified west elevation (primary façade) that includes brick veneer cladding that appears to be attached directly to the original shingle siding, an original Craftsman style front door, two ribbons of windows with six over one wood sashes, and a small casement or fixed window with 1970s bottle glass window sashes. Each of the windows have wood awnings that do not appear to be original. (see Continuation Sheet, Page 3)

*P3b. Resource Attributes:

HP2, Single Family Property _____

P4. Resources Present:
Building Structure Object Site
 District Element of District
Other (Isolates, etc.)

P5b. Description of Photo:
Photo facing south/southeast,
4/4/2017

*P6. Date Constructed/Age and Source: Historic Prehistoric
 Both
1907

*P7. Owner and Address:
Arthur Feidler
136 Southern Heights Blvd,
San Rafael, CA 94901

*P8. Recorded by:
Stacey De Shazo, M.A., Evans & De
Shazo, LLC. 6876 Sebastopol Avenue,
Sebastopol, CA, 95472

*P9. Date Recorded: April 4, 2017

*P10. Survey Type: Intensive

P5a. Photograph or Drawing



*P11. Report Citation: Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List): _____

State of California & The Resources Agency Primary #
 DEPARTMENT OF PARKS AND RECREATION HRI#
BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # 136 Southern Heights Boulevard *NRHP Status Code _____
 Page 2 of 12

B1. Historic Name: 136 Southern Heights
 B2. Common Name: 136 Southern Heights
 B3. Original Use: Residence B4. Present Use: Residence

*B5. Architectural Style: Craftsmen

*B6. Construction History: The building was constructed in 1907, and was significantly modified through the years (dates unknown).

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown b. Builder: Unknown

*B10. Significance: Theme N/A Area N/A
 Period of Significance N/A Property Type N/A Applicable Criteria N/A

136 Southern Heights Boulevard does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) nor the California Register of Historical Resources (CRHR) and is not a historical resource as defined by CEQA.

Historic Context:

(see Continuation Sheet, Page 3)

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

B13. Remarks:

B14. Evaluator: Stacey De Shazo, M.A.

*Date of Evaluation: April 4, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 3 of 12

P3a. Description (Continued from Primary)

There roof is moderate pitched with a wide fascia board and asphalt shingles.

North Elevation

The north elevation consists of wood shingle cladding, a stone fireplace, six over one wood sash casement windows, decorative triangular wooden knee braces, gable timbering, and exposed rafters. Along this elevation, the "lower floors" of the two-story house consist of a projecting lower gable and several additions along the rear of the house. There is evidence of an original stone perimeter foundation and a concrete foundation.



Photo showing the north elevation, and wooden knee braces.

CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 4 of 12



Photo showing the north elevation second story, facing east.



Photo showing the north elevation additions, facing south.

CONTINUATION SHEET

Property Name: ___ 136 Southern Heights Boulevard

Page 5 of 12



Photo showing the north elevation "ground floor" gable with knee braces and gable timber detail.

East Elevation

The east elevation consists of two main stories and a lower "basement" level. The east elevation has been modified extensively, but there are some Craftsman features that are still present, including six over one windows, shingle cladding, and a sun porch. The exterior staircase from the "main" ground floor has been removed. There is also evidence of a deck that extends the length of the property. The east elevation is in poor condition.

CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 6 of 12



Photo showing the additions along the east elevation, facing west.



Photo showing the east elevation, facing west.

CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 7 of 12

South Elevation

The south elevation consists of a first story that includes two, fixed horizontal rectangular windows and two square bay windows along the second story that are divided by an exterior fireplace that is clad in wood and extends into the eaves of the house.



Photo showing the south elevation, facing north/northwest.

B10. Significance (Continued from BSO)

Craftsman (1905 - 1930)

Craftsman architecture was the dominant style for smaller houses built throughout the country during the period from about 1905 until the early 1930s. The style developed from what is known as the American Arts & Crafts Movement that emerged in the early 20th century in the U.S. as an outgrowth of the English Arts and Crafts Movement. Its hallmark is a philosophy of honest, simple design expressed in hand-made creations by skilled craftsmen. While the Movement grew throughout the U.S., California, especially Southern California, became a particularly strong center for Craftsman design including architecture, art, and ceramics. The style quickly spread throughout the country by pattern books and popular magazines. The style faded from favor after the mid-1920s and few were built after 1930s.

Historic Context (Continued from BSO, page 3)

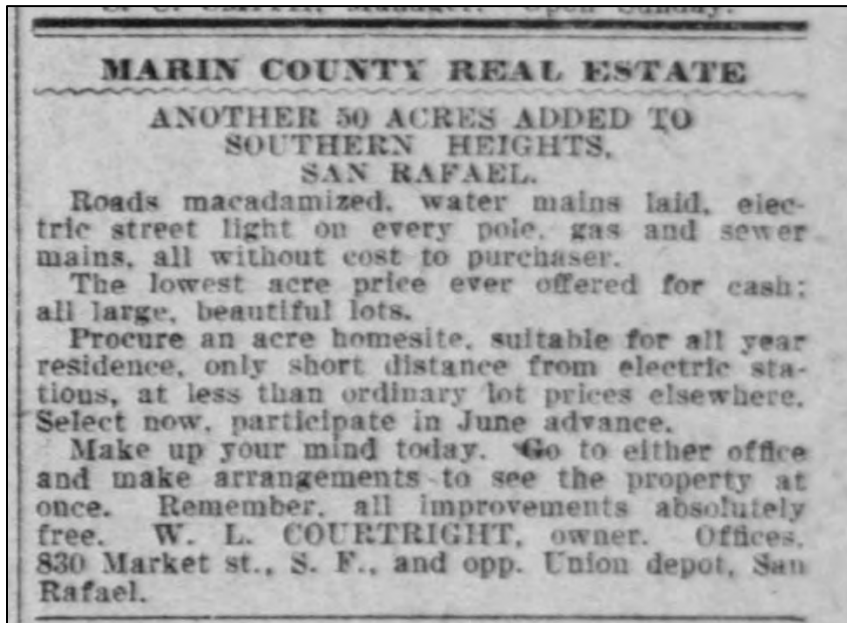
CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 8 of 12

PLANNED DEVELOPMENT OF SOUTHERN HEIGHTS

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land that encompasses the subject property. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman, where the property is located, was purchased by business partners John William Mackay and James C. Flood. MacKay and Flood were two of the "Big Four" that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James' son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. An advertisement in the *San Francisco Call* newspaper, dated May 15, 1910, states,



Advertisement for Southern Heights lot sales, *San Francisco Call* newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

"SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal

CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 9 of 12

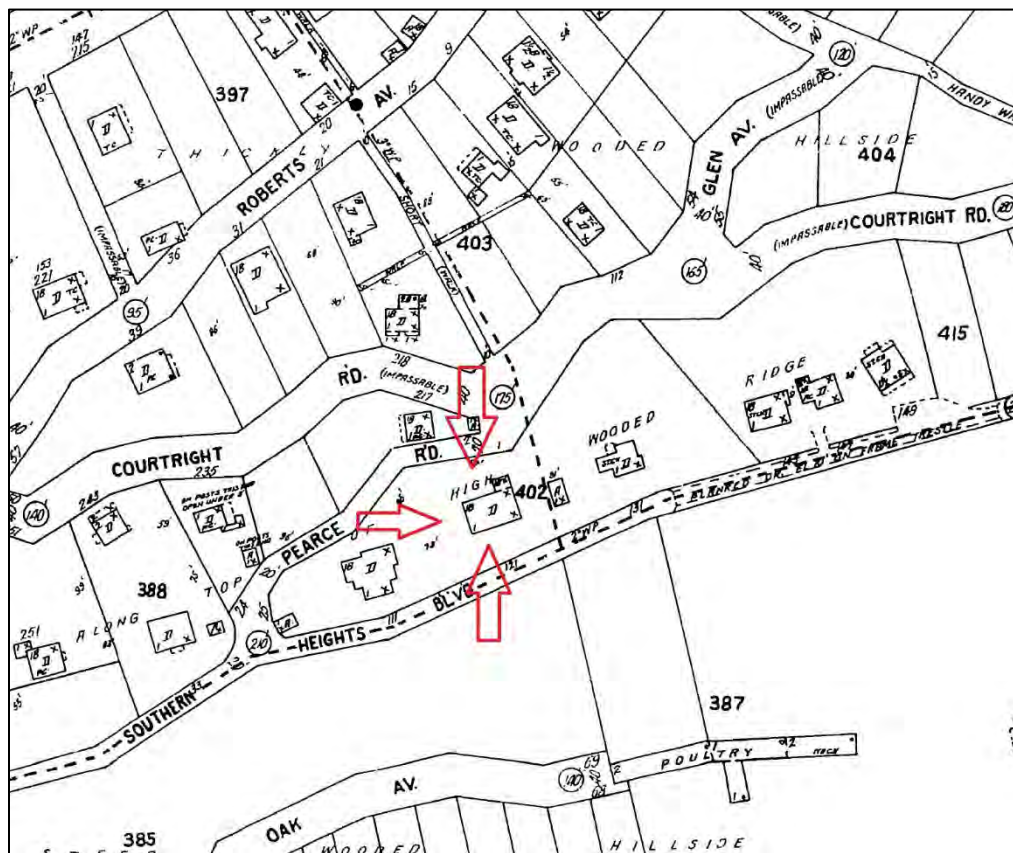
every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS”, “BUY NOW AND PROFIT BY JUNE ADVANCE”

Go to either office and make arrangements to see the property at once

W.L. COURTRIGHT. Owner”

The 1924 Sanborn Fire Insurance map shows 136 Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard.



1924 Sanborn Fire Insurance map showing the 1907 house.

Summary of Land Ownership

136 Southern Heights Boulevard appears to have been originally owned by John Thwing and was then sold to Donald and Shirley Runge in the late 1940s or early 1950s. In the 1953 U.S. Cities Directory for the City of San Rafael, Donald is listed as “student” and Shirley is listed as a “Stenographer”.

CONTINUATION SHEET

Property Name: Southern Heights Boulevard

Page 10 of 12

The property was then sold to Robert and Jean Jacobs in the early 1960s. According to the 1963 U.S. City Directory for the City of San Rafael, Robert is listed as the Vice President for “Tom Mc Gruder’s R. Millbrae” (research did not reveal further information about this company). The property was sold to the current owner in 2015.

Significance Statement:

According to National Register Bulletin No. 15, “How to Apply the National Register Criteria for Evaluation,” to be eligible for listing in the National Register of Historic Places, a building must be significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

In addition, 136 Southern Heights Boulevard must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

136 Southern Heights Boulevard does not appear eligible for listing on the NRHP or the CRHR.

136 Southern Heights Boulevard is not significant under Criterion A of the NRHP and Criterion 1 of the CRHR for its association with an important event in history. Although this residence was associated with the gradual growth of San Rafael, background research indicates that the building’s contribution to this pattern of events was not important or exceptional.

136 Southern Heights Boulevard is not significant under Criterion B of the NRHP and Criterion 2 of the CRHR for its association with any owners or occupants that appeared to be prominent figures or whose achievements were considered exceptional. The resource is not associated with a significant person in national, state, or local history.

136 Southern Heights Boulevard is not significant under Criterion C of the NRHP and Criterion 3 of the CRHR. Though the building possesses some defining characteristics of Craftsmen-style architecture, it is not a great example of a Craftsmen style residence. Furthermore, it is not significant for its type, period, or method of construction; it is not a work of master; and it does not possess high artistic value. Background research did not identify a master architect or builder associated with the building.

CONTINUATION SHEET

Property Name: 136 Southern Heights Boulevard

Page 11 of 12

Furthermore, there are much better examples of Craftsman style architecture throughout the county, including the NRHP-listed Erskine B. McNear House in San Rafael, the Outdoor Art Club in Mill Valley, and the SAulsalito Women's Club in Sausalito.

136 Southern Heights Boulevard is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

Integrity

Within the concept of integrity, the National Register Criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. Integrity of 136 Southern Heights Boulevard was not assessed because it was not found eligible under any criteria.

Conclusions

The property at 136 Southern Heights Boulevard is not significant under any of the NRHP or CRHR Criteria and is not a historic resource under Public Resource Code 5024.

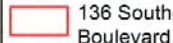



Marin County

0 0.25 0.5 Miles



1:15,000

Resource Location Map Historic Resources Evaluation 136 Southern Heights Blvd., San Rafael, CA APN 013-124-04		Resource  136 Southern Heights Boulevard
 EVANS & DE SHAZO, LLC <small>ARCHAEOLOGISTS HISTORIC PRESERVATION</small>	USGS 7.5' Quadangle: San Rafael (1993) T 11 North / R 6 West	Map Projection: NAD 83 UTM Zone 10N

State of California ♦ **The Resources Agency**
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-21-001009

HRI # 4902-0278-0000

Trinomial

NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 15 *Resource Name or #: (Assigned by recorder) Southern Heights Bridge

P1. Other Identifier: Bridge No. 27C0148; Southern Heights Sidehill Viaduct

*P2. Location: Not for Publication Unrestricted

*a. County Marin and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Rafael Date 1993 T 1N; R 6W; of of Sec Un; MD B.M.

c. Address Southern Heights Boulevard City San Rafael Zip 94901

d. UTM: Zone 10, 541359 mE/ 4201788 mN

e. Other Locational Data: The bridge is located on Southern Heights Boulevard, between Meyer Road and Pearce Road, approximately 0.70 miles south of downtown San Rafael.

*P3a. Description: The Southern Heights Bridge is listed on the Directory of Properties in the Historic Property Date File for Marin County with a National Register Status code of 7N. The Southern Heights Bridge (bridge) is a one-lane timber stringer bridge that consists of a rough sawn plank deck with raised runners and wood hand rails. The bridge was constructed in ca. 1930, but was rehabilitated in 1958 and again in 1981. The bridge has concrete abutments, with concrete piles supporting vertical wooden members with horizontal and diagonal bracing. There is an abutment, which appears to be a section of the original ca. 1930 structure located below the north end of the bridge, along the west side that measures approximately 3 feet high and 16.5 feet long and consists of flat aggregated concrete blocks that are approximately 3-4-inches thick and 1-3 feet long. This original section is adjacent to what is likely a combination of a 1958 abutments and a 1981 abutment. The longitudinal and transverse wood pile bents appear to be a combination of original, 1958, and 1991 materials; however, the concrete piers that support the wood piles appear to a combination of those installed in 1958, as well as those installed in 1981. (see Continuation Sheet, Page 3)

P5a. Photograph or Drawing



*P3b. Resource Attributes:

HP19, Bridge

P4. Resources Present: Building
 Structure Object Site District
 Element of District Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Photo facing north, 4/4/2017

Date Constructed/Age and Source:

Historic Prehistoric

Both

ca. 1930

*P7. Owner and Address:

City of San Rafael

8. Recorded by:

Stacey De Shazo, M.A., Evans & De Shazo, LLC. 6876 Sebastopol Avenue, Sebastopol, CA, 95472

*P9. Date Recorded: April 4, 2017

*P10. Survey Type: Intensive

P11. Report Citation: Vallaire, Katie (2017) Historical Resources Evaluation Report for the Southern Heights Bridge Replacement Project, San Rafael, Marin County, California. LSA, Roseville, California. Federal ID number BRLO-5043(038).

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # Southern Heights Bridge *NRHP Status Code _____

Page 2 of 15

B1. Historic Name: Southern Heights Sidehill Viaduct

B2. Common Name: Bridge No. 27CO148

B3. Original Use: Overcrossing B4. Present Use: Overcrossing

*B5. Architectural Style: Timber Stringer Bridge

*B6. Construction History: The bridge was constructed in ca. 1930, it was rehabilitated in 1958 and in 1981. The 1958 rehabilitation included installing concrete piers and abutments, and replacing deteriorated wood material along north approach of the bridge. The 1981 rehabilitation appears to have included replacement/additional longitudinal and transverse wood bracing, concrete footings and additional/replacement concrete abutments.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown b. Builder: Unknown

*B10. Significance: Theme Community Planning and Development Area San Rafael
Period of Significance NA Property Type Bridge Applicable Criteria NA

The structure does not meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) under any criteria.

The structure was first constructed to meet the immediate needs of the growing community of San Rafael, and the type of construction reflected the local economy of the community. The structure is shown on the 1924 Sanborn Fire Insurance Map, but a date of ca. 1930 has been applied to conform with this City of San Rafael's estimated construction date, as it is unclear if the bridge shown on the 1924 Sanborn map is the same bridge as the existing ca. 1930 bridge. The structure was rehabilitated in 1958 to meet the increasing needs of the local community, and again in 1981. The Southern Heights Bridge was economical, easily to erect, and was an efficient structure to build, and these qualities represent a common structural design and type that is utilitarian and intended for immediate local use. (See Continuation Sheet, Page 3).

Historic Context: Timber stringer bridge design is a very old method of bridge construction that dates to the origins of bridge building that has endured for centuries and have been used in the development and growth of towns such as San Rafael mainly due to their simplicity and readily available material (wood). The first records of bridge building in the U.S. are traced to the early settlements along the East Coast, where they were constructed of basic wood planks with not much support. During this time, stone bridges were also built, but as the U.S. expanded its territory west, the most common bridge type built was the timber stringer bridge. Like the Southern Heights Bridge, most timber stringer bridges consisted of rough wood plank decks that rest on a single vertical support structure, and constructed of a combination of stone, concrete, and wood. By the early twentieth century, the design of timber stringer bridges was included in the standardized designs of several state departments of transportation, including California. Other states, such as Montana and Maryland, also developed a standard design for simple-span timber stringer bridges and as vehicle weights and use increased, creosote-treated timbers were often utilized. (see Continuation Sheet, Page 3.)

B11. Additional Resource Attributes:

B12. References: Parsons Brinkerhoff and Engineering and Industrial Heritage 2005 *A Context for Common Historic Bridge Types*, NCHRP Project 25-25, Task 15. Prepared for the National Cooperative Highway Research Program, Transportation Research Council, and the National Research Council.

B13. Remarks:

B14. Evaluator: Katie Vallaire, M.A.

Date of Evaluation: October 2, 2017

(This space reserved for official comments.)



CONTINUATION SHEET

Property Name: Southern Heights Bridge

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P3a. Description (Continued from Primary)

There are also discarded materials that were likely associated with the bridge prior to its partial rehabilitation in 1981 that includes a partially buried discarded 8-foot by 8-foot timber piling (length of segment unknown), a discarded brick footing segment, possibly from the ca. 1930 piers, that is 13 inches long, 13 inches tall and 8 inches wide, and a discarded brick segment (possible portion of old retaining wall) that is 10 inches tall and 2 feet long and wide. The bridge is also unusual, as there is access to one property located at 122 Southern Heights Boulevard, which is located directly from the center of bridge.



Photo showing the north approach to the bridge, facing south.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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Photo showing the east side at the north approach to the bridge, facing south.



Photo showing ca. 1930 abutment and the 1958 abutment.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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Photo showing the supporting membranes of the bridge, facing east.



Photo showing the front access to the house at 122 Southern Heights Boulevard, along the center of the bridge.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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B10. Significance (Continued from BSO)

Historic Context

According to the Caltrans Historic Bridges Inventory Update (JRP Historical Consulting, April 2004)¹

"In California between the 1920s and the 1930s, "four types of timber bridges were built" that included the "slab, stringer, truss, and suspension. Douglas fir, grown in California as well as Oregon and Washington, and California redwood were most commonly used for timber bridges in the state, although some counties used California red fir and ponderosa pine. The California Division of Highways typically did not use California red fir or ponderosa pine except when constructing temporary bridges. During this period, the Division of Highways commonly used creosote pressure-treated wood, but also used untreated Douglas fir. Most of California's timber bridges built during this period are timber stringer or girder bridges. Only a small number of timber slab and timber truss structures were built during this period. Like other timber bridges, timber trusses, for example, were largely built by counties in rural areas such as those found in Los Angeles or Humboldt counties."

Twentieth Century Growth and Development of the City of San Rafael

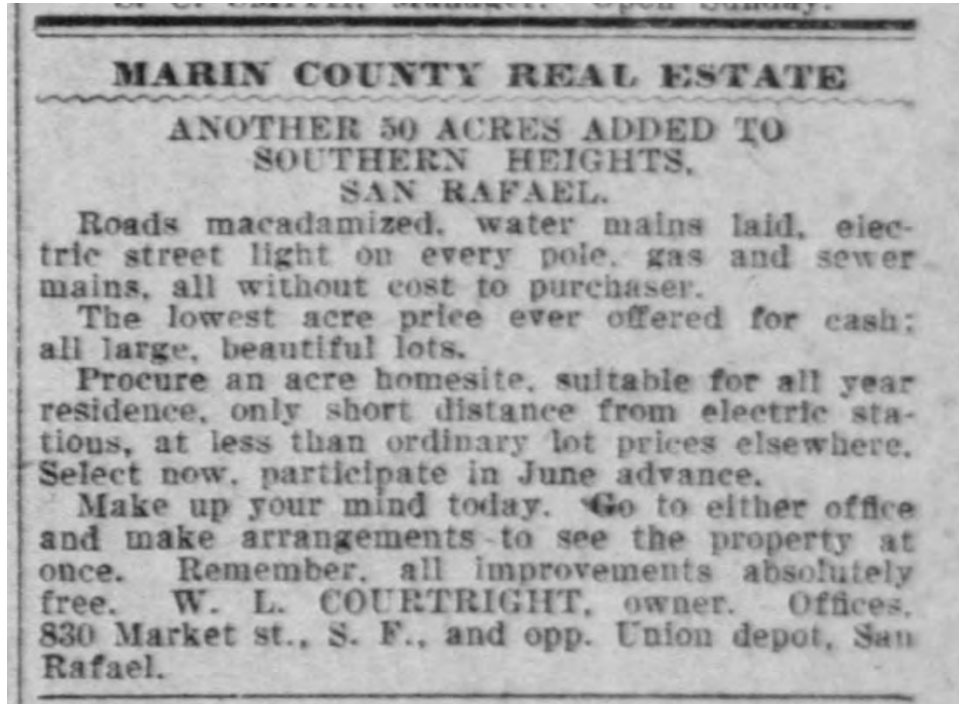
By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land where the bridge is located. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman, where the bridge is located, was purchased by business partners John William Mackay and James C. Flood. MacKay and Flood were two of the "Big Four" that discovered the Comstock Lode in Nevada that ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James' son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. Below is an advertisement in the *San Francisco Call* newspaper, dated May 15, 1910, regarding the Southern Heights Bridge.

¹ JRP Historical Consulting, April 2004. Caltrans Historic Bridges Inventory Update: Timber Truss, Concrete Truss, and Suspension Bridges. State of California Department of Transportation, Sacramento.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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Advertisement for Southern Heights lot sales, San Francisco Call newspaper, May 15, 1910.

A second advertisement in the *San Francisco Call* newspaper, dated May 21, 1910, reads,

"SOUTHERN HEIGHTS/HAVE YOUR MANOR HOUSE GROUNDS AROUND YOU AT SAN RAFAEL/OWN A HANDSOME ACRE HOME

Take the daily trip that prolongs your life and makes your home a paradise on earth. Unsurpassed boat and train service brings Southern Heights with as easy reach as many residence sections of San Francisco. Go to Southern Heights, the Switzerland of Marin county, where the climate is ideal every day in the year. Superb scenic beauties of mountain and stream redwood grove and bounding bay, within sight of your door. Macadamized roads, water mains, electric street lights, gas and sewer.

