

**MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY  
PLANNING DIVISION**

**INITIAL STUDY  
TARIGO DESIGN REVIEW AND SECOND UNIT permit**

**I. BACKGROUND**

- A. Project Sponsor's Name and Address:** Aldo Tarigo  
P.O. Box 383  
Lagunitas, CA 94938
  
- B. Lead Agency Name and Address:** Marin County Community Development Agency,  
Planning Division, 3501 Civic Center Dr., Room 308  
San Rafael, CA 94903
  
- C. Contact Person and Phone Number:** Megan Alton, Planner  
(415) 473-6269  
malton@marincounty.org

**II. PROJECT DESCRIPTION**

- A. Project Title:** Tarigo Design Review 12-42 and Second Unit Permit 12-6 (Project ID 2011-0417)
  
- B. Type of Application(s):** Design Review and Second Unit Permit
  
- C. Project Location:** Assessor's Parcel 168-034-14  
21 Barranca Road, Lagunitas, CA
  
- D. General Plan Designation:** AG3 (Agriculture, 1 unit/1-9 acres)
  
- E. Zoning:** ARP-2 (Agriculture, Residential Planned, 1 unit/2 acres)
  
- F. Description of Project:**

The applicant proposes to demolish an existing two-story 2,698-square foot residence and 442-square foot attached, unpermitted second unit and construct a new 2,792-square foot residence, 552-square foot attached garage, and 552-square foot attached second unit. The portion of the existing structure used as a second unit was built in 1917 and is located 15.5 feet from the creek. The proposed residence would be located in a similar location as the structure to be demolished, with the new residence 14 feet 3 inches from the new top of creek bank discussed below. The proposed three-story residence would have a maximum height of 29 feet 11 inches, result in a 6.3% floor area ratio, and have the following minimum setbacks: 27 feet 9 inches from the easterly front property line, 118 feet from the northerly side

property line, 100 feet 3 inches to the southerly side property line, and 118 feet from the westerly rear property line. The exterior walls would be medium brown stucco with beige painted wood facia and dark brown glazed doors and windows. The roof would be medium brown asphalt shingles. A roof mounted photovoltaic system would also be installed onto the roof of the residence.

The existing leach pit and septic tank located approximately 16 feet from the top of the creek bank would be removed and a new class II septic system would be installed approximately 60 feet from the top of bank and 19 feet from the front property line.

In 2006, a pre-existing wooden bridge was demolished and a new bridge was constructed to provide access for a drill rig for the installation of a well on the west side of the creek. The pre-existing wooden bridge across Barranca Creek links the east and west sides of the project site. The pre-existing wooden bridge was 12.7 feet wide, 16.8 feet long, and 2.8 to 3.9 feet above the bottom of the creek. This bridge was demolished without permits for the illegal construction of the new bridge in 2006.

The proposed project includes the legalization of a new, unpermitted, reinforced concrete bridge across Barranca Creek, that was constructed illegally in 2006 to replace the previously discussed pre-existing wooden bridge. The bridge constructed in 2006 is located approximately 86 feet from the east front property line, 115 feet from the south side property line, and 80 feet from the rear property line. The bridge arches with a 5-foot 1-inch height above the creek bed at its apex. The 12-foot wide bridge spans approximately 18 feet across the creek and is faced with hand set field stone. The bottom of the creek is 8.5 feet wide at the bridge crossing. The concrete abutments are generally located in the same location as the abutments for the pre-existing wooden bridge.

The proposed project would also include bank restoration. The existing concrete and stone retaining wall along the eastern portion of the creek bank would be removed for the creation of a 2:1 slope bank for up to 40 feet. The bank would be revegetated for long-term stability. Species used in the revegetation would be native species that occur in the area. Herbaceous species that provide cover could include the sedges (*Carex sp.*) that naturally occur on the project site, Santa Barbara sedge (*C. barbarae*) that grows in Marin County, meadow barley (*Hordeum brachyantherum*), California brome (*Bromus carinatus*), and the ferns (*chain, lady, polypody, and sword*) that naturally occur on the project site. Suitable shrubs for the bank planting include snowberry (*Symphoricarpos albus and/or S. mollis*), California rose (*Rosa californica*), oceanspray (*Holodiscus discolor*), and flowering current (*Ribes sanguineum*). Removal of the retaining wall would occur during the dry season, June 15 through October 15. Bank restoration would require the removal of a 40-inch California bay (*Umbellularia californica*) tree and the bank would be replanted with native plants species. For the restoration in this area, heavy construction equipment would operate from the top of the bank and would not enter the bed of the creek. Plywood sheets (e.g., 4 x 8 feet), covered in heavy plastic sheeting, would be set at the creek-side base of the wall lying over the creek bed to prevent debris from entering the creek bed. At that point, the wall will be pulled down on the new bank and removed. After the demolition and removal of the wall, the plywood and plastic sheeting would be removed from the creek bed. Biodegradable mesh would then be laid and pinned on the bank over new top soil and the new plantings added. Additionally, the proposed project includes the removal of two 20-inch diameter

apple trees that have exceeded their lifespan. A bio retention garden to filter roof runoff would be located along the existing driveway entrance.

The proposed project includes the following site improvements: 1) Removal of approximately 2,300 square feet of existing 10-inch deep, semi-pervious compact road base that runs from the bridge to the existing driveway and parking area. This area will be replaced with new soil and planted with native grasses and clovers. 2) Construction of a partially pervious, one-car parking area at the existing entrance to Barranca Road and a new, second driveway from Barranca Road. Except for existing asphalt cement at the entrance, the new driveway and parking areas would be a combination TuffTrak and crushed rock. 3) Installation of a new propane tank located six feet from the front property line. 4) Construction of a new entry gate located approximately two feet from the front property line. The lot coverage for the proposed project is 6,190 square feet. The existing lot coverage is approximately 3,369 square feet (including the pre-existing wooden bridge).

The proposed project is located on a 1.6-acre lot at 21 Barranca Road, approximately 0.8 mile north of Sir Francis Drake Boulevard and is in the community of Lagunitas within the unincorporated area of San Geronimo Valley in Marin County. Design Review is required because the project is located in a Planned Zoning District. A Second Unit Permit is required for a portion of the structure that would be utilized as a second unit. A tree removal permit is required for the removal of the 40-inch heritage California bay.

The project site is currently served by the Marin Municipal Water District (MMWD). There is an existing, non-potable irrigation well on the project site that would remain. The project includes a new rain water line. As proposed, the potable MMWD water lines, non-potable well water lines, and rain water lines would be separated. Overhead utility lines for power, cable, and telephone are located east of Barranca Road and are proposed to remain unchanged.

## **G. Background and Environmental Setting**

The project site has been developed for nearly 100 years with the existing residence (circa 1917), an 807-square foot barn (circa 1920), a 292-square foot garden shed (circa 1920), a 68-square foot green house (circa 2002), an unpermitted second unit created within a structure that is legal non-conforming, a driveway, a parking area, a septic system, and a non-potable well. As previously, discussed there was a pre-existing wooden bridge across Barranca Creek linking the east and west sides of the project site.

Access to the project site is off Sir Francis Drake Boulevard via Barranca Road and then Arroyo Road. The project site is located within the Inland Rural Corridor as defined in the 2007 Marin Countywide Plan (CWP). Adjacent land uses are single-family residences.

The project site has an average slope of approximately 10.4% percent and is bisected by Barranca Creek and an unnamed tributary, both of which are mapped as blue line ephemeral in the U.S. Geological Service (USGS) hydrology data. These creeks merge and run north to south on the lot. Barranca Creek eventually flows into

San Geronimo Creek. Barranca Creek must be crossed to access the well, water tank, gardens and accessory buildings on the western portion of the project site.

According to the property owners and the biological assessment prepared by LSA, Barranca Creek is perennial on the project site, but flows underground downstream of the project site. During severely dry years, the above ground portion of the creek consists of a few perennial pools, notably the large pool downstream of the culvert beneath Barranca Road. Two small dams occur downstream of the bridge and are largely filled with the gravels and cobbles. Shallow pools remain behind the dams during part of the year. During the biologist's site visit, plants were largely absent in the creek. A pool near the bridge supports filamentous algae, the native water cress (*Rorippa nasturtium-aquaticum*), and water primrose (*Ludwegia sp.*), which may or may not be native (LSA, 2018).

The banks of Barranca Creek and its tributary within the project site are from 1 to 6 feet high. Much of the creek is incised with steep banks. The width of Barranca Creek varies from 4 to 10 feet on the project site. The substrate consists of cobbles and coarse gravel. Sand occurs in the bottom of pools but the cobbles appear free of sediment (LSA, 2018).

Native riparian vegetation on the project site is limited. The banks of the creek support non-native periwinkle and native sword, and polypody ferns. Riparian trees consist of approximately three arroyo willows growing at the outer edge of the oak/bay woodland and two very large alders growing within the oak/bay woodland. The overstory provides complete cover over Barranca Creek.

The entire project site is located within a Stream Conservation Area (SCA) as measured from the top of bank in the Inland Rural Corridor. The SCA establishes a buffer zone within a strip of land that includes the watercourse and extends laterally outward from the top of the stream banks to a width of 100 feet on each side of each stream. The proposed project is therefore subject to stream protection policies contained in the 1994 Marin CWP. The project plans show two existing dams in Barranca Creek downstream of the bridge and a retaining wall along the easterly bank of Barranca Creek upstream from the bridge. The top of bank or creek wall are mapped on the site plan. The average slope of the area of proposed disturbance is approximately 3.8%.

The California Natural Diversity Database (CNDDDB) indicates that Barranca Creek and the unnamed tributary are anadromous fish streams. The CNDDDB maps indicate the following special-status wildlife species mapped may potentially occur near the project site. Coho salmon (*Oncorhynchus kisutch*), steelhead trout (*O. mykiss*), spotted owl (*Strix occidentalis*), and Point Reyes mountain beaver (*Aplodontia rufa phaea*). The project site is located within a half mile from a recorded nest of the northern spotted owl spotted owl (*Strix occidentalis*). According to the biological assessment prepared by LSA, special-status animals species that occur in Barranca Creek at the project site and potentially occurring in other areas of the project site include steelhead (*Onocorhynchus mykiss irideus*), California giant salamander (*Dicamptodon ensatus*), California freshwater shrimp (*Rana draytonii*), Tomales roach (*Lavinia symmetricus ssp*), western pond turtle (*Actinemys marmorata*) and western red bat (*Lasiurus blossevillii*).

Native oak, bay, buckeye, and redwood trees are the predominant vegetation throughout the eastern portion of the project site and along the creek. Annual grasses are predominant along the western portion of the project site, most of which are non-native. Introduced vegetation is present throughout the site, including fruit trees and approximately 3,000 square feet of enclosed garden. The fruit orchard north of the proposed driveway provides about 25% cover for an understory of non-native grasses. A biological assessment was prepared for the proposed project identified a list of 70 special-status species with the potential to be located near the project site. However, the biological assessment noted that none of these special status plants species are likely to occur on the project site (LSA, 2018).

Site elevations range from 312 feet at the southerly side property line to 336 feet at the northwest corner of the rear property line. Based on the U.S. Department of Agriculture, Natural Resource Conservation Service, the soil is Tocaloma-Saurin association, which is residuum weathered from sandstone and shale. The underlying geology is mapped Franciscan Complex mélange, which consists of sandstone in this area. Soil stability is rated 2 for most of the project site, with a rating of 4 being the least stable. A fault line has been identified running from a point approximately 200 feet south of the northerly corner of the property on Barranca Road westerly to Barranca Creek and thence following the creek south. The project site is not located within a Ridge and Upland Greenbelt Area as defined by the 2007 Marin CWP.

#### **H. Baseline: Existing Physical Environmental Conditions**

In determining whether a project's impacts are significant, environmental review documents ordinarily compare those potential impacts with existing physical environmental conditions in the vicinity of the project, which are referred to as the "baseline" for the impact analysis. All developed, legal and legal non-conforming project components are part of the baseline for this Initial Study/Mitigated Negative Declaration. The baseline conditions include the following existing components on the project site, with the exception to the new concrete bridge:

- 2,698-square foot residence, with the 442-square foot attached second unit
- 807-square foot barn
- 147 square foot shed
- 292-square foot garden shed
- 68-square foot green house
- wood shed
- leach pit
- pre-existing wooden bridge across Barranca Creek linking the east and west sides of the project site
- two dams within Barranca Creek
- well, water tank and pressure tank
- retaining wall along the banks of Barranca Creek

The pre-existing wooden bridge was demolished without permits for the illegal construction of the new bridge in 2006. The pre-existing wooden bridge was 12.7 feet wide by 16.8 feet long, and 2.8 to 3.9 feet above the bottom of the creek. The abutments for the wooden bridge were generally located in the same location as the new concrete abutments. Since the demolition of the pre-existing wooden bridge and

the construction of the new bridge were illegal, those existing conditions are not treated as part of the baseline condition for the purposes of the impact analysis. In this case, the pre-existing wooden bridge is part of the baseline condition for this project and the impacts analysis evaluates the potential impacts resulting from the proposal to legalize the demolition of the pre-existing wooden bridge and the construction of the new concrete bridge as part of the proposed project.

### **III. CIRCULATION AND REVIEW**

This Initial Study/Mitigated Negative Declaration is being circulated for a 30-day review and comment period pursuant to State CEQA Guidelines Section 15073. It is being circulated to all agencies that have jurisdiction over the subject property or the natural resources affected by the project and to consultants, community groups, and interested parties to attest to the completeness and adequacy of the information contained in the Initial Study as it relates to the concerns which are germane to the agency's or organization's jurisdictional authority or to the interested parties' issues.

