

**COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT**

DATE: March 8, 2017

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Certification of a Re-circulated Initial Study/Mitigated Negative Declaration (IS/MND) and consideration of a Coastal Development Permit and Design Review to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. Second Unit, on an existing 6,150 sq. ft. legal parcel. The Second Unit requires a staff-level ministerial permit and is not the subject of this review. Arroyo de en Medio Creek is located on a southeast portion of the parcel. The project is appealable to the California Coastal Commission.

County File Number: PLN 2015-00152 (Love)

PROPOSAL

The applicant, Edward Love, requests approval to construct a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. The parcel was legally created by a 2007 subdivision (PLN 2007-00533). The project consists of a new two-story residence with three bedrooms, two bathrooms, a two-car garage, and a rear deck, as well as a second unit above the proposed garage. The project site is a vacant lot located on 3rd Avenue, within a general area of developed parcels. The subject site is moderately sloped in topography with undeveloped ruderal uplands. A shallow intermittent stream, Arroyo de en Medio Creek is located on a southeast portion of the parcel. Cabrillo Highway northward, 3rd Avenue southward, and developed parcels to the west bound this parcel. The proposed landscaping consists of native, drought tolerant and non-invasive species.

RECOMMENDATION

That the Planning Commission certify the Re-circulated Initial Study/Mitigated Negative Declaration (IS/MND) and approve the Coastal Development Permit and Design Review, County File Number PLN 2015-00152, based on and subject to the required findings and conditions of approval listed in Attachment A.

SUMMARY

The project was originally scheduled for consideration at the May 25, 2016 Planning Commission meeting, but was continued to a future date upon request from the applicant since additional time was needed to submit an Archaeological Resources Report and address the comments received from the California Coastal Commission (CCC) and Midcoast Community Council (MCCC) relative to the original IS/MND released on May 4, 2016.

The project complies with applicable policies of the County's General Plan and the San Mateo County Local Coastal Program (LCP). Regarding water and wastewater supply, the project site is located in the unincorporated Miramar area where public facilities, services and utilities are available. The project would connect to the Coastside County Water District (CCWD) and the Granada Community Services District (GCSD) for water and wastewater supply, respectively, where both service providers have confirmed adequate capacity to serve the project.

Also, the project complies with LCP policies regarding sensitive habitats. According to a biological assessment prepared by WRA Environmental Consultants, dated January 25, 2016, the site is adjacent to areas of arroyo willow scrubs, which is considered riparian corridor, although no riparian or sensitive habitat exist on-site. The biological assessment recommends that development maintain a 30-foot creek setback which has been included as Mitigation Measure 1 of the IS/MND released on May 4, 2016. As proposed and conditioned, the project complies with riparian setback requirements. The 20-day public review closed on May 24, 2016. Based on comments received, the original IS/MND was revised and the Re-circulated IS/MND was released on January 31, 2017, in order to include the results of the Archaeological Resources Report and address potential issues raised by the California Coastal Commission and the Midcoast Community Council. Issues raised involved potential impacts related to flooding, geologic hazards such as liquefaction, shift in creek channel alignment, and dam failure. The 20-day public review closed on February 20, 2017. No comments were received. The Re-circulated IS/MND finds that the project, as proposed and mitigated, would not result in any significant impacts to the environment. Mitigation measures have been included as project conditions of approval in Attachment A of the staff report.

The Coastside Design Review Committee (CDRC) considered the project at the July 9, 2015 and August 13, 2015 meetings and determined that the project complies with applicable Design Review Standards and recommended project approval. The CDRC found that the project, as designed and conditioned, complements the dominant style of the neighborhood residences. Also, the CDRC determined that the project adequately protects neighbors' privacy and views; is well articulated; uses colors and materials that appear natural; incorporates drought-tolerant, native and non-invasive plant species; and uses downward-directed exterior lighting fixtures.

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**COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT**

DATE: March 8, 2017

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Certification of a Re-circulated Initial Study/Mitigated Negative Declaration (IS/MND), pursuant to the California Environmental Quality Act (CEQA), and consideration of a Coastal Development Permit and Design Review, pursuant to Sections 6328.4 and 6565.3 of the San Mateo County Zoning Regulations, to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. Second Unit, on an existing 5,080 sq. ft. legal parcel. The Second Unit requires a staff-level ministerial permit and is not the subject of this review. Arroyo de en Medio Creek is located on a southeast portion of the parcel. The project is appealable to the California Coastal Commission.

County File Number: PLN 2015-00152 (Love)

PROPOSAL

The applicant, Edward Love, requests approval to construct a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. Second Unit, on an existing 6,150 sq. ft. legal parcel. The parcel was legally created by a 2007 subdivision (PLN 2007-00533). The proposed project consists of a new two-story residence with three bedrooms, two bathrooms, a two-car garage, and a rear deck, as well as a 551 sq. ft. Second Unit above the proposed garage. The project site is a vacant lot located on 3rd Avenue, within a general area of developed parcels. The subject site is moderately sloped in topography with undeveloped ruderal uplands. A shallow intermittent stream, Arroyo de en Medio Creek is located approximately 30 feet on a southeast portion of the parcel. Cabrillo Highway northward, 3rd Avenue southward, and developed parcels to the west bound this parcel. The proposed landscaping consists of native, drought tolerant and non-invasive species.

RECOMMENDATION

That the Planning Commission certify the Re-circulated IS/MND and approve the Coastal Development Permit and Design Review, County File Number

PLN 2015-00152, based on and subject to the required findings and conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Dennis P. Aguirre, Project Planner, Telephone 650/363-1867

Applicant: Edward Love

Owner: Frank Vella and Steve Semprevivo

Location: 3rd Avenue, Miramar

APN: 048-042-280

Parcel Size: 6,150 sq. ft.

Parcel Legality: Recorded subdivision dated October 26, 2007 (PLN 2002-00533).

Existing Zoning: R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development)

General Plan Designation: Medium-Low Density Residential (2.1 to 6.0 dwelling units/acre)

Sphere-of-Influence: City of Half Moon Bay

Existing Land Use: Residential

Water Service: Coastside County Water District

Sewer Service: Granada Community Services District

Flood Zone: Zone X (areas of minimal flooding), Community Panel No. 060311 0225 C, map revised October 16, 2012. Per the State of California, County of San Mateo, Tsunami Inundation Map for Emergency Planning, dated June 15, 2009, the site is not located in a tsunami inundation area.

Environmental Evaluation: The original IS/MND was published with a review period of May 4, 2016 to May 24, 2016. Planning staff revised the IS/MND and released a Re-circulated IS/MND with a review period of January 31, 2017 to February 20, 2017.

Setting: The project site is a vacant lot located on 3rd Avenue, within a general area of developed parcels. The subject site is moderately sloped in topography with undeveloped ruderal uplands. A shallow intermittent stream, Arroyo de en Medio Creek

is located approximately 30 feet southeast of the parcel. Cabrillo Highway northward, 3rd Avenue southward, and developed parcels to the west bound this parcel.

Chronology:

<u>Date</u>	<u>Action</u>
October 26, 2007	- Recordation of approved subdivision (PLN 2002-00533)
April 15, 2015	- Application submitted.
July 9, 2015	- Coastside Design Review Committee continues review of the proposal, recommending redesign of the residence to bring the design into conformance with applicable design standards and to address neighbors' concerns.
August 13, 2015	- Coastside Design Review Committee recommends approval of the revised design.
January 27, 2016	- Submittal of Biological Assessment Report
May 4, 2016	- Release of the original IS/MND and start of 20-day public review period
May 24, 2016	- Close of original IS/MND public review period.
May 25, 2016	- Planning Commission public hearing. Applicant requests continuance to a future date in order to address comments from the California Coastal Commission and the Midcoast Community Council.
January 31, 2016	- Release of Re-circulated IS/MND and start of 20-day public review period
February 20, 2017	- Close of Re-circulated IS/MND public review period
March 8, 2017	- Planning Commission public hearing.

DISCUSSION

A. KEY ISSUES

1. Conformance with the County General Plan

Upon review of the applicable provisions of the General Plan, staff has determined that the project complies with all General Plan Policies, including the following:

Historical and Archaeological Resources Policy 5.20 (Site Survey) requires that sites proposed for new development be investigated to determine whether archaeological/paleontological resources are contained on-site. The policy requires a mitigation plan prepared by a qualified professional which includes adequate measures to protect the resource which are to be reviewed by the County and implemented as part of the project, prior to approval of development for these sites.

An archaeological report (Archaeological Report) was prepared by Michael Newland, Staff Archaeologist, Anthropological Studies Center, Sonoma State University, dated August 2016 (see Attachment D of the IS/MND). The Archaeological Report concludes that the records and literature search identified no previously recorded cultural resources in the Project Area (project site). While the background research indicates sensitivity for prehistoric archaeological resources within the Project Area, no evidence of archaeological deposits were found on the surface in the pedestrian survey, in the sidewalls of a trench adjacent to the Project Area, in a cleared natural cut within the Project Site, or in any of the auger-testing units. The entire parcel appears to consist of alluvial deposits mixed with local fill. The Archaeological Report states that, in sum, while the corridor on either side of the Arroyo de en Medio in general should be considered sensitive for archaeological resources, the current Project Area does not appear to contain any such resources. Local geomorphology suggests that buried archaeological resources are unlikely to be present in the upper portions of the deposits in these parcels.

As discussed in the Re-circulated IS/MND, Mitigation Measures 5 through 8 (see Attachment F) have been added to ensure that potential impacts to cultural resources are mitigated to a less than significant level in the event that archaeological and/or cultural resources are encountered during grading or construction activities. Mitigation Measure 5 requires that, if concentrations of prehistoric or historic-era materials are encountered during project activities, all work in the immediate vicinity must stop until a qualified archaeologist can evaluate the finds and make recommendations. Mitigation Measure 6 requires the project applicant or archaeologist to immediately notify the Current Planning Section of any discoveries made

and provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity of the find. Mitigation Measure 7 requires that a discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Mitigation Measure 8 requires that the property owner, applicant, and contractors be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric.

Water Supply Policy 10.10 (*Water Suppliers in Urban Areas*) requires consideration of water systems as the preferred method of water supply in urban areas. The Coastside County Water District, as the service provider for this urban area, has confirmed that water service connection is available for this site.

Wastewater Policy 11.5 (*Wastewater Management in Urban Areas*) requires consideration of sewerage systems as the appropriate method of wastewater management in urban areas. The Granada Community Services District, as the service provider for this urban area, has confirmed that there is a sewer mainline facility available for connection for the subject parcel.

2. Conformance with the Local Coastal Program

Based on the parcel's location in proximity to Arroyo de en Medio Creek, a Coastal Development Permit is required pursuant to Section 6328.4 of the County Zoning Regulations for development in the Coastal Development (CD) District. Staff has determined that the project is in compliance with applicable Local Coastal Program (LCP) Policies, elaborated as follows:

a. Locating and Planning New Development Component

LCP Policy 1.18 (*Location of New Development*) directs new development to existing urban areas in order to discourage urban sprawl and maximize the efficiency of public facilities, services and utilities. Also, new development should be concentrated in urban areas by requiring the "infilling" of existing residential subdivisions. Policy 1.19 (*Definition of Infill*) defines infill as the development of vacant land in urban areas that is subdivided and zoned for development at densities greater than one dwelling unit per 5 acres, and/or served by sewer and water. The project complies with these policies as the subject property was created via a 2007 subdivision (PLN 2007-00533) and is within the urban area of Miramar, in an area designated for Medium to Low Density Residential (2.1 to 6.0 dwelling units/acre), where public facilities, services and utilities are available.