CONTINUATION SHEET

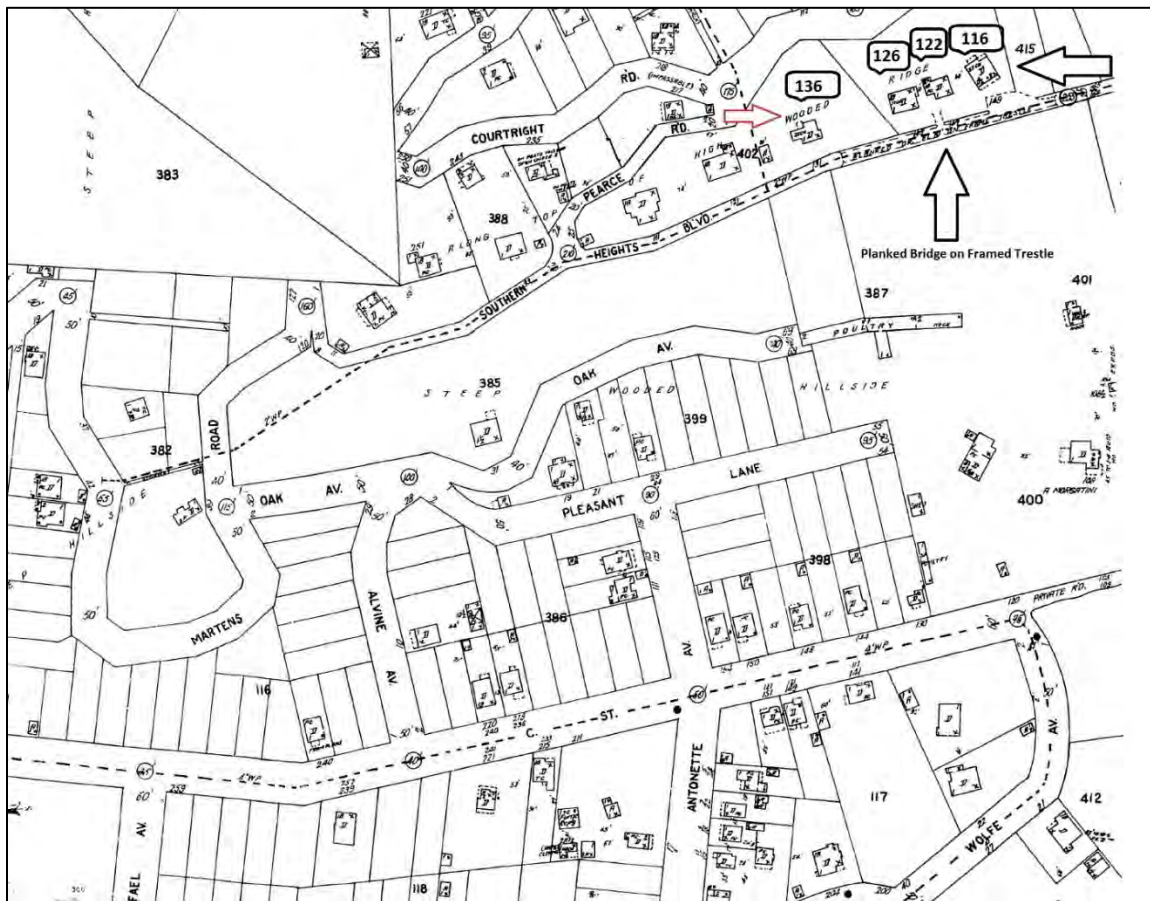
Property Name: Southern Heights Bridge

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ALL THE JOYS OF AN EVEN CLIMATE WITH ALL THE CITY CONVENIENCES WHOLE ACRES CHEAPER THAN LITTLE LOTS, "BUY NOW AND PROFIT BY JUNE ADVANCE"

*Go to either office and make arrangements to see the property at once
W.L. COURTRIGHT. Owner"*

The 1924 Sanborn Fire Insurance map shows the development of Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard. The bridge has been dated by the City of San Rafael as constructed in 1930; however, a bridge is present on the 1924 Sanborn Fire Insurance map, as such, the date of ca. 1930 was assigned to the bridge.



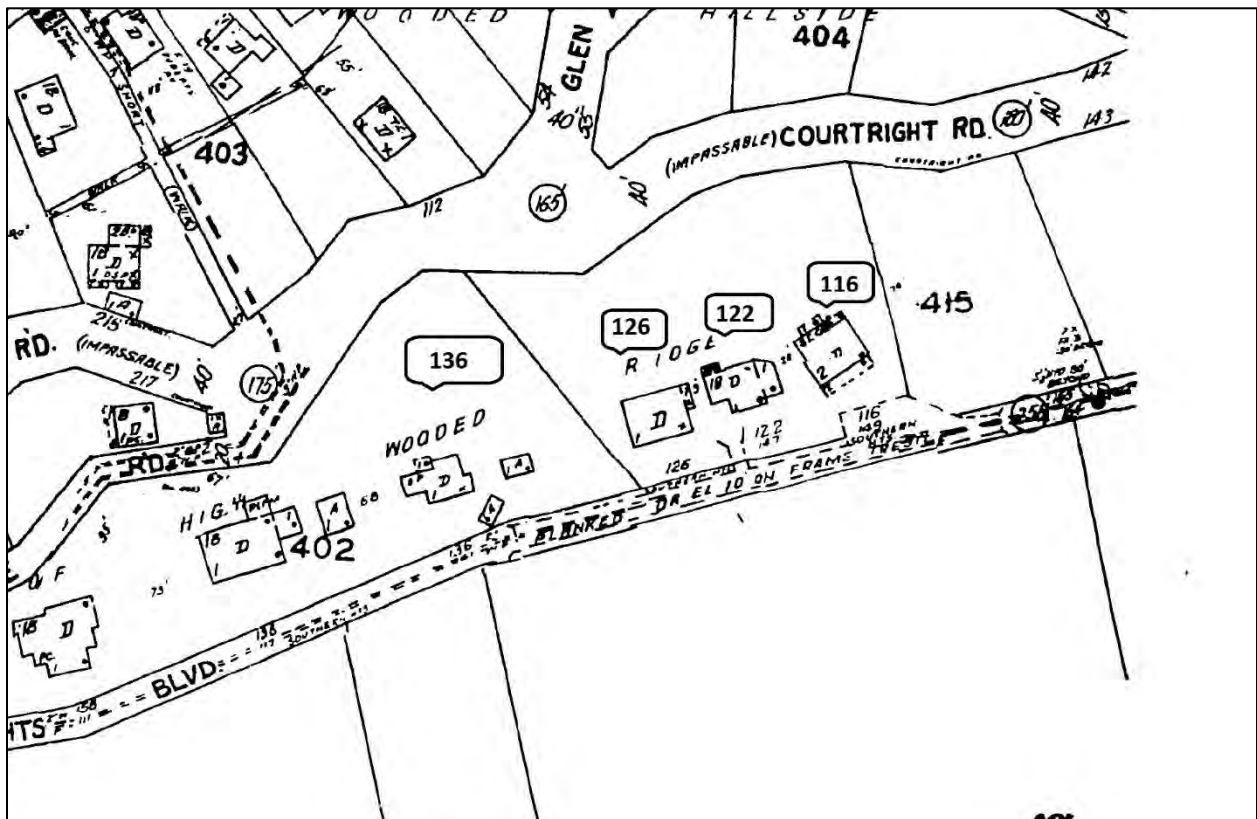
The 1924 Sanborn Fire Insurance Co. map showing the four of the properties and the bridge within the Architectural History APE.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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The 1924 Sanborn map that was updated in 1950 shows additional development in the area, as well as the addition of the garage located within APN 013-124-05 and associated with the property at 126 Southern Heights Boulevard. During this time, the lots, which are adjacent and south of the property located at 116 Southern Heights Boulevard remained undeveloped. However, according to a conversation with the property owner at 108 Southern Heights Boulevard (APN 013-132-03), there was a house that burned down on the property prior to the construction of the 1971 house. The field survey did reveal evidence of a fire on the property.



Updated 1950 Sanborn map showing four of the properties and the bridge.

The Good Roads Movement

During the late 1890s and early 1900s transportation reform efforts throughout the country took place and the national "Good Roads Movement" emerged with the goal of improving the condition of local roads. The popularity of bicycling gave impetus to the movement, and bicyclers aligned with the farmers in demanding smooth, all-weather roads. It was essentially a rural grass roots movement in which

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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bicyclers and farmers and their families lobbied for better roads, the farmers to facilitate transporting their products to market and interacting with their neighbors. States began to heed the public outcry for better roads and formed statewide “Good Roads” organizations. In Iowa, for example, the Governor called the first Iowa Good Roads Association meeting in April of 1903, a meeting which signaled a shift in control of roads from local to state government (21, p. E-15).

The Southern Heights Bridge, although constructed primarily to allow for one-way auto traffic, was also utilized as a local foot bridge and as a way to get to downtown San Rafael, by avoiding the more heavily trafficked “D” Street that is below and west of Southern Heights Boulevard (Painter 2015).²

The City of San Rafael constructed the timber stringer bridge along Southern Heights Boulevard in ca. 1930 to also link the developing neighborhoods of Picnic Valley and “Bush’s Tract” and to provide a faster route to reach downtown San Rafael. During the early twentieth century, the growth of the City of San Rafael was dependent upon community planning and development enhancements that served the increased population and communities living further from the downtown. As a part of city improvements to this planned development along Southern Heights Boulevard, the City of San Rafael set out to construct access roads to downtown and roads for those who had moved to San Rafael and were commuting into San Francisco via the ferry. The San Francisco Bay Area ferry services played an important role in the development of San Rafael and Marin County. The ferry service at one point constituted the greatest water transit system in the world. From the Gold Rush until the completion of the Golden Gate Bridge in 1935, ferries provided the only transportation across the Bay to San Rafael.

“In 1930, forty-three ferryboats, the largest number to have ever operated on the bay, carried a total of forty-seven million passengers and more than six million automobiles from shore to shore. Each day, fifty to sixty thousand people crossed the bay between San Francisco and Alameda; 25 percent of them rode in automobiles” (Nancy and Roger Olmsted papers, 1847 -2007).³

The construction of Southern Heights Boulevard provided additional access to residents in the area and was used to market lots being sold for housing development along Southern Heights, which included vacation homes for the wealthy and commuters. Several houses are located directly adjacent to the bridge, and the property located at 122 Southern Heights Boulevards has a front gate that opens directly onto the bridge, providing a unique association with the bridge and the surrounding houses. When the Southern Heights Bridge was constructed, timber stringer bridges were the standardized type of bridge constructed throughout the country. Since it was a lower cost bridge to build and the easy working characteristics and materials were in plentiful supply, the stringer style bridge made it a logical choice for many local small bridge projects, including the Southern Heights Bridge. “Although in the 20th century, concrete and steel replaced wood as the major materials for

² Painter, Diana, 2013. Historic Resource Report, 1212 & 1214 2nd Street, San Rafael, Marin County, California

³ Nancy and Roger Olmstead Papers. Electronic document. <http://www.oac.cdlib.org>. Accessed May 10, 2017.

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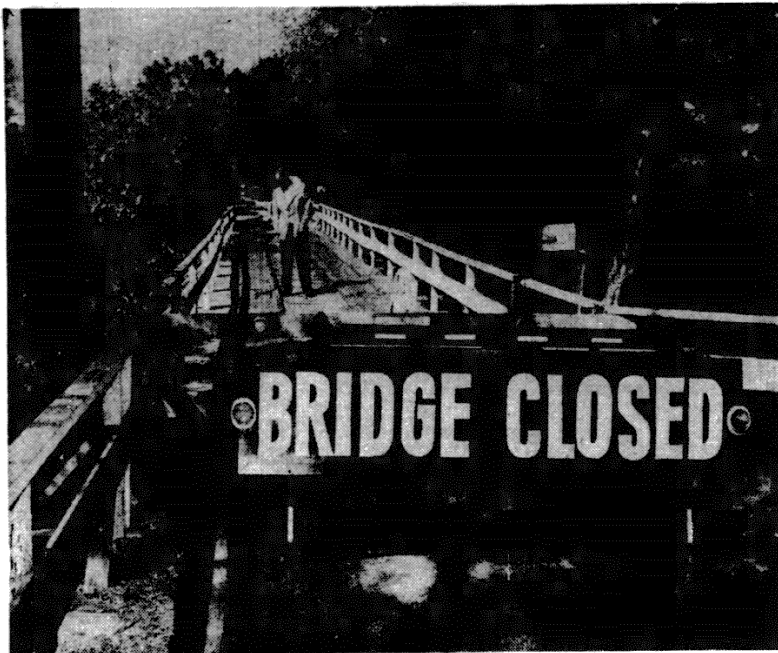
Property Name: Southern Heights Bridge

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bridge construction, wood is still widely used for short-and medium-span bridges” (Ritter/USDA 1997:1-1).⁴

By the early 1950s, the Southern Heights Bridge had seen at least 20 years of automobile traffic, and survived several local earthquakes and local fires. However, in 1954 a fire that destroyed a home along Southern Heights Boulevard was in-part blamed on the Southern Heights Bridge’s inability to support the local fire departments ten to twelve-ton trucks. By 1955, the City of San Rafael street superintendent recommended that the bridge be repaired or be torn down, and closed the bridge to pedestrian and vehicular traffic until the city could decide the fate of the bridge. In fact, the city council decided that the amount of vehicular traffic did not warrant any spending for reconstruction let alone repairing the guard rails (Daily Independent Journal 1954; Daily Independent Journal 1955).⁵

16 Independent-Journal, Monday, Oct. 10, 1955



SAN RAFAEL BRIDGE CLOSED

This means a detour for some residents on Southern Heights boulevard in San Rafael where the old wooden bridge was closed last week because it is considered “structurally unsafe.” Street Supt. Norris

Rawles is shown making one final inspection before sealing the bridge (north of Meyer road intersection) to traffic. The street superintendent will ask the city council to repair or reconstruct the bridge. (Independent-Journal photo)

“San Rafael Bridge Closed”, Daily Independent Journal, Monday October 10, 1955.

⁴ Ritter, M., (1990), Timber Bridges Design, Construction, Inspection, and Maintenance, United States Department of Agriculture

⁵ Daily Independent Journal, “Fire Razes One Home, Many Others Damaged, Low Water Pressure, Poor Bridge Blamed.” Monday June 7, 1954.

Daily Independent Journal, “ Council Dooms Wooden Bridge in San Rafael.” Tuesday November 8, 1955.

CONTINUATION SHEET

Property Name: Southern Heights Bridge

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In 1958, after the bridge was closed for over two years due to it being deemed “unsafe”, the City Council voted to rehabilitate the bridge. The city awarded the contract to Howard R. Bru construction, who won the project based on the lowest bid at \$21,781 (Daily Independent Journal 1958).⁶ The work included putting in concrete piers, replacing defective wooden members of the deck, and rebuilding the approaches. The bridge was in service another 23 years prior to its second rehabilitated that occurred in 1981. The 1981 rehabilitation included new concrete abutments and additional support. Today, the existence and technology is more advanced and have made steel and concrete the materials of choice for constructing bridges.

Significance Statement:

Bridges, like other infrastructure, are inherently vital to the communities they serve. The Southern Heights Bridge represents one of the many structures that was important to the growth and development of San Rafael. The bridge is one of many timber bridges constructed during this time on secondary roads throughout the North Bay, California, and the United States.

Evaluation:

According to National Register Bulletin No. 15, “How to Apply the National Register Criteria for Evaluation,” to be eligible for listing in the NRHP, a bridge must be significant in state, local or national history, architecture, engineering or culture, and possess integrity of location, setting, design, material, workmanship, feeling, and association.

In addition, the bridge must meet one or more of the four National Register Criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

The Southern Heights Bridge is not eligible for listing on the NRHP or CRHR under any criteria.

⁶ Daily Independent Journal, “Bridge to be Rehabilitated”, Tuesday March 18, 1958

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The bridge is not significant under Criterion A of the NRHP or Criterion 1 of the CRHR. The size and type of the bridge, along with the fact that the City Council at one point decided that the nature of the road and amount of vehicular traffic did not warrant reconstruction or even repair in 1955, are indicative of a non-vital roadway. Although this bridge was associated with the gradual growth, planning, and development of San Rafael, background research indicates that the structure's contribution to this pattern of events was not important or exceptional and that it is not associated with a specific historic event that would elevate it in stature.

The bridge is not significant under Criterion B of the NRHP or Criterion 2 of the CRHR for its association with an important or historically prominent person in national, state, or local history. Background research did not identify the bridge as being associated with any prominent figure whose achievements were considered exceptional.

The bridge is not significant under Criterion C of the NRHP or Criterion 3 of the CRHR for being an excellent example of a timber stringer bridge. Furthermore, it is not significant for its type, period, or method of construction; it is not a work of master; and it does not possess high artistic value. Background research did not identify a master architect or builder associated with the building. This resource is a good example of a timber stringer bridge in San Rafael; however, there are other timber stringer bridges throughout the area that have not been altered as substantially as this bridge. The Bellam Boulevard Underpass (Bridge 27C0075), for example, is a better representation of an early application of timber stringer bridges in the North Bay.

The bridge is not significant under Criterion D of the NRHP and Criterion 4 of the CRHR for having potential to yield information important to prehistory or history. This evaluation does not include any potential historical archaeological deposits that may be related to the property.

Integrity

Within the concept of integrity, the National Register Criteria recognize seven aspects, or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. The integrity of this bridge was not assessed because it was found not eligible for listing on the NRHP or the CRHR under any criteria.

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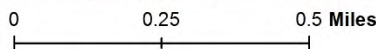
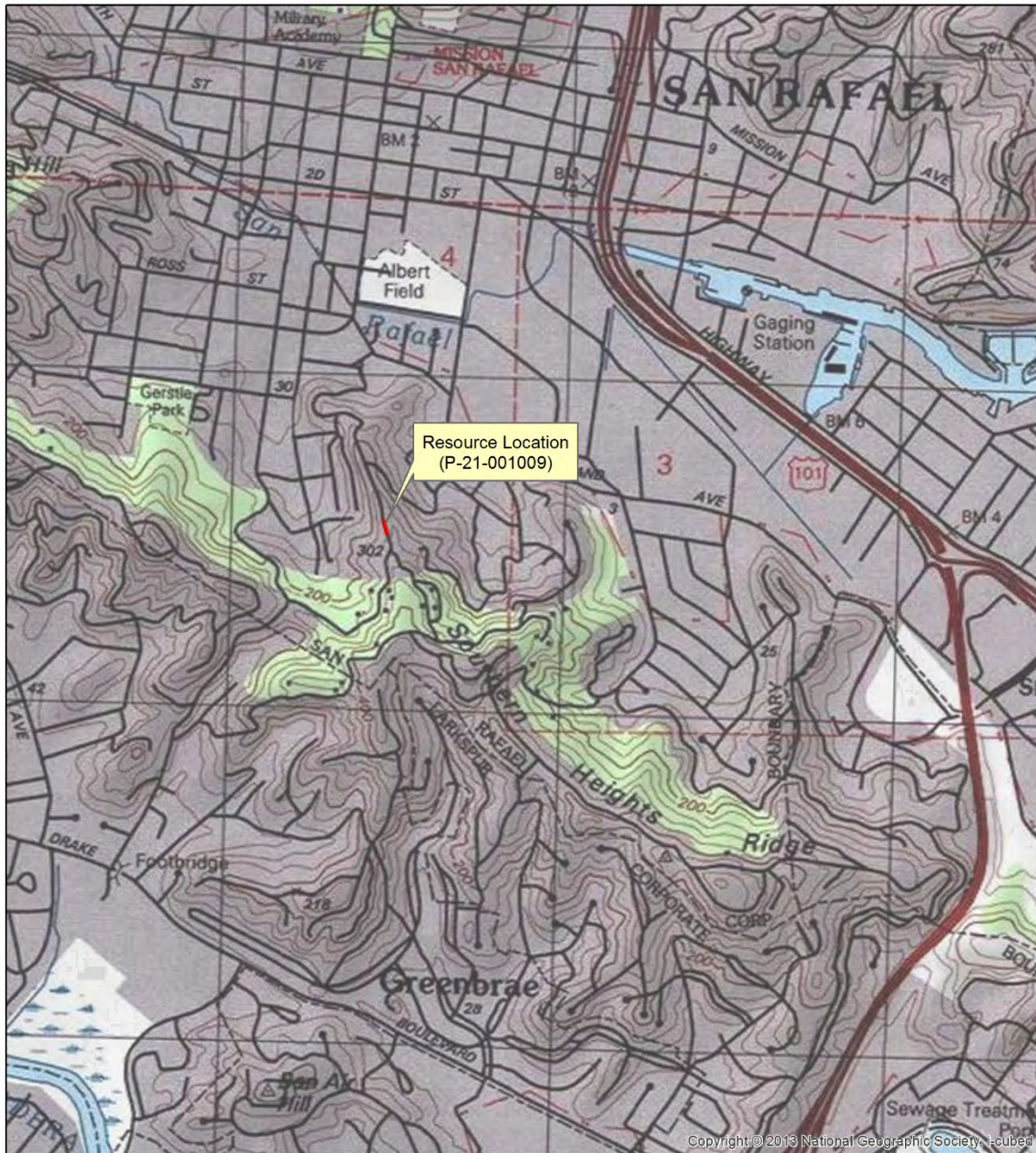
Property Name: Southern Heights Bridge

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Conclusions

The property at 136 Southern Heights Boulevard is not significant under any of the NRHP or CRHR Criteria and is not a historic resource under Public Resource Code 5024.

⁷ National Park Service, Multiple Properties Listing. Historic Highway Bridges of California. January 14, 2004. Napa County Landmarks.



1:15,000

Resource Location Map Historic Resources Evaluation Southern Heights Bridge Southern Heights Blvd., San Rafael, CA.		Resource Southern Heights Bridge
EVANS & DE SHAZO, LLC <small>ARCHAEOLOGY HISTORIC PRESERVATION</small>	USGS 7.5' Quadangle: San Rafael (1993) T 1 North / R 6 West	Map Projection: NAD 83 UTM Zone 10N

PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY-NAME	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
000659	21-000794	OLIVE AVE	ANGELICO HALL	SAN RAFAEL	P	1922	PROJ.REVW.	FCC040901G	12/02/04	6Y	
000658	21-000793	PALM AVE	MEADOWLANDS	SAN RAFAEL	P	1888	HIST.SURV.	4902-0063-0000		3S	
000651	21-000786	PALM AVE	FANJEAUX HALL	SAN RAFAEL	P	1926	HIST.SURV.	4902-0062-0000		3S	
000656	21-000791	PALM AVE	EDGEHILL	SAN RAFAEL	P	1887	HIST.SURV.	4902-0055-0000		3S	
000858	21-000993	11 PALM AVE		SAN RAFAEL	P	1908	HIST.SURV.	4902-0060-0000		3S	
000834	21-000969	19 PALM AVE		SAN RAFAEL	P	1906	HIST.SURV.	4902-0262-0000		5S2	
000835	21-000970	31 PALM AVE		SAN RAFAEL	P	1907	HIST.SURV.	4902-0238-0000		5S2	
000836	21-000971	49 PALM AVE	EDEN, EDWARD, HOUSE	SAN RAFAEL	P	1896	NAT.REG.	21-0051	11/23/10	7J	
							HIST.SURV.	4902-0240-0000		7N	
000837	21-000972	50 PALM AVE		SAN RAFAEL	P	1906	HIST.SURV.	4902-0241-0000		7N	
000838	21-000973	122 PALM AVE		SAN RAFAEL	P	1895	HIST.SURV.	4902-0242-0000		3S	
000839	21-000974	130 PALM AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0243-0000		3S	
000840	21-000975	134 PALM AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0244-0000		7N	
000841	21-000976	160 PALM AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0245-0000		3S	
000842	21-000977	178 PALM AVE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0246-0000		7N	
000843	21-000978	321 PALOMA AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0247-0000		7N	
000844	21-000979	172 PICNIC AVE		SAN RAFAEL	P	1880	HIST.SURV.	4902-0248-0000		7N	
000857	21-000992	225 PICNIC AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0261-0000		5S2	
000845	21-000980	25 QUARRY RD		SAN RAFAEL	P	1890	HIST.SURV.	4902-0249-0000		7N	
000846	21-000981	27 QUARRY RD		SAN RAFAEL	P	1882	HIST.SURV.	4902-0250-0000		3S	
065629	21-001835	4460 REDWOOD HWY		SAN RAFAEL	U		PROJ.REVW.	HUD881215B	01/11/89	6Y	
000847	21-000982	5 ROBERTS AVE		SAN RAFAEL	P	1920	HIST.SURV.	4902-0251-0000		5S2	
186925		87 ROBINHOOD DR		SAN RAFAEL	P		PROJ.REVW.	HUD111031I	11/15/11	6Y	
000848	21-000983	19 ROSS ST		SAN RAFAEL	P	1880	HIST.SURV.	4902-0252-0000		7N	
000849	21-000984	23 ROSS ST		SAN RAFAEL	P	1884	HIST.SURV.	4902-0253-0000		7N	
000850	21-000985	32 ROSS ST		SAN RAFAEL	P	1915	HIST.SURV.	4902-0254-0000		5S2	
000851	21-000986	109 ROSS ST		SAN RAFAEL	P	1870	HIST.SURV.	4902-0255-0000		7N	
000852	21-000987	112 ROSS ST		SAN RAFAEL	P	1885	HIST.SURV.	4902-0256-0000		5S2	
000854	21-000989	127 SAN RAFAEL AVE		SAN RAFAEL	P	1886	HIST.SURV.	4902-0258-0000		3S	
000855	21-000990	136 SAN RAFAEL AVE		SAN RAFAEL	P	1910	HIST.SURV.	4902-0259-0000		3S	
000856	21-000991	210 SAN RAFAEL AVE	DAVIDSON HOUSE	SAN RAFAEL	P	1875	HIST.SURV.	4902-0260-0000		3S	
000861	21-000996	230 SAN RAFAEL AVE	ELLIOTT HOUSE	SAN RAFAEL	P	1865	HIST.SURV.	4902-0265-0000		3S	
000862	21-000997	10 SANTA MARGARITA DR		SAN RAFAEL	U	1929	HIST.SURV.	4902-0266-0000		7N	
000863	21-000998	21 SANTA MARGARITA DR		SAN RAFAEL	P	1928	HIST.SURV.	4902-0267-0000		7N	
000864	21-000999	100 SANTA MARGARITA DR		SAN RAFAEL	P	1927	HIST.SURV.	4902-0268-0000		5S2	
000865	21-001000	120 SANTA MARGARITA DR		SAN RAFAEL	P	1929	HIST.SURV.	4902-0269-0000		7N	
000866	21-001001	200 SANTA MARGARITA DR		SAN RAFAEL	P	1925	HIST.SURV.	4902-0270-0000		5S2	
000871	21-001006	14 SENTINEL CT		SAN RAFAEL	P	1880	HIST.SURV.	4902-0275-0000		3S	
000872	21-001007	37 SIRARD LANE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0276-0000		5S2	
000874	21-001009	SOUTHERN HEIGHTS BLVD		SAN RAFAEL	M	1930	HIST.SURV.	4902-0278-0000		7N	
000873	21-001008	116 SOUTHERN HEIGHTS BLVD		SAN RAFAEL	P	1900	HIST.SURV.	4902-0277-0000		7N	
000875	21-001010	122 SOUTHERN HEIGHTS BLVD		SAN RAFAEL	P	1925	HIST.SURV.	4902-0279-0000		7N	
000876	21-001011	138 SOUTHERN HEIGHTS BLVD	COURTWRIGHT TRACT	SAN RAFAEL	P	1908	HIST.SURV.	4902-0280-0000		5S2	
088628	21-002274	108 SPRING GROVE AVE		SAN RAFAEL	P	1927	PROJ.REVW.	HUD940218J	03/24/94	6Y	
000877	21-001012	205 SPRING GROVE AVE		SAN RAFAEL	P	1925	HIST.SURV.	4902-0281-0000		7N	
000853	21-000988	1 ST FRANCIS LANE		SAN RAFAEL	P	1930	HIST.SURV.	4902-0257-0000		5S2	
112972	21-002435	ST VINCENT DR	ST VINCENT'S SCHOOL FOR BOYS	SAN RAFAEL	P		HIST.RES.	SHL-0630-0000	01/29/58	7L	
000878	21-001013	33 SUNSET WY		SAN RAFAEL	P	1928	HIST.SURV.	4902-0282-0000		3S	
000879	21-001014	927 TAMALPAIS AVE	BARREL HOUSE	SAN RAFAEL	P	1925	HIST.SURV.	4902-0283-0000		5S2	
000880	21-001015	930 TAMALPAIS AVE	NORTHWEST PACIFIC RAILROAD DEPOT,	SAN RAFAEL	P	1929	HIST.SURV.	4902-0284-0000		3S	
000881	21-001016	22 TERRADILLO AVE		SAN RAFAEL	P	1890	HIST.SURV.	4902-0285-0000		7N	
000883	21-001018	229 UPPER TOWN DR		SAN RAFAEL	P	1939	HIST.SURV.	4902-0287-0000		7N	
094589	21-002292	34 VILLA AVE		SAN RAFAEL	P		PROJ.REVW.	HUD950113E	02/06/95	6Y	
000884	21-001019	48 VILLA AVE		SAN RAFAEL	P	1915	HIST.SURV.	4902-0288-0000		7N	
000886	21-001021	241 W END AVE		SAN RAFAEL	P	1869	HIST.SURV.	4902-0290-0000		3S	

HISTORIC RESOURCES INVENTORY

(State use only) Ser _____ Site _____ Mo. _____ Yr. _____
 UTM _____ Q _____ NR 4 SHL _____
 Lat _____ Lon _____ Era _____ Sig _____
 Adm _____ T2 _____ T3 _____ Cat _____ HABS _____ HAER _____ Fed _____
 UTM 10/541470/4201560

IDENTIFICATION

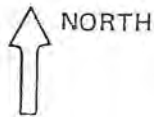
1. Common name: _____ 2001-279
2. Historic name, if known: _____
3. Street or rural address Southern Heights - Bridge at 116
 City: San Rafael ZIP: 94901 County: Marin
4. Present owner, if known: City of San Rafael Address: _____
 City: _____ ZIP: _____ Ownership is: Public Private
5. Present Use: Bridge Original Use: Bridge
 Other past uses: _____

DESCRIPTION

6. Briefly describe the present physical appearance of the site or structure and describe any major alterations from its original condition:

Trestle bridge. Timbered structure, narrow roadway with timber railings bolted together. Sets off a mini-neighborhood of 3 cottages which stand behind it. Tree covered ridge.

7. Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



8. Approximate property size:

Lot size (in feet) Frontage _____'
 Depth _____';
 or approx. acreage _____.

9. Condition: (check one)

- a. Excellent b. Good c. Fair
 d. Deteriorated e. No longer in existence

10. Is the feature a. Altered? b. Unaltered?

11. Surroundings: (Check more than one if necessary)

- a. Open land b. Scattered buildings
 c. Densely built-up d. Residential
 e. Commercial f. Industrial
 g. Other _____

12. Threats to site:

- a. None known b. Private development
 c. Zoning d. Public Works project
 e. Vandalism f. Other _____

NOTE: The following (Items 14-19) are for structures only.

14. Primary exterior building material: a. Stone b. Brick c. Stucco d. Adobe e. Wood
f. Other Wood timber
15. Is the structure: a. On its original site? b. Moved? c. Unknown?
16. Year of initial construction 1930 This date is: a. Factual b. Estimated
17. Architect (if known): _____
18. Builder (if known): _____
19. Related features: a. Barn b. Carriage house c. Outhouse d. Shed(s) e. Formal garden(s)
f. Windmill g. Watertower/tankhouse h. Other _____ i. None

SIGNIFICANCE

20. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site when known):

21. Main theme of the historic resource: (Check only one): a. Architecture b. Arts & Leisure
c. Economic/Industrial d. Exploration/Settlement e. Government f. Military
g. Religion h. Social/Education

22. Sources: List books, documents, surveys, personal interviews, and their dates:
Dave Bernardi, San Rafael Dep't Public Works

23. Date form prepared: 1/13/78 By (name): Niki Simons
Address: 23 Scenic City San Rafael ZIP: 94901
Phone: 454-2168 Organization: City of San Rafael

(State Use Only)

#19 - SHOULD be changed to
INCLUDE ROWS of COTTAGES men-
TIONED IN #6.



Attachment 4:

Archaeological Survey Report (ASR): Southern Heights Bridge Replacement Project, City of San Rafael, Marin County, California (2017).

Prepared by Sally Evans, M.A., RPA
Principal Investigator - Archaeology
Evans & De Shazo, LLC

ARCHAEOLOGICAL SURVEY REPORT

Southern Heights Bridge Replacement Project City of San Rafael Marin County, California

Caltrans District 04
Federal Aid Project No. BRLO-5043(038)


Prepared by  Date: 1/11/2018

Sally Evans, M.A., RPA
Principal Investigator - Prehistoric and Historic Archaeology
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Karen Reichardt, Principal Investigator, Prehistoric Archaeology
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Approved By:  Date: 01/10/2018

 Tom Holstein, Environmental Branch Chief
Office of Local Assistance
Caltrans, District 04
111 Grand Avenue (94612)
P.O. Box 23660, MS 10-B, Oakland, CA 94623-0660

USGS Quadrangle Map: USGS 7.5-minute San Rafael (1993)
Approximate Acreage of APE: 0.6 ± acres
Sites Recorded: None

January 2018

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- Appendix C: Native American and Historical Organization Consultation Correspondence

SUMMARY OF FINDINGS

The *Southern Heights Bridge Replacement BRLO-5043(038)* Project (Project) includes the proposed removal of the Southern Heights Bridge (Bridge No. 27CO148) and the construction of a new bridge along Southern Heights Boulevard in the City of San Rafael, Marin County, California. The bridge is being replaced by the City of San Rafael due to structural deficiencies and its overall poor condition, and is eligible for replacement under the Highway Bridge Program (HBP).

The studies for this undertaking were carried out in a manner consistent with the California Department of Transportation's (Caltrans) regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA). The City of San Rafael is the lead California Environmental Quality Act (CEQA) and sponsoring agency of this undertaking.

The Northwest Information Center (NWIC) records search was conducted by Evans & De Shazo on March 30, 2017. No previous studies include the Archaeological APE; within 0.5 miles there are 13 previously conducted cultural resources studies. One study located adjacent to the Archaeological APE did not result in any cultural resources. Pedestrian survey of the Archaeological APE was conducted by Evans & De Shazo, LLC on April 4, 2017. One isolated historic artifact (ISO-01) was identified within the Archaeological APE. The historic-era artifact within the Archaeological APE consists of a 10-pound weight iron dumbbell located on the ground surface under the existing bridge structure approximately 32 feet south of the existing concrete abutment. A photograph of the isolated artifact is shown in Figure 4; the location is shown on the survey coverage map Figures 3.

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the site[s] cannot be avoided by the project. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in the area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the project changes to include areas not previously surveyed.

INTRODUCTION

Sally Evans, M.A., RPA conducted the field survey of the Archaeological APE on April 4, 2017. Ms. Evans holds an M.A. in Cultural Resource Management, is a Registered Professional Archaeologist (RPA No. 29300590), and exceeds the Secretary of the Interior's Professional Qualifications Standards in Archaeology and History, and Caltrans' qualification standards as a Principal Investigator for Prehistoric and Historic Archaeology. Ms. Evans has over 17 years of experience in California archaeology. The Study Vicinity Map, Study Location Map, and Survey Coverage Map are included in this report as Figures 1, 2, and 3, respectively.

PROJECT LOCATION AND DESCRIPTION

The proposed Southern Heights Bridge Replacement Project is located in the City of San Rafael, Marin County, California (Figure 1), within Caltrans District 4. The project area includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard situated between Meyer Road and Pearce Road, (Figure 2). This section of Southern Heights Boulevard traverses north/south through a mountainous residential area on the northeast slope of the Southern Heights Ridge, which divides San Rafael from the communities of Larkspur, Greenbrae and Ross, and carries local traffic. The project area is located approximately 0.5 miles south of downtown San Rafael, 0.9-miles west of Highway 101, and 19-mile north of Greenbrae.

Federal Aid Project number BRLO-5043(038) consists of the demolition of the existing bridge (Bridge No. 27CO148) and the construction of a new bridge along Southern Heights Boulevard. The existing bridge is a ca. 1930 one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments, and was rehabilitated in 1958 and again in 1981. The bridge has a width of 9 feet and is 162 feet long with a wood deck and wood railings. The bridge is being replaced due to structural deficiencies and its overall poor condition. The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge type has not yet been determined, but the structure is expected to be a 100-foot long, multi-span concrete or steel bridge.

The roadway alignment and grade will remain unchanged. The southern roadway approach and retaining wall will begin approximately 20 feet south of the existing southern bridge abutment. The new southern bridge abutment will be shifted north of the driveway to 116 Southern Heights Boulevard. The northern roadway approach will begin 45 feet north of the existing northern bridge abutment. The new northern bridge abutment will be shifted south of the walking access path to 122 Southern Heights Boulevard. A 115-foot long retaining wall will be constructed to the west of the existing retaining wall to allow for the widened bridge. The new retaining wall is expected to be a soldier pile wall with steel H-piles and timber lagging with a concrete structural section on the outside face.

No new right-of-way will be required for the new bridge or retaining walls. Temporary construction easements (TCEs) are anticipated on the east and west sides of the bridge to provide construction

access. Utilities, including overhead power and communication and underground water and natural gas, will be relocated with the project. The water and gas lines will be relocated onto the new bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on spread footings or driven/drilled piles. There is no waterway beneath the bridge but a corrugated metal storm drain pipe that will need to be temporarily relocated away from the existing structure base during the construction. Construction of the roadway approaches will involve the removal of existing pavement, retaining walls and fences and the placement of fill material, aggregate base, hot mix asphalt pavement, soldier pile and concrete retaining walls, and new guard rails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

AREA OF POTENTIAL EFFECT

The Archaeological APE includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard situated between Meyer Road and Pearce Road in the City of San Rafael, Marin County, California. The horizontal Archaeological APE is bounded by the existing right-of-way and includes 274 feet of paved roadway and 162 feet of existing bridge (Bridge No. 27C0148), as well the land under the bridge and on either side of the roadway for 20 feet. This area totals approximately 0.6 acres (see Appendix A for Caltrans-approved Archaeological APE map). The Archaeological APE incorporates the project footprint that consists of the footprint of the existing bridge that is 162 feet long and 9 feet wide, the footprint of the proposed bridge that is 133 feet long and 16 feet wide, and areas not included in the existing right-of-way including a staging area at the north end of the proposed bridge footprint that is 114 feet long and approximately 16 feet wide, and a staging area at the south end of the proposed bridge footprint that is 124 feet long and approximately 17.5 feet wide. No new right-of-way is required and no Federal Lands or Tribal Lands are included in the project APE. Vertical APE is 30 feet below surface, which includes all ground disturbing activities such as removal and installation of bridge abutments, piers, footings, and railings.

SOURCES CONSULTED

SUMMARY OF METHODS AND RESULTS

On March 30, 2017, Sally Evans, M.A., RPA conducted research at the Northwest Information Center (NWIC) of the California Historical Resources Information Systems (CHRIS) in Rohnert Park, CA. (File #16-1500) to obtain information regarding previously recorded historic, prehistoric or ethnographic resources located within a half mile of the Archaeological APE, and to identify areas of previous cultural resource studies within a half mile of the APE (see Appendix B).

The following lists were reviewed:

- National Register of Historic Places
- California Register of Historical Resources
- California Inventory of Historic Resources

- California Historical Landmarks
- California Points of Historical Interest
- Caltrans Historic Highway Bridge Inventory
- California Office of Historic Preservation (OHP) Archaeological Determination of Eligibility
- OHP Directory of Properties in the Historic Property Data File for San Rafael, Marin County

The following maps were reviewed:

- 1858 Plat of the Rancho Punta de Quentin (Matthewson 1858)
- 1871 Sale Map No. 8 of Salt Marsh and Tide Lands Situated in the County of Marin (Middleton 1871)
- 1873 Map of Marin County California (Austin 1873)
- 1892 Official Map of Marin County, California (Dodge 1892)
- 1897 USGS 15-minute Tamalpais topographic map
- 1924 Sanborn Fire Insurance Company Map
- 1924 Sanborn Fire Insurance Company Map update of 1950
- 1941 USGS 15-minute Tamalpais topographic map
- 1951 USGS 15-minute Tamalpais topographic map

Historic and prehistoric references appropriate for the region were also reviewed to provide background information on the prehistory and history of the Archaeological APE region, as well as soils data and other information to identify the potential for buried archaeological resources that may require identification measures beyond a pedestrian archaeological reconnaissance survey.

The record search conducted at the NWIC revealed that the Archaeological APE has not been previously studied for cultural resources. One archaeological resources study was conducted adjacent to the Archaeological APE on the southwest (S-10445, Holman 1988) that did not result in the identification of any archaeological resources.

In total, there have been 13 cultural resource studies conducted within a ½-mile of the Archaeological APE that cover less than 10% of the land within that radius; these are listed in Table 1. The study locations are shown on a map in Appendix B. Two cultural resources have been recorded within 0.5 miles of the Archaeological APE.

TABLE 1: CULTURAL RESOURCE STUDIES CONDUCTED WITHIN A ½-MILE OF THE ARCHAEOLOGICAL APE.

File #	Date	Author	Report Title
S-010445	1988	Miley Paul Holman	Meyer Road Subdivision, Archaeological Reconnaissance, San Rafael, Marin County, California (letter report).
S-010710	1989	Nancy L. French	An Archaeological Survey of a 2.25 Acre Property on Woodland Avenue, San Rafael, Marin County, California.
S-016949	1991	William Roop	A Cultural Resources Evaluation of a Proposed Reclaimed Water Pipeline in the San Quentin Point, Corte Madera, Larkspur, Kentfield and San Rafael Areas.
S-019205	1997	William Roop	A Cultural Resources Evaluation of the Manor Road Subdivision, Kentfield, Marin County, California.
S-020237	1998	Vicki R. Beard	Cultural Resources Study of the Parcel at 24 Ross Street, San Rafael, Marin County, California.
S-021724	1999	Kelda Wilson	An Archaeological Study of 110 Taylor Street, San Rafael, Marin County, California.
S-022038	1999	Katherine Flynn	A Cultural Resources Evaluation of the Properties Located at 217 and 223 Bayview Street (APN 012-181-033 & 046), San Rafael.
S-023174	2000	Allen G. Pastron and R. Keith Brown	Historical and Cultural Resource Assessment, Proposed Telecommunications Facility, Wolfe Grade Joint Pole, Site No. SF-334-02, East of Wolfe Grade Road, Marin County, California (letter report).
S-027430	2003	Katherine Flynn	A Cultural Resources Evaluation of the Property at 20 & 22 Bayview Street, San Rafael, Marin County (APN 012-156-07).
S-030316	2005	Cassandra Chattan	A Cultural Resources Evaluation of the Proposed Best Buy San Rafael, 632 Irwin Avenue, San Rafael, Marin County, California.
S-043720a	2013	Beatrice Cox	Cultural Resources Constraints Report Gas Main Lindaro St., San Rafael, Marin County.
S-047720b	2013	Matthew A. Russell	Archaeological Monitoring Summary Report for 30887662 Gas Main Lindaro Street, San Rafael, Marin County (PO #2500892156) (letter report).
S-048525	2014	Madeline Bowen	Historic Architectural Survey Report for the Sonoma-Marin Area Rail Transit (SMART) Rail Corridor San Rafael to Larkspur Project Marin County, California.

According to records on file at the NWIC, there are two cultural resources recorded on Department of Parks and Recreation (DPR) 523 forms within a ½-mile of the Archaeological APE; these are listed in Table 2 and depicted on the map in Appendix B.

TABLE 2: CULTURAL RESOURCES PREVIOUSLY RECORDED WITHIN A ½-MILE OF THE ARCHAEOLOGICAL APE.

Primary No.	Trinomial No.	Description	Proximity to Archaeological APE
P-21-000594	CA-MRN-626/H	Prehistoric Native American shell midden site situated on an alluvial plain near the historic San Francisco Bay margins that also contains a historic house (Solomon and Campbell 1996).	0.49 miles north-northwest
P-21-000645	CA-MRN-313	Reported general location of a prehistoric Native American “shell-ground” site that appears to have been destroyed prior to 1910 (Nelson 1910).	0.35 miles north-northwest

There are no California Historical Landmarks, California Points of Historical Interest, or resources listed on the National Register of Historic Places (NRHP), California Register of Historical Resources, or California Inventory of Historic Resources located within or adjacent to the Archaeological APE.

There are two cultural resources recorded on DPR 523 forms within a ½-mile of the Archaeological APE, P-21-000594 and P-21-000645. Virtually nothing is known about prehistoric site P-21-000645 as it was destroyed prior to 1910. P-21-000594 is a multi-component site. The prehistoric component consists of midden soil with lithic tools and debitage, food refuse such as shell and faunal bone, and human remains with associated grave artifacts that include shell beads and pendants. The historic component consists of a historic house (Solomon and Campbell 1996). The site record for P-21-000594 indicates the site lies on an alluvial plain within several hundred meters of San Rafael Creek and close to the historic margin of the San Francisco Bay. Limited excavation of the site revealed that it was occupied for more than 2500 years, based on an analysis of artifacts such as shell beads, pendants, and obsidian projectile points that were associated with as many as 11 separate human burials.

According to the California OHP Archaeological Determination of Eligibility list, neither P-21-000594 nor P-21-000645 has been evaluated to determine their eligibility for listing on the NRHP (OHP 2012).

Similar to P-21-000594 and P-21-000645, prehistoric shell midden sites in the area tend to be situated in close proximity to the historic San Francisco Bay margins and along the creeks that emptied into the bay. The Archaeological APE is located on a ridge 0.2 miles southwest of the historic San Francisco Bay margins, and 0.23 miles west of the nearest creek. Given these factors, the archaeological site sensitivity for prehistoric resources within the Archaeological APE is low to moderate.

A review of historic maps indicate that no buildings were present within the Archaeological APE in the historic period; however, adjacent to the Archaeological APE on the east is a house built in 1909, two houses built in 1914, and a house built in 1971. The archaeological sensitivity for historic resources is moderate due to the presence of buildings adjacent to the Archaeological APE that were present as early as 1907.

SUMMARY OF NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission (NAHC) in Sacramento, California was contacted on April 3, 2017 to request a Sacred Lands Inventory and a list of local Native American organizations and individuals to contact for further information. The results of the Sacred Lands Inventory were received on April 11, 2017 with negative results and two tribal contacts (Souza 2017). A letter was sent to each individual/organization on the Native American Contact List provided by the NAHC on April 19, 2017. The following individuals were contacted:

- Greg Sarris, Chairman, Federated Indian of Graton Rancheria (FIGR)
- Gene Buvelot, FIGR

On May 10, 2017, Buffy McQuillen, the Tribal Heritage Preservation Officer (THPO) with the FIGR, emailed Caltrans District 4 Native American Coordinator Brett Rushing stating,

Thank you for notifying the Federated Indians of Graton Rancheria about Southern Heights Bridge Replacement Project, San Rafael, Marin County, a project within the Tribe's Ancestral Territory. We appreciate being notified and will review your project within 10 business days. If you have an immediate request please contact the Tribal Heritage Preservation Office for assistance by phone at (707) 566-2288 or by email at thpo@gratonrancheria.com.

On May 22, 2017, Buffy McQuillen, THPO with the FIGR, emailed EDS Principal Archaeologist Sally Evans and Caltrans District 4 Native American Coordinator Brett Rushing stating,

Thank you for the notification regarding the above mentioned project. The project is likely to impact tribal cultural resources important to the Tribe, with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.

On May 24, 2017, Sally Evans responded to Ms. McQuillen, stating,

Thank you for your response regarding the Southern Heights Bridge Project. Unfortunately, the field survey has been completed already. I have attached a copy of the draft Archaeological Survey Report (ASR) for your review. Let me know if the Tribe would like a field visit and I will contact our client (LSA) to arrange that.

No additional communications have been received from Buffy McQuillen or the Federated Indians of Graton Rancheria as of the writing of this report. Native American consultation will continue throughout the duration of this undertaking as needed. All Native American correspondence is attached as Appendix C.

SUMMARY OF HISTORICAL ORGANIZATION CONSULTATION

Kitty Henderson, Executive Director of the Historic Bridge Foundation, was called on January 3, 2017 and a voicemail was left for her, specifying the bridge to be removed, location, and providing callback

information. Ms. Henderson returned the call on January 3, 2017 and requested additional information about the project and bridge. The information was e-mailed to her on January 3, 2017 with an invitation to reply if the Historic Bridge Foundation has any concerns or input. Ms. Henderson called on January 5, 2017 at 8:15 AM and left a message saying she would call later that day. At 11:30 LSA returned her phone call and left a voicemail acknowledging her earlier call and expecting her call back. No response has been received to date. Correspondence with Ms. Henderson is included in Appendix C.