#### *Marin County Agencies*

- Marin County Department of Public Works, Land Development Division
- Marin County Community Development Agency, Environmental Health Services Division
- Marin County Fire Protection District

#### *Trustee and Responsible Agencies*

- United States Fish and Wildlife Service
- National Marine Fisheries Services
- US Army Corps of Engineers
- California Department of Fish and Wildlife
- California Regional Water Quality Control Board

### **IV. EVALUATION OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Pursuant to Section 15063 of the State CEQA Guidelines, and the County EIR Guidelines, Marin County will prepare an Initial Study for all projects not categorically exempt from the requirements of CEQA. The Initial Study evaluation is a preliminary analysis of a project which provides the County with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration. The points enumerated below describe the primary procedural steps undertaken by the County in completing an Initial Study checklist evaluation and, in particular, the manner in which significant environmental effects of the project are made and recorded.

- A. The determination of significant environmental effect is to be based on substantial evidence contained in the administrative record and the County's environmental data base consisting of factual information regarding environmental resources and environmental goals and policies relevant to Marin County. As a procedural device for reducing the size of the Initial Study document, relevant information sources cited and discussed in topical sections of the checklist evaluation are incorporated by reference into the checklist (e.g. general plans, zoning ordinances). Each of these information sources has been assigned a number which is shown in parenthesis following each topical question and which corresponds to a number on the data base

source list provided herein as Attachment 1. Other sources used or individuals contacted may also be cited in the discussion of topical issues where appropriate.

- B. In general, a Negative Declaration shall be prepared for a project subject to CEQA when either the Initial Study demonstrates that there is no substantial evidence that the project may have one or more significant effects on the environment. A Negative Declaration shall also be prepared if the Initial Study identifies potentially significant effects, but revisions to the project made by or agreed to by the applicant prior to release of the Negative Declaration for public review would avoid or reduce such effects to a level of less than significance, and there is no substantial evidence before the Lead County Department that the project as revised will have a significant effect on the environment. A signature block is provided in Section VII of this Initial Study to verify that the project sponsor has agreed to incorporate mitigation measures into the project in conformance with this requirement.
- C. All answers to the topical questions must take into account the whole of the action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Significant unavoidable cumulative impacts shall be identified in Section V of this Initial Study (Mandatory Findings of Significance).
- D. A brief explanation shall be given for all answers except "Not Applicable" answers that are adequately supported by the information sources the Lead County Department cites in the parenthesis following each question. A "Not Applicable" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "Not Applicable" answer shall be discussed where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- E. "Less Than Significant Impact" is appropriate if an effect is found to be less than significant based on the project as proposed and without the incorporation of mitigation measures recommended in the Initial Study.
- F. "Potentially Significant Unless Mitigated" applies where the incorporation of recommended mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead County Department must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section IV, "Earlier Analyses", may be cross-referenced).
- G. "Significant Impact" is appropriate if an effect is significant or potentially significant, or if the Lead County Department lacks information to make a finding that the effect is less than significant. If there are one or more effects which have been determined to be significant and unavoidable, an EIR shall be required for the project.
- H. The answers in this checklist have also considered the current State California Environmental Quality Act Guidelines and Appendix G contained in those Guidelines.

**V. ISSUES (and Supporting Information Sources):**

**1. LAND USE AND PLANNING.**

*Would the proposal:*

| <b>a) Conflict with applicable Countywide Plan designation or zoning standards?<br/>(Sources: 1, 2, 3, 4, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|---|---------------------------|---|-------------------------------------|-----------------------|
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is governed by the land use designation contained in the 2007 Marin Countywide Plan (CWP) and by zoning standards contained in Title 22 of the Marin County Development Code.

The 2007 Marin Countywide Plan

The project site is located in the Marin CWP Inland-Rural Corridor and has a land use designation of AG3 (Agriculture, 1 unit/1-9 acres). The proposed project would be consistent with the AG3 land use designation established by the 2007 Marin CWP because it includes the construction of a single-family residence, garage, and second unit on a 1.6-acre lot that would result in a 6.3% floor area ratio.

Marin County Development Code Title 22

The project site is zoned ARP-2 (Agriculture, Residential Planned, 1 unit/2 acres). A single-family dwelling and second unit are permitted uses allowed in this district. Development within Planned Districts is not confined by specific requirements for setback and floor area ratio. This allows for flexibility in design that is evaluated through the current Design Review process. Nonetheless, the proposed project is consistent with the development standards in Planned District because the maximum height of the primary structure would not exceed 30 feet, the building materials and colors would blend into the natural environment unobtrusively, and the proposed project entails minimal grading.

Therefore, the proposed project is consistent with the AG3 land use designation and the development standards established for the ARP-2 zoning district. This impact would be less than significant.

2018 San Geronimo Valley Community Plan

The San Geronimo Valley Community Plan is incorporated as part of the Marin Countywide Plan and includes more detailed policies that pertain specifically to the San Geronimo community, including, but not limited to, policies that address natural resources, rural character and village identity, tree preservation, and creek protection. The proposed project is consistent with the land use policies and programs in the Community Plan based on the following reasons: (1) it is not located on a visually prominent ridgeline, 2) it will preserve existing water courses, 3) grading will be minimized, 4) the building is designed with mass, colors, and materials that are compatible with the surrounding area and maintains the rural character, 5) it would add a legal residential second unit, and 6) it would not adversely affect historic or archeological resources.



|  |                                  |  |  |                              |
|--|----------------------------------|--|--|------------------------------|
| <b>b) Conflict with applicable environmental plans or policies adopted by Marin County?</b><br>(Sources: 1, 2, 3, 4, 32, 33, 34, 37, 38) | <b>Significant Impact</b><br>[ ] | <b>Potentially Significant Unless Mitigated</b><br>[ X ] | <b>Less Than Significant Impact</b><br>[ ] | <b>Not Applicable</b><br>[ ] |
|--|----------------------------------|--|--|------------------------------|

The environmental protection policies contained in the 2007 Marin CWP that pertain to the proposed project include the following: (1) protection of riparian systems; (2) protection of Stream Conservation Areas; (3) species and habitat preservation; (4) prevention of air, water, and noise pollution; (5) protection of visual resources and amenities; (6) protection of trees; (7) minimization of grading activities; and (8) appropriate streamside development and erosion control. The relevant policies are listed below, followed by the policy analyses.

On April 3, 2014 the California Court of Appeal entered its final opinion and judgment in the matter of Salmon Protection and Watershed Network v. County of Marin. In its judgment the Court of Appeal ordered the Marin County Superior Court to issue a writ of mandate to the County "...directing the county to set aside its approval of the 2007 CWP and certification of the related EIR with respect to the San Geronimo watershed only, pending preparation of a supplemental EIR with respect to the San Geronimo Valley only that analyzes cumulative impacts in conformity" with the relevant CEQA Guidelines and describes mitigation measures or makes other relevant findings also in conformance the CEQA Guidelines. Since the matter before the Court of Appeal involved solely an attack on the County's stream conservation area policies with respect to coho salmon and steelhead trout, the County will be applying the environmental quality, biological resource, and protection policies of its 1994 CWP with respect to projects in the San Geronimo Valley pending approval of the supplemental EIR. All other policies shall continue to come from the 2007 CWP.

**1994 Countywide Plan (1994 Marin CWP) Policies**

***Policy BIO-1.3 - Protect Woodlands, Forests, and Tree Resources.*** *Protect large native trees, trees with historical importance; oak woodlands; healthy and safe eucalyptus groves that support colonies of monarch butterflies, colonial nesting birds, or known raptor sites; and forest habitats. Prevent the untimely removal of trees through implementation of standards in the Development Code and the Native Tree Preservation and Protection Ordinance. Encourage other local agencies to adopt tree preservation ordinances to protect native trees and woodlands, regardless of whether they are located in urban or undeveloped areas. See also Policy SV-1.7.*

***Policy EQ-2.1 - Value of Riparian System.*** *Riparian systems, streams and their riparian and woodland habitat are irreplaceable and should be officially recognized and protected as essential environmental resources, because of their values for erosion control, water quality, fish and wildlife, aesthetics, recreation, and the health of human communities.*

***Policy EQ-2.2 - Streams Defined as Blue Lines on USGS Quad Maps.*** *All perennial and intermittent streams, which are defined as natural watercourses shown as solid or dashed blue lines on the most recent appropriate USGS quad sheet, should be subject*

to these stream and creekside protection policies. A perennial stream is further defined as:

*a watercourse that flows throughout the year (except for infrequent or extended periods of drought), although surface water flow may be temporarily discontinuous in some reaches of the channel such as between pools.*

An Intermittent stream is further defined as:

*a watercourse that flows during the wet season, continues to flow after the period of precipitation, and ceases surface flow during at least part of the dry season.*

An ephemeral stream should be subject to these policies if it supports riparian vegetation for a length of 100 feet or more. An ephemeral stream which does not support vegetation for 100 feet or more may also be subject to the SCA policies if it is demonstrated that the stream has value for flood control, water quality, or habitat which supports rare, endangered, or migratory species. An ephemeral stream is defined as:

*a watercourse which carries only surface runoff and flows during and immediately after periods of precipitation.*

**Policy EQ-2.3 - Definition of Stream Conservation Areas.** A SCA should be designated along all natural watercourses shown as a solid or dashed blue line on the most recent appropriate USGS quad sheet, or along all watercourses supporting riparian vegetation for a length of 100 feet or more.

The zones consist of the watercourse itself between the tops of the banks and a strip of land extending laterally outward from the top of both banks, to a width of 100 feet on each side in the Coastal Recreation and Inland Rural Corridors, and to a width of 50 feet on each side in the City-Centered Corridor on smaller infill lots. Where large tracts of land in the City-Centered Corridor are proposed for development, the 100-foot buffer should be applied, where consistent with legal requirements, and other planning and environmental goals. In the Coastal Recreation and Inland Rural Corridors, the zone should be extended, if necessary, to include an area 50 feet landward from the edge of riparian vegetation.

**Policy EQ-2.4 - Land uses in Stream Conservation Areas.** The following uses are permitted in the SCA by development permits, provided these uses are allowed by the underlying zoning:

- All currently existing structures and uses including reconstruction and repairs
- Necessary water supply projects
- Flood control projects
- Projects to improve fish and wildlife habitat
- Grazing of livestock and other agricultural uses
- Maintenance of water channels for erosion control and other purposes
- Road and utility line crossings
- Water monitoring installation
- Trails

**Policy EQ-2.5 - Prohibited Land Uses in Stream Conservation Areas.** The following new uses are prohibited in the SCA:

- Roads and utility lines, except at crossings
- Confinement of livestock
- Dumping or disposal of refuse
- Use of motorized recreational vehicles
- Any structural improvement (excluding repairs) other than those identified in Policy EQ-2.4, including residences, barns, and storage building, unless allowed by a development permit in Policy EQ-2.6

**Policy EQ-2.6 - Other Allowable Land Uses in the Stream Conservation Areas.** Other uses may be allowed in the SCA by development permit, provided these uses conform to all other policies for SCAs and are:

- Allowed by the underlying zoning
- On existing parcels that fall entirely within the zone
- On existing parcels where it can be conclusively demonstrated that development on any other part of the parcel would have more adverse effect on water quality or other environmental impacts

**Policy EQ-2.8 - Retention of the Natural Vegetation.** The retention of the natural vegetation in an SCA should be encouraged in order to realize benefits such as soil erosion prevention, stream, shade, etc. When vegetation must be removed and soil disturbed within the SCA, or when vegetation has been destroyed or eliminated, the area should be re-seeded or replanted with native plants of the habitat as soon as possible. Broom and other aggressive exotic plants should be removed and replaced with native plants.

**Policy EQ-2.9 - Minimal Disturbance of Vegetation.** Disturbance of vegetation within the SCA should be minimized or avoided whenever possible. Minimizing or avoiding disturbance of streamside vegetation is particularly important for trees and shrubs which provide shade, stability for the streambank, and wildlife habitat. Vegetation may partially block streams creating a ponding effect which may be beneficial fish habitat. Tree growth may be cleared from the stream channel when it unduly restricts flood flows, to protect health, safety, and welfare.

**Policy EQ-2.10 - Tree and Shrub Plantings.** Trees and shrubs to be planted along watercourses should include a variety of species that would naturally grow in or near the creek. In general, the planting of exotic trees should be avoided. When removal of riparian vegetation is unavoidable, and mitigation is required, replacement should be at a 2:1 ratio, whenever feasible. Enhancement and restoration of culverted streams is encouraged, whenever feasible.

**Policy EQ-2.18 - Soil Disturbance.** Soil disturbance should be discouraged within the SCA. Where absolutely necessary it should be limited to the smallest surface area and volume of soil possible and for the shortest practical length of time.

**Policy EQ-2.19 - Surface Runoff.** Surface runoff rates in excess of pre-development levels should not be allowed where a new problem will be created or where the runoff will exacerbate an existing problem.

**Policy EQ-2.20 - Retention of Sediment.** On-site facilities for the retention of sediments or contribution toward regional sediment control measures produced by development should be provided during construction and, if necessary, upon project completion. Continued maintenance of these facilities should be required.

**Policy EQ-2.23 - Seasonal Development Factors.** Development work adjacent to and affecting SCAs should be done during the dry season only, except for emergency repairs. Disturbed surfaces should be stabilized and replanted, and areas where woody vegetation has been removed should be replanted with suitable species before the beginning of the rainy season.