LCP Policy 1.23 (*Timing of New Housing Development in the Midcoast*) limits the maximum number of new dwelling units built in the urban Midcoast to 40 units per calendar year so that roads, public services and facilities and community infrastructure are not overburdened by impacts of new residential development. Staff anticipates that the building permits to be issued for the 2017 calendar year will not exceed this limit, based on the current year estimated and applications for building permits received for 2016.

b. Sensitive Habitats Component

LCP Policy 7.1 (*Definition of Sensitive Habitats*) defines sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable to include, in part, intermittent streams or riparian corridors. As discussed in the Re-circulated IS/MND (see Attachment F), a Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, was prepared by WRA Environmental Consultants. The Biological Report examines the project site as well as areas around it within a designated “study area.” The Biological Report finds that the study area consists of undeveloped ruderal uplands and Arroyo de en Medio Creek, an intermittent stream located in a southeasterly portion of the site. The Biological Report also indicates that the study area includes arroyo willow scrub, which is considered riparian corridor. However, a majority of Arroyo de en Medio Creek in the study area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek. The 30-foot riparian setback for development on the project site is shown in Figure 2 of the Biological Report. The Biological Report also finds that one special-status and several non-special-status bird species have potential to nest within the study area. No special-status plant species have potential to be present. The following mitigation measures, which are recommendations of the Biological Report, have been included as Mitigation Measures in the Re-circulated IS/MND and help to ensure that potential impacts to both special-status and non-special-status bird species are mitigated to a less than significant level:

Mitigation Measure 1: Requires proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback. Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Requires initiation of project grading or construction or proposed trimming or removal of trees or shrubs to occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: Requires that, In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

LCP Policy 7.11 (*Establishment of Buffer Zones*) requires a buffer zone at least 30 feet outward from the limit of riparian vegetation for intermittent streams. Since the Biological report concludes that no riparian vegetation exists on-site, this policy requires that the minimum buffer of 30 feet shall be established and measured from the midpoint of this intermittent stream. The project complies with this policy, as shown in the proposed site plan that shows a 30-foot setback from the centerline of the stream to the closest exterior wall of the structure, and is in compliance with above Mitigation Measure 1. Condition Nos. 6 and 12 further protect the creek and riparian vegetation over the life of the project by requiring compliance with performance standards in the buffer zone and biologist review of landscaping in the buffer area, removal of invasive plants, and monitoring of the riparian area and buffer zone.

LCP Policy 7.34 (*Rare and Endangered Species – Permit Conditions*) requires submittal of a biological report that assesses the presence or potential presence of rare and endangered species in areas that are in/near sensitive habitats, including riparian corridors. As previously discussed, the Biological Report finds that one special-status and several non-special-status bird species have potential to nest within the study area. Project compliance with Mitigation Measures 2 through 4 would reduce potential project impact to less than significant and achieve compliance with LCP requirements.

c. Visual Resources Component

LCP Policy 8.12(a) (*General Regulations*) applies the Design Review Zoning District to urbanized areas of the Coastal Zone, which includes

Miramar. The project is, therefore, subject to Section 6565.20 of the Zoning Regulations. The Coastside Design Review Committee (CDRC) considered this project at the regularly scheduled CDRC meetings on July 9 and August 13, 2015, and determined the report is in compliance with applicable Design Review Standards, and recommended project approval.

LCP Policy 8.13 (*Special Design Guidelines for Coastal Communities*) establishes design guidelines for Montara, Moss Beach, El Granada, and Miramar. The proposed residence complies with these guidelines as follows:

- (1) On-site grading is not extensive and only limited to standard construction activity.
- (2) The proposed residence uses materials with a natural appearance such as hardiplank siding, stone and composition shingles.
- (3) The proposed residence uses hip roofs for the project, utilizing non-reflective, composition roof shingles, as the primary roof material.
- (4) The enhanced facade articulation brings the proposed structure to a scale compatible with the homes in the neighborhood.

d. Shoreline Access Component

LCP Policy 10.1 (*Permit Conditions for Shoreline Access*) requires some shoreline access provision as a condition of granting development permits for any public or private development between the sea and the nearest road. The subject site is located between the Pacific Ocean on the west and Cabrillo Highway on the east and is therefore subject to this policy; Cabrillo Highway is the first through road to the east of the subject parcel.

LCP Policy 10.12(a) (*Residential Areas*) requires that vertical access be provided at the ends of streets perpendicular to the shoreline. The project complies with this policy based on the existing vertical access to the shoreline via Medio Avenue located approximately 400 feet to the northwest of the parcel. Unobstructed scenic vistas to the Pacific Ocean are available at the end of this access thoroughfare. The existence of this access point also complies with the requirement, pursuant to Section 30212 of the California Coastal Act that no additional access points are required.

3. Conformance with the Half Moon Bay Airport Land Use Compatibility Plan (HAF ALUCP)

Upon review of the provisions of the HAF ALUCP for the environs of Half Moon Bay Airport, as adopted by the City/County Association of Governments (C/CAG) on October 9, 2014, staff has determined that the project site is located outside Zone 7 – Airport Influence Area (AIA) where the airport accident risk level is considered low, and also outside of the aircraft noise exposure contours.

4. Conformance with Zoning Regulations

a. Conformance with S-17 District Development Standards

The proposal complies with the property’s R-1/S-17/DR/CD zoning designation, as indicated in the following table:

	S-17 Development Standards	Proposed
Building Site Area	5,000 sq. ft.	6,150 sq. ft. (existing)
Building Site Width	50 ft.	50 ft.
Maximum Building Site Coverage	(35%) 2,152 sq. ft.	(25%) 1,527 sq. ft.
Maximum Floor Area	(48%) 2,400 sq. ft.	(43%) 2,675 sq. ft.
Minimum Front Setback	20 ft.	43 ft.
Minimum Rear Setback	20 ft.	22 ft.
Minimum Right Side Setback	10 ft.	10 ft.
Minimum Left Side Setback	5 ft.	5 ft.
Maximum Building Height	28 ft.	27 ft. - 6 in.
Minimum Parking Spaces	2	2
Facade Articulation	Finding by CDRC	Complies

The proposed two-story structure meets the zoning district height standards, and includes a design, scale and size compatible with other residences located in the vicinity by virtue of the proposed overall lot coverage of 25% (1,527 sq. ft.) of total lot size, where 35% (2,152 sq. ft.) is the maximum allowed. Additionally, the total floor area proposed is 43% (2,675 sq. ft.) of total lot size, where 48% (2,400 sq. ft.) is the maximum allowed.

b. Conformance with Design Review District Standards

The Coastside Design Review Committee (CDRC) considered the project at its regularly scheduled meetings of July 9 and August 13, 2015, and adopted the following findings to recommend project approval, pursuant to the Design Review Standards for One-Family and Two-Family Residential Development in the Midcoast, Section 6565.20 of the San Mateo County Zoning Regulations, specifically elaborated as follows:

- (1) The proposed design steps down the hillside in the same direction as the topography to conform with existing grade (Section 6565.20(D)1e).
- (2) The proposed architectural style, Contemporary Craftsman, enhances the predominant style of the neighborhood homes (Section 6565.20(D)2a).
- (3) As proposed and conditioned, the proposed materials, such as hardiplank siding, stone and composition shingles, including earth tone colors as the project's color scheme of choice, make the project compatible with various architectural styles of the neighborhood. Condition No. 4.a requires the use of stone on the front risers (Section 6565.20(D)4).
- (4) As proposed and conditioned, the proposed landscaping layout that includes drought tolerant, native and non-invasive species prevents adverse impacts to the site and surrounding areas while at the same time maintaining the visual integrity of the home. Condition No. 4.b requires the removal of all vinca major ground cover to be substituted with any other grass or ground cover called out in the landscape plan. Condition No. 4.c requires pruning of the existing cypress tree to maintain its health, shape and form (Section 6565.20(F)1).

B. ENVIRONMENTAL REVIEW

Due to the subject site's proximity to the intermittent creek, an IS/MND was prepared for the project, pursuant to the California Environmental Quality Act (CEQA). The original IS/MND (see Attachment E) was published on May 4, 2016, with a review period ending on May 24, 2016. Comments were received from the California Coastal Commission (CCC) and Midcoast Community Council (MCCC).

Potential issues raised involved flooding, area of soils that would be subject to liquefaction, shift in creek channel alignment and dam failure. In order to address the issues raised by the CCC and MCC discussed below, a Re-circulated IS/MND

was published on January 31, 2107, with a review period ending on February 20, 2017. No comments were received. In order to reduce biological, geotechnical and cultural resource impacts to a less than significant level, fourteen (14) mitigation measures have been included as part of the conditions for approval (see Attachment F). Since the release of the Re-circulated IS/MND, Planning staff has further strengthened Mitigation Measure 1 to require fencing of the buffer zone area to prevent disturbance to the area during project grading and construction activities.

C. REVIEW BY THE MIDCOAST COMMUNITY COUNCIL

The Midcoast Community Council (MCC) forwarded a response to the IS/MND on June 8, 2016. The issues raised in the June 8, 2016 letter involved potential flooding due to dam failure and the potential need to re-design the project based on re-alignment of the creek bank over time. These issues are addressed in the Re-circulated IS/MND. Regarding flooding, the project area is not designated as a flood plain by FEMA. Also, based on the Geotechnical Consultant's analysis (Froehlich method, 1995), the house would not be flooded in the event of a dam break since the elevation of the lowest portion of the proposed residence (49.7 ft. – 51 ft. range) is higher than the calculated peak flow elevation within the creek bed of 48.5 feet. Regarding creek re-alignment over time, CCC staff state that the channel of the creek is likely to migrate over the lifetime of the proposed house and possibly threaten the house, which will be a little over 30 feet from the current creek bank. The Re-circulated IS/MND states that property lines were established about 110 years ago and were defined by the centerline of the creek. The property lines remain in the centerline of the creek, suggesting that the creek has not migrated in 110 years.

D. REVIEW BY THE CALIFORNIA COASTAL COMMISSION

The California Coastal Commission forwarded responses to the project referral in a letter dated June 15, 2015 and to the original IS/MND in letters dated May 23, 2016 and August 31, 2016. Concerns raised involved potential geological hazards related to strong ground motion, liquefaction, and lateral spreading; flooding concerns related to the site's location in the floodplain of a creek and potential creek channel migration over time; and questions related to the project's protection of biological resources. A discussion of each issue is provided in the Re-circulated IS/MND and summarized in Sections B and C of this report, above. Condition Nos. 6 and 12 further protect the creek and riparian vegetation over the life of the project, by requiring compliance with performance standards in the buffer zone and biologist review of landscaping in the buffer area, removal of invasive plants, and monitoring of the riparian area and buffer zone.

E. OTHER REVIEWING AGENCIES

Building Inspection Section
Department of Public Works
Coastside Fire Protection District
Coastside County Water District
Granada Community Services District

ATTACHMENTS

- A. Recommended Findings and Conditions of Approval
- B. Vicinity Map
- C. Project Plans
- D. Coastside Design Review Committee Decision Letter, dated May 10, 2016
- E. Original Initial Study/Mitigated Negative Declaration, dated May 4, 2016
- F. Re-circulated Initial Study/Mitigated Negative Declaration, dated February 20, 2017
- G. Site Photos

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County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2015-00152

Hearing Date: March 8, 2017

Prepared By: Dennis P. Aguirre
Project Planner

For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Environmental Review, Find:

1. That the Re-circulated Initial Study/Mitigated Negative Declaration is complete, correct and adequate, and prepared in accordance with the California Environmental Quality Act and applicable State and County Guidelines.
2. That, on the basis of the Re-circulated Initial Study/Mitigated Negative Declaration and comments hereto, there is no evidence that the project, subject to the mitigation measures contained in the Re-circulated Initial Study/Mitigated Negative Declaration, will have a significant effect on the environment.
3. That the Re-circulated Initial Study/Mitigated Negative Declaration reflects the independent judgment of San Mateo County.
4. That the mitigation measures identified in the Re-circulated Initial Study/Mitigated Negative Declaration, agreed to by the applicant, placed as conditions on the project, and identified as part of this public hearing, satisfy the requirements for a Mitigation and Reporting Plan in conformance with the California Public Resources Code, Section 21081.6.

Regarding the Coastal Development Permit, Find:

5. That the project, as described in the application and accompanying materials required by the Zoning Regulations, Section 6328.4 and as conditioned in accordance with Section 6328.14, conforms with the applicable policies and required findings of the San Mateo County Local Coastal Program (LCP). Specifically, the project complies with policies regarding location of new development, sensitive habitats, shoreline access, and design review standards and findings. The project also conforms to Coastal Act Access and Recreation Policies.

6. That the number of building permits for the construction of single-family residences issued in the calendar year does not exceed the limitation of LCP Policy 1.23.

Regarding the Design Review, Find:

7. That, with the findings made by the Coastside Design Review Committee at its meetings of July 9 and August 13, 2015, the project is in compliance with applicable Design Review Standards for the Coastside. The project, as designed and conditioned, complements the predominant style of the neighborhood homes. The project adequately protects neighbors' privacy and views; is well articulated; uses colors and materials that appear natural; incorporates drought tolerant, native and non-invasive plant species; and uses downward-directed exterior lighting fixtures.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The project shall be constructed in compliance with the plans approved by the Planning Commission on March 8, 2017. Any changes or revisions to the approved plans shall be submitted to the Design Review Officer for review and approval prior to implementation. Minor adjustments to the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Alternatively, the Design Review Officer may refer consideration of the revisions to the Coastside Design Review Committee, with applicable fees to be paid.
2. The Coastal Development Permit, and Design Review final approvals shall be valid for five (5) years from the date of approval, in which time a building permit shall be issued and a completed inspection (to the satisfaction of the Building Inspector) shall have occurred within 180 days of its issuance. This approval may be extended by one 1-year increment with submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.
3. The applicant shall include the project approval letter on the top pages of the building plans.
4. The applicant shall submit or indicate the following on plans submitted for a building permit, as stipulated by the Coastside Design Review Committee:
 - a. Use stone on the front risers.
 - b. Remove all "vinca major" ground cover to be substituted with any other grass or ground cover which shall be identified in the landscape plan.