BACKGROUND

ENVIRONMENTAL SETTING

The Archaeological APE is located on the Marin Peninsula, approximately a ½-mile south of downtown San Rafael, 0.67-miles (1078.26 meters [m]) southwest of San Rafael Creek and 2 miles west of the San Rafael Bay portion of the San Francisco Bay. The San Francisco Bay area lies at the approximate midpoint of a mountainous terrain referred to as the Coast Ranges. The Bay itself lies in a forty-mile-long, three to twelve-mile-wide northerly trending structural depression bounded by moderately high north-south trending ridges on the east and west sides. The western ridge stretches south from Mount Tamalpais (elevation, 2,600 feet) on the Marin Peninsula to the Santa Cruz Mountains and is bordered on the west by the Pacific Ocean. The Pacific Ocean connects to the Bay via the Golden Gate, a strait that divides the Marin and San Francisco peninsulas. The eastern ridge is marked by the Berkeley Hills, or “East Bay” hills (elevation 1,900 feet at Volmer Peak), which separate the Bay Shore from the San Ramon and Livermore Valley areas, and the Diablo range, which extends southward from Mount Diablo (elevation, 3730 feet) to Santa Clara Valley (Moratto 1984:219).

Situated at 37° north latitude, the Archaeological APE has a “Mediterranean climate pattern with two distinct seasons: a warm dry period from April to October, followed by a cool, rainy period from November to March” (Okamoto and Wong 2011:45). Annual precipitation ranges from 20-40 inches (Moratto 1984:223), with eighty percent of it occurring between November and March (Okamoto and Wong 2011:46). Air temperatures in January range from 45-55°F, and in July, from 55-65°F near the Bay Shore and up to 15°F higher inland. In the spring and summer months, westerly wind is sucked through the Golden Gate due to these temperature differences (Okamoto and Wong 2011:40). Seasonal weather patterns are also affected by three to four yearlong El Niño Southern Oscillation (ENSO) cycles. An ENSO cycle consists of periods of warmer Pacific Ocean temperatures that increases precipitation (El Niño), followed by periods of cooler-than-average waters and strong ocean upwelling (Okamoto and Wong 2011:47).

GEOARCHAEOLOGICAL SENSITIVITY ANALYSIS

According to Caltrans’ geoarchaeological overview of the region and preliminary soil analysis, the Archaeological APE is not sensitive for surface or buried archaeological deposits based on the Jurassic-Cretaceous age of the landform which predates human occupation in North America in addition to extensive erosion events associated with the landform (Byrd et al. 2017; Meyer and Rosenthal 2007). The Bay Area landscape has changed dramatically since first human occupation of the region over 10,000 years ago. Towards the end of the Pleistocene, continental ice sheets melted and sea levels rose

rapidly causing landforms which were once suitable for human habitation to become submerged or buried by sediment. This environmental change also formed the San Francisco Bay via inundation of the Franciscan Valley between 11,000 and 8,000 cal BP. Additional environmental changes occurred during the historic-period, corresponding to the arrival of the Spanish. Native vegetation cover was vastly reduced due to agriculture-induced drought and livestock grazing activities creating an erosion susceptible landscape and causing widespread upland erosion, rapid lowland sediment deposition, and deeply cut channels within valleys filled with alluvium (Byrd et al. 2017; Meyer and Rosenthal 2007). Regional to the APE, San Rafael Creek once occupied the lower valley currently occupied by commercial and industrial buildings, westerly adjacent to San Rafael Bay (USGS 1897). The main creek system was located approximately 0.5 miles (804.67 m) away from the APE, but was also accompanied by a salt water marsh, as depicted on the USGS topographic map of Tamalpais, CA (1987). This marsh extended as close as 0.13 miles (209.21 m.).

The area immediately surrounding the Archaeological APE consists of a moderately dense mountainous residential area on the northeast slope of the Southern Heights Ridge, which divides San Rafael from the communities of Larkspur, Greenbrae and Ross. The Southern Heights Ridge reaches an elevation of 540 feet above mean sea level (amsl). The Archaeological APE is situated on the northeast slope of the Ridge at elevations ranging from 230 feet to 312 feet amsl with an average slope of 25.9 percent. As previously stated, the APE is situated on a Jurassic-Cretaceous-aged (Mesozoic Era) landform consisting of a mélange of sheared and fragmented marine sedimentary and metasedimentary rock associated with the Franciscan Complex (California Geological Survey 2010). In this region, the Franciscan complex is mostly composed of Upper Jurassic-Cretaceous greenstone, chert, sandstone, and shale (Meyer and Rosenthal 2007; Natural Resources Conservation Service [NRCS] 2017). These rock materials associated with the Franciscan complex weathered to form the Tocaloma-McMullin soil complex. In the APE, the soil complex correlates with 30 to 50 percent slopes and provides ideal conditions for vegetation including: California laurel, California live oak, Pacific madrone fern, blackberry bushes, poison oak, tanoak, and annual grasses. The Tocaloma soil series originated from weathered sandstone and shale to form moderately deep, well-draining soil. This deposition is associated with hills that have slopes ranging from 2 to 75 percent. Tocaloma soil typically consists of loam from 0 to 19 inches, followed by very gravelly loam from 19 to 39 inches, underlain by Soft, fractured sandstone bedrock from 39 to 43 inches (NRCS 2003). The McMullin soil series also originated from weathered sandstone and shale as well as various igneous and metamorphic rock to form shallow, well- to- excessive draining soil. This deposition is associated with northward-facing slopes ranging between 1 to 75 percent. In profile, McMullin soil consists of gravelly loam from 0 to 7 inches, and gravelly clay loam from 7 to 14 inches, followed by hardened fractured bedrock starting at 14 inches below ground surface (NRCS 2003).

Furthermore, site sensitivity models by Jack Meyer and Philip Kaijankoski increasingly substantiate and quantify the low sensitivity of the APE. Using “Table 11: Surface Model Weights by Environmental Criteria” and “Table 12: Age-Based Buried Site Potential” presented within the *San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4*. Table 1, below, summarizes the above information relation to the scoring system and sensitivity presented within Table 11 to determine surface site sensitivity.

Table 1: Surface Site Sensitivity

Environmental Theme	Data Presented	Score
Slope (%)	25.9 percent	0
Distance to Historic-Era Streams (meters)	804.67 m	0.33
Distance to Confluence of Historic-Era Shoreline	2,639.32 m	0
Cumulative Score:		0.33

Based on the cumulative score, the APE has the lowest sensitivity class for surface site sensitivity.

Based on a review of “Table 12: Age-Based Buried Site Potential” presented within the *San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4*, the APE has the lowest sensitivity class for buried site potential since the age of the landform dates to a Pre-Pleistocene era.

ETHNOGRAPHIC SETTING

Several historically known Native American groups are reported to have lived in territories contiguous to the San Francisco Bay at the time of Spanish contact. Marin County and southern Sonoma County were inhabited by the Coast Miwok, while various groups of Costanoans occupied the San Francisco Peninsula, the South Bay, and the shoreline areas of the East Bay. The area around Mt. Diablo and lands to the north and east were occupied by the Bay and Plains Miwok (Milliken et al. 2007:100).

The Coast Miwok, who inhabited all of Marin County and southern Sonoma County, occupied a territory separate from the other Miwok groups who lived along the western slopes of the Sierra, in the San Joaquin Valley and along the southern shore of Suisun Bay. Linguistically, the Miwok languages belong to the Penutian language stock, which also includes the various Wintun, Patwin, Yokuts, Maidu and Costanoan languages. Within the Coast Miwok territory there was a dialectic division between the Western-Bodega Miwok (*Olamentko*) and the Southern Marin, or *Hookooeko* tribe, who spoke the Southern Marin dialect with some linguistic differences between valley and coastal peoples (Kelly 1978:414). Merriam (1907) discusses a third group from the northern area of Southern Marin Valley known as the *Lekahtewutko* tribe. More recently, Randall Milliken identified the area around San Rafael and Point San Pedro as having been occupied by the *Aguasto* tribe based on research of mission records. The Richardson Bay area and the surrounding communities of Sausalito, Mill Valley, Belvedere and Tiburon are now recognized as having been occupied by the *Huimen* tribe, a branch of the Coast Miwok (Goerke 2007:10).

The Coast Miwok practiced a hunting-and-gathering economy and utilized both marine and terrestrial resources. Up to seven species of acorns provided the main vegetable staple, while a number of other nuts, berries, seeds, kelp and seaweed were also relied upon. Black-tailed deer and Tule elk were the primary big game animals, but other mammals and birds, including antelope, bears, sea lions and sea otters, squirrels, rabbits and a variety of inland and shore birds, were also eaten. Shellfish, including abalone, oyster, mussel and clam species, were also important to the diet and an exchange economy, as their shells provided material for both currency and as decorative items. Obsidian was a valuable resource for all prehistoric Californians, who used it to fashion spear points, arrowheads, knives, scrapers, and other cutting implements. The only obsidian source in Marin County is located at Burdell Mountain, but this source was likely “not suitable for tool manufacture, and has not been detected in archaeological collections” (Jackson 1989:82). Instead, the obsidian used by the Coast Miwok comes primarily from the Annadel and Napa Valley sources, located in Sonoma County and Napa County, respectively.

The Coast Miwok divided themselves into small village communities (or tribelets) that made use of designated tracts of land; although larger, permanent settlements are also known to have existed. Small communities moved around within their territory and sometimes across the territories of other groups in order to take advantage of the range of seasonally available subsistence and exchange resources, and to visit places of religious importance. While some locations were used only on occasion for specific purposes, others were used year-round and reflect a variety of economic and ritual activities. Larger semi-permanent and permanent villages consisted of single or multi-family, circular, conical or domed huts (covered with grass or redwood bark) surrounding a large, circular, semi-subterranean ceremonial house, or dance hall. Sweathouses, of similar design to the ceremonial house, were also common. Sociopolitical organization within village communities was non-egalitarian, meaning that differences in status or rank between individuals existed. Most tribelets had a headman or chief, known as the *hoipu*, and one or two headwomen, called *maien*. These individuals held high status positions within the group as organizers of various political, social, and religious activities (Slaymaker 1974).

The Coast Miwok had strong spiritual beliefs that were expressed in dance performances, various healing practices, proper behavior, and in their intimate knowledge of the land.

“...communities shared a number of beliefs and practices, reflected in an active spiritual life, a rich oral literature, a sense of community, a feeling of belonging to the land rather than being master of it, and a concern about ways to avoid illness and death by poisoning. Rules for proper behavior acted as the glue that held all this together. Everyone knew that they must respect not only the land and its animals but also one another’s property” (Georke 2012:24).

The first European contact with the Coast Miwok appears to have been in 1579, when Sir Francis Drake stopped to repair his ship, the *Golden Hinde*, somewhere in the Point Reyes vicinity. Sixteen years later, Sebastian Cermeño’s galleon, the *San Agustin*, ran aground at what is now known as Drake’s Bay and again there is documentation of relations with the indigenous people; and in 1603, Sebastian Vizcaino’s ship landed at Tomales Point. There seems to be no further contact with Europeans until late 1769 when

Portola is said to have “discovered” San Francisco Bay, an event that signaled the beginning of the European conquest of the area. Six years after Portola, on August 5, 1775, Captain Juan Manuel de Ayala sailed the *San Carlos* into San Francisco Bay and dropped anchor in Richardson Bay near present-day Sausalito. During their forty-four day stay the crew interacted with the Coast Miwok who were “generous with food and gifts, curious about the Spaniards, polite, intelligent and respectful to their elders” (Georke 2007, 2012:42).

Less than a year after the *San Carlos* sailed into the San Francisco Bay, the Spanish returned to the area to establish a military presidio and mission in San Francisco. Coast Miwok culture became severely disrupted following the establishment of the Mission San Francisco de Asís (1776; also, known as Mission Dolores). The priests at Mission Dolores first focused on converting Native Americans of the San Francisco Peninsula and those in the East Bay, but by 1803 the population of Coast Miwok speakers at Mission Dolores increased significantly. Later, between 1816 and 1817, a large number of Olompali and Petaluma area Coast Miwok were baptized and split between Mission Dolores and Mission San Jose (Milliken 2009). By 1817, Coast Miwok people made up half of the Native American population at Mission Dolores; however, the death rate at Mission Dolores was so high due to cramped and unsanitary conditions and European introduced diseases that a new *asistencia*, or mission hospital, was established in San Rafael in 1817, and the approximate two hundred Coast Miwok survivors from Mission Dolores were transferred to the new mission outpost (Georke 2012:43). Mission San Rafael was established where the city of San Rafael now lies, at a site of a Coast Miwok village called *Nanaguani* (Teather 1986:69). Once the mission structures were built to house the military men and their domestic animals and goods, the Native Americans were brought to the mission to work. The Coast Miwok lived outside of the mission structures in their village(s), or what the Spanish called their ranchitos, or “little ranches”. Once brought into the mission system, the Coast Miwok were forced to remain at the missions and provide free labor in exchange for Catholicism.

When Mexico gained its independence from Spain the missions were desecularized; however, the post-mission period was just as devastating to Native Americans as their land was given away to prominent Californio families (California-born people of Mexican heritage) in the Mexican period that raided and terrorized Native American settlements and forced them to work as unpaid laborers. The early American period was even more devastating to Native Americans, as the newly arriving settlers found Native people an impediment to acquiring land, livestock and gold (Georke 2012:54).

In the early years of the twentieth century, the ethnographer S.A. Barrett traveled around the North Bay region interviewing Native Americans and gathering data to record the linguistic boundaries of Native groups and the locations of both active and old village sites (Barrett 1908). His overall purpose was to reconstruct the cultural geography and social relationships of the various native groups that inhabited the region. Although Barrett was able to locate a number of old and current village sites in the central and northern Coast Miwok territory, none were recorded for the territory south of San Rafael. This is in part due to the fact that at the time of Barrett’s study, the remaining Coast Miwok speakers all came from the northern Marin and southern Sonoma County coastal areas and there were no southern Marin Coast Miwok who were knowledgeable about their indigenous culture or willing to share information.

Among the ethnographic “old village” sites reported by Barrett in southeastern Marin County were *Awániwi*, located just north of San Rafael. Goerke (2007) talks about the *Awániwi* as a tribelet located to the north of the territorial boundary of the *Huimen*, who occupied the southern Marin area. Merriam (1907) and Kelly (1978) reported the presence of a village site in or near Sausalito, called *Liwanelowa*; and reportedly, the first Coast Miwok people to come into the Mission were from that village (Goerke 2007:14).

PREHISTORIC SETTING

This section provides information derived from the archaeological record of the San Francisco Bay area regarding settlement strategies, levels of social organization, subsistence economies, and food procurement strategies of pre-contact Native populations. It follows a chronology based on the Central California Taxonomic System (CCTS) that has been revised to include two radio-carbon based sequences, known as Scheme D (Groza 2002) and Scheme D2 (Milliken et al. 2007:101), but collapsed into four broad time periods: Early Period (3500 B.C. – 200 B.C.), Middle Period (200 B.C. - 700 A.D.), Middle/Late Period Transition (A.D. 700 – 900), and Late Period (A.D. 900 – 1769). Cultural patterns that emerged in the Bay Area are also described using the pattern-aspect-phase cultural sequence developed by Fredrickson (1973, 1984).

Early Holocene (2000 - 3500 B.C.)

Populations that emerged around the San Francisco during the Early Holocene (8000 – 3500 B.C.) were mobile foragers, characterized by a “Millingstone culture” that used milling slabs and handstones, crude cores and core tools, and various types of large wide-stemmed and leaf-shaped projectile points (Milliken et al. 2007:114; Wiberg 2010:31). Faunal remains indicate that people practiced a broad-spectrum hunting and gathering technique, exploiting acorns and a wide variety of seeds, fish, birds, and mammals, “although robust faunal assemblages are not common” (Hylkema 2002:235). Shellfish were collected, but were not a primary subsistence resource (Moratto 1984:277). Procurement and processing of major plant and animal subsistence resources were performed by all members of a group, including men, women and children (McGuire and Hildebrandt 1994). The settlement pattern is thought to be based on high residential mobility and limited exchange (Wiberg 2010:31).

Early Period (3500 - 200 B.C.)

The Early Period (3500 B.C. - 500 B.C.) marks a shift from a mobile foraging pattern to a sedentary and semisedentary land use pattern along the Bay Shore (Milliken et al. 2007:114-115). This more sedentary way of life seems to have been in response to the adoption of acorns as a primary food source, as well as the availability of a suite of new resources as the San Francisco Bay estuary formed and matured. Populations in the San Francisco Bay region increased during this time, as evident by the establishment of many previously unoccupied sites along the Bay Shore. Social organization became more complex, evidenced by an elaboration in mortuary practices, an increase in ornamental grave associations, regional symbolic integration and the establishment of trade networks. Also, by 1500 B.C., the mortar and pestle initially introduced circa 4000 cal B.C. replaced the use of millingslabs at most sites (Milliken

et al. 2007:115). Cultural patterns that emerge in the San Francisco Bay region during this period include Windmill in the Delta Region and Lower Berkeley along the Bay Shore.

Stabilization of the Bay water level and formation of marshes around the Bay circa 2500 B.C. coincide with the development of a distinctive cultural pattern along the eastern Bay Shore that was heavily influenced by the Windmill Pattern of the Delta region. This Lower Berkeley Pattern is recognized by the presence of perforated charmstones, notched and grooved net sinkers, spire-topped and thick rectangular *Olivella* beads and distinctive *Haliotis* pendants (Moratto 1984:259). However, unlike Windmill Pattern sites, Lower Berkeley Pattern sites are also marked by the presence of numerous mortars and pestles, a greater diversity and number of bone artifacts, and flexed burials that have no burial artifacts or preference for orientation (Milliken et al. 2007:115). The minimal amount of shell compared to faunal bone in Lower Berkeley Pattern components of the Emeryville shellmound (CCO-295) and the West Berkeley site (ALA-307) indicate that shellfish may not have been the primary resource collected during this time (Moratto 1984:277-279; Morgan et al. 1999). While marine resources were utilized, the emphasis appears to have been on terrestrial resources (Hildebrandt and Jones 1991:382).

Middle Period (500 B.C. - A.D. 700) and Middle/Late Period Transition (A.D. 700 – 900)

The Middle Period (500 B.C. - A.D. 700) is marked by a population increase and a greater level of sedentism (Milliken et al. 2007:115-116). Fixed permanent villages used most of the year became dominant along the Bay Shore, including on Belvedere Island. This indicates the establishment of fixed group territories as well (Lightfoot and Luby 2002:276; Wiberg 2010: 31). During this period, population growth led to restricted mobility, which in turn led to resource intensification, increased cooperation and a greater level of social complexity (Milliken et al. 2007:99). In the latter half of the Middle Period (cal A.D. 430 – 700) and the Middle/Late Period Transition (A.D. 700 – 900), a dramatic cultural disruption occurred, marked by changes in shell bead styles, settlement patterns and food resources (Milliken et al. 2007:116).

The Berkeley Pattern, which developed from the preceding Lower Berkeley Pattern, was well established by the Middle Period (Moratto 1984:277). Berkeley Pattern traits typically include tightly flexed burials, with fewer grave offerings and no preference toward orientation. Cremations are occasionally encountered and are associated with more grave goods than flexed burials, a mortuary treatment suggesting differentiation in wealth or status. Burial artifacts typically include *Olivella* saddle and saucer beads and *Haliotis* pendants. Berkeley Pattern sites are also characterized by utilitarian objects that include numerous mortars and pestles, which imply greater reliance on nuts and seeds, as well as a highly-developed bone tool industry. New types of bone tools such as the single-barbed bone fish spear indicate a greater dependency on fish and marine mammals like sea otter, seal and sea lion (Elsasser 1978:39; Hildebrandt and Jones 1992: 382). Shellfish collecting was also very important. This is indicated by the deposition of large quantities of shell, mostly mussel, which make up a good portion of shellmound constituents. Hunting is implied by spear and dart-sized projectile points, which were propelled using an atlatl, as well as high frequencies of deer and elk remains (Beardsley 1954; Hildebrandt and Jones 1991:382).

Starting at the end of the Middle Period and continuing in the Middle/Late Period Transition many of the Bay Shore sites were abandoned as residential places and then later reused as special-purpose sites in the Late Period (Lightfoot and Luby 2003:277). The reasons postulated for the abandonment of shellmound sites along the Bay include population decline, environmental degradation resulting from drought conditions of the Medieval Climatic Anomaly (MCA) that affected the availability of marine resources, a shift towards greater reliance on acorns rather than shellfish, intrusion of Patwin speaking people into the North Bay, or the return to a semisedentary settlement system whereby year-round occupation of shellmounds gave way to seasonal use of interior localities (Ingram 1998; Lightfoot and Luby 2003:279). Zooarchaeological data suggest that the abandonment of shellmounds as residential places does not coincide with a population decline, as some sites evince continued resource intensification due to overhunting in the Late Period (Broughton 1994).

Late Period (A.D. 900 - 1769)

The Augustine Pattern emerged from the preceding Berkeley Pattern in the Late Period (A.D. 900 - 1769). A variety of diagnostic artifacts make up this cultural expression, including bone harpoons, collared/flanged tobacco pipes, flanged pestles and large “flower pot” mortars, incised bone whistles and tubes, *Olivella* and clam shell disc beads, “banjo” style *Haliotis* pendants, and the bow and arrow, inferred by the presence of small, serrated projectile points (Moratto 1984:211-213). The typical burial treatment is in a flexed posture, but cremations and pre-interment grave burning occur. Economically, intensive fishing, hunting and gathering strategies, particularly harvesting acorns and other seeds, characterize Augustine Pattern components. The Augustine Pattern is characterized by more settlements, intensification of trade, greater social and political organization and increased status differentiation and social ranking (Moratto 1984:213).

HISTORIC SETTING

This section outlines the historical chronology of San Rafael with reference to events and themes related to the history of the area from the Spanish period to the later American period.

Spanish Period (1776 – 1821)

After 1776, Spanish activity in the San Francisco Bay Area and in Marin County increased greatly and included the establishment of several missions around the Bay Area (Hoover et al. 1966). The City of San Rafael inherited its name directly from San Rafael Arcangel which was the twentieth mission founded in Alta California on December 14, 1817, in what is now downtown San Rafael, approximately 0.8 miles north of the Archaeological APE. The Prefect of Missions, Father Vincente de Sarria, wrote that San Rafael Arcangel was chosen “in order that this most glorious prince, who in his name expresses the ‘healing of God’, may care for bodies as well as souls” (Teather 1986:69). Although the mission was established as an *asistencia*, or mission hospital, to Mission Dolores in San Francisco in 1817, it was later upgraded to full mission status in 1822.

Mexican Period (1821 – 1848)

In 1821, Mexico won its independence from Spain, which resulted in the decline of the mission system and the removal of the church as the center of authority. The Franciscan missions in Mexico were secularized soon after the revolution, but those in California remained under church control until 1835. This was because California was so far out on the frontier that the church, as the only authority available, would remain in charge for another decade. The law secularizing the missions required that the church relinquish secular control over the neophytes (converted Native Americans), change the missions into pueblos and divide the mission lands, livestock and equipment amongst the resident neophytes. The remaining mission property was to be administered by civil administrators who would oversee the missions until secularization was completed. However, most of the land and property designated for the ex-neophytes were turned into private estates called ranchos, and the Native Americans were driven off. Mission San Rafael was the first mission to be turned over to the Mexican Government in 1833. By 1842, the mission was abandoned and the mission livestock, equipment, and supplies were transferred to General Vallejo, who also had the vines and fruit trees uprooted and replanted on his property. The Mission was sold in 1846 and torn down between 1861 and 1870 (Weber 2006).

The Archaeological APE is situated within land that was part of the *Punta de Quentin* land grant, an 8,877-acre grant given by Governor Juan B. Alvarado to John B.R. Cooper in 1840 that encompassed the southern portion of San Rafael, the San Quentin peninsula, and the present-day towns of Ross, Kentfield and part of San Anselmo. Cooper married General Mariano Vallejo's sister Encarnacion in 1827 and became a naturalized Mexican in 1830. Cooper spent little time at his rancho and hired Timothy Murphy of San Rafael to look after his cattle that roamed his rancho land with local Native American supplying the labor force (Mason 1971:48). In 1847, Cooper sold logging rights on the rancho to the U.S. military for payment of \$5 per 1,000 board feet cut (Spitz 2006:34).

Early American Period (1848 – 1900)

The 1848 Treaty of Guadalupe Hidalgo marked the end of the Mexican-American war, and in 1850 California was admitted into the United States. Marin County was one of the original 27 counties in the new state of California, and San Rafael served as the county seat with the crumbling mission building serving as the first county courthouse (Teather 1974:66).