**Policy EQ-2.87 - Species Preservation in the Environmental Review Process.** Environmental review of development applications shall consider the impact of the proposed development on species and habitat diversity. Environmental review documents should propose mitigation measures for ensuring the protection of the habitat and species therein.

**Policy EQ-2.88 - Protection of Special Status Species.** Development shall be restricted or modified in areas which contain special status species and migratory species of the Pacific Flyway and/or significant natural areas, wetlands, riparian habitats, and freshwater habitats, to ensure the continued health and survival of these species and areas.

**Policy EQ-3.6 - Wildlife, Vegetation, and Habitats.** A diversity and abundance of wildlife and marine life shall be maintained. Vegetation and animal habitats shall be preserved wherever possible.

**Policy EQ-3.16 - Minimize Excavation, Grading, and Filling.** New development in the County shall adhere to the standards of the Department of Public Works in order to minimize excavating, grading, and filling, while allowing for adequate access.

**Policy EQ-3.21 - Streamside Development.** Along creeks, development must retain the natural vegetation, prevent water pollution, and minimize flood hazard from runoff.

## DISCUSSION

To prevent adverse impacts resulting from development along watercourses, the County in the 1994 CWP has defined Stream Conservation Areas along major creeks in Marin County. Barranca Creek and its unnamed tributary on the project site are perennial, solid blue line watercourses on USGS quad maps subject to the SCA policies contained in the 1994 Marin CWP. Because of its location within the Inland Rural Corridor, the SCA on the project site extends laterally outward 100 feet from the top of all creek banks. Based on the biological site assessment, prepared by LSA, there is limited riparian vegetation so that the SCA does not need to be extended an additional distance. Except for a narrow strip area along Barranca road, the entire project is located within the SCA. It is not possible to construct a project outside the 100-foot SCA. As explained in 1994 Marin CWP Policies EQ-2.4 through EQ-2.6, the proposed project is allowed within the SCA because the construction of a single-family residence is an allowed use in the ARP-2 zoning district and the project site falls entirely within the SCA.

1994 Marin CWP Policies EQ-2.1, EQ-2.18 through EQ-2.20 relates to the value riparian systems, calls for minimized soil disturbance and reduced surface water runoff rate. Specifically, 1994 Marin CWP Policy EQ-2.19 states that surface runoff rates more than pre-development levels should not be allowed. While the proposed residence is located largely over the footprint of the existing residence, the proposed footprint is also expanded beyond the existing and the overall lot coverage includes an increase in impervious surface from approximately 3,369 square feet to 6,190 square feet. To ensure consistency with 1994 Marin CWP Policies EQ-2.1, EQ-2.18 through EQ-2.20 and to ensure that the proposed project would not result in potentially significant impacts (see Section IV.4 – Water, for discussion on water related impacts) **Mitigation Measure 1.B.1** is provided to modify the footprint of the proposed residence and requires the driveway surface to replace with low runoff coefficient surface. Through implementation of **Mitigation Measure 1.B.1** and as illustrated in Exhibit B the footprint of the proposed residence would be confined to the approximate limits of the existing residence; the southern portion of the structure approximately which is 1,127 square feet. The footprint of the existing second unit (442 square feet) shall be removed and left undeveloped; thereby eliminating the footprint of the proposed art studio and development above. Eliminating this area allows for the replacement of this impervious surface to be transferred to the proposed garage with the second unit above making the proposed residence consistent with 1994 Marin CWP Policies EQ-2.1, EQ-2.18 through EQ-2.20 by reducing runoff rate.

Additionally, the newly proposed TuffTrak driveway surface could add approximately 2,000 square feet of additional impervious surfaces to the project site. To ensure compliance with 1994 Marin CWP Policies EQ-2.1, EQ-2.18 through EQ-2.20 **Mitigation Measure 1.B.1** also requires the TuffTrak driveway surface to be replaced with a partially pervious surface with a low runoff coefficient such as gravel or grasscrete that yields a greater absorption rate. This would result in impervious surfaces amounts to be closer to those of the existing conditions. Thus, rendering the proposed project consistent with 1994 Marin CWP Policies EQ-2.1, EQ-2.18 through EQ-2.20 and therefore the impact would be less than significant. Environmental impacts associated with increase soil disturbance and surface water runoff rate are discussed in Section IV.4 - Water of this Initial Study.

The proposed project includes the removal of the pre-existing wooden bridge which was demolished without permits for the illegal construction of the concrete bridge in 2006. Technical specifications for building new bridges are subject Marin County Code Titles 11 and 24. Marin County Code Section 11.08.040 includes requirements for the bridge design, including the bridge footings and abutments, to remain clear of the 100-year flow elevation. Marin County Code Section 24.04.520(d) requires a minimum of 2 feet of freeboard between the bridge soffit and the 100-year flow elevation. The new concrete bridge does not meet these as the bridge would impede 100-year flows. To ensure consistency with Marin County Code Sections 11.08.040 and 24.04.520 **Mitigation Measure 1.B.2** requires the bridge to be redesigned and reconstructed to meet the Department of Public Work's standards to provide enough clearance beneath it for a 100-year flow elevation. Thus, rendering the proposed project consistent Marin County Code Sections 11.08.040 and 24.04.520 and therefore the impact would be less than significant. Environmental impacts related to grading and flood hazards are further discussed in Section IV.4 - Water of this Initial Study.

Marin County Code Section 24.04.560 requires a minimum 20-foot setback from a watercourse top-of-bank or 20-foot plus twice the channel depth (measured from the toe of the near embankment), whichever is greater. The retaining wall along the eastern bank would be removed and the bank would be returned to a more natural state; as a result, a 20-foot setback from a watercourse top-of-bank would apply. Portion of the proposed residence (art studio) falls within the 20-foot setback from the new top of creek bank; therefore, the proposed residence would be inconsistent with Marin County Code Section 24.04.560. **Mitigation Measure 1.B.1** addresses this inconsistency by modifying the residence to be generally confined to the limits of the existing residence, thereby resulting in an approximately 23-foot setback from the new top of creek bank. Therefore, the project would be consistent with Marin County Code Section 24.04.560 and the impact would be less than significant. Environmental impacts related to hydrology and flood hazards are further discussed in Section IV.4 - Water of this Initial Study.

1994 Marin CWP Policy EQ-2.23 states that work adjacent to and affecting SCAs should be done during the dry season only. As discussed, in Section IV.4 - Water of this Initial Study discharges into surface or ground waters could degrade water quality resulting in a potentially significant environmental impact which is mitigated by **Mitigation Measure 4.C.1**. **Mitigation Measure 4.C.1** requires all construction to occur only during the dry season, April 16<sup>th</sup> through October 14<sup>th</sup>. Therefore, with the implementation of **Mitigation Measure 4.C.1** the proposed project would consistent with Marin CWP Policy EQ-2.23, and the impact would be less than significant.

1994 Marin CWP Policies EQ-2.8 through EQ-2.10, EQ-3.6, EQ-3.16 and EQ-3.21 address the preservation of existing and native vegetation, habitat within the SCA in order to control erosion and maintaining stream functions. Section IV.7 - Biological Resources of this Initial Study analyzes the potential environmental effects of the proposed project on sensitive biological species and incorporates mitigation measures to ensure that the environmental impacts are mitigated to a less than significant level.

1994 Marin CWP Policy BIO-1.3 calls for the protection of large native trees. Bank restoration would require the removal of a 40-inch heritage California bay (*Umbellularia californica*). The proposed project would also be required to comply with Marin County Code Section 22.26.040H, which requires the removal of heritage trees to be replaced at a minimum ratio of two new, appropriately sized and installed trees for each tree removed. Therefore, as required by Marin County Code the project would be consistent with 1994 Marin CWP Policy BIO-1.3 and the impact would be less than significant.

### **Mitigation Measure 1.B.1**

The residence, second unit and garage shall be modified to be consistent with Exhibit B. Exhibit B illustrates that the footprint of the new residence would be limited to the approximate footprint of the existing residence; the southern portion of the structure approximately 1,127 square feet. The footprint of the existing second unit (442 square feet) shall be removed and left undeveloped; thereby eliminating the footprint of the proposed art studio and development above. The proposed garage and second unit and are not subject to change as a result of this mitigation measure. TuffTrak driveway surface is to be replaced with a partially pervious surface with a low runoff coefficient such as gravel or grasscrete that yields a greater absorption rate. Occupancy of the residence shall not be approved until the existing illegal bridge has been removed.

**Monitoring Measures 1.B.1**

Before issuance of a Building Permit, the Community Development Agency shall review the Building Permit to ensure consistency with **Mitigation Measure 1.B.1**.

**Mitigation Measure 1.B.2**

The illegally constructed bridge shall be removed and replaced in accordance with the Department of Public Work’s (Titles 11 and 24) standards which require the bridge footings and abutments to remain clear of the 100-year flow elevation.

**Monitoring Measures 1.B.2**

Before issuance of a Building Permit, the Department of Public Work shall review confirm that the requirements for the design and installation of the bridge have been satisfied.

|   |   |   |   |   |
|---|---|---|---|---|
| <p><b>c) Affect agricultural resources, operations, or contracts (e.g. impacts to soils or farmlands, impacts from incompatible land uses, or conflicts with Williamson Act contracts)? (Sources: 1, 2, 34, 35)</b></p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ ]</p> | <p><b>Not Applicable</b></p> <p>[ X ]</p> |
|---|---|---|---|---|

While the project site is designated for agricultural development by the 2007 Marin CWP and within an agricultural residential zoning district, the project site is not under agricultural or forest land production, Williamson Act contract, or agricultural land trust. The project site is neither designated as prime agricultural land, nor farmland soil of State importance. Therefore, the proposed project would have no impact on agricultural resources. The project site maintains the density and floor area ratio appropriate for the zoning district.

|  |   |   |   |   |
|--|---|---|---|---|
| <p><b>d) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)? (Source: 1, 4, 34)</b></p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ X ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|--|---|---|---|---|

The project site is located on Barranca Road, which is developed with rural, low density residential development. The proposed project would result in the replacement of an existing residence and would not result in the direct or indirect physical division of an established community. This impact would be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| e) <b>Result in substantial alteration of the character or functioning of the community, or present or planned use of an area?</b><br>(Source: 1, 2, 4, 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is currently developed with a residence and accessory structures and the proposed project would maintain that use. Through the discretionary review process for the Design Review, findings would need to be made that the visual character of the structure is in keeping with the existing neighborhood and community. This impact would be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| f) <b>Substantially increase the demand for neighborhood or regional parks or other recreational facilities, or affect existing recreational opportunities?</b><br>(Source: 1, 4, 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project includes the replacement of an existing residence, second unit, bridge, and includes associated site improvements which would not increase demand on neighborhood or regional parks or other such facilities. This impact would be less than significant.

**2. POPULATION AND HOUSING.**

***Would the proposal:***

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| a) <b>Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?</b><br>(Sources: 1, 4, 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project conforms to the 2007 Marin CWP AG3 land use designation, which allows for 1 unit per 1 to 9 acres as the proposed project includes the replacement of an existing residence, second unit, bridge and includes other associated site improvements. Therefore, the proposed project would not exceed County population projections or density requirements and therefore this impact would be less than significant.



|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure)?<br/>(Sources: 1, 4, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not induce substantial growth in the area, either directly or indirectly, because it would result in the replacement of an existing residence, second unit, bridge and includes associated site improvements that are consistent with the density standards contained in the 2007 Marin CWP and Marin County Development Code. The project site is served by existing roads and utilities, and would not require substantial investment in additional infrastructure. Therefore, the proposed project would not result in a substantial increase in the local population or induce growth directly or indirectly. This impact would be less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) Displace existing housing, especially affordable housing?<br/>(Source: 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not displace affordable housing because it entails the replacement an existing residence, second unit, bridge and includes associated site improvements. While the second unit would not be income and rent restricted, second units typically provide housing units that are more affordable. The residence and second unit would generally be located in the same location as the existing residence to be demolished. The proposed project would not involve the removal of any other residences. Therefore, this impact would be less than significant.

**3. GEOPHYSICAL. *Would the proposal result in or expose people to potential impacts involving:***

| <b>a) Location in an area of geologic hazards, including but not necessarily limited to: 1) active or potentially active fault zones; 2) landslides or mudslides; 3) slope instability or ground failure; 4) subsidence; 5) expansive soils; 6) liquefaction; 7) tsunami; or 8) similar hazards?<br/>(Sources: 1, 2, 3, 5, 11, 18, 19, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is located within the seismically active San Francisco Bay region, but is located outside of an Alquist-Priolo Earthquake Fault Zone. The closest active fault is the San Andreas Fault, located approximately 3.5 miles west of the project site. Nevertheless, Marin County GIS indicates a historic fault within the project site. Although fault rupture is not necessarily bound by the limits of a fault hazard zone, it is considered unlikely to occur in areas outside of the mapped fault rupture hazard zone.

While the overall project site has an average slope of 10%, the building footprint is relatively flat. A review of Marin County GIS hazard maps does not indicate significant hazards from landslides or mudslides. The project site is also not located within an area that is subject tsunami. Marin County GIS maps indicate the project site may have moderately expansive soil. The Association of Bay Area Governments' Liquefaction Susceptibility Map indicates the project site is in an area with moderate risk of liquefaction.