- c. Prune the existing cypress tree to maintain its health, shape and form. Evidence of proper pruning shall be provided prior to final inspection of the building permit.
5. The applicant shall provide “finished floor elevation verification” to certify that the structure is actually constructed at the height shown on the submitted plans. The applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site.
 - a. The applicant shall maintain the datum point so that it will not be disturbed by the proposed construction activities until final approval of the building permit.
 - b. This datum point and its elevation shall be shown on the submitted site plan. This datum point shall be used during construction to verify the elevation of the finished floors relative to the existing natural or to the grade of the site (finished grade).
 - c. Prior to Planning approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades.
 - d. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).
 - e. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.
 - f. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.
6. The property owner shall comply with LCP Policy 7.13 (*Performance Standards in Buffer Zones*) for the life of the project:

Require uses permitted in buffer zones to: (1) minimize removal of vegetation; (2) conform to natural topography to minimize erosion potential; (3) make provisions (i.e., catch basins) to keep runoff and sedimentation from exceeding pre-development levels; (4) replant where appropriate with native and noninvasive exotics; and (5) prevent discharge of toxic substances, such as fertilizers and pesticides; into the riparian corridor.

7. The applicant shall include an erosion and sediment control plan meeting County guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed upon the commencement of construction in order to maintain the stability of the site and to prevent erosion and sedimentation off-site.
8. The applicant shall apply for a building permit and shall adhere to all requirements of the Building Inspection Section, the Department of Public Works and the Coastside Fire Protection District.
9. No site disturbances shall occur, including any grading or vegetation removal, until a building permit has been issued.
10. To reduce the impact of construction activities on neighboring properties, comply with the following:
 - a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.
 - b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.
 - c. The applicant shall ensure that no construction-related vehicles shall impede through traffic along the right-of-way on 3rd Avenue. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on 3rd Avenue. There shall be no storage of construction vehicles in the public right-of-way.
11. The exterior color samples submitted to the Coastside Design Review Committee are approved. Color verification shall occur in the field after the applicant has applied the approved materials and colors but before a final inspection has been scheduled.
12. Installation of the approved landscape plan is required prior to final inspection. Also, a professional biologist shall provide recommendations to address removal of invasive species and include a monitoring plan for the buffer and riparian area,

which shall be submitted for review by the Community Development Director. If landscaping is proposed within the 30-foot riparian buffer zone, the biologist shall review the plan and provide recommendations to the Community Development Director. Only the approved landscape plan, in compliance with LCP Policy 7.13, can be implemented within the 30-foot riparian buffer zone area.

13. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. Saturdays. Said activities are prohibited on Sundays, Thanksgiving and Christmas (San Mateo Ordinance Code Section 4.88.360).
14. **Mitigation Measure 1:** Any proposed grading and/or construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed by a licensed surveyor in consultation with the biologist (who shall mark the edge) and added to the project survey and site plan for submittal and review by the Current Planning Section. The applicant shall install a chain-link fence along the limit of riparian vegetation to prevent use or disturbance of the area during grading and construction.
15. **Mitigation Measure 2:** Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).
16. **Mitigation Measure 3:** In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.
17. **Mitigation Measure 4:** In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.
18. **Mitigation Measure 5:** If concentrations of prehistoric or historic-era materials are encountered during project activities, all work in the immediate vicinity stop until a qualified archaeologist can evaluate the finds and make recommendations.
19. **Mitigation Measure 6:** The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

20. **Mitigation Measure 7:** A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.
21. **Mitigation Measure 8:** The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.
22. **Mitigation Measure 9:** Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).
23. **Mitigation Measure 10:** Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1-foot of the soil, and by base friction below the foundations. An equivalent fluid weight of 300 pcf shall be used in design to calculate the passive pressure. Although the upper 1-foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. A base friction coefficient of 0.30, multiplied by the vertical dead load shall be used to calculate the base friction lateral resistance.
24. **Mitigation Measure 11:** Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.
25. **Mitigation Measure 12:** Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

26. **Mitigation Measure 13:** The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.
27. **Mitigation Measure 14:** The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

Building Inspection Section

28. The applicant shall apply for a building permit.

Granada Community Services District

29. Prior to the issuance of a building permit, the applicant shall obtain a sewer permit for a sewer connection via the required approval of a sewer permit variance.

Coastside County Water District

30. Prior to the issuance of a building permit, the applicant shall obtain a water service connection to include fire suppression plans for review and approval.

Department of Public Works

31. Prior to the issuance of the building permit, the applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off of the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.
32. Prior to the issuance of the building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the

roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

33. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.
34. Prior to the issuance of the building permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.
35. The applicant shall demonstrate, to the satisfaction of the Department of Public Works and the appropriate Fire District or Fire Marshal, that the existing road access from the nearest "publicly" maintained roadway to the building site meets or exceeds the County's minimum standards for an "Interim Access Roadway," including provisions for existing and proposed drainage and drainage facilities. The applicant must also demonstrate that appropriate turnouts and a turnaround, meeting Fire Marshal requirements, exist or can be provided, if applicable.

Coastside Fire Protection District

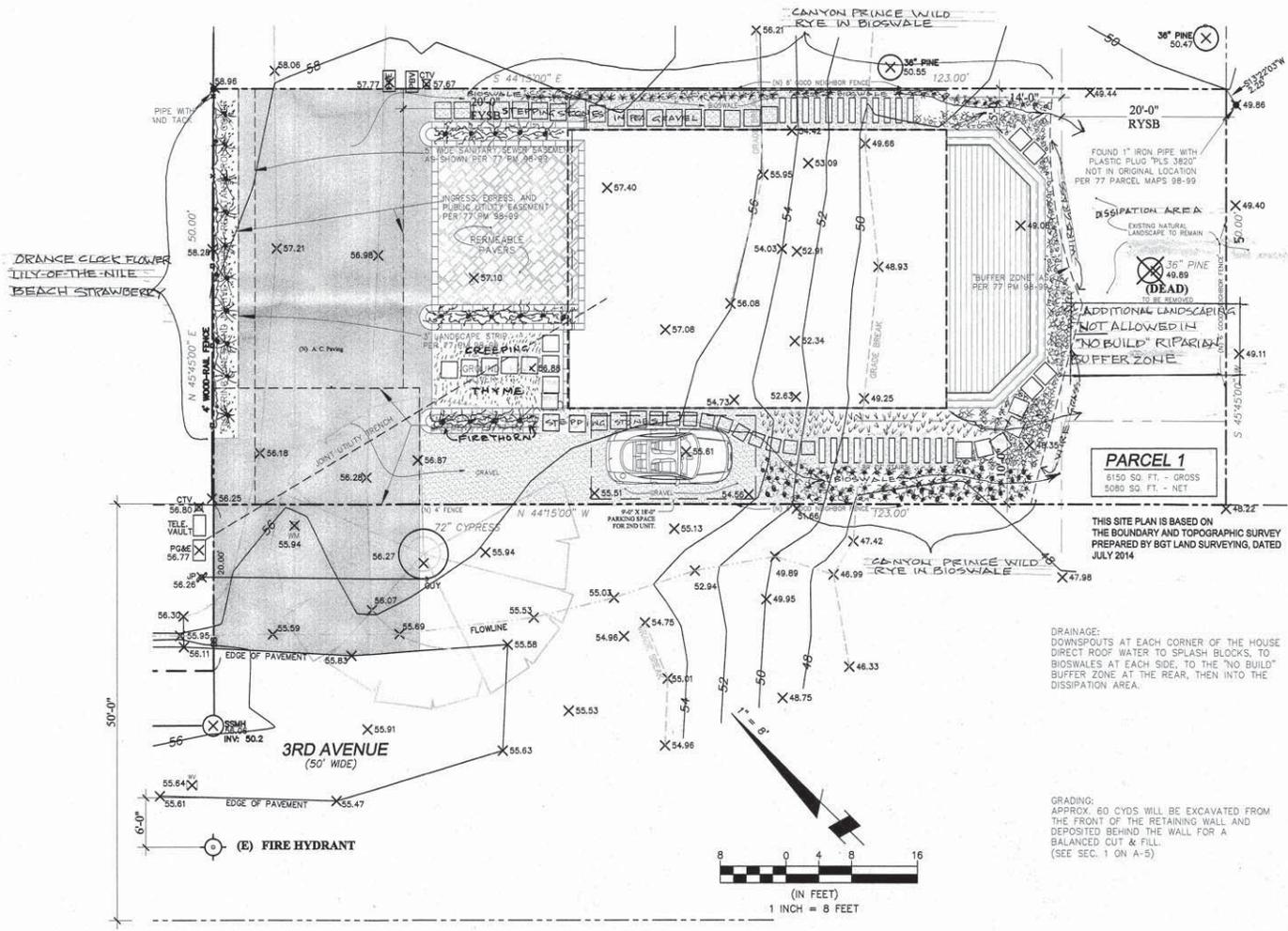
36. Smoke detectors which are hardwired: As per the California Building Code, State Fire Marshal Regulations, and Coastside Fire Protection District Ordinance No. 2013-03, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hardwired, interconnected, and have battery backup. These detectors are required to be placed in each new and reconditioned sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final.
37. Add note to plans: Smoke alarms/detectors are to be hardwired, interconnected, or with battery backup. Smoke alarms to be installed per manufacturer's instruction and NFPA 72.
38. Add note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 sq. ft.; 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor.
39. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.

40. Occupancy Separation: As per the 2010 CBC, Section 406.1.4, a 1-hour occupancy separation wall shall be installed with a solid core, 20-minute fire rated, self-closing door assembly with a smoke gasket between the garage and the residence. All electrical boxes installed in rated walls shall be metal or protected.
41. Address numbers: As per Coastside Fire Protection District Ordinance No. 2013-03, building identification shall be conspicuously posted and visible from the street. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON-SITE.) The letters/numerals for permanent address signs shall be 4 inches in height with a minimum 3/4-inch stroke. Such letters/numerals shall be internally illuminated and facing the direction of access. Finished height of bottom of address light unit shall be greater than or equal to 6 feet from the finished grade. When the building is served by a long driveway or is otherwise obscured, a 6-inch by 18-inch green reflective metal sign with 3-inch reflective numbers/letters similar to Hy-Ko 911 or equivalent shall be placed at the entrance from the nearest public roadway. See Fire Ordinance for standard sign.
42. Add the following note to the plans: New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. Residential address numbers shall be at least 6 feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required by the Coastside Fire Protection District. This remote signage shall consist of a 6-inch by 18-inch green reflective metal sign with 3-inch reflective numbers/letters similar to Hy-Ko 911 or equivalent.
43. Roof covering: As per Coastside Fire Protection District Ordinance No. 2013-03, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "B" or higher as defined in the current edition of the California Building Code.
44. Vegetation management: As per the Coastside Fire Protection District Ordinance No. 2013-03, the 2013 California Fire Code and Public Resources Code 4291:
 - a. A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. In SRA (State Responsible Area), the fuel break is 100 feet or to the property line.
 - b. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 to 10 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity.

- c. Remove that portion of any existing tree, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure.
45. Add the following note to plans: The installation of an approved spark arrester is required on all chimneys, existing and new. Spark arresters shall be constructed of woven or welded wire screening of 12-gauge USA standard wire having openings not exceeding 1/2-inch.
46. Fire Access Roads: The applicant must have a maintained asphalt surface road for ingress and egress of fire apparatus. The San Mateo County Department of Public Works, the Coastside Fire Protection District Ordinance No. 2013-03, and the California Fire Code shall set road standards. As per the 2013 CFC, dead-end roads exceeding 150 feet shall be provided with a turnaround in accordance with Coastside Fire Protection District specifications. As per the 2007 CFC, Section Appendix D, road width shall not be less than 20 feet. Fire access roads shall be installed and made serviceable prior to combustibles being placed on the project site and maintained during construction. Approved signs and painted curbs or lines shall be provided and maintained to identify fire access roads and state the prohibition of their obstruction. If the road width does not allow parking on the street (20-foot road) and on-street parking is desired, an additional improved area shall be developed for that use.
47. Fire apparatus roads to be a minimum of 20 feet wide with minimum of 35 feet centerline radius and a vertical clearance of 15 feet.
48. Fire apparatus access roads to be an approved all weather surface. Grades 15% or greater to be surfaced w/ asphalt, or brushed concrete. Grades 15 % or greater shall be limited to 150 feet in length with a minimum of 500 feet between the next section. For roads approved less than 20 feet, 20-foot wide turnouts shall be on each side of 15% or greater section. No grades over 20%. (Plan and profile required) CFC 503.
49. "No Parking - Fire Lane" signs shall be provided on both sides of roads 20 to 26 feet wide and on one side of roads 26 to 32 feet wide.
50. Fire Hydrant: As per 2013 CFC, Appendix B and C, a fire district approved fire hydrant (Clow 960) must be located within 250 feet of the proposed single-family dwelling unit measured by way of drivable access. As per 2013 CFC, Appendix B the hydrant must produce a minimum fire flow of 1,000 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for 2 hours. Contact the local water purveyor for water flow details. Required: An approved fire hydrant (Clow 960) within 250 feet of your project that flows a minimum of 1,000 gpm at 20 per square inch. Location of hydrant by way travel for fire apparatus ingress and egress. Fire Flows required before final.