Due to the discovery of gold by James W. Marshall at Sutter's Mill in Coloma, California, the 1850s saw a massive influx of people into California who came to seek their fortune in gold. In addition to massive emigration from the eastern United States, people also came from China, Germany, Chile, Mexico, Ireland, Turkey and France (Harvard University Library Open Collections Program 2017). Once the initial rush (1848-1858) was over, there was a high demand for prime agricultural land, as people realized that money could more easily be made from raising and selling food to satisfy the needs of a rapidly growing population than it could be in the gold fields. As a result, rancho land began to be divided up and sold, or taken over by squatters (Teather 1974). Although the Treaty of Guadalupe Hidalgo provided some protection to those who were granted land during the Mexican Period in that the land grants were to be honored, the Land Act of 1851 required the owners to file a claim with the U.S. District Court. By this

time, Cooper had sold his interests in the *Punta de Quentin* rancho to Benjamin Buckelew who came to California with his wife Martha. Buckelew founded a watch making and jewelry shop in San Francisco in 1846, and owned and operated a San Francisco newspaper called *The Californian* in 1847-48 before purchasing the *Punta de Quentin* rancho in 1850 (Hoover et al. 1966). As the new owner, Buckelew filed a claim for Rancho *Punta de Quentin* with the Public Land Commission in 1853 and it was confirmed in 1866. Unlike Cooper, Buckelew lived within the rancho, in a house at present-day 111 Redwood Drive in Ross. He also planned a new community development on the San Quentin peninsula called Marin City but ran out of money and, in 1852, sold the 20-acre property at Point San Quentin to the State for construction of San Quentin State Prison (Spitz 2006:34). The 1858 plat of the *Punta de Quentin* rancho indicates that a few houses, as well as a mill, were present with the rancho land by 1858; however, none were located near the Archaeological APE. Buckelew fell into debt and was forced to sell the rancho *Punta de Quentin* to James Ross and John Cowell in 1857 for \$30,000. Ross was a Scot who came from Australia to San Francisco in 1848 and made a fortune in the wholesale liquor business. After purchasing the rancho from Buckelew he moved his family into the Buckelew home and set up a trading post called "Ross Landing" (Ross Historical Society 2009).

Although logging in Marin County began during the Spanish period, in 1849 the scale of logging increased dramatically due to a growing demand for lumber in San Francisco (Spitz 2006:49). Redwood, Douglas fir, oaks, laurels, and madrones trees throughout the area were cut and milled at local sawmills, including those located near the Archaeological APE. Munro-Fraser (1880) reports that,

"Magnificent forests were swept away that can never be restored. Fine redwood groves stretched between San Rafael and San Anselmo. Even the stumps are gone. Great madrone trees grew on the ridges...Not a tree of them remains...The devastation wrought through Ross Valley and along the foothill and canyons down to Corte Madera was nothing short of sacrilege".

History of San Rafael

In 1844, Governor Micheltorena awarded Timothy Murphy three contiguous ranchos - *San Pedro* that included portions of present-day San Rafael, *Santa Margarita*, and *Las Gallinas* - as a single land grant that totaled 21,678-acres. In 1847, Murphy was appointed the administrator of the Mission San Rafael, acting as an agent for over 1,400 Native Americans still living in and around the mission (Marin History Museum 2008). Murphy utilized the surrounding land for grazing Mission livestock. In 1849, Murphy built an adobe home, at the northeast corner of present-day Fourth and C streets, that was the first private dwelling built in San Rafael (Spitz 2006:38). It was occupied by Don Antonio Osio, while Murphy himself resided in the Mission Buildings (Munro-Fraser 1880:323). The following year the first town lots were laid out, and in 1851 a post office was established. Murphy died in 1853, and his adobe was sold to Timothy Mahon. Mahon either donated or leased the building to the city, and it served as the county courthouse until a new one was constructed in 1872 (Kyle 2002). According to Munro-Fraser (1880:331), in March of 1866 a writer of a local newspaper (the *Marin County Journal*) published the following recollection of San Rafael,

“When we first became a resident of this place, nearly fifteen years ago [in 1851], San Rafael boasted of ten houses, besides the Mission buildings, one store, one boarding house, and one whiskey mill. The buildings were all make-shifts—not one substantial house among them except the residence of the late Timothy Murphy, now owned and used by the county as a Court-house. No fencing or other improvements were visible save a corral or two. Now we have three stores, two hotels, two boarding houses, one restaurant, two livery stables, public school, an academy, a newspaper, telegraph office, three bootmakers, two blacksmith shops, one harnessmaker, butcher shop, clockmaker, barber, three layers, a physician, etc. The town contains about seventy-five or eighty houses, amongst which are some costly residences, with tastefully laid out grounds, the property of newcomers who have found in our delightful valley and desirable location for a home.”

San Rafael was officially incorporated in 1874, and at the time of incorporation, it included 160 acres, centered at Fourth and B streets, and 600 residences (Spitz 2006:112). During this time, San Rafael grew slowly due its lack of industry and isolation from San Francisco. This all changed with the coming of the ferry and the railroad in 1870 when the San Rafael & San Quentin (SR&SQ) railroad was established on March 21, 1870, which ran from downtown San Rafael southeast to the ferry terminal at Point San Quentin. The coming of the railroad changed the character of San Rafael from a small isolated town of approximately 841 people in 1870 to approximately 2,276 in 1880.

In 1873, the Archaeological APE was part of a 549-acre property owned by William Tell Coleman, a leading San Rafael citizen and previous U.S. Presidential candidate (Austin 1873; Spitz 2006:101,120). Coleman was born in Kentucky and came to California during the Gold Rush. Coleman earned his fortune by selling tools, wares and other supplies to miners in Sacramento and Placerville before moving to San Francisco in 1850 and starting the William T. Coleman & Company. Coleman was extremely successful in the merchandising business, and was a prominent local figure. In 1851, he founded the Committee of Vigilance in San Francisco, which was established to restore order in San Francisco during a time when vigilante justice was common. In 1856, he established a steamship line between New York and San Francisco, and moved to New York to manage his new business. He came to San Rafael in 1871 and paid \$84,000 for 1,100 acres of land that included the 549-acre property that included the Archaeological APE, as well as 915-acres north of the SR&SQ railroad. Coleman hired Golden Gate Park superintendent and civil engineer William Hammond Hall (1846-1934) to lay out the Coleman subdivision and he planted thousands of trees and well-nursed gardens. Coleman was influential in the success of many developments in San Rafael including the Marin County Water & Power Company, promoting the railroad, and he was partner in the Hotel Rafael. By the 1880s, due in part to the efforts of Coleman, San Rafael was an established town with major institutions and business, but it also remained a resort town that catered not only to the wealthy, but working-class travelers as well. Accommodations included luxury hotels, cottages, summer homes, and boarding houses. Growth during this time was support by Hansen & Lund Lumber Yard and Isaac Shaver’s Pioneer Planning Mill & Lumber, Co.

The 1906 earthquake shook San Rafael, jolting many homes off their foundations and knocking over chimneys and rooftops; but the biggest effect of the earthquake was the dramatic increase in population

as people fled San Francisco (Spitz 2006). The rail line via ferry continued to be the only way to travel between San Francisco and San Rafael until the construction of the Golden Gate Bridge in 1937, which greatly improved access (Kyle 2002; Spitz 2006).

History of Southern Heights

By the late 1890s and the early 1900s, land speculators and investors were looking to develop parcels of open land south of downtown San Rafael, which includes the land that encompasses the Archaeological APE. According to the 1892 Marin County Map, 252-acres of the 549-acres of land owned by Coleman was purchased by business partners John William Mackay and James C. Flood. Mackay and Flood were two of the “Big Four” that discovered the Comstock Lode in Nevada, which ultimately produced more than \$500 million worth of silver. At some point, the land owned by Flood and Mackay was deeded to James’ son, James L. Flood. In 1907, James L. Flood sold a portion of 252-acre of land to William L. Courtright and his wife Eloisa Courtright, which included the Archaeological APE, the land along Southern Heights Boulevard, as well as land east and north of the Southern Heights along present-day Courtright Road. By 1910, Courtright was selling parcels for development along Southern Heights Boulevard. The 1924 Sanborn Fire Insurance map shows the development of Southern Heights Boulevard, the surrounding neighborhood, and the location of a wood plank bridge along Southern Heights Boulevard. The 1950 updated of the 1924 Sanborn Map shows additional development in the area.

FIELD SURVEY METHODS

A field survey of the Archaeological APE was conducted on April 4, 2017 by EDS Principal Archaeologist Sally Evans, M.A., RPA. Ms. Evans holds an M.A. in Cultural Resource Management, is a Registered Professional Archaeologist (RPA No. 29300590), and exceeds the Secretary of the Interior's Professional Qualifications Standards in Archaeology and History, and Caltrans' professional qualification standards as a Principal Investigator for both Prehistoric and Historic Archaeology.

The Archaeological APE was surveyed by walking a linear north/south oriented transect along the east and west sides of both proposed staging areas, and east-west oriented transects under the existing bridge structure that were spaced five feet apart. Most of the proposed staging areas consists of a paved roadway (Southern Heights Boulevard), therefore the ground surface was not visible along the roadway sections; however, the ground survey was visible along both sides of the roadways and under the bridge structure. In total, approximately 73% of ground surface within the APE was inspected for the presence of archaeological resources. This estimate is based on the survey coverage area, calculated in GIS to be approximately 0.44 acres, divided by the total size of the APE (approximately 0.6 acres). Figure 3 shows 1":550' scale survey coverage map. The surveyor looked for the presence of isolated and concentrations of historic and prehistoric artifacts that could constitute an archaeological site.

A Garmin64 Global Positioning Satellite (GPS) system with 1 to 5 meters of accuracy was used to record the survey coverage area. No artifacts were collected during the field survey. Potential isolated artifacts were noted, but not recorded. Isolates are exempt properties that generally do not merit recordation. Their notation in the ASR, without formation recordation, typically exhausts the research value and

potential significance of isolates (Volume 2 - Standard Environmental Reference, Chapter 5: Cultural Resources Identification, Page 4:15).

STUDY FINDINGS AND CONCLUSIONS

No potentially significant archaeological resources, including prehistoric or historic archaeological sites, were identified within or adjacent to the Archaeological APE. Additionally, the Archaeological APE is not sensitive for surface or buried archaeological deposits because the landform predates human occupation in North America and has experienced extensive erosion. The undertaking will have low potential to impact either prehistoric or historic-era archaeological resources within the Archaeological APE.

Other Resources

One isolated artifact, referred to as ISO-01, was encountered within and adjacent to the APE. ISO-01 is a 10-pound iron dumbbell that was observed on the ground surface under the existing bridge structure approximately 32 feet south of the concrete abutment (Figure 4).

ISO-01 meets the criteria in Attachment 4 "Properties Except from Evaluation," of the Section 106 PA. Isolated artifacts are exempt properties that generally do not merit recordation (Volume 2 - Standard Environmental Reference, Chapter 5: Cultural Resources Identification, Page 4:15); and do not qualify as a property type eligible for listing on the NRHP or meet the definition of a historical resource under CEQA. Therefore ISO-01 was not recorded on DPR 523 forms. The locations of ISO-01 is shown in Figure 3.

Outside of the Archaeological APE, historic-era artifacts were observed during survey of the Architectural History APE at 116 Southern Heights Boulevard/APN 013-132-03 where the property owner confirmed that an older house had burned down on the property prior to the existing house built in 1971. The historic-era artifacts are outside of the Area of Direct Impact (ADI) and Archaeological APE and will be neither directly nor indirectly affected by the Project. There is no potential for indirect effects because they are located too far away to be impacted by vibration and the Project will not result in increased public access which would put it at risk for vandalism or looting. The historic-era artifacts are located outside of the Archaeological APE that includes all areas that will be directly affected by the Project's proposed ground disturbing activities. They are located within the Architectural History APE, which is larger than the Archaeological APE because it includes the ADI but also takes into account all adjacent parcels that contain built environment resources that have the potential to be indirectly affected (i.e. visual, vibration, or noise impacts) by the proposed Project. The historic-era artifacts are outside of the Archaeological APE and will not be affected directly or indirectly by the Project; therefore, further consideration of the historic-era artifacts is not warranted for purposes of this Project.

Unidentified Cultural Materials

If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find.

Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.

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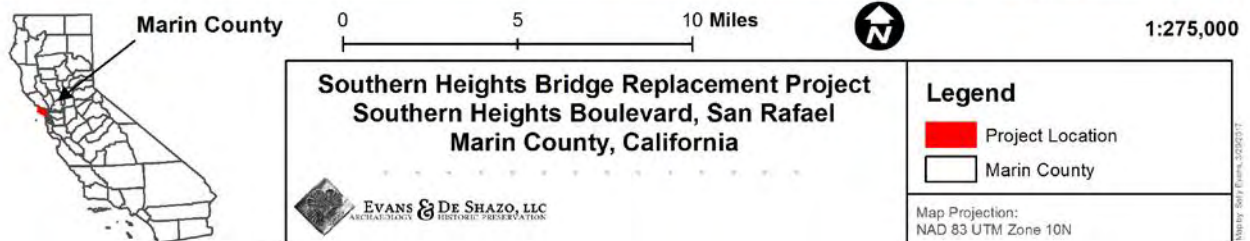


FIGURE 1: PROJECT VICINITY MAP.

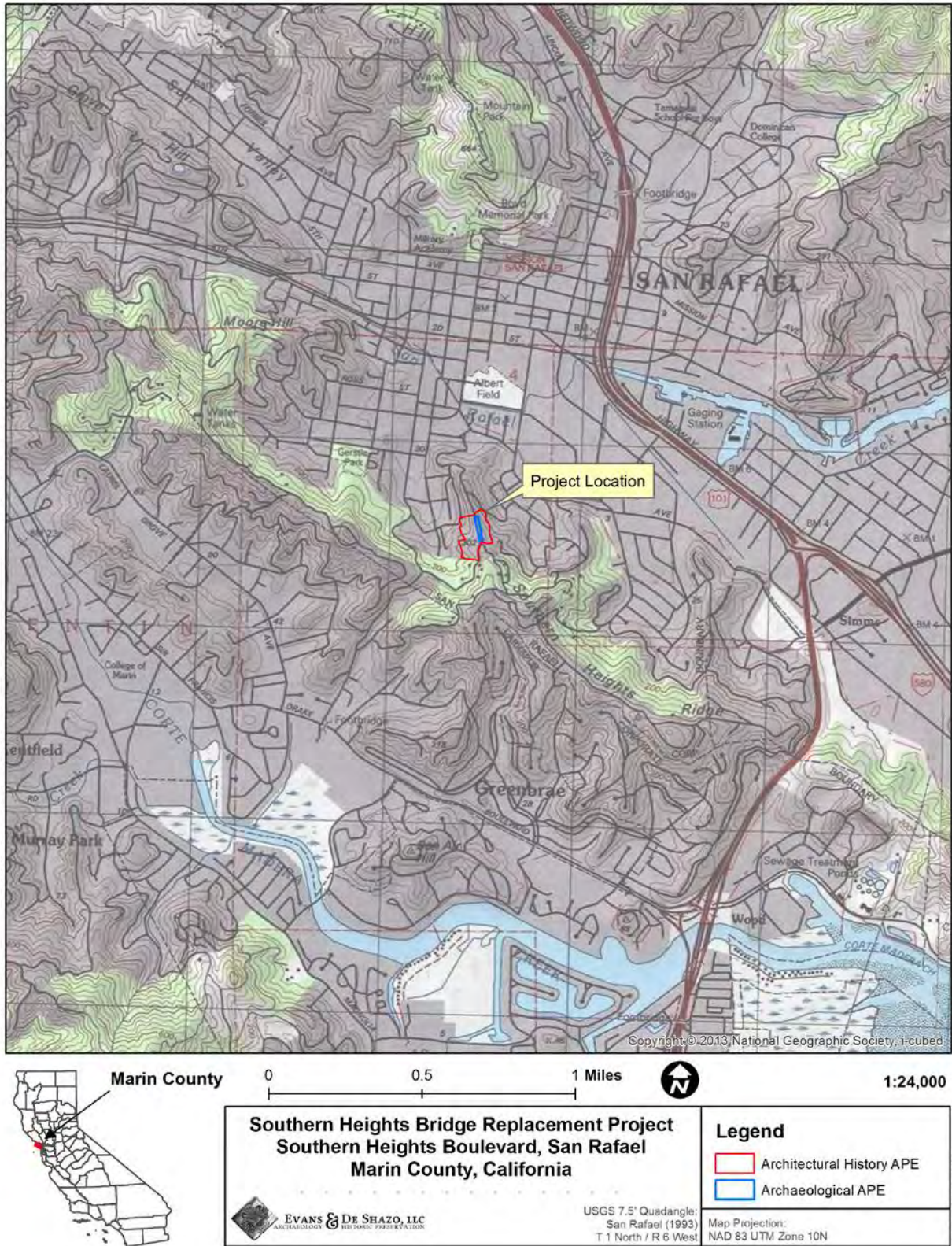


FIGURE 2: PROJECT APE SHOWN ON THE USGS 7.5-MINUTE SAN RAFAEL QUADRANGLE MAP (1993) WITHIN TOWNSHIP 1 NORTH AND RANGE 6 WEST.

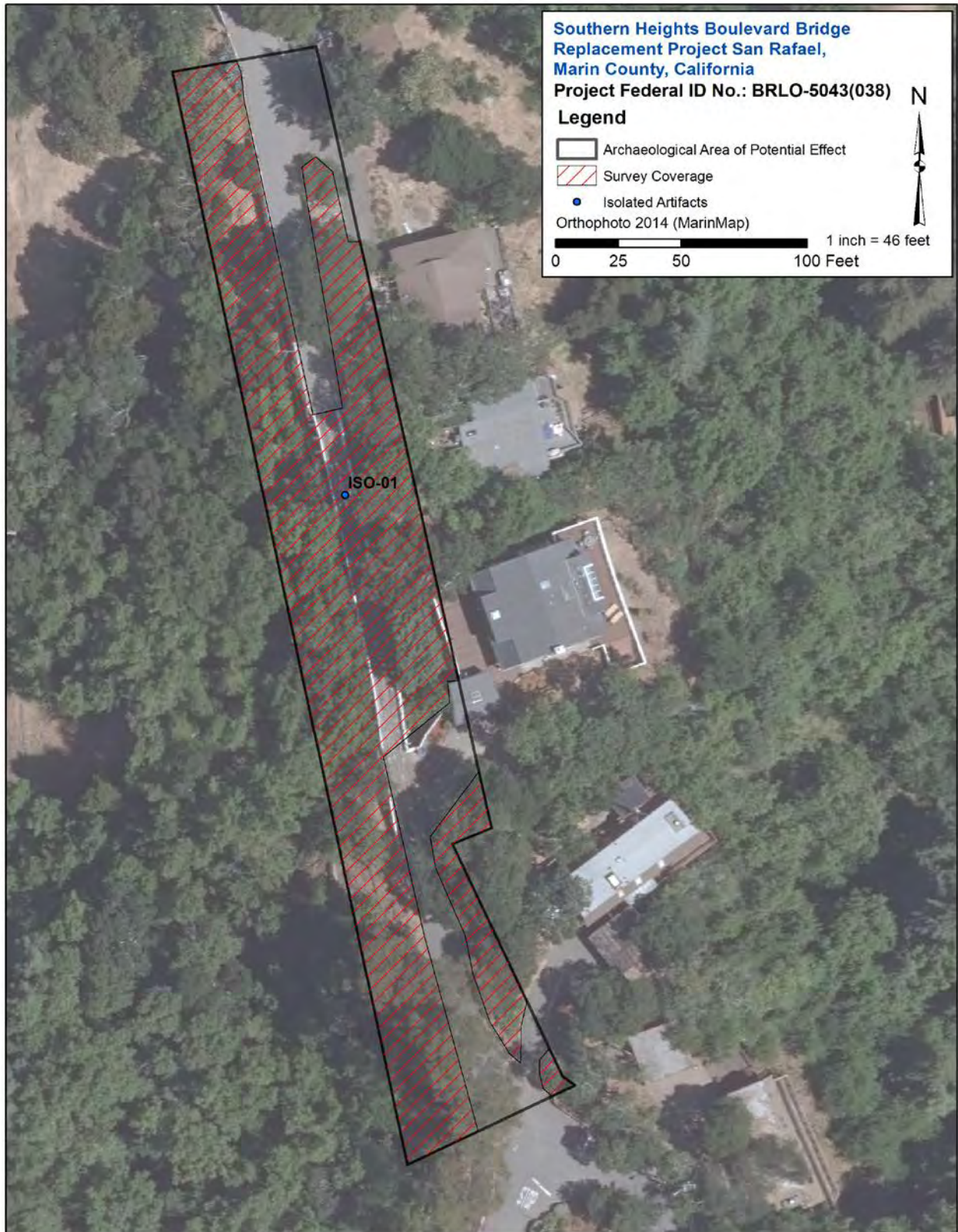


FIGURE 3: SURVEY COVERAGE MAP WITH LOCATION OF ISO-01.



FIGURE 4: ISO-01.