Nonetheless, all plans submitted for a building permit would be reviewed and approved by a registered civil engineer with soils engineering expertise or a registered geotechnical engineer. The proposed project would be required to comply with safety standards enforced by the California Building Code. Therefore, based on the project location and standard construction requirements, potential project-related impacts due to geological hazards would be considered less than significant.

| <b>b) Substantial erosion of soils due to wind or water forces and attendant siltation from excavation, grading, or fill?<br/>(Sources: 1, 2, 3, 11, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is not located in an area that is exposed to unusually high wind or water/wave forces. The proposed project is located in a flat, developed area of the site and is surrounded by trees. As such, soil erosion due to wind is unlikely. Water use during construction would be minimal and would not result in substantial erosion of soils. The proposed project would be required to implement standard measures for minimizing erosion per the Marin County Code Title 24, prior to issuance of a building permit. Marin County Code Section 24.04.625 includes construction-phased BMPs such as erosion and sediment controls, and pollution prevention practices. In addition, the project would comply with Bay Area Air Quality Air Management District (BAAQMD) basic control measures required in the Air Section IV.5 below, which includes covering and watering the excavated soil. These standard measures would minimize soil erosion; therefore, the impact would be less than significant.

|  |                                  |  |  |                              |
|--|----------------------------------|--|--|------------------------------|
| <p><b>c) Substantial changes in topography from excavation, grading or fill, including but not necessarily limited to: 1) ground surface relief features; 2) geologic substructures or unstable soil conditions; and 3) unique geologic or physical features? (Sources: 1, 2, 3, 11, 34)</b></p> | <p><b>Significant Impact</b></p> | <p><b>Potentially Significant Unless Mitigated</b></p> | <p><b>Less Than Significant Impact</b></p> | <p><b>Not Applicable</b></p> |
|  | <p>[ ]</p>                       | <p>[ ]</p>   | <p>[ X ]</p>                               | <p>[ ]</p>                   |

The proposed project would not result in significant, adverse changes in topography or unstable soil conditions at the project site due to grading. Pursuant to Marin County requirements, the proposed project would be designed by a qualified professional engineer and would be subject to review and approval by the Department of Public Works in accordance with Marin County codes. Through the Design Review process, the project must be determined to be in conformance with policies that minimize excavation, grading, and fill. Based on the application materials, the proposed project would not result in significant impacts to the environment because the proposed project would not substantially reform the natural topography on the project site and would avoid unique geologic features in the area. This impact would be less than significant.

**4. WATER. *Would the proposal result in:***

|   |                                  |  |  |                              |
|---|----------------------------------|--|--|------------------------------|
| <p><b>a) Substantial changes in absorption rates, drainage patterns, or the rate and amount of surface runoff? (Sources: 1, 2, 3, 4, 8, 14, 33, 34, 37)</b></p> | <p><b>Significant Impact</b></p> | <p><b>Potentially Significant Unless Mitigated</b></p> | <p><b>Less Than Significant Impact</b></p> | <p><b>Not Applicable</b></p> |
|   | <p>[ ]</p>                       | <p>[ X ]</p>   | <p>[ ]</p>                                 | <p>[ ]</p>                   |

The proposed project could result in substantial change in absorption rates, drainage patterns, or the rate and amount of surface runoff. The project site is located within the SCA of Barranca creek and another creek tributary running through the project site. The existing amount of impervious surface is approximately 3,369 square feet versus

the proposed amount at 6,190 square feet. The increased amount of impervious surfaces would change absorption rates on the project site and the amount of surface water runoff from the project site into the creek would increase. Additionally, new development could alter drainage patterns or could create impediments to the creek flow resulting in a potentially significant environmental impact. To mitigate this impact to a less than significant level, **Mitigation Measure 4.A.1** would require the proposed project to implement low impact development (LID) practices and designs that prevent offsite discharge from events up to the 85<sup>th</sup> percentile 24-hour rainfall event. As discussed in Land Use and Planning Section V.1(b) **Mitigation Measure 1.B.1** requires modification of the proposed residence, second unit and the garage to generally be within the approximate footprint of the existing residence which minimizes the increase in impervious surfaces at the project site. The proposed TuffTrak driveway surface adds approximately 2,000 square feet of additional impervious surfaces to the project site. **Mitigation Measure 1.B.1** requires the TuffTrak driveway surface to be replaced with gravel or grasscrete that yields a greater absorption rate, thereby further reducing the amount of impervious surfaces on the project site. Therefore, with implementation of **Mitigation Measure 4.A.1** and **Mitigation Measure 1.B.1**, impacts to absorption rates, drainage patterns, and amount of surface runoff would be less than significant.

The proposed project includes the removal of an existing concrete and stone retaining wall along the eastern portion of the creek bank. This portion of the creek bank would be returned to a more natural state with a 2:1 slope for approximately 40 feet. Removal of the retaining wall would occur during the dry season. The removal of the existing retaining wall would restore the creeks drainage pattern to a more natural state and would result in a less than significant impact.

**Mitigation Measure 4.A.1**

Implement low impact development (LID) practices and designs that are demonstrated to prevent offsite discharge from events up to the 85th percentile 24-hour rainfall event. Specifically, the proposed project shall be required to complete a stormwater control plan that meets all requirements for Small Projects/Single Family Homes described in Appendix C of the BASMAA Post-Construction Manual.

**Monitoring Measures 4.A.1**

Before issuance of a Building Permit, the Department of Public Work’s shall review the plans to ensure compliance with LID practices and stormwater control plan requirements.

| b) Exposure of people or property to water related hazards, including, but not necessarily limited to: 1) flooding; 2) debris deposition; or 3) similar hazards? | Significant Impact | Potentially Significant Unless Mitigated | Less Than Significant Impact | Not Applicable |
|--|--------------------|--|------------------------------|----------------|
| (Sources: 1, 2, 3, 11, 12, 19, 32, 33, 34, 37)   | [ ]                | [ X ]                                    | [ ]                          | [ ]            |

According to the Federal Emergency Management Agency 2009 Flood Insurance Rate Map, the proposed development area is located outside of the 100-year flood zone. However, the applicant is required to evaluate the watercourse conditions of Barranca Creek on the project site due to the illegal construction of the bridge and provide hydrologic and hydraulic calculations based on a 100-year flow event for the watercourse. The hydrology report prepared September 2, 2014 is used for calculating the 100-year storm runoff in this Initial Study. This report showed that the bridge including footings and abutments constructed in 2006 are within the 100-year flow elevation. As such, the bridge was not constructed with sufficient capacity underneath of it to allow for 100-year flow elevations to flow through Barranca Creek, which could expose the property to unnecessary flooding hazard, resulting in a potential significant impact. To reduce this impact to a less-than-significant level **Mitigation Measure 1.B.2** requires the bridge constructed in 2006 to be redesigned and replaced in accordance with the Departments of Public Works standards (Sections 11.08.040 and 22.04.520) to provide enough clearance underneath it for the 100-year flow elevation; therefore allowing water to flow unimpeded through Barranca Creek without creating a flood hazard. This impact would be less than significant after mitigation.

|   |   |   |   |   |
|---|---|---|---|---|
| <p>c) <b>Discharge of pollutants into surface or ground waters or other alteration of surface or ground water quality (e.g. temperature, dissolved oxygen or turbidity)?</b><br/>(Sources: 1, 2, 3, 33, 34, 37)</p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ X ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|---|---|---|---|---|

The proposed project could result in discharge of pollutants into surface or ground waters. Additionally, the project as a whole could disturb currently stable soils and result in increased erosion and discharge of sediment to Barranca Creek thereby degrading water quality causing a potentially significant impact. To ensure construction activities do not result in a significant environmental to the surface or groundwater quality **Mitigation Measure 4.C.1** would be required. **Mitigation Measure 4.C.1** requires project construction to only occur during the dry season, April 16<sup>th</sup> through October 14<sup>th</sup>. Thereby, reducing the potential for pollutants or soils to leaving the construction areas to enter Barranca Creek. The impacts to water quality would be less-than-significant with implementation of **Mitigation Measure 4.C.1**.

The project proposes the bank restoration and removal of the retaining wall along the eastern portion of the creek bank. This component of the project includes some protection measures to ensure erosion and discharge of sediment to Barranca Creek does not degrade water quality causing an environmental impact. Project components include the placement of straw wattles, silt fences, hay bales, or other BMPs to reduce the amount of silt that could enter Barranca Creek prior to revegetation of the restored bank. Plywood sheets (4 x 8 feet) would be placed over the creek adjacent to the work area and covered in heavy plastic sheeting to prevent any debris from entering the creek bed. Erosion control netting would also be used on the bank.

As discussed in the Geophysical Section IV.3, an erosion control and sedimentation plan would be required prior to construction of the proposed project, which would ensure that construction of the material and debris do not encroach into Barranca Creek. In addition, the project would comply with BAAQMD basic control measures required in the Air Section IV.5 below, which includes covering and watering the excavated soil. These standard measures would minimize soil erosion; therefore, the impacts to water quality would be less than significant.

The proposed project would also remove the existing leach pit and septic tank approximately 16 feet from the top of the creek bank and replace it with a new class II septic system, which would be installed approximately 60 feet from the top of bank. This would eliminate a potentially leaky system causing potential pollutants to enter Barranca Creek. Furthermore, the new septic system would be required to comply with Marin County Code Title 18 to ensure Marin County standards for percolation rates, soil conditions, and setbacks to surface and subsurface waters are met; therefore, the proposed project septic system would not adversely affect surface or ground water quality in the vicinity. Therefore, the impacts to water quality would be less than significant.

**Mitigation Measure 4.C.1**

Construction activities on the project site shall be restricted to dry weather periods from April 16<sup>th</sup> through October 14<sup>th</sup>. Construction activity shall be timed with an awareness of precipitation forecasts and potential increases in stream flow. Construction activities shall be stopped when the National Weather Service (NWS) 72-hour weather forecast indicates a 30% chance or higher rate of precipitation. All necessary erosion control measures shall be implemented prior to the onset of precipitation. Construction equipment and materials shall be removed if inundation is likely. Construction activities halted due to precipitation may resume when precipitation ceases and the NWS 72-hour weather forecast indicates less than a 30 percent chance of precipitation. No work shall occur during a dry-out period of 24 hours after the above-referenced wet weather.

**Monitoring Measures 4.C.1**

Before issuance of a Building Permit, the Community Development Agency shall verify that construction activities in Barranca Creek are only occurring April 16<sup>th</sup> through October 14<sup>th</sup>. Construction timeline shall also be noted on the plans.

| <b>d) Substantial change in the amount of surface water in any water body or ground water either through direct additions or withdrawals, or through intersection of an aquifer by cuts or excavations?<br/>(Sources: 1, 2, 3, 33, 34, 37)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ X ]   | [ ]                                 | [ ]                   |

The proposed project could result in significant impacts to the environment due to direct water withdrawals or additions as the result of construction related activities near or in Barranca Creek and the increased number of impervious surfaces as a result of the proposed project. **Mitigation Measure 1.B.1** and **Mitigation Measure 4.A.1** would ensure that the proposed project would not result in a substantial increase in runoff by reducing that amount of impervious surfaces and by requiring the proposed project to implement LID practices. **Mitigation Measure 4.C.1** ensures that the appropriate measures are taken to ensure construction of the proposed project would be done during the dry season. Implementation of these mitigation measures would ensure the proposed project would result in a less-than-significant impact to the environment due to direct water withdrawals or additions at the project site.

|   |   |   |   |   |
|---|---|---|---|---|
| <p>e) <b>Substantial changes in the flow of surface or ground waters, including, but not necessarily limited to: 1) currents; 2) rate of flow; or 3) the course or direction of water movements?</b><br/>(Sources: 1, 2, 3, 31, 32, 33, 34, 37)</p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ X ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|---|---|---|---|---|

The illegally constructed bridge and the increase in the amount of new impervious surfaces created by the proposed project may result in potentially significant impacts to the natural flow of the Barranca Creek. **Mitigation Measure 1.B.1** and **Mitigation Measure 4.A.1** would ensure that the proposed project would not result in a substantial increase in runoff by reducing that amount of impervious surfaces and by requiring the proposed project to implement LID practices. **Mitigation Measure 1.B.1** would also require the TuffTrak driveway surface to be replaced with a partially pervious surface with a low runoff coefficient such as gravel or grasscrete that yields a greater absorption rate. These mitigation measures reduced the amount of impervious surfaces to be closer to the baseline condition, thereby reducing flows into Barranca Creek. **Mitigation Measure 1.B.2** requires the bridge constructed in 2006 to be redesigned and replaced in accordance with the Department of Public Work's standards so as not to interfere with the natural flow of the watercourse at the 100-year flow elevation. In addition to the above listed mitigation measures the project as proposed includes beneficial design elements, including the bank restoration and the replacement of a substandard septic system with a code compliant septic system. Through project prescribed mitigation measures and proposed design elements the project minimizes the potential for the substantial changes in the flow of surface or ground waters to a less-than-significant level.

|  |   |   |   |   |
|--|---|---|---|---|
| <p>f) <b>Substantial reduction in the amount of water otherwise available for public water supplies?</b><br/>(Sources: 2, 4, 34)</p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ X ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|--|---|---|---|---|

The proposed project involves replacing the existing residence, second unit, bridge and includes other associated site improvements. The project site is currently served

by the MMWD. There is also an existing, non-potable irrigation well on the project site that would remain. As such, the proposed project would not require new water supplies. The impact will be less than significant.