51. Show location of fire hydrant on a site plan. A fire hydrant is required within 250 feet of the building and flow a minimum of 1,000 gallons per minute (gpm) at 20 pounds per square inch (psi). This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to the Coastside Fire Protection District. If there is not a hydrant within 250 feet with the required flow, one will have to be installed at the applicant's expense.
52. Automatic Fire Sprinkler System: As per San Mateo County Building Standards and Coastside Fire Protection District Ordinance No. 2013-03, the applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. All areas that are accessible for storage purposes shall be equipped with fire sprinklers including closets and bathrooms. The only exception is small linen closets less than 24 sq. ft. with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Department or the City of Half Moon Bay. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County or City will forward a complete set to the Coastside Fire Protection District for review. The fee schedule for automatic fire sprinkler systems shall be in accordance with Half Moon Bay Ordinance No. 2006-01. Fees shall be paid prior to plan review.
53. Exterior bell and interior horn/strobe are required to be wired into the required flow switch on your fire sprinkler system. The bell, horn/strobe and flow switch, along with the garage door opener, are to be wired into a separate circuit breaker at the main electrical panel and labeled.
54. All fire conditions and requirements must be incorporated into your building plans prior to building permit issuance. It is your responsibility to notify your contractor, architect and engineer of these requirements.

DPA:pac - DPABB0054_WPU.DOCX



PLANT LIST					
SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE	REMARKS
	CLIMBING VINE	ORANGE CREEPER	TUNBERGIA GREGORII	1 GAL	2'
	PERENNIAL	LILY OF THE VALLEY	AGAPATHUS CRYPTOLIS	1 GAL	4'
	GROUND COVER	BEACH STRAWBERRY	FRAGARIA CHILOENSIS	FLATS	12" x 18"
	SHRUB	PIRETHORN	FRAGARIA ANTHUS	1 GAL	3'
	GROUND COVER	WILD RYE	LYRAPHIS	FLATS	12" x 18"
	GROUND COVER	CREeping THyme	THYMUS PRAECOX	FLATS	6"
	GROUND COVER	WIRE GRASS	UNCLAS	FLATS	6"
	GROUND COVER	BLUE RUSH	VITIS A	FLATS	12"
	GROUND COVER	PERENNIAL	M. D. J. K.	FLATS	12"

1 LANDSCAPE PLAN

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

San Mateo County Planning Commission Meeting

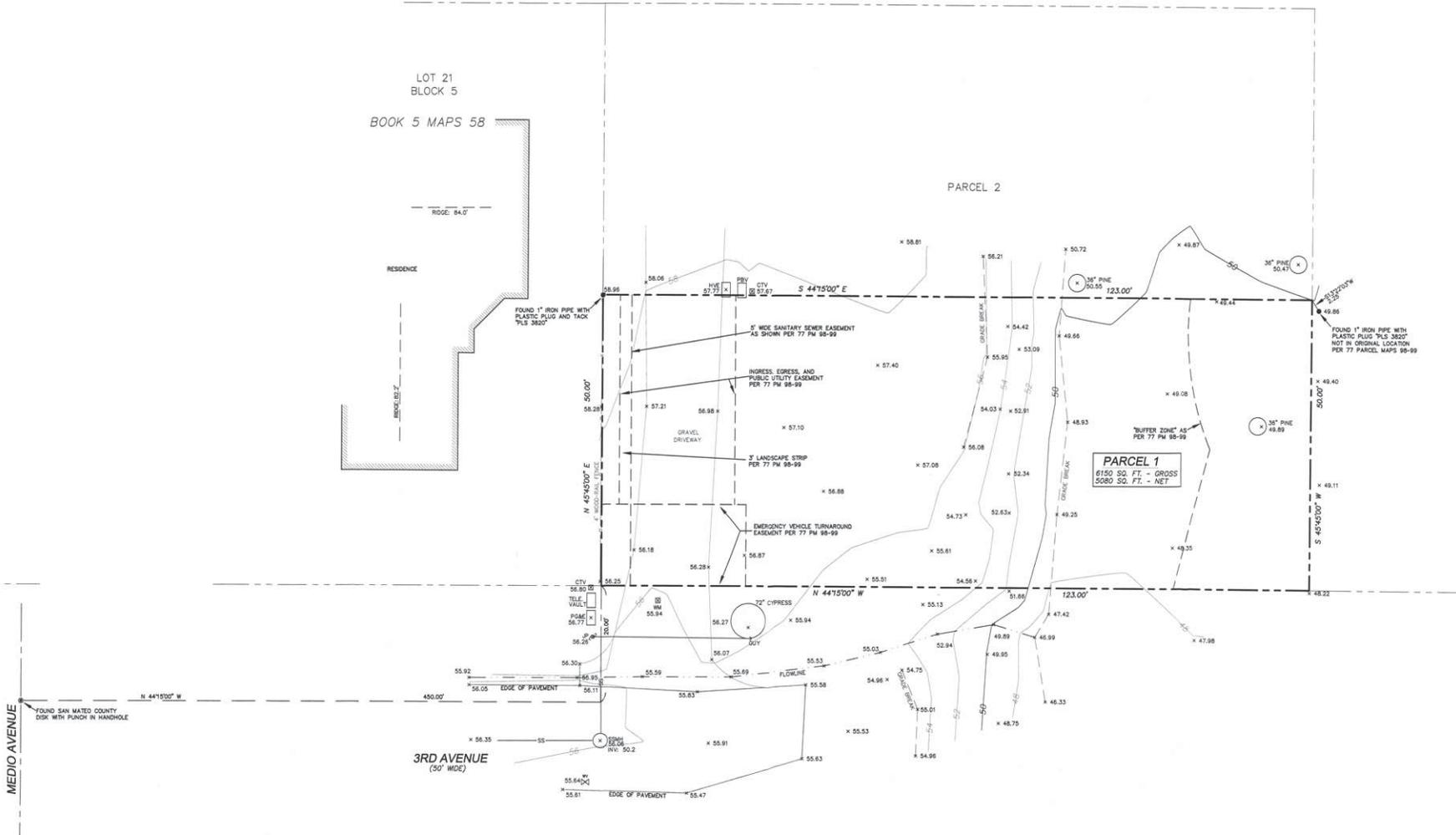
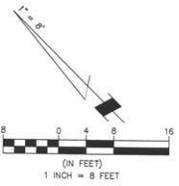
Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **C**

File Numbers: **PLN 2015-00152**



77 PARCEL MAPS 98-99
PARCEL 3

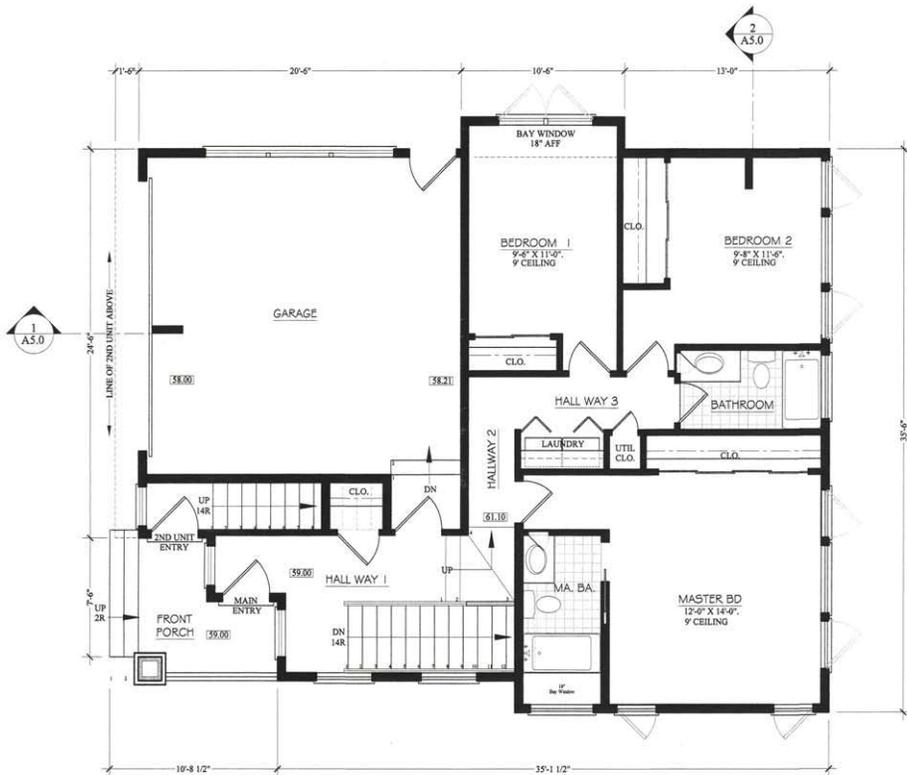


San Mateo County Planning Commission Meeting

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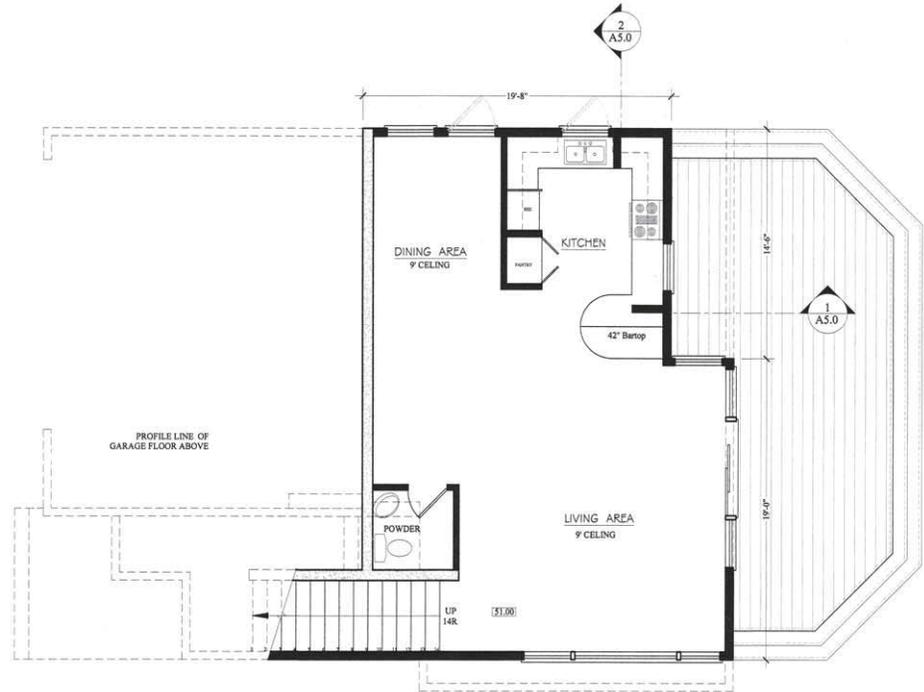
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File Numbers: **PLN 2015-00152**