Appendix A:

Archaeological Area of Potential Effect (APE) Map

Archaeological APE Map



**Southern Heights Boulevard Bridge Replacement
Project San Rafael, Marin County, California**

Project Federal ID No.: BRLO-5043(038)



Legend

- Archaeological Area of Potential Effect
- Temporary Construction Easement
- Staging Area
- Bridge - New
- Existing Bridge Structure
- Parcels

Orthophoto 2014 (MarinMap) 1 inch = 27 feet
 0 20 40 80 Feet

APPROVED: *Kearin*
 CALTRANS PQS

03/14/2017
 DATE

APPROVED: *[Signature]*
 CALTRANS LOCAL ASSISTANCE
 ENGINEER

3/14/2017
 DATE

APPROVED: *[Signature]*
 SAN RAFAEL ASSISTANT CIVIL
 ENGINEER

2/17/17
 DATE

Appendix B:

Northwest Information Center Record Search Information



NWIC Billing Worksheet

IC File Number:

Client Name: Phone:
 Affiliation: Email:
 Proj Name/Number:

Date Request Rec'd: Date of Response:

Check In:	<input type="text" value="10:05:00 AM"/>	Check Out:	<input type="text" value="11:00:00 AM"/>	Check In:	<input type="text"/>	Check Out:	<input type="text"/>
In-person Time:		Hour(s):	<input type="text" value="0.92"/>			\$	<input type="text" value="100.00"/>
Staff Time:		Hour(s):	<input type="text" value="1"/>			\$	<input type="text" value="150.00"/>
Shape Files:		Number:	<input type="text" value="13"/>			\$	<input type="text" value="156.00"/>
Custom Map Features:		Number:	<input type="text"/>			\$	<input type="text" value="0.00"/>
Digital Database Record:		Number of Row(s):	<input type="text"/>			\$	<input type="text" value="0.00"/>
Quads:		Number:	<input type="text" value="1"/>			\$	<input type="text" value="0.00"/>
Address-mapped Flat Fee:						\$	<input type="text" value="0.00"/>
Hard Copy (Xerox/Computer) Pages:		Page(s):	<input type="text"/>			\$	<input type="text" value="0.00"/>
Labor Charge:		Hour(s):	<input type="text"/>			\$	<input type="text" value="0.00"/>
PDF Pages:		Page(s):	<input type="text" value="378"/>			\$	<input type="text" value="56.70"/>
PDF Flat Fee:						\$	<input type="text" value="25.00"/>
Other:	<input type="text" value="CHRIS Data Request"/>					\$	<input type="text" value="0.00"/>
						Subtotal	\$ <input type="text" value="487.70"/>
Multi-Day Start:	<input type="text"/>	Multi-Day End:	<input type="text"/>			\$	<input type="text" value="0.00"/>

Rapid response surcharge of 50% of total cost:	\$	<input type="text" value="0.00"/>
Emergency Response surcharge of 100% of total cost	\$	<input type="text" value="0.00"/>
Total:	\$	<input type="text" value="487.70"/>

Information Center Staff:
 Sonoma State University Customer ID:
 Sonoma State University Invoice No.:
 CHRIS Access and Use Agreement No.:

****This is not an invoice. Sonoma State University will send separate invoice.****

Report List

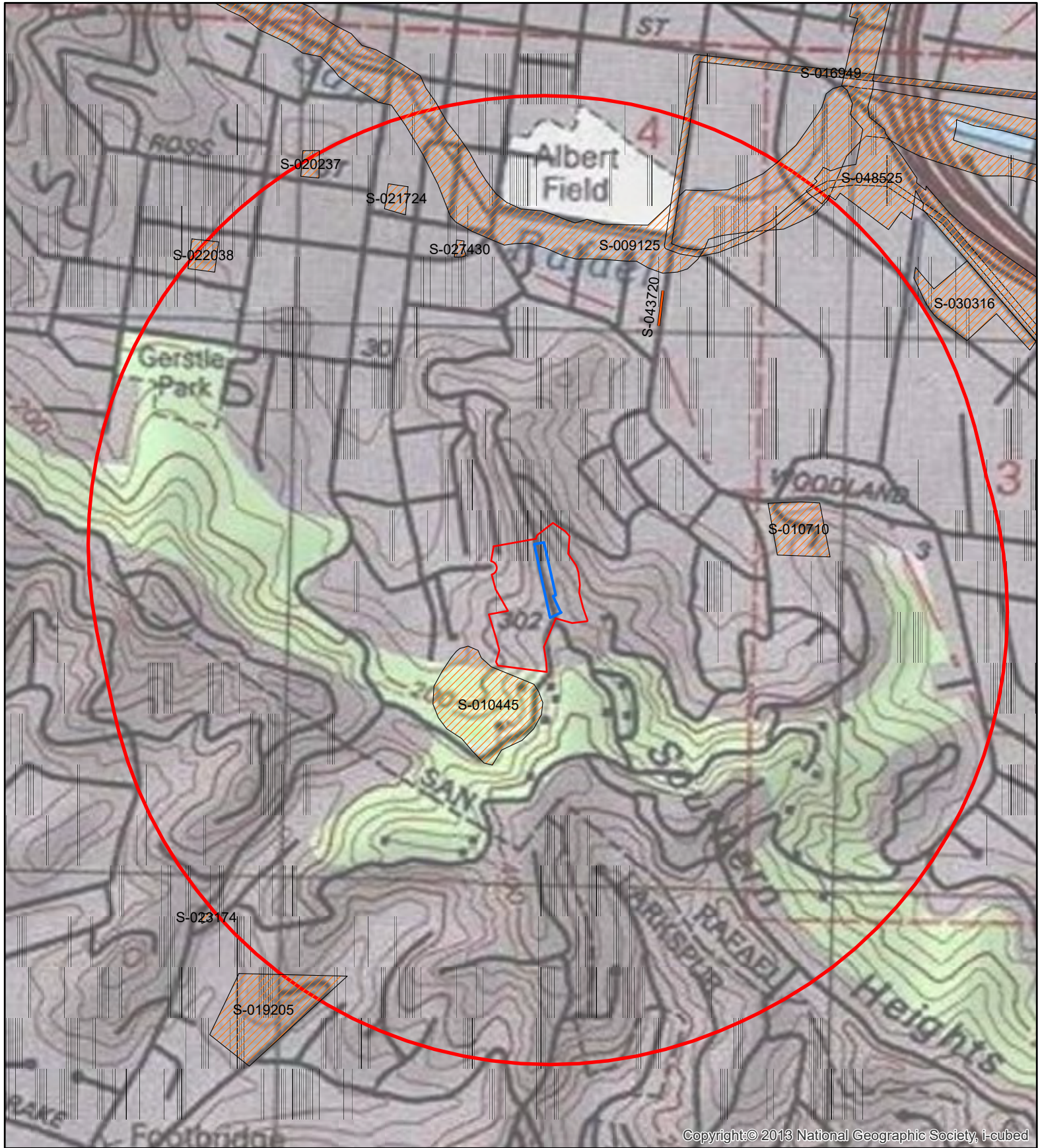
Southern Heights Bridge Replacement Project

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-010445		1988	Miley Paul Holman	Meyer Road Subdivision, Archaeological Reconnaissance, San Rafael, Marin County, California (letter report).	Holman & Associates	
S-010710	Submitter - ASC# 5501/18-89	1989	Nancy L. French	An Archaeological Survey of a 2.25 Acre Property on Woodland Avenue, San Rafael, Marin County, California	Anthropological Studies Center, Sonoma State University	
S-016949	Submitter - A.R.S. Project 91-14	1991	William Roop	A Cultural Resources Evaluation of a Proposed Reclaimed Water Pipeline in the San Quentin Point, Corte Madera, Larkspur, Kentfield and San Rafael Areas	Archaeological Resource Service	21-000095, 21-000114, 21-000541, 21-000544
S-019205		1997	William Roop	A Cultural Resources Evaluation of the Manor Road Subdivision, Kentfield, Marin County, California	Archaeological Resource Service	
S-020237		1998	Vicki R. Beard	Cultural Resources Study of the Parcel at 24 Ross Street, San Rafael, Marin County, California	Tom Origer & Associates	
S-021724		1999	Kelda Wilson	An Archaeological Study of 110 Taylor Street, San Rafael, Marin County, California		
S-022038		1999	Katherine Flynn	A Cultural Resources Evaluation of the Properties Located at 217 and 223 Bayview Street (APN 012-181-033 & 046), San Rafael		
S-023174		2000	Allen G. Pastron and R. Keith Brown	Historical and Cultural Resource Assessment, Proposed Telecommunications Facility, Wolfe Grade Joint Pole, Site No. SF-334-02, East of Wolfe Grade Road, Marin County, California (letter report)	Archeo-Tec	
S-027430		2003	Katherine Flynn	A Cultural Resources Evaluation of the Property at 20 & 22 Bayview Street, San Rafael, Marin County (APN 012-156-07)		
S-030316	Submitter - A.R.S. Project #05-051	2005	Cassandra Chattan	A Cultural Resources Evaluation of the Proposed Best Buy San Rafael, 632 Irwin Avenue, San Rafael, Marin County, California.	Archaeological Resource Service	
S-043720	Agency Nbr - PM # 30887662	2013	Beatrice Cox	Cultural Resources Contyraints Report Gas Main Lindaro St., San Rafael, Marin County	Garcia & Associates	
S-043720		2013	Matthew A. Russell	Archaeological Monitoring Summary Report for 30887662 Gas Main Lindaro Street, San Rafael, Maring County (PO #2500892156) (letter report)	Garcia & Associates	

Report List

Southern Heights Bridge Replacement Project

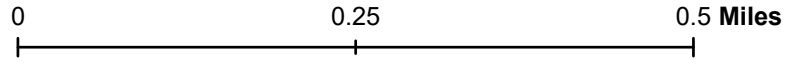
Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-048525	OHP PRN - FTA_2013_0418_001	2014	Madeline Bowen	Historic Architectural Survey Report for the Sonoma-Marín Area Rail Transit (SMART) Rail Corridor San Rafael to Larkspur Project Marin County, CA	AECOM	21-001015, 21-002618, 21-002910



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Marin County



1:9,000

**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

- Architectural History APE
- Archaeological APE
- 1/2-Mile Buffer
- Previous CR Studies_polys
- Previous CR Studies_lines



USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

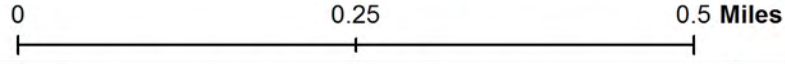
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NAD 83 UTM Zone 10N



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Marin County



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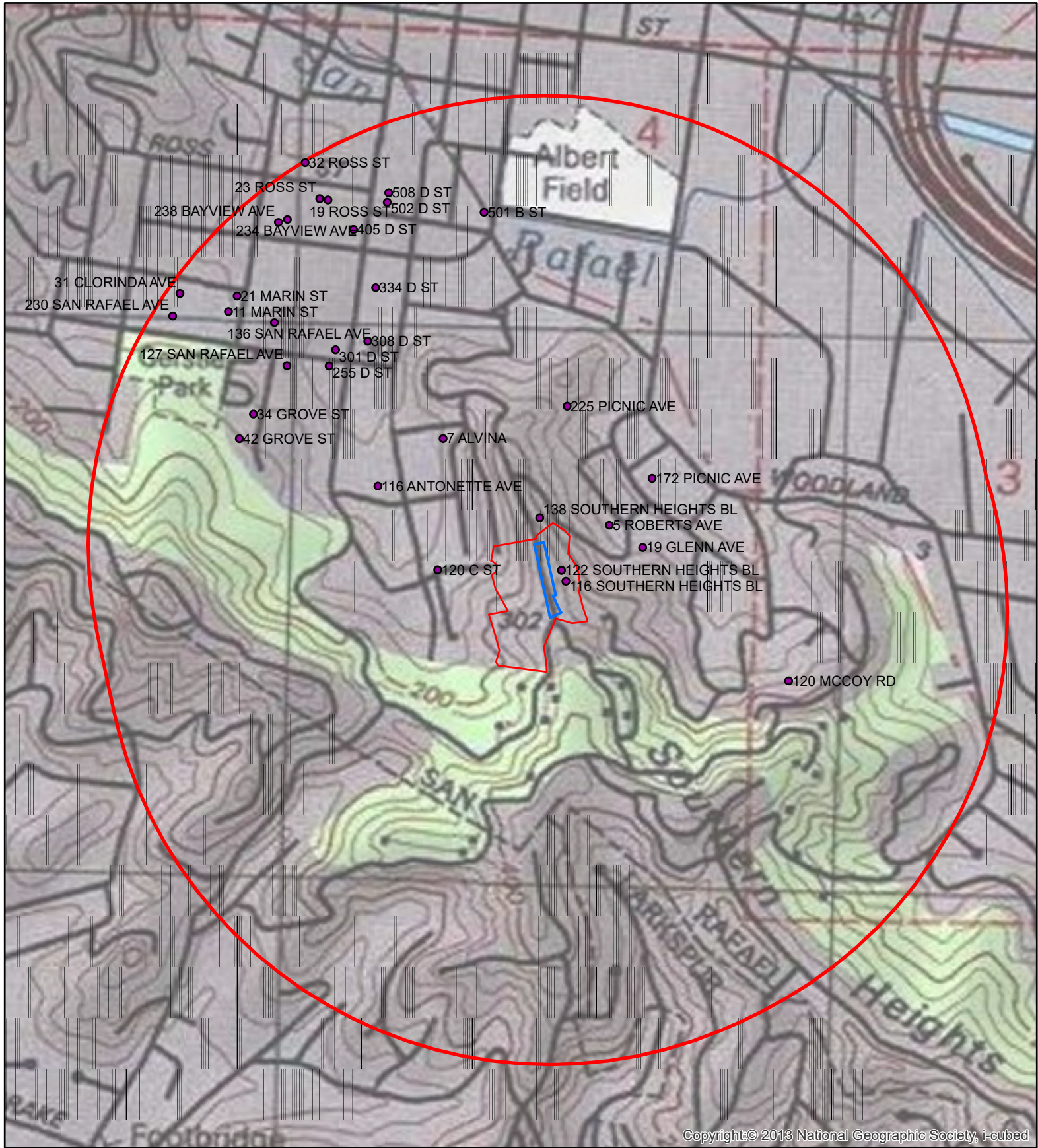
**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

- Primary Resources
- Archaeological APE
- Architectural History APE
- 1/2-Mile Buffer
- Historic Baylands



USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

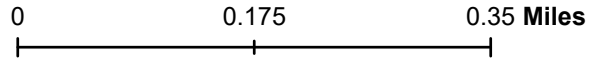
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NAD 83 UTM Zone 10N



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Marin County



1:9,000

**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

- Architectural History APE
- Archaeological APE
- 1/2-Mile of Archaeological APE
- HPD_Resources



USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

Map Projection:
NAD 83 UTM Zone 10N

Map by Sally Evans, 3/29/2017

Appendix C:

Native American and Historical Organization

Consultation Correspondence

- **Sacred Lands Inventory Request Letter to Native American Heritage Commission (NAHC)**
- **NAHC Letter with Results of Sacred Lands Inventory and Native American Contact List**
- **Letters to Native American Individuals/Organizations on the NAHC Native American Contact List to initiate consultation**
- **Correspondence from Federated Indians of Graton Rancheria (FIGR)**
- **Correspondence from the Historic Bridge Foundation**



March 31, 2017

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

RE: Sacred Sites Inventory Request

Project Information:

Project Name	<i>Southern Heights Bridge Replacement Project</i>
Address	Southern Heights Boulevard, San Rafael, Marin County, CA.
USGS Quadrangle	7.5' USGS San Rafael quadrangle (1993)
Township	1 North
Range	6 West
Section(s)	4

Project Description:

Evans & De Shazo, LLC was retained to conduct the necessary cultural resource studies, including an Archaeological and Historic Property Survey, and Historic Resource Evaluation to be completed in accordance with Volume 2, Cultural Resources, of the California Department of Transportation Environmental Handbook, for the Southern Heights Bridge Replacement Project.

The current Southern Heights Bridge (Caltrans Bridge No. 27Co148) is a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments that were constructed in 1981. The bridge is being replaced due to structural deficiencies and its overall poor condition, and is eligible for replacement under the Highway Bridge Program (HBP). The California Department of Transportation (Caltrans), acting as the lead agency under the delegated authority of the Federal Highway Association (FHWA), is providing the project oversight as federal funds are involved.

Due to the allocation of federal funds, the project is subject to review under the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). The Caltrans Preliminary Environmental Studies (PES) form for the Southern Heights Bridge Replacement Project calls for the preparation of an Area of Potential Effect (APE) map, a Historic Property Survey Report (HPSR), an Archaeological Survey Report (ASR), and potentially a Historic Resources Evaluation Report (HRER) to fulfill the requirement of determining if the project will adversely affect historic properties.



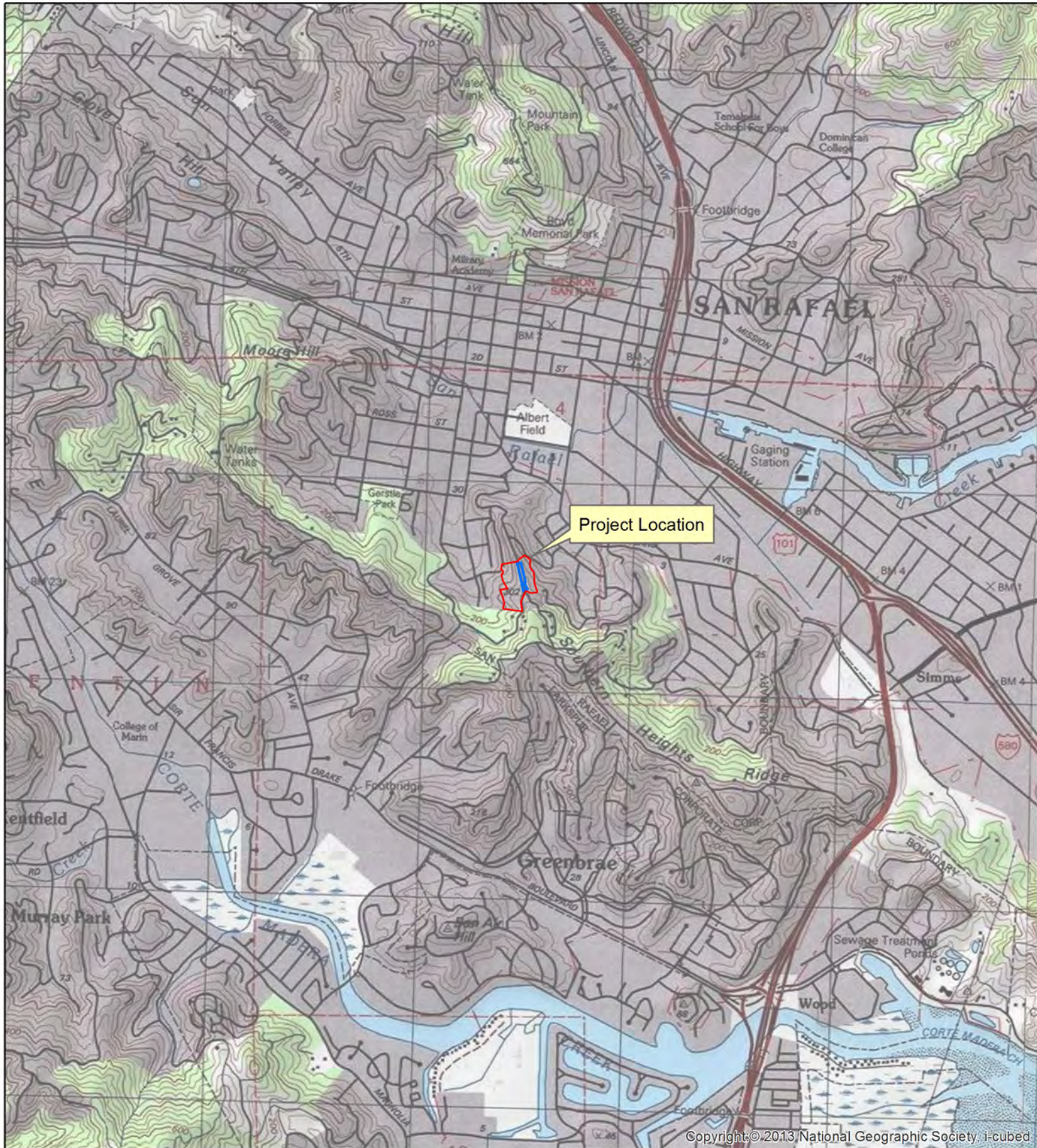
EVANS & DE SHAZO, LLC
ARCHAEOLOGY HISTORIC PRESERVATION

We are contacting you to request a Sacred Sites inventory for the Project Area (APE map attached) and a list of Native Americans to contact for further information. Please email the results to sally@evans-deshazo.com.

Respectfully,

Sally Evans, M.A., RPA
Principal Archaeologist

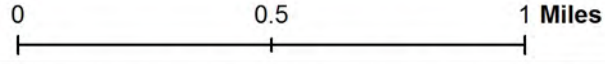
PLEASE REPLY TO: sally@evans-deshazo.com



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Marin County



1:24,000

**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

Legend

- Architectural History APE
- Archaeological APE



USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

Map Projection:
NAD 83 UTM Zone 10N

Map by Sally Evans, 3/20/2017

**Native American Heritage Commission
Native American Contacts
4/11/2017**

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
gbuvelot@gratonrancheria.
(415) 279-4844 Cell
(707) 566-2288 ext 103

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the updated contact list for Southern Helghts Bridge Replacement Project, San Rafael, Marin County.



April 19, 2017

File No: 16.01.266

Mr. Gene Buvelot
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: Southern Heights Bridge Replacement Project, San Rafael, Marin County, CA
FED PROJ #: BRLO-5043(038)

Dear Mr. Buvelot:

The City of San Rafael, in cooperation with the California Department of Transportation (Caltrans) District 4, is proposing to remove the Southern Heights Bridge (Bridge No. 27Co148) and construct of a new bridge along Southern Heights Boulevard in the City of San Rafael, Marin County, California. The existing Southern Heights Bridge was constructed in the 1930's as a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments constructed 1981. The bridge is being replaced by the City due to its poor condition and structural deficiencies. This bridge is eligible for replacement under the Highway Bridge Program (HBP). The Area of Potential Effect (APE) for archaeology (Archaeological APE) includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard. The Archaeological APE includes 274 feet of paved roadway and 162-feet of existing bridge as well the land under the bridge and on either side of the roadway for 20 feet. This area totals approximately 0.6 acres (see Attached APE map).

The City of San Rafael is the sponsoring agency, acting on Caltrans' behalf, for Section 106 and California Environmental Quality Act (CEQA) compliance on this project. As part of State and Federal regulations the City of San Rafael is notifying the Native American community of the proposed project.

Please consider this letter and preliminary project information as the initiation of Section 106 consultation pursuant to the National Historic Preservation Act and as formal notification of a proposed project as required under CEQA, specifically Public Resources Code 21080.3.1 and Chapter 532 Statutes of 2014 (i.e. AB 52). Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this project and provide a designated lead contact person if you have not provided that information to us already.

Our records indicate that there are no known archaeological sites recorded within or adjacent to the APE; however, there are two archaeological sites recorded within a half-mile, CA-MRN-313, located 0.35 miles to the northwest, and CA-MRN-626/H, located 0.49 miles to the northwest of the APE. These two sites are shell midden sites situated

Mr. Gene Buvelot

April 19, 2017

Page 2

adjacent to the historic San Francisco Bay margins; CA-Mrn-626/H is also known to contain Native American burials, and is a multi-component site that also contains a historic house. A record search of the sacred lands file by the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the immediate APE.

We would like to provide you with an opportunity to communicate concerns you might have regarding places within the project area that may be important to your community. We respectfully request your participation in the identification and protection of cultural resources, sacred lands or other heritage sites within the above described project area with the understanding that you or other members of the community might possess specialized knowledge of the area.

Since this is a City of San Rafael project, Evans & De Shazo, LLC (EDS) archaeologist Sally Evans, Principal Archaeologist, a consultant representing this local government, will be contacting you. As part of this effort, Sally Evans will ask if the Tribe knows of any culturally sensitive locations at, or near, the project location. Our consultant will be inquiring about the Tribe's concerns regarding the proposed project.

We recognize the unique government-to-government relationship that the Federally Recognized Tribes hold with the federal government. To complete environmental studies, the City is coordinating with LSA Associates, Inc. (LSA) to conduct studies, provide consultation and prepare documents for the project. EDS has been retained by LSA to provide the necessary Cultural resource studies. Should the Tribe prefer an alternative arrangement on how consultation shall occur, we would be glad to work with you to identify a mutually satisfactory means for including your concerns in the project development process. Therefore, if requested by the Tribe, Caltrans, as the acting lead federal agency, would take the lead in this consultation as required under 36 CFR 800.2(c)(2)(ii)(C). In addition, if at any time during the consultation process the Tribe would like to either involve Caltrans in the consultation process or solely consult with Caltrans as the Federal lead agency, please contact Caltrans District Native American Coordinator Brett Rushing at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. FHWA also understands they may not delegate away their consultation responsibilities.

We understand the sensitive nature of the environmental studies with regards to discussions on cultural resources and other environmental impacts which may affect your community. Due to this, your interest and participation is invaluable to the process. We want to ensure that the Tribe's concerns are treated with respect and that these are addressed to your satisfaction.

If you have any questions or concerns with the content of this letter, please contact Sally Evans with Evans & De Shazo, LLC by email (sally@evans-deshazo.com) or by phone

Mr. Gene Buvelot
April 19, 2017
Page 3

(707-812-7400). Caltrans District 4 Native American Coordinator Brett Rushing can be reached at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. I can also be reached at 415-485-3389 or at kevin.mcgowan@cityofsanrafael.org.

Very truly yours,



Kevin McGowan, Assistant Public Works Director/City Engineer

Attachment: Topographic map indicating project location, Archaeological APE map

C: Bill Guerin, Public Works Director
Brett Rushing, Caltrans District 4 Native American Coordinator
Greg Sarris, Federated Indians of Graton Rancheria



April 19, 2017

File No: 16.01.266

Mr. Greg Sarris, Chairperson
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: Southern Heights Bridge Replacement Project, San Rafael, Marin County, CA
FED PROJ #: BRLO-5043(038)

Dear Mr. Sarris:

The City of San Rafael, in cooperation with the California Department of Transportation (Caltrans) District 4, is proposing to remove the Southern Heights Bridge (Bridge No. 27Co148) and construct of a new bridge along Southern Heights Boulevard in the City of San Rafael, Marin County, California. The existing Southern Heights Bridge was constructed in the 1930's as a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments constructed 1981. The bridge is being replaced by the City due to its poor condition and structural deficiencies. This bridge is eligible for replacement under the Highway Bridge Program (HBP). The Area of Potential Effect (APE) for archaeology (Archaeological APE) includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard. The Archaeological APE includes 274 feet of paved roadway and 162-feet of existing bridge as well the land under the bridge and on either side of the roadway for 20 feet. This area totals approximately 0.6 acres (see Attached APE map).

The City of San Rafael is the sponsoring agency, acting on Caltrans' behalf, for Section 106 and California Environmental Quality Act (CEQA) compliance on this project. As part of State and Federal regulations the City of San Rafael is notifying the Native American community of the proposed project.

Please consider this letter and preliminary project information as the initiation of Section 106 consultation pursuant to the National Historic Preservation Act and as formal notification of a proposed project as required under CEQA, specifically Public Resources Code 21080.3.1 and Chapter 532 Statutes of 2014 (i.e. AB 52). Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this project and provide a designated lead contact person if you have not provided that information to us already.