**5. AIR QUALITY. *Would the proposal:***

| <b>a) Generate substantial air emissions that could violate official air quality standards or contribute substantially to an existing or projected air quality violation?<br/>(Sources: 20, 21, 22, 23, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|---|---------------------------|---|-------------------------------------|-----------------------|
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

Air quality in the Bay Area Air Basin, which includes Marin County, is governed by the Bay Area Air Quality Air Management District (BAAQMD). The Bay Area Air Basin is currently classified as non-attainment for the one-hour State ozone standard as well as for the federal and State 8-hour standards. Additionally, the Bay Area Air Basin is classified as non-attainment for the State 24-hour and annual arithmetic mean PM<sub>10</sub> standards as well as the State annual arithmetic mean and the national 24-hour PM<sub>2.5</sub> standards. The Bay Area Air Basin is unclassified or classified as attainment for all other pollutants standards.

The proposed project would generate criteria pollutant emissions during construction and operation. Construction-related emissions would result from heavy equipment operating at the project site and from truck trips associated with deliveries and construction workers commuting to and from the project site. Post construction use would remain the same as before the project, resulting in emissions from routine residential activities such as car trips, routine painting, and other maintenance activities.

To determine the significance of the proposed project impact that would be related to the potential for it to cause or contribute to an air quality standard violation, Marin County utilizes the screening criteria provided in BAAQMD's *2010 CEQA Air Quality Guidelines*. The screening criteria for single-family residences is 114 dwelling units for emissions generated during construction of the project and 325 dwelling units for emissions generated during operation of the project, provided all basic construction mitigation measures are included during construction. Therefore, construction and operation of the proposed project would not result in a violation of air quality standard or contribute significantly to an existing or projected air quality violation with implementation of the Marin Count Development Code standards as outlined in Title 22.20.040. Since the project entails the replacement of an existing residence, second unit, bridge and other associated site improvements the associated impact would be less than significant with the implementation of the Dust Control Measures adopted in 22.20.040 of the Marin Count Development Code:

The following dust control measures apply to all projects involving ground disturbance that are subject to environmental review:



- a. All unpaved exposed surfaces (e.g., parking areas, staging areas, soil piles, and graded areas, and unpaved access roads) shall be watered two times a day.
- b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- c. All visible mud or dirt track-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.
- d. All vehicle speeds on unpaved roads shall be limited to a maximum of 15 miles per hour.
- e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California of Regulations). Clear signage shall be provided for construction workers at all access points.
- f. 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.

During construction, County staff conducting routine inspections shall verify that the applicant and contractors are implementing the applicable BAAQMD basic control measures. With the implementation of these BMP as adopted in Marin County Development Code section 22.20.040, the project would have a less than significant impact related to this issue.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Expose sensitive receptors to pollutants, such as noxious fumes or fugitive dust?<br/>(Sources: 20, 21, 22, 23, 25, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The BAAQMD recommends that lead agencies assess the incremental toxic air contaminant (TAC) exposure risk to all sensitive receptors within a 1,000-foot radius of a project's fence line. Long-term operations that would be associated with the proposed project would result in no new TAC emissions. However, project construction activities would generate diesel particulate matter (DPM), which is considered to be a TAC. The majority of DPM exhaust emissions that would be generated at the project site would be due to the use of diesel off-road equipment.

The closest sensitive receptors to the project site are neighboring residences on Barranca and Arroyo Roads. The closest residences are at a distance of approximately 100 feet from the project activities. Lagunitas Elementary School is the nearest school and is approximately 1.5 miles east of the project site.

The dose to which receptors are exposed is the primary factor affecting health risk from exposure to TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects (OEHHA, 2003). However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the project.

For the proposed project, DPM emissions that would be generated near the sensitive receptors would be limited to a period of up to a few months. Because these emissions would be minor and occur for over a few months in the vicinity of the residences compared to the 70-year exposure used in health risk assessments, project-related DPM emissions would not be considered substantial and would not result in a significant incremental cancer risk. Therefore, the impact related to exposing sensitive receptors to substantial pollutant concentrations would be less than significant.

|  |                                  |  |  |                              |
|--|----------------------------------|--|--|------------------------------|
| <p><b>c) Alter air movement, moisture, or temperature, or cause any change in climate?<br/>(Sources: 20, 21, 22, 23, 34)</b></p> | <p><b>Significant Impact</b></p> | <p><b>Potentially Significant Unless Mitigated</b></p> | <p><b>Less Than Significant Impact</b></p> | <p><b>Not Applicable</b></p> |
|  | <p>[ ]</p>                       | <p>[ ]</p>   | <p>[ X ]</p>                               | <p>[ ]</p>                   |

The area's climate is characterized by moderate coastal winds and mild temperatures throughout the year. The proposed project would not result in considerable alterations to climatic conditions because the proposed project would result in the replacement of a residence, second unit and includes other associated site improvements. The proposed project is not industrial in nature nor does it involve the installation of wind energy conversion system. Therefore, the proposed project would not result in the change of air movement or temperature. See Section IV.6 below for a discussion on impacts related to greenhouse gas emissions.

|  |                                  |  |  |                              |
|--|----------------------------------|--|--|------------------------------|
| <p><b>d) Create objectionable odors?<br/>(Sources: 20, 21, 22, 23, 34)</b></p> | <p><b>Significant Impact</b></p> | <p><b>Potentially Significant Unless Mitigated</b></p> | <p><b>Less Than Significant Impact</b></p> | <p><b>Not Applicable</b></p> |
|  | <p>[ ]</p>                       | <p>[ ]</p>   | <p>[ X ]</p>                               | <p>[ ]</p>                   |

The resulting project would not create odorous emissions; however, project construction may include sources, such as diesel equipment, which could result in the creation of objectionable odors. Since the construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities will not

affect a substantial number of people. Therefore, impacts from odors generated by construction of the proposed project would be less than significant.

**6. GREENHOUSE GAS EMISSIONS. *Would the proposal:***

| <b>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?<br/>(Sources: 20, 21, 22, 23, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would generate some greenhouse gas (GHG) emissions during construction and operation. Construction emissions would be generated onsite due to the use of heavy-duty off-road equipment associated with project demolition and construction (i.e., excavators, graders, front loaders, dump trucks, paving equipment).

The proposed project includes the installation of roof mounted photovoltaic system, which would lower greenhouse gas emissions. Otherwise, post-construction emissions would remain the same from the day to day residential use of the site (e.g. car trips, electricity use, and natural gas consumption).

As discussed in the Air Quality Section IV.5(a) above, Marin County has opted to utilize the screening criteria provided in BAAQMD's 2010 *CEQA Air Quality Guidelines*. The screening criterion for GHG emissions is 56 dwelling units (BAAQMD, 2010). Since the proposed project would entail the construction and operation of residence and associated site improvements, this impact would be less than significant.

| <b>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?<br/>(Source: 1, 3, 20, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not conflict with certain GHG reduction goals set forth in Assembly Bill 32, including the 39 Recommended Actions identified by California Air Resources Control Board in its Climate Change Scoping Plan. The proposed project would also not conflict with goals and policies contained in the 2007 Marin CWP and Greenhouse Gas Reduction Plan. The proposed project would be required to obtain building permits for construction, which will ensure compliance with all Title 24 and the Marin County Green Building Program. Therefore, this impact would be less than significant.

**7. TRANSPORTATION/  
CIRCULATION. *Would the  
proposal result in:***

| <b>a) Substantial increase in vehicle trips or traffic congestion such that existing levels of service on affected roadways will deteriorate below acceptable County standards?<br/>(Sources: 1, 2, 3, 7, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|---|---------------------------|---|-------------------------------------|-----------------------|
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

Project construction would generate short-term increases of limited heavy truck traffic to deliver construction equipment and supplies, as well as contractor vehicle traffic during construction. Additionally, Department of Public Work reviewed the proposed project and found it in conformance with County transportation and road standards. The proposed project would not result in a significant increase in the number of vehicle trips because the proposed project is replacing an existing residence, second unit, bridge and includes other associated site improvements. The proposed project would not exceed the road capacity or significantly contribute to traffic in the area.

Additionally, the level of service standards for roadways that are part of the Marin Congestion Management Program network are intended to regulate long-term traffic increases from operation of new development. There would be no new long-term trips associated with the proposed project, as the proposed project is replacing an existing residence, second unit, bridge and includes associated site improvements. Further, there would be no increase in long-term trips to the project site once the proposed project is completed. As such, the proposed project would not exceed level of service standards established by the Transportation Authority of Marin (the county congestion management agency) for designated Congestion Management Program roadways. This impact would be less than significant.

| <b>b) Traffic hazards related to: 1) safety from design features (e.g. sharp curves or dangerous intersections); 2) barriers to pedestrians or bicyclists; or 3) incompatible uses (e.g. farm equipment)?<br/>(Source: 1, 2, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|---|---------------------------|---|-------------------------------------|-----------------------|
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in significant impacts to traffic related hazards because the replacement of one residence, a second unit, bridge, and associated site improvements would not result in any significant change to existing traffic patterns. The proposed project would be adequately served by the existing infrastructure and would not require changes to traffic or pedestrian and bicycle circulation. Furthermore, the proposed project would not alter the physical configuration of the existing roadway

network serving the area, and would not introduce unsafe design features. The proposed project also would not introduce uses that are incompatible with existing uses already served by the existing road system. Therefore, the proposed project would have a less than significant traffic hazard impact.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) Inadequate emergency access or access to nearby uses?<br/>(Sources: 1, 2, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in inadequate emergency access or access to nearby uses. The proposed project involves the replacement an existing residence, second unit, bridge and includes associated site improvements, which is accessed via Barranca Road. The proposed project would not include any work within public roadways, and access for emergency vehicles would not be obstructed. The number of short-term vehicle trips generated by the proposed project would not affect traffic flow for emergency service providers. Therefore, the proposed project would have a less than significant effect on emergency access.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>d) Insufficient parking capacity on-site or off-site?<br/>(Sources: 1, 2, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in insufficient parking capacity on-site or off-site as the proposed project involves the replacement an existing residence, second unit, bridge and includes associated site improvements. The proposed project has been reviewed by the Marin County Department of Public Works for conformance with all development code standards. It appears that the project site can accommodate the required amount of parking spaces and turnaround area. Furthermore, adequate parking and turnaround area are evaluated during the building permit process. Therefore, the proposed project would be in conformance with all parking requirements and the project would have a less than significant effect on parking capacity.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>e) Substantial impacts upon existing transportation systems, including rail, waterborne or air traffic systems?<br/>(Source: 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not impact existing transportation systems. The proposed project would replace an existing residence, second unit, bridge and includes other associated site improvements, which are not located near existing transportation systems, including rail, waterborne, or air traffic systems. Therefore, the proposed project would have a less-than-significant on existing transportation systems.

**8. BIOLOGICAL RESOURCES.**

*Would the proposal result in:*

| a) Reduction in the number of endangered, threatened or rare species, or substantial alteration of their habitats including, but not necessarily limited to: 1) plants; 2) fish; 3) insects; 4) animals; and 5) birds listed as special-status species by State or Federal Resource Agencies? (Sources: 1, 2, 8, 14, 34) | Significant Impact | Potentially Significant Unless Mitigated | Less Than Significant Impact | Not Applicable |
|--|--------------------|--|------------------------------|----------------|
|  | [ ]                | [ X ]                                    | [ ]                          | [ ]            |

The proposed project would not result in significant impacts relating to the reduction in the number of special status species or their habitat areas. The applicant hired LSA Associates to conduct an assessment of biological resources on the project site, including the habitat of endangered, threatened, or rare species (LSA, 2018). The biological report includes a review of the California Department of Fish and Wildlife Natural Diversity Database (CNDDDB). Additionally, an on-site reconnaissance survey was conducted to further assess the potential for endangered, threatened, or rare species to occur on the project site. The biological assessment identified 70 special status species of plants and 34 special status species of wildlife known to occur in the larger vicinity of the project site.

Special Status Plants

Although 70 special-status plants have been documented in the region, special-status plants are unlikely to occur on the project site due to site conditions and lack of habitat. The project site has been intensively used in the past for residential use and, with the exception of the oak/bay woodland, consists mostly of non-native species. Woodland special-status plants were not observed and are not likely to occur. The special-status plant species of scrub, chaparral, and/or woodland tend to be shrubby or perennial and would have been observed had they been present. Similarly, the small grassland areas that occur on the project site are unsuitable for special status plants. The project would have no impacts to rare plants (LSA, 2018).

The removal of the pre-existing bridge, construction of the bridge in 2006, bridge replacement as required by *Mitigation Measure 1.B.2* and the proposed residence is generally within the same footprint and would have no effects on special-status woodland plant species because they were either not observed during surveys or would not likely occur because their habitat was absent from the project site. Therefore, this impact is less than significant. Similarly, the bank restoration component of the proposed project is unlikely to effect special-status woodland plant species because their habitat is not present at the project site. Furthermore, the vegetation both immediately upstream and immediately downstream of the bridge is mostly ornamental at the retaining walls. This historical cultivation would have removed any special-status plant species had they been present. The downstream bank that is not supported by retaining walls does not support any special status plant species. This impact would be less than significant.