1 PROPOSED SECOND FLOOR PLAN (Entry Level)
A2.0

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



2 PROPOSED FIRST FLOOR (Lowest Level)
A2.0

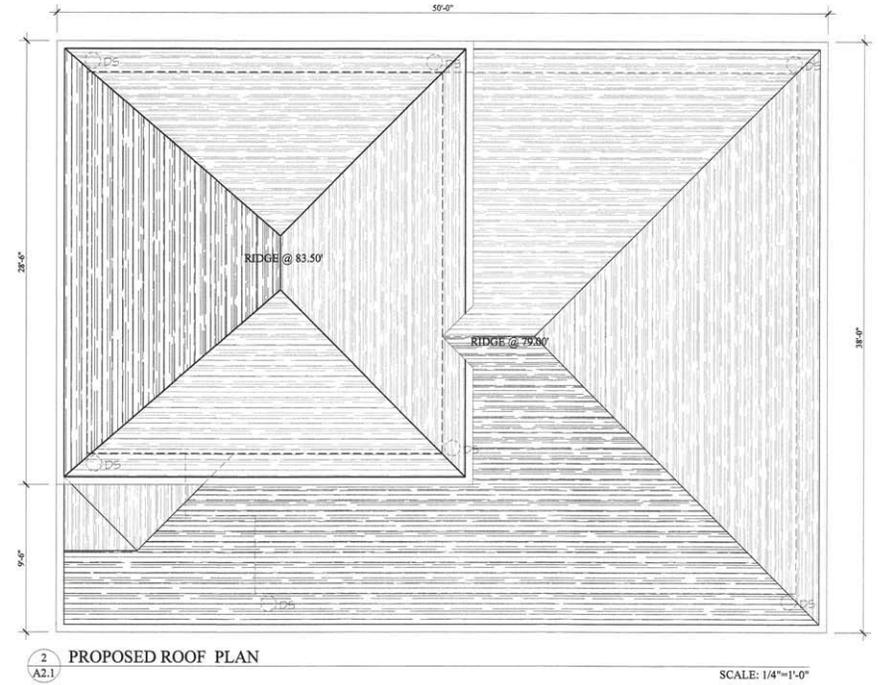
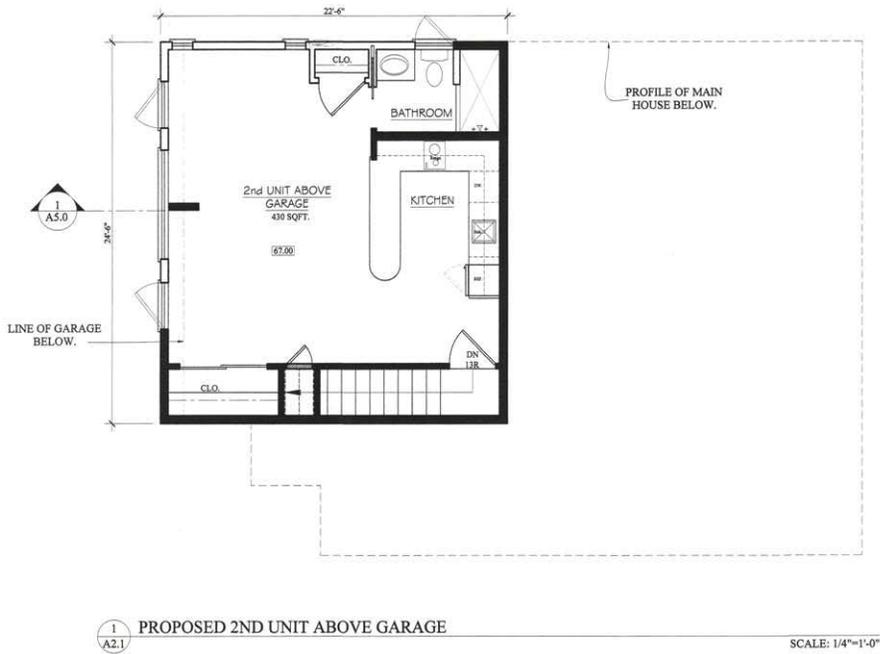
SCALE: 1/4"=1'-0"

San Mateo County Planning Commission Meeting

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1
A4 PROPOSED FRONT ELEVATION (NORTH)

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



1
A4 PROPOSED REAR ELEVATION (SOUTH)

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

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

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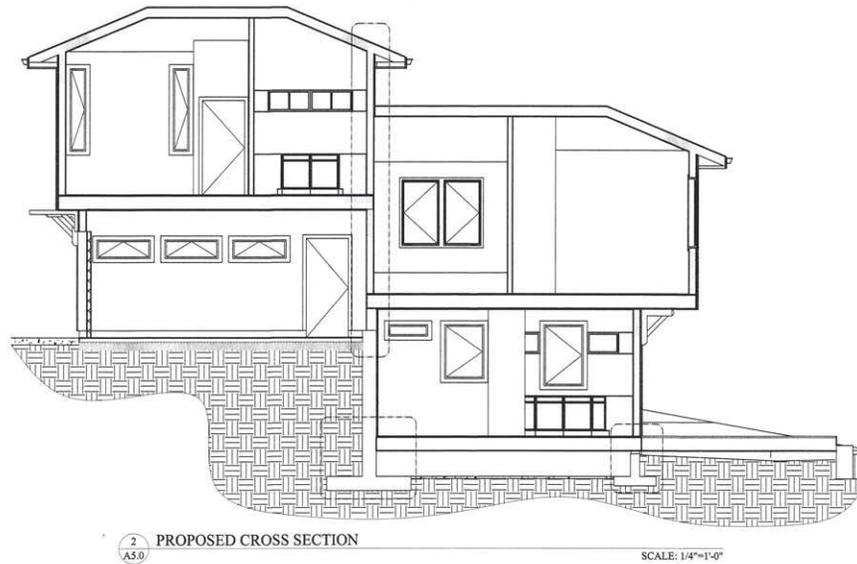
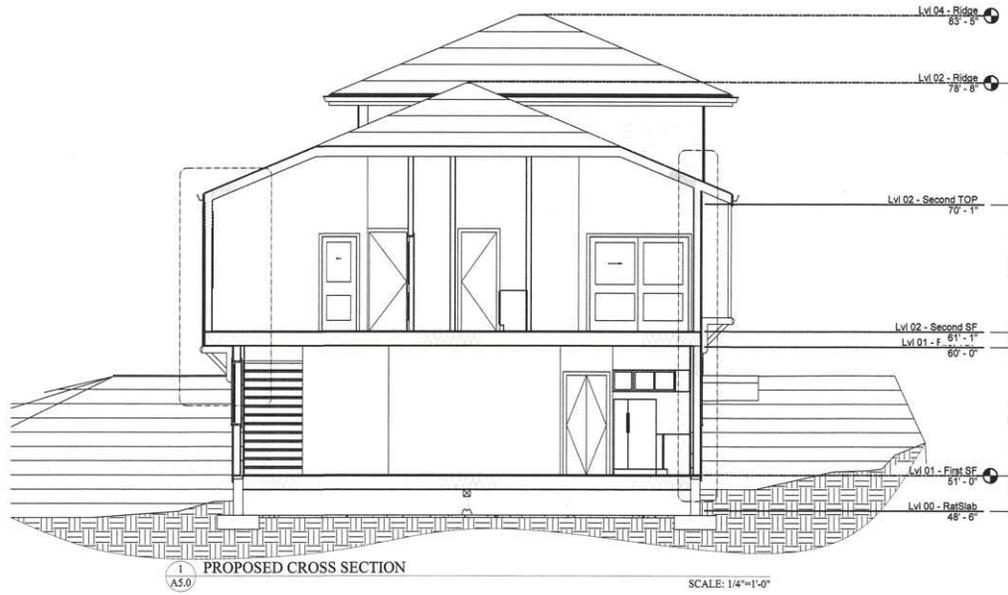


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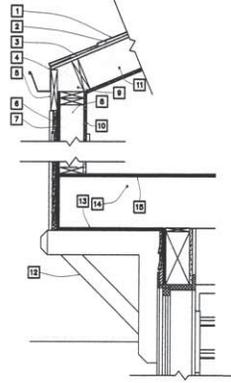


San Mateo County Planning Commission Meeting

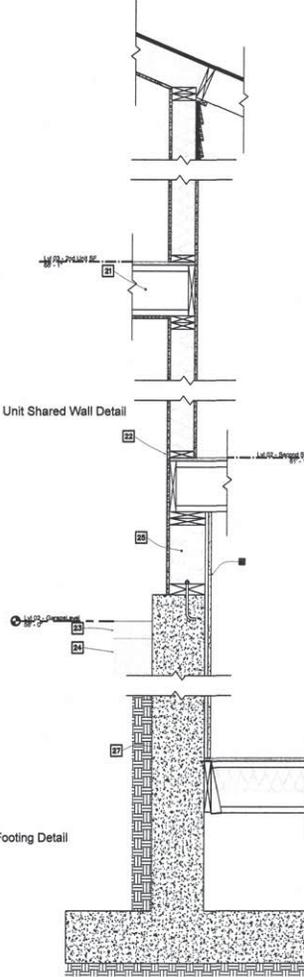
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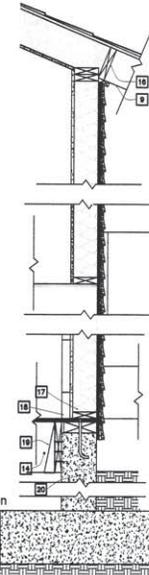


① Pop-Out Detail
3/4" = 1'-0"



② Garage / Second Unit Shared Wall Detail
3/4" = 1'-0"

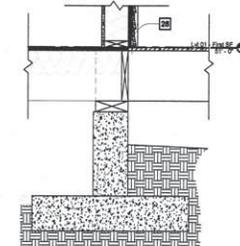
③ Retaining Wall / Footing Detail
3/4" = 1'-0"



Typ. Eave Detail
3/4" = 1'-0"

Typ. Wall to Floor
3/4" = 1'-0"

④ Typ. Wall to Foundation
3/4" = 1'-0"



⑤ Deck Connection Detail
3/4" = 1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **C**

File Numbers: **PLN 2015-00152**

May 10, 2016

Edward Love
720 Mill Street
Half Moon Bay, CA 94019

PROJECT FILE

Dear Mr. Love:

SUBJECT: Coastside Design Review Committee Recommendation of Approval
3rd Avenue, Miramar
APN 048-042-280; County File No. PLN 2015-00152

At its meeting of August 13, 2015, the San Mateo County Coastside Design Review Committee (CDRC) considered your application for design review permit to allow construction of a new 1,724 sq. ft., 2-story, single-family residence, plus a 400 sq. ft. attached 2-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel, as part of a hearing-level Coastal Development Permit. No significant trees are proposed for removal.

Based on the plans, application forms and accompanying materials submitted, the Coastside Design Review Committee recommended approval of your project based on and subject to the following findings and conditions of approval:

FINDINGS

The Coastside Design Review Officer found that:

1. For the Environmental Review

Due to the presence of an intermittent stream, Arroyo de en Medio Creek, located approximately 30 feet from the subject site, a Mitigated Negative Declaration has been prepared for the project, pursuant to the California Environmental Quality Act (CEQA), Section 15070.

The Coastside Design Review Committee found that:

2. For the Design Review

The project has been reviewed under and found to be in compliance with the Design Review Standards for One-Family and Two-Family Residential Development in the Midcoast, Section 6565.20 of the San Mateo County Zoning Regulations, specifically elaborated as follows:



- a. The proposed design steps down the hillside in the same direction as the topography as it conforming it to existing grade (Section 6565.20(D)1e).
- b. The proposed architectural style, Contemporary Craftsman, is compatible with the dominant style of the neighborhood homes (Section 6565.20(D)2a).
- c. As proposed and conditioned, the proposed materials, such as hardiplank siding, stone and composition shingles, and earth tone colors as the project's color scheme of choice, make the project compatible with various architectural styles of the neighborhood. Condition No. 2.a requires the use of stone on the front risers (Section 6565.20(D)4).
- d. As proposed and conditioned, the proposed landscaping plan that includes drought tolerant, native and non-invasive species prevents adverse impacts to the site and surrounding areas and maintains the visual integrity of the proposed residence. Condition No. 2.b requires the removal of all "vinca major" and the substitution of any grass which shall be identified in the landscape plan. Condition No. 2.c requires pruning of the existing cypress tree to protect its shape and form and promote longevity. (Section 6565.20(F)1).

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The project shall be constructed in compliance with the plans recommended for approval by the Coastside Design Review Committee on August 13, 2015. Any changes or revisions to the approved plans shall be submitted to the Design Review Officer for review and approval prior to implementation. Minor adjustments to the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Alternatively, the Design Review Officer may refer consideration of the revisions to the Coastside Design Review Committee, with applicable fees to be paid.
2. The applicant shall indicate the following on plans submitted for a building permit, as stipulated by the Coastside Design Review Committee:
 - a. Use stone on the front risers.
 - b. Remove of all "vinca major" and the substitute any grass which shall be identified in the landscape plan.
 - c. Prune the existing cypress tree to protect its shape and form and maintain health. Evidence of proper pruning shall be provided prior to final inspection of the building permit.

3. The applicant shall provide "finished floor elevation verification" to certify that the structure is actually constructed at the height shown on the submitted plans. The applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site.
 - a. The applicant shall maintain the datum point so that it will not be disturbed by the proposed construction activities until final approval of the building permit.
 - b. This datum point and its elevation shall be shown on the submitted site plan. This datum point shall be used during construction to verify the elevation of the finished floors relative to the existing natural or to the grade of the site (finished grade).
 - c. Prior to Planning approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades.
 - d. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).
 - e. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.
 - f. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.
4. During project construction, the applicant shall, pursuant to Chapter 4.100 of the San Mateo County Ordinance Code, minimize the transport and discharge of stormwater runoff from the construction site into storm drain systems and water bodies by:
 - a. Using filtration materials on storm drain covers to remove sediment from dewatering effluent.
 - b. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30.