Our records indicate that there are no known archaeological sites recorded within or adjacent to the APE; however, there are two archaeological sites recorded within a half-mile, CA-MRN-313, located 0.35 miles to the northwest, and CA-MRN-626/H, located 0.49 miles to the northwest of the APE. These two sites are shell midden sites situated

adjacent to the historic San Francisco Bay margins; CA-Mrn-626/H is also known to contain Native American burials, and is a multi-component site that also contains a historic house. A record search of the sacred lands file by the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the immediate APE.

We would like to provide you with an opportunity to communicate concerns you might have regarding places within the project area that may be important to your community. We respectfully request your participation in the identification and protection of cultural resources, sacred lands or other heritage sites within the above described project area with the understanding that you or other members of the community might possess specialized knowledge of the area.

Since this is a City of San Rafael project, Evans & De Shazo, LLC (EDS) archaeologist Sally Evans, Principal Archaeologist, a consultant representing this local government, will be contacting you. As part of this effort, Sally Evans will ask if the Tribe knows of any culturally sensitive locations at, or near, the project location. Our consultant will be inquiring about the Tribe's concerns regarding the proposed project.

We recognize the unique government-to-government relationship that the Federally Recognized Tribes hold with the federal government. To complete environmental studies, the City is coordinating with LSA Associates, Inc. (LSA) to conduct studies, provide consultation and prepare documents for the project. EDS has been retained by LSA to provide the necessary Cultural resource studies. Should the Tribe prefer an alternative arrangement on how consultation shall occur, we would be glad to work with you to identify a mutually satisfactory means for including your concerns in the project development process. Therefore, if requested by the Tribe, Caltrans, as the acting lead federal agency, would take the lead in this consultation as required under 36 CFR 800.2(c)(2)(ii)(C). In addition, if at any time during the consultation process the Tribe would like to either involve Caltrans in the consultation process or solely consult with Caltrans as the Federal lead agency, please contact Caltrans District Native American Coordinator Brett Rushing at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. FHWA also understands they may not delegate away their consultation responsibilities.

We understand the sensitive nature of the environmental studies with regards to discussions on cultural resources and other environmental impacts which may affect your community. Due to this, your interest and participation is invaluable to the process. We want to ensure that the Tribe's concerns are treated with respect and that these are addressed to your satisfaction.

If you have any questions or concerns with the content of this letter, please contact Sally Evans with Evans & De Shazo, LLC by email (sally@evans-deshazo.com) or by phone

Mr. Greg Sarris
April 19, 2017
Page 3 of 3

(707-812-7400). Caltrans District 4 Native American Coordinator Brett Rushing can be reached at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. I can also be reached at 415-485-3389 or at kevin.mcgowan@cityofsanrafael.org.

Very truly yours,



Kevin McGowan, Assistant Public Works Director/City Engineer

Attachment: Topographic map indicating project location, Archaeological APE map

C: Bill Guerin, Public Works Director
Brett Rushing, Caltrans District 4 Native American Coordinator
Greg Sarris, Federated Indians of Graton Rancheria

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Sent To Mr. Gene Bavelot, FIGIR
 Street and Apt. No., or PO Box No. 6400 Redwood Drive Suite 300
 City, State, ZIP+4® Robnett Park, CA 94928

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$	
Postage	\$ 1.15	
Total Postage and Fees	\$ 11.31	

Sent To Mr. Greg Savaris, Chairperson
 Street and Apt. No., or PO Box No. Federated Indians of Graton Rancheria
 City, State, ZIP+4® 6400 Redwood, Robnett Park, CA 94928

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Postage	\$ 1.15	
Total Postage and Fees	\$ 11.31	

Sent To Bill Guerin, Pub. Works Direct
 Street and Apt. No., or PO Box No. COSR 11 Morpheus St
 City, State, ZIP+4® San Rafael, CA 94901

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Sally Evans <sally@evans-deshazo.com>

Southern Heights Bridge Replacement Project, San Rafael, Marin County2 messages

THPO@gratonrancheria.com <THPO@gratonrancheria.com>

Wed, May 10, 2017 at 9:05 AM

To: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>, "Sally Evans (sally@evans-deshazo.com)" <sally@evans-deshazo.com>

Dear Brett Rushing,

Thank you for notifying the Federated Indians of Graton Rancheria about Southern Heights Bridge Replacement Project, San Rafael, Marin County, a project within the Tribe's Ancestral Territory. We appreciate being notified and will review your project within 10 business days. If you have an immediate request please contact the Tribal Heritage Preservation Office for assistance by phone at [\(707\) 566-2288](tel:707.566.2288) or by email at thpo@gratonrancheria.com.

Sincerely,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Office: [707.566.2288](tel:707.566.2288); ext. 137Cell: [707.318.0485](tel:707.318.0485)FAX: [707.566.2291](tel:707.566.2291)**Antonette Tomic**

THPO Administrative Assistant

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: [707.566.2288](tel:707.566.2288), ext. 143Fax: [707.566.2291](tel:707.566.2291)atomic@gratonrancheria.com

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Sally Evans <sally@evans-deshazo.com>

Southern Heights Bridge Replacement Project, San Rafael FED Proj#:BRLO-5043(038)

3 messages

Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Mon, May 22, 2017 at 5:21 PM

To: "Sally Evans (sally@evans-deshazo.com)" <sally@evans-deshazo.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>

Hi Sally,

Thank you for the notification regarding the above mentioned project. The project is likely to impact tribal cultural resources important to the Tribe, with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.

Respectfully,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: 707.566.2288; ext. 137

Cell: 707.318.0485

FAX: 707.566.2291

bmcquillen@gratonrancheria.com<mailto:bmcquillen@gratonrancheria.com>

Federated Indians of Graton Rancheria: Proprietary and Confidential

Confidentiality Notice: This transmittal is a confidential communication or may otherwise be privileged. If you are not the intended recipient, you are hereby notified that you have received this transmittal in error and that any review, dissemination, distribution or copying of this transmittal is strictly prohibited. If you have received this communication in error, please notify this office and immediately delete this message and all its attachments, if any.

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Sally Evans <sally@evans-deshazo.com>

Wed, May 24, 2017 at 7:41 AM

To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>, Katie Vallaire <Katie.Vallaire@lsa.net>

Hi Buffy,

Thank you for your response regarding the Southern Heights Bridge Project. Unfortunately, the field survey has been completed already. I have attached a copy of the draft Archaeological Survey Report (ASR) for your review. Let me know if the Tribe would like a field visit and I will contact our client (LSA) to arrange that. I will also incorporate your comments regarding the Tribe's concerns that human remains may be nearby into the report as well.

Respectfully,

Sally Evans

[Quoted text hidden]

—

Sally Evans, M.A., RPA

Principal Archaeologist / Cultural Resource Specialist

Evans & De Shazo, LLC

Main Office

5/26/2017

Evans & De Shazo, LLC Mail - Southern Heights Bridge Replacement Project, San Rafael FED Proj#BRLO-5043(038)


707-812-7400 | office
707-484-9628 | cell
6876 Sebastopol Avenue
Sebastopol, CA 95472

Oregon Field Office
971-344-2826

<http://www.evans-deshazo.com/>



EVANS & DE SHAZO, LLC
ARCHAEOLOGY & HISTORIC PRESERVATION

 ASR_Southern Heights_DRAFT.pdf
19527K

Wed, May 24, 2017 at 7:42 AM

Rhea Sanchez

From: Katie Vallaire
Sent: Wednesday, January 03, 2018 9:34 AM
To: Rhea Sanchez
Subject: FW: bridge eligibility question

From: Katie Vallaire
Sent: Thursday, August 10, 2017 2:25 PM
To: 'Calpo, Janice C@DOT'
Subject: RE: bridge eligibility question

Thanks so much, Janice! That helps a lot.
Yeah, the City said they think it was added to their list because it "looked" old. ☺
Have a great day!
Katie

From: Calpo, Janice C@DOT [<mailto:janice.calpo@dot.ca.gov>]
Sent: Thursday, August 10, 2017 2:11 PM
To: Katie Vallaire
Subject: RE: bridge eligibility question

Hello Karin –

You are very right to take Category 5 especially with a grain of salt, so good for you checking on this one, and initially being as the City has it in their historic resources inventory, that would definitely be a red flag! Sometime seemingly unremarkable bridges might be flagged as part of a larger resource too, but as for what we have here, that are no notes or no red flags that would alert us to further evaluation. If you think that what the city said seems reasonable, then I would say you've done your due diligence. I do wonder what their original thinking was – maybe better to check if they have a well-reasoned inventory form (we especially don't know about local history or public interest sometimes) or if they just have the type of minimal form that was more in use a long time ago and does not mean a lot.

Thank you for paying attention and checking on this one anyway!

- Janice

Janice Catlin Calpo
Principal Architectural Historian, Cultural Studies Office
Division of Environmental Analysis
Caltrans HQ, 1120 N Street, MS 27
Sacramento, CA 95814
916 653-0802



Bridges

Bridge	Dist	RTE	PM	Name	Loc	Fac	City	MT	AMT	Leng	Spans	YrBlt	Yrwd	Hist	Mat	Type	Co	lat	long	NRUpd
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Bridges

Bridge	Dist	RTE	PM	Name	Loc	Fac	City	MT	AMT	Leng	Spans	YrBlt	Yrwd	Hist	Mat	Type	Co	lat	long	NRUpd
27C0148	4			S HEIGHT SIDEHILL VIA	JCT MEYER RD IN SAN RAFEL	SOUTHERN HEIGHT BL	San Rafael	702	0	49.4	29	0		5	7	02	27			5

From: Katie Vallaire [<mailto:Katie.Vallaire@lsa.net>]
Sent: Thursday, August 10, 2017 1:26 PM
To: Calpo, Janice C@DOT <janice.calpo@dot.ca.gov>
Subject: bridge eligibility question

Hello Janice,

I hope you are doing well! The bridge called out in the document attached (Bridge #27C0148) is not eligible for listing in the NRHP because it is a Category 5 bridge. I know we are supposed to take these statuses with a grain of salt (I have had to evaluate Cat 5 bridges before!), so I was hoping to get your advice on whether we should evaluate this bridge or not... The City currently has it on their Historic Resources Inventory; but after speaking with them, they do not know why it was ever included and said they will likely be removing it.

Any suggestions or guidance would be greatly appreciated!

Thanks so much,

Katie

We moved! See below for our new contact information.

Katie Vallaire, RPA | Senior Cultural Resources Manager

LSA | 201 Creekside Ridge Court, Suite 250

Roseville, CA 95678

916-772-7450 Tel

[Website](#)

Rhea Sanchez

From: Rhea Sanchez
Sent: Friday, January 05, 2018 3:36 PM
To: 'Kitty Henderson'
Subject: RE: Bridge #027CO148

Dear Ms. Henderson,

Thank you for your time on the phone today and for this e-mail. I will document your request to be included earlier in the decision-making process when initial discussions of bridge removal occur, so that your organization can be involved in the decision-making process regarding alternatives and/or removal of bridge(s).

I appreciate the time you've given to this project. Thank you!

Rhea Sanchez, RPA 17075 | Cultural Resources Manager
LSA | 201 Creekside Ridge Court, Suite 250
Roseville, CA 95678

916-772-7450 Tel
[Website](#)

From: Kitty Henderson [mailto:kitty@historicbridgefoundation.com]
Sent: Friday, January 05, 2018 3:26 PM
To: Rhea Sanchez
Subject: Re: Bridge #027CO148

Rhea

Thank you for providing me the requested information about the Southern Heights Bridge.

The Historic Bridge Foundation has no comment about the replacement of this bridge due to the fact that we do not have sufficient information on the significance of the bridge or the Section 106 process and any alternatives that may have been discussed.

Kitty Henderson
Executive Director
Historic Bridge Foundation
PO Box 66245
Austin, Texas 78766
512 407 8898

On Jan 3, 2018, at 2:54 PM, Rhea Sanchez <Rhea.Sanchez@lsa.net> wrote:

Dear Ms. Henderson,

Thank you for returning my call regarding the removal and replacement of Bridge #027CO148. You asked if this is a Section 106 project, requested additional information on the bridge as well as requested project description. Yes, this project is undergoing Section 106 environmental review:

The California Department of Transportation (Caltrans), acting as the lead agency under the delegated authority of the Federal Highway Administration (FHWA), is providing the project oversight as federal funds are involved. Therefore, the Project is considered an undertaking as defined in 36 CFR §800.16(y) and subject to review under the 2014 *First Amended Programmatic Agreement) Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

Here is the additional information you requested:

The proposed Southern Heights Bridge Replacement Project is located in the City of San Rafael, Marin County, California, within Caltrans District 4. The project area includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard situated between Meyer Road and Pearce Road. This section of Southern Heights Boulevard traverses north/south through a mountainous residential area on the northeast slope of the Southern Heights Ridge, which divides San Rafael from the communities of Larkspur, Greenbrae and Ross, and carries local traffic. The project area is located approximately 0.5 miles south of downtown San Rafael, 0.9-miles west of Highway 101, and 19-mile north of Greenbrae. The project consists of the demolition of the existing Bridge No. 27CO148 and the construction of a new bridge along Southern Heights Boulevard.

The existing bridge is a ca. 1930 one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments. The concrete piers and retaining walls, as well as defective wooden deck members were replaced in 1958, and in 1981 the bridge was again reinforced with concrete wall abutments. The bridge has a width of 9 feet and is 162 feet long with a wood deck and wood railings. The bridge is being replaced due to structural deficiencies and its overall poor condition. The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge type has not yet been determined, but the structure is expected to be a 100-foot long, multi-span concrete or steel bridge.

The roadway alignment and grade will remain unchanged. The southern roadway approach and retaining wall will begin approximately 20 feet south of the existing southern bridge abutment. The new southern bridge abutment will be shifted north of the driveway to 116 Southern Heights. The northern roadway approach will begin 45 feet north of the existing northern bridge abutment. The new northern bridge abutment will be shifted south of the walking access path to 122 Southern Heights. A 115-foot long retaining wall will be constructed to the west of the existing retaining wall to allow for the widened bridge. The new retaining wall is expected to be a soldier pile wall with steel H-piles and timber lagging with a concrete structural section on the outside face.

No new right-of-way will be required for the new bridge or retaining walls. Temporary construction easements (TCEs) are anticipated on the east and west sides of the bridge to provide construction access. Utilities, including overhead power and communication and underground water and natural gas, will be relocated. It is not yet clear if the overhead utility relocations will be accommodated within the existing right-of-way or if utility easements will be needed for the overhead piles and wires. The water and gas lines will be relocated onto the new bridge.

Construction of the bridge will involve excavation for and construction of concrete abutments and piers. The structure will be supported on cast-in-drilled-hole piles. There is no waterway beneath the bridge,

but a corrugated metal storm drain pipe that will need to be temporarily relocated away from the structure during the construction. Construction of the roadway approaches will involve the removal of existing pavement, retaining walls and fences and the placement of fill material, aggregate base, hot mix asphalt pavement, soldier pile and concrete retaining walls, and new guard rails. Tree removal and removal of other vegetation along the slopes adjacent to the bridge will be necessary for the project.

The footprint of the existing bridge is 162 feet long and 9 feet wide, the footprint of the proposed bridge that is 133 feet long and 16 feet wide, a staging area at the north end of the proposed bridge footprint that is 114 feet long and approximately 16 feet wide, and a staging area at the south end of the proposed bridge footprint that is 124 feet long and approximately 17.5 feet wide.

Please notify us the Historic Bridge Foundation has any concerns about the removal and replacement of this bridge. This is not a request for research; it is solely a request for public input for any concerns that your organization may have. If you have any questions, please contact me at the same number you used this afternoon or by replying to this e-mail.

Happy New Year!

Rhea Sanchez, RPA 17075 | Cultural Resources Manager

[LSA](#) | 201 Creekside Ridge Court, Suite 250

Roseville, CA 95678

916-772-7450 Tel

[Website](#)

Attachment 5:

Native American Consultation Correspondence

- **Sacred Lands Inventory Request Letter to Native American Heritage Commission (NAHC)**
- **NAHC Letter with Results of Sacred Lands Inventory and Native American Contact List**
- **Letters to Native American Individuals/Organizations on the NAHC Native American Contact List to initiate consultation**
- **Correspondence from Federated Indians of Graton Rancheria (FIGR)**



March 31, 2017

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

RE: Sacred Sites Inventory Request

Project Information:

Project Name	<i>Southern Heights Bridge Replacement Project</i>
Address	Southern Heights Boulevard, San Rafael, Marin County, CA.
USGS Quadrangle	7.5' USGS San Rafael quadrangle (1993)
Township	1 North
Range	6 West
Section(s)	4

Project Description:

Evans & De Shazo, LLC was retained to conduct the necessary cultural resource studies, including an Archaeological and Historic Property Survey, and Historic Resource Evaluation to be completed in accordance with Volume 2, Cultural Resources, of the California Department of Transportation Environmental Handbook, for the Southern Heights Bridge Replacement Project.

The current Southern Heights Bridge (Caltrans Bridge No. 27Co148) is a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments that were constructed in 1981. The bridge is being replaced due to structural deficiencies and its overall poor condition, and is eligible for replacement under the Highway Bridge Program (HBP). The California Department of Transportation (Caltrans), acting as the lead agency under the delegated authority of the Federal Highway Association (FHWA), is providing the project oversight as federal funds are involved.

Due to the allocation of federal funds, the project is subject to review under the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). The Caltrans Preliminary Environmental Studies (PES) form for the Southern Heights Bridge Replacement Project calls for the preparation of an Area of Potential Effect (APE) map, a Historic Property Survey Report (HPSR), an Archaeological Survey Report (ASR), and potentially a Historic Resources Evaluation Report (HRER) to fulfill the requirement of determining if the project will adversely affect historic properties.



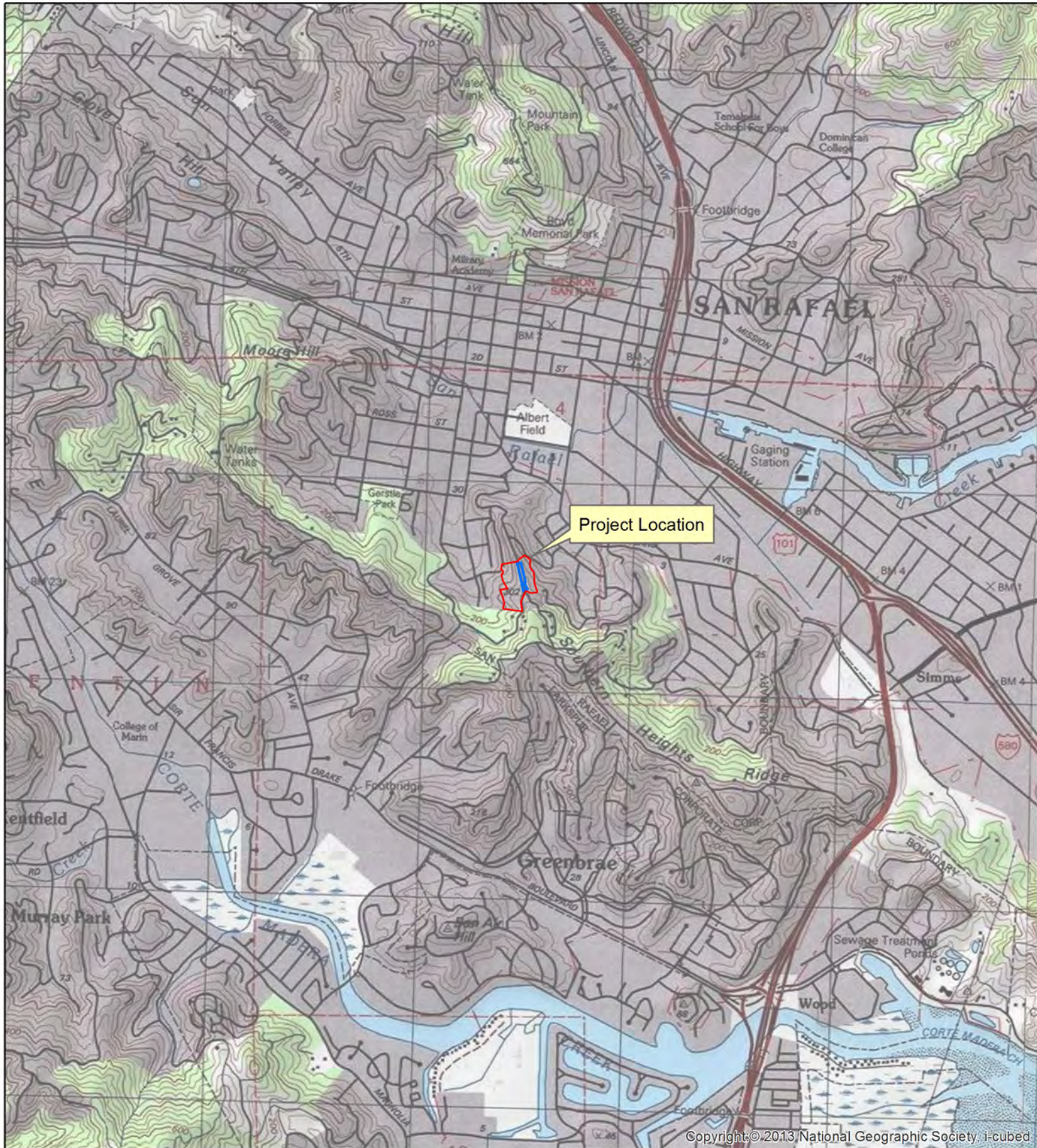
EVANS & DE SHAZO, LLC
ARCHAEOLOGY HISTORIC PRESERVATION

We are contacting you to request a Sacred Sites inventory for the Project Area (APE map attached) and a list of Native Americans to contact for further information. Please email the results to sally@evans-deshazo.com.

Respectfully,

Sally Evans, M.A., RPA
Principal Archaeologist

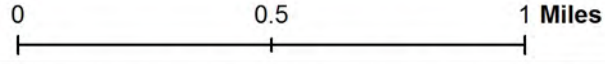
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Marin County



1:24,000

**Southern Heights Bridge Replacement Project
Southern Heights Boulevard, San Rafael
Marin County, California**

Legend

- Architectural History APE
- Archaeological APE



USGS 7.5' Quadangle:
San Rafael (1993)
T 1 North / R 6 West

Map Projection:
NAD 83 UTM Zone 10N

**Native American Heritage Commission
Native American Contacts
4/11/2017**

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
gbuvelot@gratonrancheria.
(415) 279-4844 Cell
(707) 566-2288 ext 103

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the updated contact list for Southern Helghts Bridge Replacement Project, San Rafael, Marin County.



April 19, 2017

File No: 16.01.266

Mr. Gene Buvelot
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: Southern Heights Bridge Replacement Project, San Rafael, Marin County, CA
FED PROJ #: BRLO-5043(038)

Dear Mr. Buvelot:

The City of San Rafael, in cooperation with the California Department of Transportation (Caltrans) District 4, is proposing to remove the Southern Heights Bridge (Bridge No. 27Co148) and construct of a new bridge along Southern Heights Boulevard in the City of San Rafael, Marin County, California. The existing Southern Heights Bridge was constructed in the 1930's as a one-lane stringer structure with a timber deck supported on timber bents with concrete pedestal footings and reinforced concrete wall abutments constructed 1981. The bridge is being replaced by the City due to its poor condition and structural deficiencies. This bridge is eligible for replacement under the Highway Bridge Program (HBP). The Area of Potential Effect (APE) for archaeology (Archaeological APE) includes a 436-foot-long and 60-foot-wide section of Southern Heights Boulevard. The Archaeological APE includes 274 feet of paved roadway and 162-feet of existing bridge as well the land under the bridge and on either side of the roadway for 20 feet. This area totals approximately 0.6 acres (see Attached APE map).

The City of San Rafael is the sponsoring agency, acting on Caltrans' behalf, for Section 106 and California Environmental Quality Act (CEQA) compliance on this project. As part of State and Federal regulations the City of San Rafael is notifying the Native American community of the proposed project.

Please consider this letter and preliminary project information as the initiation of Section 106 consultation pursuant to the National Historic Preservation Act and as formal notification of a proposed project as required under CEQA, specifically Public Resources Code 21080.3.1 and Chapter 532 Statutes of 2014 (i.e. AB 52). Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this project and provide a designated lead contact person if you have not provided that information to us already.

Our records indicate that there are no known archaeological sites recorded within or adjacent to the APE; however, there are two archaeological sites recorded within a half-mile, CA-MRN-313, located 0.35 miles to the northwest, and CA-MRN-626/H, located 0.49 miles to the northwest of the APE. These two sites are shell midden sites situated

Mr. Gene Buvelot

April 19, 2017

Page 2

adjacent to the historic San Francisco Bay margins; CA-Mrn-626/H is also known to contain Native American burials, and is a multi-component site that also contains a historic house. A record search of the sacred lands file by the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the immediate APE.