### Special Status Animals

The following special status terrestrial animal species could occur in Barranca Creek or the oak/bay woodland that occurs along the creek, although none were observed during the biologist's site visits:

1. Aquatic or amphibious animals: The absence (or small amount) of silt and the observation of steelhead and aquatic invertebrates indicates that Barranca Creek continues to provide valuable habitat to aquatic species.
  - a. Juvenile Steelhead trout (*Oncorhynchus mykiss*) have been observed in Barranca Creek on the project site. The creek is shaded and perennial during most years, and appears to provide rearing habitat for steelhead prior to migration to the Pacific Ocean.
  - b. Juvenile coho salmon (*Oncorhynchus kisutch*) requires cool water for rearing. Although shaded, water temperatures may not be cool enough to support rearing habitat for coho salmon within this reach of Barranca Creek.
  - c. Tomales roach (*an un-named subspecies of Lavinia symmetricus*) occurs throughout much of Lagunitas Creek and may therefore occur in Barranca Creek.
  - d. Foothill yellow-legged frog (*Rana boylei*) and California red-legged frog (*Rana draytonii*) have both been observed downstream of Peters dam on Lagunitas Creek and could potentially occur in Barranca Creek.
  - e. Western pond turtle (*Clemmys marmorata*) could occur in the larger pools in Barranca Creek.
  - f. California giant salamander (*Dicamptodon ensatus*) occur in Barranca Creek and a single larva has been observed on the project site.

### Removal of pre-existing wooden bridge and illegal construction of replacement bridge

The analysis of the proposed project includes the removal of the pre-existing wooden bridge, which was demolished without permits for the illegal construction of the concrete bridge in 2006. Juvenile steelhead and coho salmon, adult and juvenile Tomales roach, foothill yellow-legged frog, California red-legged frog, California giant salamander, and western pond turtle could potentially have occurred at the project site during the replacement of the bridge during September 2006. There is adequate habitat both upstream and downstream of the bridge for these species while the bridge construction took place. During construction, it is likely that any species present in the vicinity of the bridge would have moved elsewhere. Direct impacts to these species were therefore unlikely (LSA, 2018).

The cement abutments to the pre-existing wooden bridge were installed on bedrock of the bank of the channel. Vertical rock banks predate the bridge on both sides of Barranca Creek upstream of the bridge and one vertical rock bank predates the bridge downstream of the bridge. The other downstream bank is an earthen slope.

Removal of the pre-existing wooden bridge and construction of the bridge in 2006 would have created negligible sediment because of the retaining walls surrounding the site and the bedrock banks that support the footings. The bedrock portion of the stream banks occur on either side of Barranca Creek solely beneath the bridge. The retaining walls would have held the banks during bridge replacement and largely prevent sloughing of the banks soil from entering Barranca Creek. Soil is largely absent from the area where the bank consists of bedrock beneath the bridge. Excavation of the soil for the supports for the new bridge occurred in back of the rock bank where there is an absence of soil, thereby resulting in little sediment entering Barranca Creek. Additionally, the natural downstream bank is not steep and would not have generated much, if any, sediment. Debris from the bridge removal was not observed in Barranca Creek.

The replacement bridge over Barranca Creek does not appear to adversely affect any downstream spawning habitat of steelhead and coho salmon. Other aquatic species such as the foothill yellow-legged frog, California red-legged frog, and western pond turtle is not likely to have been affected by the replacement of the bridge. The footings and bridge are stable, and sediment is not entering Barranca Creek from the bridge site. Erosion at the bridge site is not occurring and downstream effects are negligible. Therefore, impacts to special-status animals species resulting from the removal of the pre-existing wooden bridge, and construction of the concrete bridge in 2006 would be less than significant.

#### *Bank Restoration and Retaining Wall Removal*

The project proposes the bank restoration and removal of the retaining wall along the eastern portion of the creek bank to occur during the dry season. Heavy equipment would operate from the top of the bank and would not enter the bed of Barranca Creek. In accordance with the Department of Public Works standard requirements, an erosion control and sedimentation plan would be required prior to construction, which would ensure that construction material and debris do not encroach into the habitat of these aquatic and amphibious animals. Straw wattles, silt fences, hay bales, or other BMPs would be implemented to reduce the amount of silt that could enter Barranca Creek prior to revegetation of the restored bank. Plywood sheets (4 x 8 feet) would be placed over the creek adjacent to the work area and covered in heavy plastic sheeting to prevent any debris from entering the creek bed. Erosion control netting would be used on the bank. Erosion control materials with plastic or nylon netting would not be used as such netting can entrap snakes, birds, and other wildlife. The bank would be revegetated for long-term stability. However, potentially significant environmental impacts could occur as a result of the bank restoration and retaining wall removal if special-status species are present within Barranca Creek. If special-status species are present during construction activities, harm, injury or death could result from construction equipment in the area, sediment disruption or the general disturbance of the area. Implementation of **Mitigation Measure 8.A.1** would reduce these impacts to a less-than-significant level. **Mitigation Measure 8.A.1** requires a qualified biologist to conduct a preconstruction survey for western pond turtles and other special-status species that may be in the construction area prior to initial ground disturbance. Additionally, regulatory requirements could require the applicant to obtain permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the California Department of Fish and Wildlife prior to the any construction related activities for bank restoration or retaining wall removal.



Therefore, with the implementation of **Mitigation Measure 8.A.1** and regulatory requirements impacts to special-status species resulting from bank restoration and retaining wall removal would be less than significant.

**New Bridge as Required by Mitigation Measure 1.B.2**

In accordance with the Department of Public Works standard requirements, an erosion control and sedimentation plan would be required prior to construction of the proposed project, which would ensure that construction material and debris do not encroach into the habitat of these aquatic and amphibious animals. BMPs would also be implemented to reduce the amount of silt that could enter Barranca Creek. Habitat occurs for special status species in Barranca Creek. While animal species could move into the construction site, they would most likely remain in the creek. However, potentially significant environmental impacts could result in the harm, injury or death of special-status species within Barranca Creek as a result of the removal of the illegally constructed bridge and construction of the new bridge as required by Mitigation Measure 1.B.2. **Mitigation Measure 8.A.1** requires a qualified biologist to conduct a preconstruction survey for western pond turtles and other special-status species that may be in the construction area prior to initial ground disturbance. Additionally, regulatory requirements could require the applicant to obtain permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the California Department of Fish and Wildlife prior to the any construction related activities for bank restoration or retaining wall removal. **Mitigation Measure 4.C.1** as discussed Section IV.4 - Water of this Initial Study requires construction of the proposed project to occur only during the dry season, April 16<sup>th</sup> through October 14<sup>th</sup>. Implementation of these mitigation measures and regulatory requirements would reduce the impacts to special-status animals species resulting from the new bridge as required by Mitigation Measure 1.B.2 to be less than significant.

**Other Proposed Project Components**

Construction of the residence and other site improvements, such as a new driveway and septic system not previously discussed above would take place outside of the creek bank. In accordance with the Department of Public Works standard requirements, an erosion control and sedimentation plan would be required prior to construction, which would ensure that construction material and debris do not encroach into the habitat of these aquatic and amphibious animals. Therefore, aquatic or amphibious special status species would not be affected and this impact is less than significant.

2. Birds and Bats

- a. The northern spotted owl (*Strix occidentalis caurina*) is listed as threatened under the federal Endangered Species Act and is proposed for listing as threatened under the California Endangered Species Act. The biological assessment noted that although northern spotted-owl nests are located less than half a mile from the project site, none were observed onsite (LSA, 2018).
- b. The Pallid bats (*Antrozous pallidus*) and Townsend's big-eared bats (*Corynorhinus townsendii*) use buildings, caves, and mineshafts for roosting. Evidence of these bats, such as bat droppings and staining on exterior walls, were not observed during the field surveys. Based observations, it is unlikely

that these bats are roosting in the existing residence or outbuildings (LSA, 2018).

- c. The western red bat (*Lasiurus blossevillii*) have the potential to roost in the trees on the project site.
- d. Nesting birds have the potential to roost in the trees on the project site.

Removal of pre-existing wooden bridge and illegal construction of replacement bridge

The analysis of the proposed project includes the removal of the pre-existing wooden bridge, which was demolished without permits for the illegal construction of the concrete bridge in 2006. Birds that could nest and bats that could roost in trees of the project site would not have been affected by the removal of the pre-existing wooden bridge and the construction of the illegal bridge in 2006 because trees were not affected and the removal and construction of the bridge did not occur during the nesting season. Furthermore, the biological assessment concluded that the proposed project site does not provide suitable nesting or foraging habitat for spotted owl and no impact would have occurred (LSA, 2018). Additionally, the proposed project is located beyond the range of impacts of visual or auditory impacts from construction. Based on the mapped locations of known spotted owl territories, the removal of the pre-existing wood bridge and construction of the replacement bridge would not result in adverse impacts to nesting owls or birds if constructed during the breeding season. Therefore, no impacts to birds or bats would have occurred during the removal of the pre-existing wooden bridge and the illegal construction of the concrete bridge in 2006.

Bank Restoration, Retaining Wall Removal, New Bridge as Required by Mitigation Measure 1.B.2, Residence and Other Site Improvements

The California bay tree proposed for removal during bank restoration could be used as a roost site by western red bats, a tree roosting species resulting in a potentially significant impact to the western red bat if present. If bat species were roosting on the tree during removal, harm, injury or death would result to the animal. *Mitigation Measure 8.A.2* would be required to minimize potential adverse effects to western red bats if they are roosting in the bay tree. Implementation of *Mitigation Measure 8.A.2* requires cut limbs will be left in place on the ground overnight to allow any foliage roosting bats to escape during the night if present. Therefore, this impact would be less than significant after mitigation.

As for nesting birds, any construction activities associated with the proposed project occurring during the breeding season would result in a visual and noise-related disturbance, with excessive disturbances resulting in reproductive failure and the death, or “take”, of an endangered species. Nesting birds, their nests, and eggs are protected under the federal Migratory Bird Treaty Act. Any activities resulting in reproductive failure would be a violation of federal law. Birds could be harmed if nests and eggs are present in any shrubs or small trees that are removed to facilitate the development. Similarly, nesting birds near the project construction activities could abandon their active nests. While birds usually nest between mid-March and the first of July, occasionally birds will nest from the beginning of March to the end of August. Implementation of ***Mitigation Measures 8.A.3*** would prevent

adverse impacts to nesting birds by requiring nesting bird surveys and reduce this impact to a less-than-significant level.

**Mitigation Measure 8.A.1**

Prior to initial ground disturbance a qualified biologist will conduct a preconstruction survey for western pond turtles and other special-status species that may be in the construction area. If a western pond turtle or other special-status species is discovered in the construction area, it will be allowed to leave the area on its own accord; initial ground disturbance will be postponed until any western pond turtles or other special-status species have left the construction area. A wildlife exclusion fence (silt fence) will be placed around the construction area, which will exclude wildlife from the work area prior to initiation of construction activities.

**Monitoring Measure 8.A.1**

Before issuance of a Building Permit, Community Development Agency staff shall verify that the applicant has had a qualified biologist conduct a preconstruction survey or has submitted a report from a biologist verifying that western pond turtles and other special-status species would not be adversely affected by the construction.

**Mitigation Measure 8.A.2**

Limbs cut from the bay tree shall be left in place on the ground overnight. The branches will not be chipped, cut up, or hauled away until the next day to allow any foliage roosting bats to escape during the night.

**Monitoring Measure 8.A.2**

Community Development Agency staff shall verify that ***Mitigation Measure 8.A.2*** complies with mitigation standards listed above and has been properly implemented.

**Mitigation Measure 8.A.3**

Avoiding construction activities during the breeding season is the preferred strategy, but this may conflict with construction BMPs that recommend dry-season construction. If construction occurs during the nesting season (February 15 to August 31), a professional biologist shall survey the project site for the presence of nesting birds and submit a report to Community Development Agency staff. This preconstruction survey shall be conducted within 7 days of the start of construction. If an active nest is found, the biologist shall identify a no-work buffer around the nest until the young have fledged or the nest has otherwise become inactive. Buffer distances for bird nests should be site specific and an appropriate distance, as determined by the biologist. The buffer distances will be specified to protect the bird's normal behavior to prevent nesting failure or abandonment. The buffer distance recommendation would be developed after field investigations that evaluate the bird(s) apparent distress in the presence of people or equipment at various distances. Abnormal nesting behaviors that may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed toward project personnel, standing up from a brooding position, and/or flying away from the nest. The biologist has the authority to stop project activities if a bird exhibits abnormal behavior that may cause reproductive failure such as nest abandonment and loss of eggs and/or young until an appropriate buffer is established.

The qualified biologist shall monitor the behavior of the adult and young birds, when present, at the nest site to ensure that they are not disturbed by project work. Nest monitoring shall continue during project work until the young have fully fledged and have completely left the nest site and are no longer being fed by the parents as determined by the qualified biologist.

If necessary, the biologist will consult with California Department of Fish and Wildlife regarding appropriate action to comply with the Fish and Game Code. If a lapse in project-related work of 7 days or longer occurs, another focused nest survey will be required before project work resumes.

**Monitoring Measure 8.A.3**

Before issuance of a Building Permit, Community Development Agency staff shall verify that the applicant is avoiding nesting season or has submitted a report from a biologist verifying that nesting birds would not be adversely affected by the construction.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Substantial change in the diversity, number, or habitat of any species of plants or animals currently present or likely to occur at any time throughout the year?<br/>(Sources: 1, 2, 8, 14, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not substantially change the diversity, number, or habitat of any species of plants or animals currently or seasonally present because post-project conditions would be similar to pre-project conditions. The project site would continue to be used for residential purposes; the proposed project would occur on the developed portion of the site, i.e. the footprint of the existing dwelling, the ornamental garden, or the orchard. These disturbed areas support ornamental and non-native vegetation and do not support high biological values. Approximately 2,300-square feet of existing semi-impermeable road base will be removed, new soil brought in, and replanted with native grasses and clover.