- c. Removing spoils promptly, and avoiding stockpiling of fill materials, when rain is forecast. If rain threatens, stockpiled soils and other materials shall be covered with a tarp or other waterproof material.
 - d. Storing, handling, and disposing of construction materials and wastes so as to avoid their entry to the storm drain system or water body.
 - e. Avoiding cleaning, fueling or maintaining vehicles on-site, except in an area designated to contain and treat runoff.
 - f. Limiting and timing application of pesticides and fertilizers to avoid polluting runoff.
5. The applicant shall include an erosion and sediment control plan meeting County guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed upon the commencement of construction in order to maintain the stability of the site and to prevent erosion and sedimentation off-site.
6. The applicant shall apply for a building permit and shall adhere to all requirements of the Building Inspection Section, the Department of Public Works and the Coastside Fire Protection District.
7. No site disturbances shall occur, including any grading or vegetation removal, until a building permit has been issued.
8. To reduce the impact of construction activities on neighboring properties, comply with the following:
 - a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.
 - b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.
 - c. The applicant shall ensure that no construction-related vehicles shall impede through traffic along the right-of-way on 3rd Avenue. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on 3rd Avenue. There shall be no storage of construction vehicles in the public right-of-way.
9. The exterior color samples submitted to the Coastside Design Review Committee are approved. Color verification shall occur in the field after the applicant has applied the approved materials and colors but before a final inspection has been scheduled.

10. Installation of the approved landscape plan is required prior to final inspection.
11. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. Saturdays. Said activities are prohibited on Sundays, Thanksgiving and Christmas (San Mateo Ordinance Code Section 4.88.360).

Building Inspection Section

12. The applicant shall apply for a building permit.

Granada Community Services District

13. Prior to the issuance of a building permit, the applicant shall obtain a sewer permit for a sewer connection via the required approval of a sewer permit variance.

Coastside County Water District

14. Prior to the issuance of a building permit, the applicant shall obtain a water service connection to include fire suppression plans for review and approval.

Department of Public

15. Prior to the issuance of the building permit, the applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off of the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.
16. Prior to the issuance of the building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.
17. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans,

have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

18. Prior to the issuance of the building permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.
19. The applicant shall demonstrate, to the satisfaction of the Department of Public Works and the appropriate Fire District or Fire Marshal, that the existing road access from the nearest "publicly" maintained roadway to the building site meets or exceeds the County's minimum standards for an "Interim Access Roadway," including provisions for existing and proposed drainage and drainage facilities. The applicant must also demonstrate that appropriate turnouts and a turnaround, meeting Fire Marshal requirements, exist or can be provided, if applicable.

Coastside Fire Protection District

20. Smoke detectors which are hardwired: As per the California Building Code, State Fire Marshal Regulations, and Coastside Fire Protection District Ordinance No. 2013-03, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hardwired, interconnected, and have battery backup. These detectors are required to be placed in each new and reconditioned sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final.
21. Add note to plans: Smoke alarms/detectors are to be hardwired, interconnected, or with battery backup. Smoke alarms to be installed per manufacturer's instruction and NFPA 72.
22. Add note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 sq. ft.; 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor.
23. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.
24. Occupancy Separation: As per the 2010 CBC, Section 406.1.4, a 1-hour occupancy separation wall shall be installed with a solid core, 20-minute fire rated, self-closing door assembly with a smoke gasket between the garage and the residence. All electrical boxes installed in rated walls shall be metal or protected.

25. Address numbers: As per Coastside Fire Protection District Ordinance No. 2013-03, building identification shall be conspicuously posted and visible from the street. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON-SITE.) The letters/numerals for permanent address signs shall be 4 inches in height with a minimum 3/4-inch stroke. Such letters/numerals shall be internally illuminated and facing the direction of access. Finished height of bottom of address light unit shall be greater than or equal to 6 feet from the finished grade. When the building is served by a long driveway or is otherwise obscured, a 6-inch by 18-inch green reflective metal sign with 3-inch reflective numbers/letters similar to Hy-Ko 911 or equivalent shall be placed at the entrance from the nearest public roadway. See Fire Ordinance for standard sign.
26. Add the following note to the plans: New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. Residential address numbers shall be at least 6 feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required by the Coastside Fire Protection District. This remote signage shall consist of a 6-inch by 18-inch green reflective metal sign with 3-inch reflective numbers/letters similar to Hy-Ko 911 or equivalent.
27. Roof covering: As per Coastside Fire Protection District Ordinance No. 2013-03, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "B" or higher as defined in the current edition of the California Building Code.
28. Vegetation management: As per the Coastside Fire Protection District Ordinance No. 2013-03, the 2013 California Fire Code and Public Resources Code 4291:
 - a. A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. In SRA (State Responsible Area), the fuel break is 100 feet or to the property line.
 - b. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 to 10 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity.
 - c. Remove that portion of any existing tree, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure.
29. Add the following note to plans: The installation of an approved spark arrester is required on all chimneys, existing and new. Spark arresters shall be constructed of

woven or welded wire screening of 12-gauge USA standard wire having openings not exceeding 1/2 inch.

30. Fire Access Roads: The applicant must have a maintained asphalt surface road for ingress and egress of fire apparatus. The San Mateo County Department of Public Works, the Coastside Fire Protection District Ordinance No. 2013-03, and the California Fire Code shall set road standards. As per the 2013 CFC, dead-end roads exceeding 150 feet shall be provided with a turnaround in accordance with Coastside Fire Protection District- specifications. As per the 2007 CFC, Section Appendix D, road width shall not be less than 20 feet. Fire access roads shall be installed and made serviceable prior to combustibles being placed on the project site and maintained during construction. Approved signs and painted curbs or lines shall be provided and maintained to identify fire access roads and state the prohibition of their obstruction. If the road width does not allow parking on the street (20-foot road) and on-street parking is desired, an additional improved area shall be developed for that use.
31. Fire apparatus roads to be a minimum of 20 feet wide with minimum of 35 feet centerline radius and a vertical clearance of 15 feet.
32. Fire apparatus access roads to be an approved all weather surface. Grades 15% or greater to be surfaced w/ asphalt, or brushed concrete. Grades 15 % or greater shall be limited to 150 feet in length with a minimum of 500 feet between the next section. For roads approved less than 20 feet, 20-foot wide turnouts shall be on each side of 15% or greater section. No grades over 20%. (Plan and profile required) CFC 503.
33. "No Parking - Fire Lane" signs shall be provided on both sides of roads 20 to 26 feet wide and on one side of roads 26 to 32 feet wide.
34. Fire Hydrant: As per 2013 CFC, Appendix B and C, a fire district approved fire hydrant (Clow 960) must be located within 250 feet of the proposed single-family dwelling unit measured by way of drivable access. As per 2013 CFC, Appendix B the hydrant must produce a minimum fire flow of 1,000 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for 2 hours. Contact the local water purveyor for water flow details. Required: An approved fire hydrant (Clow 960) within 250 feet of your project that flows a minimum of 1,000 gpm at 20 pounds per square inch. Location of hydrant by way travel for fire apparatus ingress and egress. Fire Flows required before final.
35. Show location of fire hydrant on a site plan. A fire hydrant is required within 250 feet of the building and flow a minimum of 1,000 gallons per minute (gpm) at 20 pounds per square inch (psi). This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to the Coastside Fire Protection District. If there is not a hydrant within 250 feet with the required flow, one will have to be installed at the applicant's expense.
36. Automatic Fire Sprinkler System: As per San Mateo County Building Standards and Coastside Fire Protection District Ordinance No. 2013-03, the applicant is required to

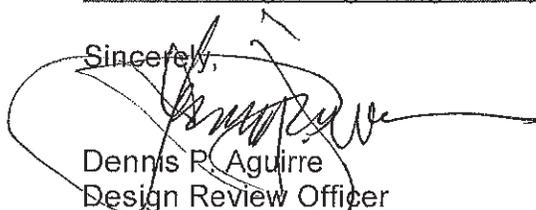
install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. All areas that are accessible for storage purposes shall be equipped with fire sprinklers including closets and bathrooms. The only exception is small linen closets less than 24 sq. ft. with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Department or the City of Half Moon Bay. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County or City will forward a complete set to the Coastside Fire Protection District for review. The fee schedule for automatic fire sprinkler systems shall be in accordance with Half Moon Bay Ordinance No. 2006-01. Fees shall be paid prior to plan review.

37. Exterior bell and interior horn/strobe are required to be wired into the required flow switch on your fire sprinkler system. The bell, horn/strobe and flow switch, along with the garage door opener, are to be wired into a separate circuit breaker at the main electrical panel and labeled.
38. All fire conditions and requirements must be incorporated into your building plans prior to building permit issuance. It is your responsibility to notify your contractor, architect and engineer of these requirements.

Please note that the decision of the Coastside Design Review Committee is a recommendation regarding the project's compliance with design review standards, not the final decision on this project, which requires a hearing-level Coastal Development Permit (CDP). The decision on the permit will take place at the Planning Commission meeting on **May 25, 2016**. For more information, please contact the project planner, Dennis P. Aguirre, at 650/363-1867, or by email at daguirre@smcgov.org.

To provide feedback, please visit the Department's Customer Survey at the following link:
<http://planning.smcgov.org/survey>.

Sincerely,



Dennis R. Aguirre
Design Review Officer

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cc: Dianne Whitaker, Architect
Linda Montalto-Patterson, Acting Miramar Community Representative
Steve Semprevivo
Frank Vella

ATTACHMENT E

COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT MITIGATED NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: New Vella/Semprevivo Single-Family Residence, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2015-00152

OWNER: Frank Vella and Steve Semprevivo

APPLICANT: Edward Love

ASSESSOR'S PARCEL NO.: 048-042-280

POSTING
ONLY
BESZ DE LA VEG.

MAY 04 2016

LOCATION: 3rd Avenue, unincorporated Miramar area of San Mateo County

PROJECT DESCRIPTION: The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. The project, as proposed and mitigated, will not adversely affect water or air quality or increase noise levels substantially.
2. The project, as proposed and mitigated, will not have adverse impacts on the flora or fauna of the area.
3. The project, as proposed and mitigated, will not degrade the aesthetic quality of the area.
4. The project, as proposed, will not have adverse impacts on traffic or land use.
5. In addition, the project, as proposed and mitigated, will not:
 - a. Create impacts which have the potential to degrade the quality of the environment.
 - b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

- c. Create impacts for a project which are individually limited, but cumulatively considerable.
- d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project is less than significant.

MITIGATION MEASURES recommended for project implementation to avoid potentially significant effects:

Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a

professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.

- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

RESPONSIBLE AGENCY CONSULTATION: None.

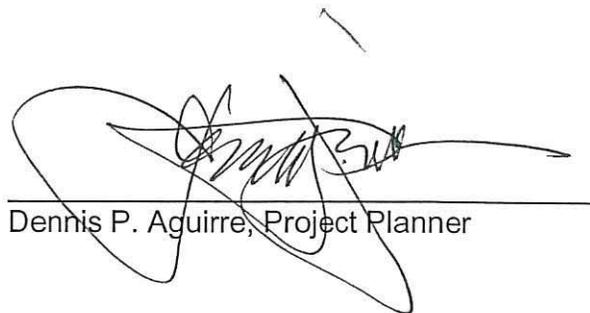
INITIAL STUDY: The San Mateo County Current Planning Section has reviewed the Environmental Evaluation of this project and has found that the probable environmental impacts are less than significant. A copy of the initial study is attached.

REVIEW PERIOD: May 4, 2016 to May 24, 2016

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., May 24, 2016.**

CONTACT PERSON

Dennis P. Aguirre
Project Planner, 650/363-1867
daguirre@smcgov.org



Dennis P. Aguirre, Project Planner

DPA:pac – DPAAA0232_WPH.DOCX

County of San Mateo
Planning and Building Department

**INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST**
(To Be Completed by Planning Department)

1. **Project Title:** New Vella/Semprevivo Single-Family Residence
2. **County File Number:** PLN 2015-00152
3. **Lead Agency Name and Address:** County of San Mateo Planning and Building Department, 455 County Center, Second Floor, Redwood City, CA 94063
4. **Contact Person and Phone Number:** Dennis P. Aguirre, Project Planner, 650/363-1867
5. **Project Location:** 3rd Avenue, unincorporated Miramar area of San Mateo County
6. **Assessor's Parcel Number and Size of Parcel:** 048-042-280; 6,150 sq. ft.
7. **Project Sponsor's Name and Address:** Frank Vella and Steve Semprevivo, 758 Vasques Drive, Half Moon Bay
8. **General Plan Designation:** Medium High Density Residential
9. **Zoning:** R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development)
10. **Description of the Project:** The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.
11. **Surrounding Land Uses and Setting:** The project site is a vacant lot located on 3rd Avenue in the unincorporated Miramar area of San Mateo County, within a general area of developed parcels. The subject site is mildly sloped (approximately 10%) in topography with vegetation consisting of non-native invasive plant species, ruderal and disturbed vegetation, and areas of riparian vegetation. An intermittent stream, Arroyo de en Medio, runs along the southern boundary of the site. 3rd Avenue westward and developed parcels to the north, south and west bound this parcel.
12. **Other Public Agencies Whose Approval is Required:** None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

There are environmental factors that would be potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Significant Unless Mitigated", as indicated by the checklist on the following pages.