We would like to provide you with an opportunity to communicate concerns you might have regarding places within the project area that may be important to your community. We respectfully request your participation in the identification and protection of cultural resources, sacred lands or other heritage sites within the above described project area with the understanding that you or other members of the community might possess specialized knowledge of the area.

Since this is a City of San Rafael project, Evans & De Shazo, LLC (EDS) archaeologist Sally Evans, Principal Archaeologist, a consultant representing this local government, will be contacting you. As part of this effort, Sally Evans will ask if the Tribe knows of any culturally sensitive locations at, or near, the project location. Our consultant will be inquiring about the Tribe's concerns regarding the proposed project.

We recognize the unique government-to-government relationship that the Federally Recognized Tribes hold with the federal government. To complete environmental studies, the City is coordinating with LSA Associates, Inc. (LSA) to conduct studies, provide consultation and prepare documents for the project. EDS has been retained by LSA to provide the necessary Cultural resource studies. Should the Tribe prefer an alternative arrangement on how consultation shall occur, we would be glad to work with you to identify a mutually satisfactory means for including your concerns in the project development process. Therefore, if requested by the Tribe, Caltrans, as the acting lead federal agency, would take the lead in this consultation as required under 36 CFR 800.2(c)(2)(ii)(C). In addition, if at any time during the consultation process the Tribe would like to either involve Caltrans in the consultation process or solely consult with Caltrans as the Federal lead agency, please contact Caltrans District Native American Coordinator Brett Rushing at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. FHWA also understands they may not delegate away their consultation responsibilities.

We understand the sensitive nature of the environmental studies with regards to discussions on cultural resources and other environmental impacts which may affect your community. Due to this, your interest and participation is invaluable to the process. We want to ensure that the Tribe's concerns are treated with respect and that these are addressed to your satisfaction.

If you have any questions or concerns with the content of this letter, please contact Sally Evans with Evans & De Shazo, LLC by email (sally@evans-deshazo.com) or by phone

Mr. Gene Buvelot
April 19, 2017
Page 3

(707-812-7400). Caltrans District 4 Native American Coordinator Brett Rushing can be reached at (510) 286-6336 or via email at brett.rushing@dot.ca.gov. I can also be reached at 415-485-3389 or at kevin.mcgowan@cityofsanrafael.org.

Very truly yours,



Kevin McGowan, Assistant Public Works Director/City Engineer

Attachment: Topographic map indicating project location, Archaeological APE map

C: Bill Guerin, Public Works Director
Brett Rushing, Caltrans District 4 Native American Coordinator
Greg Sarris, Federated Indians of Graton Rancheria



April 19, 2017

File No: 16.01.266

Mr. Greg Sarris, Chairperson
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: Southern Heights Bridge Replacement Project, San Rafael, Marin County, CA
FED PROJ #: BRLO-5043(038)

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Mr. Greg Sarris
April 19, 2017
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Very truly yours,



Kevin McGowan, Assistant Public Works Director/City Engineer

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C: Bill Guerin, Public Works Director
Brett Rushing, Caltrans District 4 Native American Coordinator
Greg Sarris, Federated Indians of Graton Rancheria

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Total Postage and Fees \$ 11.31

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Street and Apt. No., or PO Box No. Federated Indians of Graton Rancheria
City, State, ZIP+4® 6400 Redwood, Robert Park, CA 94928

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<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Paul Bue <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>														
<p>1. Article Addressed to:</p> <p>Bill Guerin, Public Works Director City of San Rafael 111 Morpheus St. San Rafael, CA 94901</p>  <p>9590 9402 2828 7069 1013 41</p>	<p>B. Received by (Printed Name) <i>EARL BOISCLAW</i></p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>														
<p>2. Article Number (Transfer from service label)</p> <p>7016 2710 0000 7524 5676</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®														
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™														
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery														
<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise														
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™														
<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery														
<input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)															
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>															



Sally Evans <sally@evans-deshazo.com>

Southern Heights Bridge Replacement Project, San Rafael, Marin County2 messages

THPO@gratonrancheria.com <THPO@gratonrancheria.com>

Wed, May 10, 2017 at 9:05 AM

To: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>, "Sally Evans (sally@evans-deshazo.com)" <sally@evans-deshazo.com>

Dear Brett Rushing,

Thank you for notifying the Federated Indians of Graton Rancheria about Southern Heights Bridge Replacement Project, San Rafael, Marin County, a project within the Tribe's Ancestral Territory. We appreciate being notified and will review your project within 10 business days. If you have an immediate request please contact the Tribal Heritage Preservation Office for assistance by phone at (707) 566-2288 or by email at thpo@gratonrancheria.com.

Sincerely,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Office: [707.566.2288](tel:707.566.2288); ext. 137Cell: [707.318.0485](tel:707.318.0485)FAX: [707.566.2291](tel:707.566.2291)**Antonette Tomic**

THPO Administrative Assistant

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: [707.566.2288](tel:707.566.2288), ext. 143Fax: [707.566.2291](tel:707.566.2291)atomic@gratonrancheria.com

please consider our environment before printing this email.



Sally Evans <sally@evans-deshazo.com>

Southern Heights Bridge Replacement Project, San Rafael FED Proj#:BRLO-5043(038)

3 messages

Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Mon, May 22, 2017 at 5:21 PM

To: "Sally Evans (sally@evans-deshazo.com)" <sally@evans-deshazo.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>

Hi Sally,

Thank you for the notification regarding the above mentioned project. The project is likely to impact tribal cultural resources important to the Tribe, with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.

Respectfully,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: 707.566.2288; ext. 137

Cell: 707.318.0485

FAX: 707.566.2291

bmcquillen@gratonrancheria.com<mailto:bmcquillen@gratonrancheria.com>

Federated Indians of Graton Rancheria: Proprietary and Confidential

Confidentiality Notice: This transmittal is a confidential communication or may otherwise be privileged. If you are not the intended recipient, you are hereby notified that you have received this transmittal in error and that any review, dissemination, distribution or copying of this transmittal is strictly prohibited. If you have received this communication in error, please notify this office and immediately delete this message and all its attachments, if any.

 winmail.dat
8K

Sally Evans <sally@evans-deshazo.com>

Wed, May 24, 2017 at 7:41 AM

To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>, Katie Vallaire <Katie.Vallaire@lsa.net>

Hi Buffy,

Thank you for your response regarding the Southern Heights Bridge Project. Unfortunately, the field survey has been completed already. I have attached a copy of the draft Archaeological Survey Report (ASR) for your review. Let me know if the Tribe would like a field visit and I will contact our client (LSA) to arrange that. I will also incorporate your comments regarding the Tribe's concerns that human remains may be nearby into the report as well.

Respectfully,

Sally Evans

[Quoted text hidden]

-

Sally Evans, M.A., RPA

Principal Archaeologist / Cultural Resource Specialist

Evans & De Shazo, LLC

Main Office

5/26/2017

Evans & De Shazo, LLC Mail - Southern Heights Bridge Replacement Project, San Rafael FED Proj#BRLO-5043(038)


707-812-7400 | office
707-484-9628 | cell
6876 Sebastopol Avenue
Sebastopol, CA 95472

Oregon Field Office
971-344-2826

<http://www.evans-deshazo.com/>



EVANS & DE SHAZO, LLC
ARCHAEOLOGY & HISTORIC PRESERVATION

 ASR_Southern Heights_DRAFT.pdf
19527K

Wed, May 24, 2017 at 7:42 AM



Sally Evans <sally@evans-deshazo.com>

Southern Heights Bridge Replacement Project, San Rafael FED Proj#:BRLO-5043(038)

5 messages

Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Mon, May 22, 2017 at 5:21 PM

To: "Sally Evans (sally@evans-deshazo.com)" <sally@evans-deshazo.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>

Hi Sally,

Thank you for the notification regarding the above mentioned project. The project is likely to impact tribal cultural resources important to the Tribe, with additional concern that human remains may be nearby. The Tribe would like to participate in the survey phase if it has not been completed at this time.

Respectfully,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: 707.566.2288; ext. 137

Cell: 707.318.0485

FAX: 707.566.2291

bmcquillen@gratonrancheria.com<mailto:bmcquillen@gratonrancheria.com>

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**Sally Evans** <sally@evans-deshazo.com>

Wed, May 24, 2017 at 7:41 AM

To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Cc: "Brett Rushing (brett.rushing@dot.ca.gov)" <brett.rushing@dot.ca.gov>, Katie Vallaire <Katie.Vallaire@lsa.net>

Hi Buffy,

Thank you for your response regarding the Southern Heights Bridge Project. Unfortunately, the field survey has been completed already. I have attached a copy of the draft Archaeological Survey Report (ASR) for your review. Let me know if the Tribe would like a field visit and I will contact our client (LSA) to arrange that. I will also incorporate your comments regarding the Tribe's concerns that human remains may be nearby into the report as well.

Respectfully,

Sally Evans

[Quoted text hidden]

--

Sally Evans, M.A., RPA**Principal Archaeologist / Cultural Resource Specialist****Evans & De Shazo, LLC****Main Office**

707-812-7400 | office

707-484-9628 | cell

6876 Sebastopol Avenue
Sebastopol, CA 95472

Oregon Field Office

971-344-2826

<http://www.evans-deshazo.com/>

EVANS & DE SHAZO, LLC
ARCHAEOLOGY & HISTORIC PRESERVATION

 **ASR_Southern Heights_DRAFT.pdf**
19527K

Sally Evans <sally@evans-deshazo.com>

Thu, Sep 21, 2017 at 3:20 PM

To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>, "Rushing, Brett@DOT" <brett.rushing@dot.ca.gov>

Hi Buffy,

I hope you are well. I wanted to follow up with you on this Southern Heights Bridge Replacement Project. I am hoping you have had a chance to review the draft Archaeological Survey Report that was attached to the previous email sent on May 24th. I would like to continue consultation regarding the Tribe's concern that Tribal Cultural Resources could be impacted by the Project. I am happy to meet with you in person, or to discuss over the phone at your convenience. Also, as I mentioned previously, let me know if the Tribe would like a field visit and I will contact our client (LSA) to arrange that.

I will also follow this email up with a phone call early next week. Thank you for your time and consideration.

Respectfully,

Sally Evans

[Quoted text hidden]

Sally Evans, M.A., RPA

[Quoted text hidden]

Evans & De Shazo, Inc. (DBE/SBE/WBE)

<http://www.evans-deshazo.com/>

Main Office

707-812-7400 | office

707-484-9628 | cell

6876 Sebastopol Avenue
Sebastopol, CA 95472

Oregon Field Office

971-344-2826



EVANS & DE SHAZO, INC
ARCHAEOLOGY & HISTORIC PRESERVATION

Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Fri, Sep 29, 2017 at 4:56 PM

To: Sally Evans <sally@evans-deshazo.com>, "Rushing, Brett@DOT" <brett.rushing@dot.ca.gov>

Sally, I have letters about the project. Did you drop box me a link to the study?

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act (NAGPRA)

Federated Indians of Graton Rancheria

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: 707.566.2288; ext. 137

Cell: 707.318.0485

FAX: 707.566.2291

bmcquillen@gratonrancheria.com

Federated Indians of Graton Rancheria: Proprietary and Confidential

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From: Sally Evans [mailto:sally@evans-deshazo.com]

Sent: Thursday, September 21, 2017 3:21 PM

To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>; Rushing, Brett@DOT <brett.rushing@dot.ca.gov>

Subject: Re: Southern Heights Bridge Replacement Project, San Rafael FED Proj#:BRLO-5043(038)

[Quoted text hidden]

Sally Evans <sally@evans-deshazo.com>
To: Buffy McQuillen <BMcQuillen@gratonrancheria.com>

Mon, Oct 2, 2017 at 10:14 AM

Hi Buffy,

Attached is the Archaeological Survey Report. Let me know what day/time this week is good for your to chat over the phone about this one. I want to make sure the Tribe's concerns are fully addressed.

All the best,

Sally

----- Forwarded message -----

From: **Sally Evans** <sally@evans-deshazo.com>

Date: Wed, May 24, 2017 at 7:41 AM

Subject: Re: Southern Heights Bridge Replacement Project, San Rafael FED Proj#:BRLO-5043(038)

[Quoted text hidden]

--

Sally Evans, M.A., RPA

[Quoted text hidden]

Evans & De Shazo, Inc. (DBE/SBE/WBE)

<http://www.evans-deshazo.com/>

Main Office

707-812-7400 | office

707-484-9628 | cell

6876 Sebastopol Avenue

Sebastopol, CA 95472

Oregon Field Office

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ARCHAEOLOGY HISTORIC PRESERVATION



ASR_Southern Heights_DRAFT.pdf

19527K

Attachment 6:

Caltrans Historic Bridge Inventory



Structure Maintenance & Investigations



Historical Significance - Local Agency Bridges

August 2013

District 04

Marin County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
27C0123	ESTERO AMERICANO	JUST SOUTH OF S.R 1	5. Bridge not eligible for NRHP	1990	
27C0124	ESTERO DE SAN ANTONIO	4.5 MI FROM S.H. 1	5. Bridge not eligible for NRHP	1958	
27C0125	ESTERO AMERICANO	0.85 MI S OF S.H. 1	5. Bridge not eligible for NRHP	1961	
27C0126	SAN GERONIMO CREEK	.04 MI E NICASIO VLLY RD	5. Bridge not eligible for NRHP	1929	
27C0127	SAN GERONIMO CREEK	.03 MI S SR FRNCS DRAKE B	5. Bridge not eligible for NRHP	1938	
27C0128	COYOTE CREEK	0.17 MI N MARINE AVE	5. Bridge not eligible for NRHP	1964	
27C0129	COYOTE CREEK TRIBUTARY	.02 MI W TENNESSEE VLY RD	5. Bridge not eligible for NRHP	1950	
27C0130	SAN GERONIMO CREEK	.03 MI S SR FRNCS DRAKE B	5. Bridge not eligible for NRHP	1964	
27C0131	REDWOOD CREEK	0.09 MI S SH 1	5. Bridge not eligible for NRHP	1956	
27C0132	MILLER CREEK	0.08 MI N LUCAS VALLEY RD	5. Bridge not eligible for NRHP	1962	
27C0133	MILLER CREEK	LUCAS VLY RD INTERSECTION	5. Bridge not eligible for NRHP	1963	
27C0134	MILLER CREEK	0.06 MI N LUCAS VALLEY RD	5. Bridge not eligible for NRHP	1925	
27C0135	MILLER CREEK	0.06 MI N LUCAS VALLEY RD	5. Bridge not eligible for NRHP	1965	
27C0136	SAN GERONIMO CREEK	.04 MI S SR FRNCS DRAKE B	5. Bridge not eligible for NRHP	1948	
27C0137	SAN GERONIMO CREEK	0.5 MI S SIR FRNCS DRAKE	5. Bridge not eligible for NRHP	1965	
27C0140	WIDOW REED CREEK	BTWN MILLER & SYCAMORE AV	5. Bridge not eligible for NRHP	1950	
27C0141	FAIRFAX CREEK	IN FAIRFAX	5. Bridge not eligible for NRHP	1930	
27C0142	FAIRFAX CREEK	IN FAIRFAX	5. Bridge not eligible for NRHP	1930	
27C0143	FAIRFAX CREEK	AT BOTHIN RD	5. Bridge not eligible for NRHP	1930	
27C0144	SAN ANSELMO CREEK	IN FAIRFAX	5. Bridge not eligible for NRHP	1929	
27C0146	SAN ANSELMO CREEK	IN FAIRFAX	5. Bridge not eligible for NRHP	1998	
27C0147	SAN ANSELMO CREEK	IN FAIRFAX	5. Bridge not eligible for NRHP	1930	
27C0148	SOUTHERN HEIGHTS SIDEHILL VIADUCT	JCT MEYER RD IN SAN RAFEL	5. Bridge not eligible for NRHP	1981	
27C0149	ROSS CREEK	0.1 MI N SHADY LN IN ROSS	2. Bridge is eligible for NRHP	1908	
27C0150	ALEXANDER AVENUE OH	0.1 MI E INTX MAGNLA AVE	1. Bridge is on NRHP	1925	
27C0151	SAN ANTONIO CREEK	AT MARIN SONOMA CO LINE	5. Bridge not eligible for NRHP	1964	
27C0152	SIR FRANCIS DRAKE POC	1/4 MI E OF US 101	5. Bridge not eligible for NRHP	1981	
27C0153	SAN ANSELMO CREEK	300' N MADRONE AVE	5. Bridge not eligible for NRHP	1930	
27C0154	SAN GEROMINO CREEK	INT SIR FRANCIS DRAKE BL	5. Bridge not eligible for NRHP	1962	1974
27C0155	MILLER CREEK	0.1 MI N LUCAS VALLEY RD	5. Bridge not eligible for NRHP	1987	
27C0156	WARNER CREEK	0.2 MI S DIABLO AVE	4. Historical Significance not determined	1992	
27C0157	WHITE'S HILL BRIDGE	0.6 MI N/O BAYWOOD CYN RD	5. Bridge not eligible for NRHP	2002	
27C0158	LINDEN LANE UP	0.1 MI EAST OF LINCOLN AV	4. Historical Significance not determined	2002	
27C0159	NOVATO CREEK	0.25 MI N OF ROWLAND BLVD	5. Bridge not eligible for NRHP	1992	
27C0160	CORTE MADERA CREEK	IN THE CITY OF ROSS	4. Historical Significance not determined	2011	

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APPENDIX D

ADDITIONAL DOCUMENTATION

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2018062022

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Southern Heights Bridge Replacement Project

Lead Agency: City of San Rafael Contact Person: Hunter Young
Mailing Address: 111 Morpew Street Phone: 415 485 3408
City: San Rafael Zip: 94901 County: Marin County

Project Location: County:Marin City/Nearest Community: San Rafael

Cross Streets: Southern Heights Boulevard and Meyer Road Zip Code: 94901

Longitude/Latitude (degrees, minutes and seconds): 37 ° 57 ' 44.9 " N / 122 ° 31 ' 44.6 " W Total Acres: 0.36

Assessor's Parcel No.: 012-282-17, 012-282-36, 012-282-37 Section: Twp.: Range: Base:

Within 2 Miles: State Hwy #: 101, 580 Waterways: San Rafael Bay, San Rafael Creek, Corte Madera Creek

Airports: Railways: Schools: James B Davidson Middle

Document Type:

- CEQA: [] NOP [] Draft EIR [] NEPA: [] NOI [] Other: [] Joint Document
[] Early Cons [] Supplement/Subsequent EIR [] EA [] Final Document
[] Neg Dec (Prior SCH No.) [] Draft EIS [] Other: CE
[] Mit Neg Dec Other:

Local Action Type:

- [] General Plan Update [] Specific Plan [] Rezone [] Annexation
[] General Plan Amendment [] Master Plan [] Prezone [] Redevelopment
[] General Plan Element [] Planned Unit Development [] Use Permit [] Coastal Permit
[] Community Plan [] Site Plan [] Land Division (Subdivision, etc.) [] Other: Bridge Replacement

Development Type:

- [] Residential: Units Acres
[] Office: Sq.ft. Acres Employees [] Transportation: Type Bridge Replacement
[] Commercial: Sq.ft. Acres Employees [] Mining: Mineral
[] Industrial: Sq.ft. Acres Employees [] Power: Type MW
[] Educational: [] Waste Treatment: Type MGD
[] Recreational: [] Hazardous Waste: Type
[] Water Facilities: Type MGD [] Other:

Project Issues Discussed in Document:

- [] Aesthetic/Visual [] Fiscal [] Recreation/Parks [] Vegetation
[] Agricultural Land [] Flood Plain/Flooding [] Schools/Universities [] Water Quality
[] Air Quality [] Forest Land/Fire Hazard [] Septic Systems [] Water Supply/Groundwater
[] Archeological/Historical [] Geologic/Seismic [] Sewer Capacity [] Wetland/Riparian
[] Biological Resources [] Minerals [] Soil Erosion/Compaction/Grading [] Growth Inducement
[] Coastal Zone [] Noise [] Solid Waste [] Land Use
[] Drainage/Absorption [] Population/Housing Balance [] Toxic/Hazardous [] Cumulative Effects
[] Economic/Jobs [] Public Services/Facilities [] Traffic/Circulation [] Other:

Present Land Use/Zoning/General Plan Designation:

Single Family Residential and Parks/Open Space

Project Description: (please use a separate page if necessary)

The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge will be a three-span, reinforced concrete slab structure, approximately 127 feet long. The roadway alignment and grade will remain unchanged. The existing right-of-way width is 20 feet.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|--|
| <input checked="" type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> Caltrans District #4 | <input type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB #2 |
| <input type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region #3 | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Health Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Housing & Community Development | |
| <input checked="" type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date June 15, 2018 Ending Date July 16, 2018

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: <u>City of San Rafael Dept of Public Works</u>
Address: _____	Address: <u>111 Morphew Street</u>
City/State/Zip: _____	City/State/Zip: <u>San Rafael, CA, 94901</u>
Contact: _____	Phone: <u>415 485 3408</u>
Phone: _____	

Signature of Lead Agency Representative:  Date: 6/14/18

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Notice of Determination**Appendix D****To:**

Office of Planning and Research
U.S. Mail: *Street Address:*
 P.O. Box 3044 1400 Tenth St., Rm 113
 Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk
 County of: Marin
 Address: 3501 Civic Center Drive, Room 208
 San Rafael, CA 94903

From:

Public Agency: City of San Rafael
 Address: 111 Morphew Street
 San Rafael, CA 94901
 Contact: Hunter Young
 Phone: 405 485 3408

Lead Agency (if different from above):
 Address: _____
 Contact: _____
 Phone: _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): _____

Project Title: Southern Heights Bridge Replacement Project _____

Project Applicant: City of San Rafael Department of Public Works _____

Project Location (include county): City of San Rafael, Marin County _____

Project Description:

The proposed project will replace the existing bridge with a new structure accommodating one 12-foot wide lane and bridge railings, resulting in an approximate bridge width of 15 feet. The new bridge will be a three-span, reinforced concrete slab structure, approximately 127 feet long. The roadway alignment and grade will remain unchanged. The existing right-of-way width is 20 feet.

This is to advise that the City of San Rafael _____ has approved the above
 Lead Agency or Responsible Agency)

described project on _____ and has made the following determinations regarding the above
 (date)
 described project.

1. The project [will will not] have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [were were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [was was not] adopted for this project.
5. A statement of Overriding Considerations [was was not] adopted for this project.
6. Findings [were were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

 Signature (Public Agency): _____ Title: _____

Date: _____ Date Received for filing at OPR: _____



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH



KEN ALEX
DIRECTOR

July 17, 2018

Hunter Young
City of San Rafael
111 Morphew St
San Rafael, CA 94901

Subject: Southern Heights Bridge Replacement Project
SCH#: 2018062022

Dear Hunter Young:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on July 16, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

**Document Details Report
State Clearinghouse Data Base**

SCH# 2018062022
Project Title Southern Heights Bridge Replacement Project
Lead Agency San Rafael, City of

Type MND Mitigated Negative Declaration
Description The proposed project will replace the existing bridge with a new structure accommodating one 12-ft wide lane and bridge railings, resulting in an approx bridge width of 15 ft. The new bridge will be a three-span, reinforced concrete slab structure, approx 127 ft long. The roadway alignment and grade will remain unchanged. The existing ROW width is 20 ft.

Lead Agency Contact

Name Hunter Young
Agency City of San Rafael
Phone 415 485-3408 **Fax**
email
Address 111 Morpew St
City San Rafael **State** CA **Zip** 94901

Project Location

County Marin
City San Rafael
Region
Lat / Long 37° 57' 44.9" N / 122° 31' 44.6" W
Cross Streets Southern Heights Blvd and Meyer Rd
Parcel No. 012-282-17, -36, -37
Township

Range **Section** **Base**

Proximity to:

Highways 101, 580
Airports
Railways
Waterways San Rafael Bay, San Rafael Creek, Corte Madera Creek
Schools James B Davidson MS
Land Use single fam res and parks/OS

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Noise; Toxic/Hazardous

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Native American Heritage Commission; Department of Fish and Wildlife, Marine Region

Date Received 06/14/2018 **Start of Review** 06/15/2018 **End of Review** 07/16/2018