Native woodland and riparian vegetation on the project site are located primarily along the undeveloped portions of Barranca Creek and its unnamed tributary located on the property. As part of the bank restoration the creek bank would be revegetated with native species that occur in the area. Herbaceous species that provide cover could include the sedges (*Carex sp.*) that naturally occur on the property, Santa Barbara sedge (*C. barbarae*) that grows in Marin County, meadow barley (*Hordeum brachyantherum*), California brome (*Bromus carinatus*), and the ferns (chain, lady, polypody, and sword) that naturally occur on the property. Suitable shrubs for the bank planting include snowberry (*Symphoricarpos albus* and/or *S. mollis*), California rose (*Rosa californica*), oceanspray (*Holodiscus discolor*), and flowering current (*Ribes sanguineum*).

The developed portion of the project site suggests low diversity; site use by animals is likely limited to feral cats, common wildlife, and nesting birds during the breeding season (approximately February 15 through August 31). Many wildlife species are nocturnal and regularly move through residential areas such as the Barranca Road neighborhood with sufficient cover. Common wildlife and nesting birds will likely avoid the area during construction but return post-construction. Therefore, the proposed project impacts related the substantial change in diversity, number, or habitat of any species of plants or animals would be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) Introduction of new species of plants or animals into an area, or improvements or alterations that would result in a barrier to the migration, dispersal or movement of animals?<br/>(Sources: 1, 2, 8, 14, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not serve as a barrier to the dispersal, migration or movement of animal species because no additional internal or boundary fencing is proposed as part of the proposed project that would interfere with the migration or dispersal of animals. The bridge required by *Mitigation Measure 1.B.2* crossing the creek is elevated and spans the creek, resulting in minimal disruption of the creek bed and surrounding banks. The continued residential use would not increase the introduction of domesticated pets, e.g. dogs and cats. Further, the introduction of domesticated animals into an area within close proximity to existing residential development, where such animals are normally found, is not deemed to be a significant environmental impact.

The proposed project would not likely result in the introduction of new species of plants into the area. As discussed above, bank restoration would utilize plant species already occurring on the project site or found in Marin. Additionally, the area for proposed development is characterized by ornamental and orchard vegetation. The understory grasses where the new septic system and driveway will be located are non-native and include periwinkle (*Vinca major*), English ivy (*Hedera helix*), Bermuda buttercup (*Oxalis pes-caprae*), and ornamental onion (*Allium triquetrum*). Native species appear to include western sword fern (*Polystichum munitum*), polypody fern (*Polypodium* sp.), wood strawberry (*Fragaria vesca*), and miner’s lettuce (*Claytonia perfoliata*) (LSA, 2018). The proposed project would not result in a significant impact related to this issue.

**9. ENERGY AND NATURAL RESOURCES. *Would the proposal result in:***

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>a) Substantial increase in demand for existing energy sources, or conflict with adopted policies or standards for energy use?<br/>(Source: 1, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project involves the replacement an existing residence, second unit, bridge and includes other associated site improvements. The proposed project would be required to meet the minimum requirements of the Marin County Green Building Submittal Checklist, California Title 24 and Ordinance 3492. The Green Building Requirements include energy efficiency standards which would reduce energy consumption by the proposed project. Additionally, the proposed project includes the installation of roof-mounted photovoltaic panels. Therefore, this impact will be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Use of non-renewable resources in a wasteful and inefficient manner?<br/>(Source: 1, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would be required to meet the requirements of the Marin County Green Building Submittal Checklist, California Title 24 and Ordinance 3492 to reduce the amount of energy consumed. Furthermore, the construction of the proposed project involves a moderate size residential structure on a 1.6-acre lot with associated site improvements. Therefore, the proposed project would have a less than significant impact as it relates to the use of non-renewable resources in a wasteful or inefficient manner.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) Loss of significant mineral resource sites designated in the Countywide Plan from premature development or other land uses which are incompatible with mineral extraction?<br/>(Source: 1, 2, 10, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project involves the replacement an existing residential structure, with a similarly sized single-family residence and associated site improvements, which is consistent with the 2007 Marin CWP land use designation for agricultural use and the zoning for single family residential development. The project site is not designated by the State or the County as an area of significant mineral resource or mineral resource

preservation. Therefore, the proposed project would have a less than significant impact on mineral extraction.

**10. HAZARDS. *Would the proposal involve:***

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>a) A risk of accidental explosion or release of hazardous substances including, but not necessarily limited to: 1) oil, pesticides; 2) chemicals; or 3) radiation)? (Source: 1, 24, 26, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

Foreseeably, no major or unusual quantities of explosive or hazardous materials would be present on the project site during or after construction. However, the inadvertent release of any such materials could cause an adverse impact to the environment. The proposed project would be subject to the numerous federal, State, and local laws and regulations governing hazardous materials. Therefore, this impact would be less than significant with implementation of federal, State, and local laws.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Possible interference with an emergency response plan or emergency evacuation plan? (Source: 1, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not interfere with emergency response plans or emergency evacuation plan. The proposed project involves the replacement of an existing residential structure, second unit, bridge and includes associated site improvements, on an existing site which is accessed via Barranca Road. The proposed project would not include any work within public roadways, and access for emergency vehicles would not be obstructed. Furthermore, emergency responders would not be hindered as the proposed project would be required to comply with existing building and fire codes. Therefore, the proposed project would have a less than significant effect on emergency response plans or emergency evacuation plans.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) The creation of any health hazard or potential health hazard? (Source: 4, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would include construction activities that employ hazards or the use of hazardous chemicals, such as gasoline, diesel fuel, oils and lubricants, paints and thinners, solvents, and other chemicals. Impacts could occur if construction-related activities were to result in hazards or the release of hazardous materials and could be considered potentially significant. Numerous federal, State, and local laws

and regulations ensure the safe transportation, use, storage, and disposal of hazardous materials. Because the applicant and its contractors would be required to comply with all hazardous materials laws and regulations for the transport, use, and disposal of hazardous materials, the impacts associated with the potential to create a significant hazard to the public or the environment would be less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>d) Exposure of people to existing sources of potential health hazards? (Source: 24, 25, 26, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is not included on any of the environmental databases maintained by the California Department of Toxic Substances Control list of hazardous waste and hazardous substances site list. Therefore, it is unlikely that the proposed project would expose people to existing sources of potential health hazards; the impact is less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>e) Increased fire hazard in areas with flammable brush, grass, or trees? (Sources: 1, 2, 3, 27, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project setting amid mature trees, bushes, and grasslands is conducive to the ignition and spread of a wildland fire if appropriate measures are not taken during construction activities. The project area is generally classified as having a “high” fire risk by the County of Marin (2018), which could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. However, the proposed project would be required to be designed and constructed in conformance with the standards of the Marin County Fire Department regarding defensible space and fire-resistant building materials, and in conformance with applicable Building Code requirements. During the building permit process, an approved Vegetation Management Plan would be installed before final inspection. Therefore, this impact would be less than significant.

**11. NOISE. *Would the proposal result in:***

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>a) Substantial increases in existing ambient noise levels? (Source: 1, 2, 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |



The proposed project would result in the periodic generation of noise associated with construction activities, which would only occur for a temporary period and of limited duration. Vehicles traveling to and from the project site would result in the generation of intermittent low levels of noise. All construction activity would be regulated through the Marin County's Noise Ordinance, Design Review, and the Building Permit process by controlling permitted hours of activity and permitted noise levels. Finally, noise levels during and after construction would conform to the Noise Element of the Countywide Plan.

As the project entails the replacement of an existing residence, second unit, bridge, and includes other associated site improvements, no new permanent sources of noise will be introduced and therefore this impact would be less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>b) Exposure of people to significant noise levels, or conflicts with adopted noise policies or standards?<br/>(Source: 1, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

As discussed above in Section 11(a) of this Initial Study, the proposed project would not expose the population in the area to significant noise levels. The noise generated from the proposed project would be periodic and temporary in nature and would occur during certain hours of the day and week in preparation of the site and project construction. As noted above, in Section 11(a), all construction activity would be regulated through the County's Noise Ordinance, the Noise Element of the Countywide Plan, Design Review, and the Building Permit process by controlling permitted hours of activity and permitted noise levels. Therefore, as required through standard conditions of approval, the project would not conflict with adopted noise policies or standards and therefore this impact would be less than significant.

**12. PUBLIC SERVICES. *Would the proposal have an effect upon, or result in a need for new or altered government service in any of the following areas:***

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>a) Fire protection?<br/>(Source: 29, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

Fire protection throughout much of unincorporated and rural Marin County is provided by the Marin County Fire Department. The project site is primarily served by the Woodacre Fire Station; located approximately 4.2 miles from the project site. The project would not result in an increased need for new fire protection services since the primary fire protection for the area is carried out by Marin County Fire Department. The replacement of the existing residence, bridge and associated site improvements would not result in a significant increase in fire services. Additionally, construction activities

would be short-term, involve a limited workforce, and would not significantly increase demand on fire services. Therefore, the project impact with respect to the provision of fire protection services would be less than significant.

|   |                               |   |   |                           |
|---|-------------------------------|---|---|---------------------------|
| <b>b) Police protection?<br/>(Source: 30, 34)</b> | <b>Significant<br/>Impact</b> | <b>Potentially<br/>Significant<br/>Unless<br/>Mitigated</b> | <b>Less Than<br/>Significant<br/>Impact</b> | <b>Not<br/>Applicable</b> |
|   | [ ]                           | [ ]   | [ X ]                                       | [ ]                       |

The project site is served by the Marin County Sheriff’s Patrol Division, which provides police patrol services to unincorporated areas within the Marin County. The Kentfield Substation, located at 831 College Avenue serves the community of Woodacre as well as the project site. The proposed project would not be expected to significantly affect the Marin County Sheriff’s ability to maintain service ratios, response times, other performance objectives, and new or physically altered facilities will not be required. Therefore, the proposed project impact with respect to the provision of police protection facilities would be less than significant.

|   |                               |   |   |                           |
|---|-------------------------------|---|---|---------------------------|
| <b>c) Schools?<br/>(Source: 28, 34)</b> | <b>Significant<br/>Impact</b> | <b>Potentially<br/>Significant<br/>Unless<br/>Mitigated</b> | <b>Less Than<br/>Significant<br/>Impact</b> | <b>Not<br/>Applicable</b> |
|   | [ ]                           | [ ]   | [ X ]                                       | [ ]                       |

The Lagunitas School District provides public education to the areas of Forest Knolls, Lagunitas, San Geronimo, and Woodacre. The proposed project would not result in the increased need for new schools since the replacement of an existing residence, second unit, bridge and associated site improvements would not result in a significance increase in service needs or demands. The impact would be less than significant.

|  |                               |   |   |                           |
|--|-------------------------------|---|---|---------------------------|
| <b>d) Maintenance of public<br/>facilities, including roads?<br/>(Source: 3, 34)</b> | <b>Significant<br/>Impact</b> | <b>Potentially<br/>Significant<br/>Unless<br/>Mitigated</b> | <b>Less Than<br/>Significant<br/>Impact</b> | <b>Not<br/>Applicable</b> |
|  | [ ]                           | [ ]   | [ X ]                                       | [ ]                       |

The proposed project would not result in the increased need for or maintenance of public facilities or roads since the proposed project would replace an existing residence, second unit, bridge and includes other associated site improvements. Additionally, because construction activities would be short-term and involve a limited workforce, project construction would not significantly increase demand the demand on such facilities. Therefore, the proposed project would have a less than significant on public facilities.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| e) Other governmental services?<br>(Source: 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not impact other government services such as parks or libraries, since the replacement of existing residential structures would not result in an increase in the population that could significantly increase the need for such service. Therefore, the proposed project would have a less than significant impact on other government services.

**13. UTILITIES AND SERVICE SYSTEMS. *Would the proposal result in a need for new systems, or substantial alterations to the following utilities:***

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| a) Power or natural gas?<br>(Sources: 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in significant impacts to the environment due to an increased need for new power and natural gas services, since the project site is currently served by Pacific Gas and Electric Company and a private propane service company. Further, the proposed project would generate energy on-site from the project's roof-mounted photovoltaic system. Therefore, this impact would be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| b) Communications systems?<br>(Sources: 34) | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in significant impacts due to an increased need for communications systems since communication systems are available to serve the proposed project. Normal service is currently available on-site from various telephone and cable companies and would continue or be replaced as needed. Therefore, this impact would be less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>c) Local or regional water treatment or distribution facilities?<br/>(Sources: 1, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The Marin Municipal Water District currently provides service to the project site and has indicated that the project would not impair its ability to continue service for the two living units. Additionally, during the Building Permit process, code requirements would ensure the use of water conserving fixtures and appliances. The water treatment and distribution capacity in the area would essentially be the same whether or not the proposed project is implemented; therefore, the proposed project would have a less than significant impact on local or regional water treatment or distribution facilities.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>d) Sewer or septic tanks?<br/>(Source: 1, 2, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not create an increased need for septic services and would result in a net benefit to the environment. The project site is currently served by an outdated septic system located approximately 16 feet from the stream. As part of the project, this system would be removed and a new upgraded Class II septic system would be installed, all of which would be reviewed and approved by the Marin County Environmental Health Services before issuance of a Building Permit. Therefore, this impact would be less than significant.

|   |                           |   |                                     |                       |
|---|---------------------------|---|-------------------------------------|-----------------------|
| <b>e) Storm water drainage?<br/>(Source: 3, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would not result in significant impacts to storm water drainage facilities since the proposed project would replace an existing residence, second unit, bridge and includes other associated site improvements on a developed lot. Furthermore, the proposed project would be subject to review and approval by the Department of Public Works to ensure that construction complies with Marin County Code, Title 24 (Development Standards) for drainage and erosion control. This impact would be less than significant.

|  |                           |   |                                     |                       |
|--|---------------------------|---|-------------------------------------|-----------------------|
| <b>f) Solid waste disposal?<br/>(Source: 34, 36)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The project site is currently served by solid waste collection service. The proposed project would not create a significant increase in solid waste production nor substantially affect the service of the garbage hauler or the receiving landfill. Therefore, the proposed project would not result in significant impacts to the environment.