	Aesthetics		Climate Change		Population/Housing
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Public Services
	Air Quality	X	Hydrology/Water Quality		Recreation
X	Biological Resources		Land Use/Planning		Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities/Service Systems
X	Geology/Soils		Noise	X	Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" 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 "No Impact" answer should be explained 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).
2. All answers must take account of the whole 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.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.

- b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. AESTHETICS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1.a. Have a significant adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	
<p>Discussion: The proposed project site is not located within any designated State or County Scenic Corridor. The site is would not visible from Cabrillo Highway due to existing mature vegetation and proposed landscaping that provide screening for the project and minimize any significant visual impacts from this main thoroughfare. The project is located in a Design Review (DR) District. The Coastside Design Review Committee (CDRC) considered the project at its August 13, 2015 meeting, and recommended approval of the project, as submitted.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				
1.b. Significantly damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				

1.c. Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief features, and/or development on a ridgeline?			X	
<p>Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project is consistent with the existing residential character of the neighborhood, as determined by the CDRC.</p> <p>Source: Project Plans and Field Observation.</p>				
1.d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?			X	
<p>Discussion: As the project involves the installation of exterior lighting fixtures that are downward directed, as required by the Design Review standards, no significant source of light and glare will be created that would affect views in the area.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
1.f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?			X	
<p>Discussion: The subject parcel is zoned R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development). The project is subject to the approval of a Coastal Development Permit and Design Review Permit, pursuant to Sections 6328.4, and 6565.3 of the San Mateo County Zoning Regulations. The project, as proposed, is generally consistent with these regulations. The proposed development conforms to the use requirements of the R-1 Zoning District and the development standards of the S-17 Zoning District.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.g. Visually intrude into an area having natural scenic qualities?			X	
<p>Discussion: The project site is bordered by 3rd Avenue to the west and developed parcels to the north, south and west bound this parcel. The proposed residence would blend in with existing houses in the area. As mitigated, the project would protect the Arroyo de en Medio creek and</p>				

associated riparian vegetation, located at the rear of the parcel. Reference response to Section 1.a., above.

Source: Project Plans and Field Observation.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2.a. For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

Discussion: N/A. The project site does not contain farmland and is not located in an agricultural zoning district, nor is it adjacent to such lands. The project site does not contain an open space easement and is not subject to a Williamson Act contract.

Source: Project Plans and Field Observation.

2.b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
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Discussion: Reference response to Section 2.a., above.

Source: Project Plans and Field Observation.

2.c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X
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Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.d.	For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.e.	Result in damage to soil capability or loss of agricultural land?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.f.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? <i>Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.</i>			X
Discussion: N/A. The project site does not contain and is not located in an area containing forestland/timberland.				
Source: Project Plans and Field Observation.				

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
Discussion: The construction of the new residence may result in temporary generation of pollutants related to construction and minor earthwork (60 cubic yards). However, the proposed single family residential use would not result in the regular generation of air pollutants. Section					

<p>2-1-113 (<i>Exemption, Sources and Operations</i>) of the General Requirements of the Bay Area Air Quality Management District exempts sources of air pollution associated with construction of a single-family dwelling used solely for residential purposes, as well as road construction. No mitigation measures are necessary.</p> <p>Source: Bay Area Air Quality Management District (BAAQMD) Regulation 2, Rule 1: General Requirements.</p>					
3.b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?			X	
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.d.	Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.e.	Create objectionable odors affecting a significant number of people?				X
<p>Discussion: While project construction for the new residence may create temporary construction-related odors, the project would not result in the regular generation of odors, nor would temporary odors affect a significant number of people, as the project is located on private property within a single-family residential neighborhood.</p> <p>Source: Project Application/Plans.</p>					
3.f.	Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?			X	

Discussion: Reference response to Section 3.a., above.

Source: BAAQMD Regulation 2, Rule 1: General Requirements.

4. BIOLOGICAL RESOURCES. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
4.a. Have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion: A Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, was prepared by WRA Environmental Consultants (Biological Report), included as Attachment B. The Biological Report examines the project site as well as well as areas around it within a designated “study area.” The Biological Report finds that the study area consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream located southeasterly of the site. The Biological Report also indicates that the study area includes arroyo willow scrub, which is considered riparian corridor. However, a majority of Arroyo de en Medio Creek in the study area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek. The 30-foot riparian setback for development on the project site is shown in Figure 2 of Attachment B. The Biological report also finds that one special-status and several non-special-status bird species have potential to nest within the study area. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. The following mitigation measures, which are recommendations of the Biological Report, help to ensure that potential impacts to both special-status and non-special-status bird species are mitigated to a less than significant level:

Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of

<p>species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.</p> <p>Source: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, by WRA Environmental Consultants; San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>					
4.b.	Have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
<p>Discussion: Reference response to Section 4.a., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.c.	Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
<p>Discussion: The project site does not contain federally protected wetlands.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.d.	Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
<p>Discussion: Reference response to Section 4.a. and c., above. The project would not interfere significantly with the movement of any native resident or migratory fish as the project would not directly affect Arroyo de en Medio Creek, which is located approximately 30 feet from the project site. The project does not contain and, therefore, would not impede the use of native wildlife nursery sites.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or			X	

ordinance (including the County Heritage and Significant Tree Ordinances)?				
<p>Discussion: While no heritage trees are present and one significant tree is present, no live trees are proposed for removal. One dead Monterey pine tree (36-inch dbh) is proposed for removal.</p> <p>Source: Project Plans, Field Observation.</p>				
4.f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?			X	
<p>Discussion: As proposed and mitigated, the residence would be located a minimum of 30 feet from riparian vegetation and in areas of no riparian vegetation 30 feet from the centerline of the creek, as required by the Local Coastal Program. The project does not involve the removal of riparian vegetation or associated sensitive habitat.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
<p>Discussion: The site is not located inside or within 200 feet of a marine or wildlife reserve.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.h. Result in loss of oak woodlands or other non-timber woodlands?				X
<p>Discussion: Reference response to Section 4.e., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				

5. CULTURAL RESOURCES. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
5.a. Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?		X		
<p>Discussion: The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level for historical resources:</p> <p>Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the</p>				

Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Source: Project Application/Plans, San Mateo County General Plan and California Historical Resources File System Results.

5.b. Cause a significant adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?

X

Discussion: Staff forwarded the project referral to California Historical Resources Information System (CHRIS) for review and comments. Based on the review of their records, Study #003082 (Dietz 1970) identified no cultural resources existed on the project area (see Attachment D). Due to this passage of time since the study, the corresponding recommendation from CHRIS requires that a qualified archaeologist conduct further field studies for the entire project area. The applicant will submit this study for review prior to the Planning Commission meeting in order for staff to prepare an updated status on potential environmental impacts. In the event that archaeological resources could be potentially significantly impacted by the project, the Initial Study/Negative Declaration will be revised and re-circulated, pursuant to California Environmental Quality Act (CEQA).

The following mitigation measure is also recommended to ensure that potential impacts are mitigated to a less than significant level in the event that archaeological and/or cultural resources are encountered during grading or construction activities:

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Source: Project Application/Plans and San Mateo County General Plan.

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

X

Discussion: The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level in the event paleontological specimen are discovered:

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Source: Project Application/Plans and San Mateo County General Plan.

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

X

Discussion: Reference response to Section 5.a., above.

Source: Project Application/Plans and San Mateo County General Plan.

6. GEOLOGY AND SOILS. Would the project:				
	Potentially Significant Impacts	Significant Unless Mitigated	Less Than Significant Impact	No Impact
6.a. Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault? <i>Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.</i>		X		
<p>Discussion: A Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study), submitted for the project, determined the following:</p> <p>"Fault Rupture - The site is not located in the Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion."</p> <p>To incorporate the full recommendations of the Geotechnical Study the following mitigation measure has been added:</p> <p>Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
ii. Strong seismic ground shaking?		X		
<p>Discussion: The following discussion is from on the Geotechnical Report cited above:</p> <p>"Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30- to 50-year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as</p>				

is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.”

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iii. Seismic-related ground failure, including liquefaction and differential settling?		X		
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Discussion: The following discussion is based on the Report cited above:

“Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however, precautions should be made to prevent expensive cosmetic damage.”

“Liquefaction – Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at this site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.”

As the site may be subject to liquefaction-induced ground deformation, the Geotechnical Study recommends either a reinforced mat foundation or a pier and grade beam foundation. Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iv. Landslides?		X		
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Discussion: The parcel has been designated as an area with Landslide Susceptibility I based on information gathered from the U.S. Geological Survey. Such areas have the lowest susceptibility to soil instability and a decreased potential for occurrences of a landslide.

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: State of California Seismic Hazard Zone Map/San Mateo County Landslide Susceptibility Map and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010

<p>v. Coastal cliff/bluff instability or erosion?</p> <p><i>Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).</i></p>				X
<p>Discussion: N/A. The site is not located on or adjacent to a cliff or bluff.</p> <p>Source: Project Plans/County GIS Resource Map.</p>				
<p>6.b. Result in significant soil erosion or the loss of topsoil?</p>		X		
<p>Discussion: The project involves minor earthwork of approximately 60 cubic yards. The addition of Mitigation Measure 9, below, would minimize erosion and loss of top soil resulting from the project:</p> <p>Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.</p> <p>Source: Project Application/Plans.</p>				
<p>6.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?</p>		X		
<p>Discussion: Reference responses to Section 6.a, above.</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation and County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
<p>6.d. Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?</p>				X
<p>Discussion: The Geotechnical Study does not identify expansive soils as a significant concern at the property.</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation; County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
<p>6.e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?</p>				X

Discussion: The project does not involve a septic system for wastewater disposal as the project incorporates a sewer connection. Granada Community Services District (GCSD) has confirmed that it can provide sewer service to the project.

Source: Project Application/Plans and San Mateo County GIS Resource Maps.

7. CLIMATE CHANGE. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7.a. Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?			X	
<p>Discussion: To ensure that new development projects are compliant with the County's Energy Efficiency Climate Action Plan (EECAP), the County provides the EECAP Development Checklist. The applicant has provided staff with a completed Checklist indicating the voluntary measures to be taken in order to comply with EECAP (see Attachment E). At the building permit stage, the project is also required to comply with the California Green Building Standards Code, which includes requirements for energy saving measures. Based on the voluntary measures provided by the applicant, staff has determined that no mitigation measures are required. Also, reference response to Section 3.a., above.</p> <p>Source: San Mateo County Energy Efficiency Climate Action Plan (EECAP) and BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X
<p>Discussion: Reference response to Section 3.a. above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
<p>Discussion: The project does not involve loss or conversion of forestland, as the project site does not contain forestland. The project does not involve removal of live trees.</p> <p>Source: Project Application/Plans.</p>				

7.d.	Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
<p>Discussion: The project site is not located on or adjacent to a cliff or bluff.</p> <p>Source: San Mateo County GIS Resource Maps.</p>					
7.e.	Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
<p>Discussion: The projected site is not located along a shoreline area.</p> <p>Source: Project Application/Plans.</p>					
7.f.	Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
<p>Discussion: The project site is located in Flood Zone X designated as an area of minimal flood hazard, usually depicted on FIRMS as above the 500-year flood level (Community Panel No. 060311 0225 C, map revised October 16, 2012).</p> <p>Source: FEMA Flood Insurance Rate Map.</p>					
7.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>					

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X

<p>Discussion: N/A. The project involves the construction of a residence and does not involve the routine transport, use, or disposal of hazardous materials.</p> <p>Source: Project Application/Plans.</p>					
8.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
<p>Discussion: The project involves the construction of a residence and would not involve the release of hazardous materials into the environment.</p> <p>Source: Project Application/Plans.</p>					
8.c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
<p>Discussion: The project involves the construction of a residence and would not involve hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste.</p> <p>Source: Project Application/Plans.</p>					
8.d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
<p>Discussion: The project parcel has not been identified as a hazardous material site, based on staff's review of the current Hazardous Waste and Substances Site List posted by the California Department of Toxic Substances Control (mandated by Government Code Section 65962.5).</p> <p>Source: California Department of Toxic Substances Control, Hazardous Waste and Substances Site List.</p>					
8.e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Based on the Half Moon Bay Airport Land Use Compatibility Plan, as adopted on October 9, 2014, the project site is located outside Zone 7 - Airport Influence Area (AIA). Aircraft accident level is considered to be low at the site.</p> <p>Source: Project Application/Plans, San Mateo County GIS Resource Maps and Half Moon Bay ALUCP.</p>					

8.f. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Reference response to Section 8.e., above.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
<p>Discussion: The project will not physically interfere with an adopted emergency plan. The project site is located in a developed coastal area and is served by emergency response agencies such as the Coastside Fire Protection District and the San Mateo County Sheriff's Department.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
<p>Discussion: The project site is not located within a wildland urban interface area nor is the project site within a designated moderate, high, or very high fire severity zone.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.i. Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>				
8.j. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>				
8.k. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	

Discussion: The Biological Report identified the presence of a dam located 1.5 miles upstream from the project site. In an email to staff dated May 3, 2016, the project consultant Geologist, Sigma Prime Geosciences, Inc., (Consultant) estimated the potential runoff resulting from a dam break and determined that a 3.6% increase in the runoff for this watershed area would potentially occur (Attachment F). Based on this increase, the potential impact on the areas located downstream has been determined by the Consultant to be less than significant. Also reference response to Section 7.f., above.