**14. AESTHETICS/VISUAL RESOURCES. *Would the proposal:***

| <b>a) Substantially reduce, obstruct, or degrade a scenic vista open to the public or scenic highway, or conflict with adopted aesthetic or visual policies or standards?<br/>(Sources: 1, 2, 4, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|--|---------------------------|---|-------------------------------------|-----------------------|
|  | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would be compatible with the character of the local community and would not result in significant impacts to scenic vistas and open space lands or conflict with visual policies. The project replaces an existing residence and bridge in the same location and it would not reduce, obstruct, or degrade unique natural features that are distinguishing characteristics of the surrounding area. Therefore, impact would be less than significant.

| <b>b) Have a demonstrable negative aesthetic effect by causing a substantial alteration of the existing visual resources including, but not necessarily limited to: 1) an abrupt transition in land use; 2) disharmony with adjacent uses because of height, bulk or massing of structures; or 3) cast of a substantial amount of light, glare, or shadow?<br/>(Sources: 1, 2, 4, 34)</b> | <b>Significant Impact</b> | <b>Potentially Significant Unless Mitigated</b> | <b>Less Than Significant Impact</b> | <b>Not Applicable</b> |
|---|---------------------------|---|-------------------------------------|-----------------------|
|   | [ ]                       | [ ]   | [ X ]                               | [ ]                   |

The proposed project would result in a less than significant impact to the aesthetic effects resulting from the from the substantial alteration of the existing visual resources since the proposed project would replace the existing residence, second unit and bridge in approximately the same location. Furthermore, the proposed project would have a similar style and design as the existing structures. Since the property is zoned ARP-2, development would require Design Review approval to ensure that it is in keeping with the Single-family Design Guidelines, is consistent with the design policies in the San Geronimo Valley Community Plan, and meets the zoning district standards for height, size, and location. Therefore, this impact would be less than significant.

**15. CULTURAL RESOURCES.**

*Would the proposal:*

|  |   |   |   |   |
|--|---|---|---|---|
| <p><b>a) Disturb paleontological, archaeological, or historical sites, objects, or structures?<br/>(Sources: 1, 2, 15, 16, 17, 34)</b></p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ X ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|--|---|---|---|---|

A review of cultural resource maps maintained by the Marin County Community Development Agency indicates that the project site is in an area of potentially high archeological sensitivity. However, an evaluation of cultural resources on the project site conducted by Archaeological Resource Service concluded that there are no indications of potentially significant archaeological deposits within the subject parcel. No human remains or archeological resources of any kind are known to be on the project site. Additionally, the proposed project is located primarily in areas previously developed or disturbed and would not require significant grading.

Nonetheless, in case any archaeologically significant resources are encountered during excavation work, a standard condition of approval requires the applicant to cease all construction activity. In such a case, County staff is consulted and a registered archaeologist hired to examine the site and provide an analysis. This, if necessary, is done in order to properly assess the find and in order to undertake the proper steps before construction is allowed to resume.

Similarly, there are no significant historic events or people associated with the project site. While the existing residence is nearly 100 years old, through the years there have been several additions and modifications to the structure such that there are no distinguishing architectural features of historical significance. Nonetheless, the new residence will incorporate elements of style and design from the existing residence.

Based on the cultural resource evaluation and the application of the standard conditions of approval, the proposed project would not result in significant impacts to the environment because the development would avoid areas of paleontological, archaeological, and historical significance. Therefore, the impact would be less than significant.

|   |   |   |   |   |
|---|---|---|---|---|
| <p><b>b) Have the potential to cause a physical change which would adversely affect unique ethnic cultural values, or religious or sacred uses within the project area?<br/>(Sources: 1, 2, 15, 16, 17, 34)</b></p> | <p><b>Significant Impact</b></p> <p>[ ]</p> | <p><b>Potentially Significant Unless Mitigated</b></p> <p>[ ]</p> | <p><b>Less Than Significant Impact</b></p> <p>[ X ]</p> | <p><b>Not Applicable</b></p> <p>[ ]</p> |
|---|---|---|---|---|

The evaluation of cultural resources prepared Archaeological Resource Service indicated there are no unique ethnic, cultural values, or religious or sacred uses present within the project area. There is no indication of Native American settlement or user of the subject parcel. The project site is currently developed with a residence and that use would remain with implementation of the proposed project. This impact would be less than significant.

**16. SOCIAL AND ECONOMIC EFFECTS. *Would the proposal result in:***

| Any physical changes which can be traced through a chain of cause and effect to social or economic impacts.<br>(Sources: 1, 34) | Significant Impact | Potentially Significant Unless Mitigated | Less Than Significant Impact | Not Applicable |
|---|--------------------|--|------------------------------|----------------|
|   | [ ]                | [ ]                                      | [ X ]                        | [ ]            |

The proposed project does not entail physical changes that would result in a negative social or economic effect since it replaces an existing residential structure and second unit. The project would not result in a significant increase in the costs of providing limited County services to the project area nor would it result in adverse physical effects on the environment. Therefore, the impact would be less than significant.

**VI. MANDATORY FINDINGS OF SIGNIFICANCE.** Pursuant to Section 15065 of the State EIR Guidelines, a project shall be found to have a significant effect on the environment if any of the following are true:

*(Please explain your answer after each question)*

- |   | Yes | No    | Maybe |
|---|-----|-------|-------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | [ ] | [ X ] | [ ]   |

*As described in Section IV of this Initial Study, any potential environmental impacts from the proposed project will be mitigated to a level of insignificance.*

- |  | Yes | No    | Maybe |
|--|-----|-------|-------|
| b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | [ ] | [ X ] | [ ]   |

*As described in Section IV of this Initial Study, any potential environmental impacts from the proposed project will be mitigated to a level of insignificance.*

- |  |            |           |              |
|--|------------|-----------|--------------|
|  | <b>Yes</b> | <b>No</b> | <b>Maybe</b> |
|  | [ ]        | [X]       | [ ]          |
- c) 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).

*As described in Section IV of this Initial Study, any potential environmental impacts from the proposed project will be mitigated to a level of insignificance.*

- |  |            |           |              |
|--|------------|-----------|--------------|
|  | <b>Yes</b> | <b>No</b> | <b>Maybe</b> |
|  | [ ]        | [X]       | [ ]          |
- d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

*As described in Section IV of this Initial Study, any potential environmental impacts from the proposed project will be mitigated to a level of insignificance.*

**VII. PROJECT SPONSOR'S INCORPORATION OF MITIGATION MEASURES:**

Acting on behalf of the project sponsor or the authorized agent of the project sponsor, I (undersigned) have reviewed the Initial Study for the Tarigo Project and have particularly reviewed the mitigation measures and monitoring programs identified herein. I accept the findings of the Initial Study, including the recommended mitigation measures, and hereby agree to modify the proposed project applications now on file with Marin County to include and incorporate all mitigation measures and monitoring programs set out in this Initial Study.

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(Project Sponsor's Name or Representative) Date

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(Project Sponsor's Name or Representative) Date

**VII. DETERMINATION:** (Completed by Marin County Environmental Planning Manager). Pursuant to Sections 15081 and 15070 of the State Guidelines, the forgoing Initial Study evaluation, and the entire administrative record for the project:

- [ ] I find that the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- [X] 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 the mitigation measures included in this initial study have been added to the project. A 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.

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Environmental Planning Manager

Date

## ATTACHMENT 1

### INITIAL STUDY TARIGO DESIGN REVIEW AND SECOND UNIT

#### DOCUMENTS INCORPORATED BY REFERENCE

The following is a list of relevant information sources that have been incorporated by reference into the foregoing Initial Study pursuant to Section 15150 of the State CEQA Guidelines. The number assigned to each information source corresponds to the number listed in parenthesis following the incorporating topical question of the Initial Study checklist. These documents are both a matter of public record and available for public inspection at the Planning Division office of the Marin County Community Development Agency (CDA), Suite 308, Civic Center, 3501 Civic Center Drive, San Rafael. The information incorporated from these documents shall be considered to be set forth fully in the Initial Study.

1. Marin Countywide Plan, CDA - Planning Division. 1994 and 2007.
2. Marin County Development Code, Title 22, CDA - Planning Division. September 24, 2013.
3. Marin County Development Standards, Title 24, Marin County Department of Public Works - Land Use & Water Resources Division.
4. San Geronimo Valley Community Plan. 1997. Adopted by the Marin County Board of Supervisors. December 2, 1997.
5. Alquist-Priolo Special Studies Zones Map. 1974.
6. Marin County Archaeological Sensitivity Map, Community Development Agency - Planning Division. Undated. *Confidential*
7. Marin Congestion Management Program 2015 Update. Transportation Authority of Marin, September 24, 2015.
8. Natural Diversity Data Base Map (San Geronimo 7.5 Minute Quadrangle), California Department of Fish and Wildlife. Periodically updated.
9. Soil Survey of Marin County, USDA Soil Conservation Service. 1985.
10. Mineral Resources, CDA - Planning Division. 1987.
11. Marin County Slope Stability Map, Community Development Agency - Planning Division. 1976.
12. Flood Insurance Rate Map Series of Marin County, California, prepared by the Federal Emergency Management Agency, Community Panel Number. Viewed on Marin GIS April 23, 2014.

13. U.S.G.S. Topographic Map, San Geronimo 7.5 Minute Quadrangle Topographic Map.
14. LSA. 2018. Results of the Biological Survey of 21 Barranca Road, Marin County, California. Prepared by Eric Lichtwardt. February 27, 2018.
15. Archeological Resources Service. 2014. A Cultural Resources Evaluation of 21 Barranca Road, Lagunitas, Marin County, California. Prepared by William Roop. July 18, 2014.
16. Marin County Archaeological Inventory Map, Community Development Agency - Planning Division (undated) *confidential*
17. Marin County Archaeological Sensitivity Map, Community Development Agency - Planning Division (undated) *confidential*
18. Association of Bay Area Governments (ABAG), 2018. Liquefaction Susceptibility Map. Available online: <http://gis.abag.ca.gov/website/Hazards/?hlyr=liqSusceptibility>. March 20, 2018.
19. California Department of Conservation, (CDC), 2018. Marin County Tsunami Inundation Maps, available online: [http://www.conservation.ca.gov/cgs/geologic\\_hazards/Tsunami/Inundation\\_Maps/Marin/Pages/Marin.aspx](http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Marin/Pages/Marin.aspx). March 20, 2018.
20. Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance. October 2009.
21. BAAQMD, 2010. *CEQA Air Quality Guidelines*. Updated May 2010.
22. BAAQMD, 2012. *CEQA Air Quality Guidelines*. Updated May 2012.
23. BAAQMD, 2014. Air Quality Standards and Attainment Status, obtained on-line [http://hank.baaqmd.gov/pln/air\\_quality/ambient\\_air\\_quality.htm](http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm).
24. California Department of Toxic Substances Control. <http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=21+Barranca+Rd>. March 20, 2018.
25. Office of Environmental Health Hazard Assessment (OEHHA). 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. August 2003.
26. State Water Resources Control Board (SWRCB), 2014. GeoTracker database. Available online: <http://geotracker.waterboards.ca.gov/>. April 30, 2014.
27. County of Marin, 2018. Marin Map, Hazard, Fire Hazard Severity Zone. Available online: <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer>.

28. Lagunitas School District, official website, available online at <http://lagunitas.org>. Accessed March 20, 2018.
29. Marin County Fire Department, Woodacre Fire Station, available online at <http://www.marincounty.org/depts/fr/divisions/operations/stations/woodacre>. Accessed March 20, 2018.
30. Marin County Sheriff Department, official website, available online at <https://www.marinsheriff.org/about-us/field-service-bureau/patrol-division>. Accessed March 20, 2018.
31. Marin County Department of Public Works. Inter-office memorandum, by David Nicholson. May 9, 2012.
32. Marin County Code Title 11, 22 (2013), 24, and 34.
33. CSW/Stuber-Stroech Engineering Group, Inc. 2014. Hydrology and Hydraulic Analysis for 21 Barranca Road, Lagunitas, CA. September 2, 2014.
34. Tarigo Design Review plans, including civil engineering plans, architectural plans, and landscape plan, received March 6, 2018.
35. Marin County Williamson Act FY 2016/2016 Map, CDA—Planning Division online map at: [ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Marin\\_15\\_16\\_WA.pdf](ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Marin_15_16_WA.pdf)
36. CalRecycle, Facility/Site Summary Details: Redwood Sanitary Landfill (21AA0001), available online at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/21-AA-0001/Detail/>. Accessed MARCH 26, 2018.
37. CSW/Stuber-Stroech Engineering Group, Inc. 2017. Tarigo Hydrology, Supplemental Hydrological and Hydraulic Calculations. November 30, 2017.
38. Marin County Department of Public Works. Inter-office memorandum, by Roger Bray. March 15, 2018.