Source: FEMA Flood Insurance Rate Map, Sigma Prime response letter dated May 3, 2016.

8.i. Inundation by seiche, tsunami, or mudflow?			X	
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Discussion: Reference response to Section 7.e., above. Regarding mudflows, the site and vicinity area are relatively flat and would not be impacted by mudflows as generated from upslope areas.

Source: Project Application/Plans.

9. HYDROLOGY AND WATER QUALITY. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9.a. Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?			X	

Discussion: The project, as proposed, would result in less than significant impacts in this area upon implementation of a proposed Erosion Control Plan and Best Management Practices (BMPs).

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program “General Construction and Site Supervision Guidelines,” including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

Source: Project Application/Plans.

<p>9.b. Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>				X
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<p>Discussion: The project will not involve direct use of groundwater as a domestic water source as the project site is located in a developed residential zone already serviced by Coastside County Water District (CCWD). Coastside County Water District has verified the ability to provide domestic water service to this project.</p> <p>Source: Project Application/Plans.</p>					
9.c.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?			X	
<p>Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project would not significantly alter site topography and would not impact the creek southeast of the parcel due to the proposed 30-foot creek setback. The project's impervious areas will increase but proposed new drainage facilities (as shown on the site plan) would capture and filter increased site runoff flow and volume in compliance with the County's Guidelines for Drainage Review.</p> <p>Source: Project Application/Plans.</p>					
9.d.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans.</p>					
9.e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?			X	
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans and San Mateo County Drainage Policy.</p>					
9.f.	Significantly degrade surface or ground-water water quality?				X
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans.</p>					

9.g. Result in increased impervious surfaces and associated increased runoff?			X	
Discussion: Reference response to Section 9.c., above.				
Source: Project Application/Plans.				

10. LAND USE AND PLANNING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10.a. Physically divide an established community?				X
Discussion: The project involves development of a vacant parcel, or infilling, of an existing developed residential neighborhood that will not divide the established community.				
Source: Project Application/Plans.				
10.b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
Discussion: Reference response to Section 1.f., above.				
Source: Project Plans, San Mateo County General Plan and San Mateo Zoning Regulations.				
10.c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
Discussion: The project site is located adjacent to the riparian corridor of Arroyo de en Medio. The Local Coastal Program regulates development adjacent to intermittent creeks. Reference response to Section 4.a., above.				
Source: California Department of Fish and Wildlife, Habitat Conservation Planning.				
10.d. Result in the congregating of more than 50 people on a regular basis?				X
Discussion: The project does not involve the congregation of more than 50 people as the project is for a new single-family residence.				
Source: Project Application/Plans.				

10.e.	Result in the introduction of activities not currently found within the community?				X
<p>Discussion: The proposed project would not result in the introduction of new activities in the area. The subject R-1 Zoning District permits single-family residential use and such use is established within the subject community.</p> <p>Source: Project Application/Plans.</p>					
10.f.	Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
<p>Discussion: The addition of a new residence on the vacant parcel designated for residential use will not encourage off-site development as the project, including proposed utilities, will result in development of the subject parcel. The project would be served by water and sewer services already provided in the area. The project does not involve the establishment of new industry, commercial facilities or recreation activities.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					
10.g.	Create a significant new demand for housing?				X
<p>Discussion: N/A. The project does not create any permanent jobs in the area and provides one additional dwelling in the area. Therefore, the project would not create a significant new demand for housing.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					

11. MINERAL RESOURCES. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11.a.	Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X
<p>Discussion: The project site is not located in an area known for mineral resources nor does the project involve mineral extraction.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					

11.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
<p>Discussion: Reference response to Section 11.a., above.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>				

<p>12. NOISE. Would the project result in:</p>				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12.a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
<p>Discussion: While this project will not generate noise levels in excess of residential levels once implemented, during construction activities increased noise levels may occur. However, noise sources associated with demolition, construction or grading of any real property are exempt from the County Noise Ordinance provided these activities occur during designated timeframes.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?			X	
<p>Discussion: Pile driving for pier foundations can be a potential source of excessive ground-borne vibration or ground-borne noise levels. While the foundation involves a pier and grade beam foundation, the Geotechnical Study recommends drilled piers or cast in place piers. Therefore, the project does not involve pile driving. Also, reference response to Section 12.a, above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.c. A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
<p>Discussion: Reference response to Section 12.a, above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				

12.d. A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
<p>Discussion: Reference response to Section 12.a., above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?			X	
<p>Discussion: The project site is located outside the Community Noise Equivalent Level (CNEL) airport noise exposure contours identified in the Half Moon Bay Airport Land Use Plan and is therefore not exposed to significant levels of aircraft noise.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				
12.f. For a project within the vicinity of a private airstrip, exposure to people residing or working in the project area to excessive noise levels?				X
<p>Discussion: The project site is located within an existing single-family residential neighborhood and is not located within the vicinity of a private air strip.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				

13. POPULATION AND HOUSING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13.a. Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

Discussion: Reference response to Section 10.f., above. The project involves the construction of only one new home and does not involve the establishment of a business. The project involves pavement of a road shoulder along 3rd Avenue to connect the property to the existing paved portion 3rd Avenue and does not involve extension of a road.

Source: Project Application/Plans.

13.b. Displace existing housing (including low- or moderate-income housing), in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X
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Discussion: The project does not displace housing but involves the construction of a new dwelling on a vacant parcel within an existing single-family residential area.

Source: Project Application/Plans.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14.a. Fire protection?			X	
14.b. Police protection?			X	
14.c. Schools?			X	
14.d. Parks?			X	
14.e. Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?			X	

Discussion: The current level of public services will not be significantly affected by the addition of one new single-family residence in the neighborhood.

Source: Project Application/Plans.

15. RECREATION. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15.a. Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?			X	
<p>Discussion: The project will not generate an increase in the use of existing recreational facilities beyond the service levels anticipated for the area.</p> <p>Source: Project Application/Plans.</p>				
15.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
<p>Discussion: The project does not include any recreational facilities. As described in Section 15.a., New or expanded recreational facilities will not be required by this project.</p> <p>Source: Project Application/Plans.</p>				

16. TRANSPORTATION/TRAFFIC. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
<p>Discussion: The proposed single-family residence will not significantly increase the vehicular or pedestrian traffic nor change their patterns in the area beyond the levels anticipated for the area.</p> <p>Source: Project Plans and Field Observation.</p>				

16.b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?			X	
<p>Discussion: Reference response to Section 16.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
<p>Discussion: N/A. The project will not result in a change in air traffic patterns.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
16.d. Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
<p>Discussion: The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved.</p> <p>Source: Project Plans and Field Observation.</p>				
16.e. Result in inadequate emergency access?				X
<p>Discussion: The project will not impact emergency access to the area. Reference response to Section 8.g., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
<p>Discussion: No sidewalks are present in this area; however, pedestrians likely use road shoulders for access. The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved. The project involves the development of residential uses on a residentially zoned parcel and would not conflict with pedestrian facilities or adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.</p> <p>Source: Project Plans and Field Observation.</p>				

16.g. Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?			X	
Discussion: Reference response to Section 16.f., above.				
Source: Project Plans and Field Observation.				
16.h. Result in inadequate parking capacity?			X	
Discussion: The project complies with applicable County's Parking Regulations, as it includes two on-site covered parking spaces.				
Source: Project Plans and Field Observation.				

17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
Discussion: The project site would be serviced by Granada Community Services District (GCSD) for sanitary sewer service. GCSD has confirmed that it has the capacity to serve the project at the subject property. Any increase in the total wastewater treatment by GCSD would be minimal associated with one new single-family dwelling and associated residents.				
Source: Project Application/Plans.				
17.b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
Discussion: Reference response to Section 17.a., above.				
Source: Project Application/Plans.				
17.c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
Discussion: Proposed new on-site drainage facilities would minimize the impacts of runoff to off-site areas and facilities. Reference Section 9.c., above.				
Source: Project Application/Plans.				

17.d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
<p>Discussion: Reference response to Section 9.b., above.</p> <p>Source: Project Application/Plans; Letter from CCWD dated August 14, 2014 and Letter from GCSD dated August 14, 2014.</p>				
17.e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
<p>Discussion: Reference response to Section 17.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.f. Be served by a landfill with insufficient permitted capacity to accommodate the project's needs?				X
<p>Discussion: The project site is located in a developed residential area already adequately serviced by GCSD, provides solid waste disposal service via an exclusive franchise agreement with Recology of the Coast. Any increase in the total solid waste would be minimal associated with one new single-family dwelling and associated residents.</p> <p>Source: Project Application/Plans; GCSD website.</p>				
17.g. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
<p>Discussion: Reference response to Section 17.f., above.</p> <p>Source: Project Application/Plans.</p>				
17.h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?			X	
<p>Discussion: Reference Section 7.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?			X	

Discussion: Reference response to Section 14 and Sections 17.a. through 17.f., above.

Source: Project Application/Plans.

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
18.a. Does the project have the potential to degrade the quality of the environment, significantly 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		
<p>Discussion: Yes, as discussed in Section 4.a., above, the project has the potential to impact plant and wildlife species in the area. Implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.</p> <p>Source: San Mateo County General Plan Sensitive Habitats Map.</p>				
18.b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
<p>Discussion: One recently approved project located at 420 - 3rd Avenue (PLN 2015-00024) involves an addition to the existing residential development. Therefore, the project would not have impacts that are individually limited, but cumulatively considerable. Also, reference response to 16.f., above. No cumulative effects have been identified for this project.</p> <p>Source: Project Application/Plans.</p>				
18.c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?		X		

Discussion: As previously discussed, the project could result in environmental impacts that could both directly and indirectly cause impacts on human beings. However, implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.

Source: Project Application/Plans.

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)		X	
State Water Resources Control Board		X	
Regional Water Quality Control Board		X	
State Department of Public Health		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
U.S. Environmental Protection Agency (EPA)		X	
County Airport Land Use Commission (ALUC)		X	
CalTrans		X	
Bay Area Air Quality Management District		X	
U.S. Fish and Wildlife Service		X	
Coastal Commission		X	
Sewer District: Granada Community Services District		X	
Water District: Coastside County Water District		X	

<u>MITIGATION MEASURES</u>		
	<u>Yes</u>	<u>No</u>
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	
<p>The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:</p> <p><u>Mitigation Measure 1:</u> Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the</p>		

issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

DETERMINATION (to be completed by the Lead Agency).

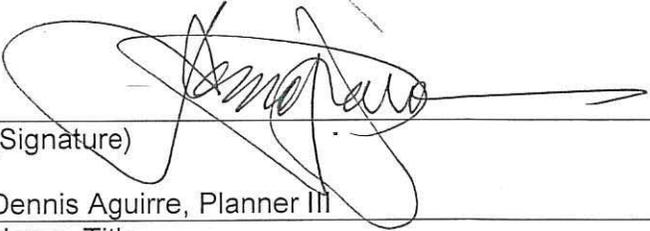
On the basis of this initial evaluation:

I find the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared by the Planning Department.

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 of the mitigation measures in the discussion that have been included as part of the proposed project. A **NEGATIVE DECLARATION** will be prepared.

X

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.



(Signature)
Dennis Aguirre, Planner III

Name, Title

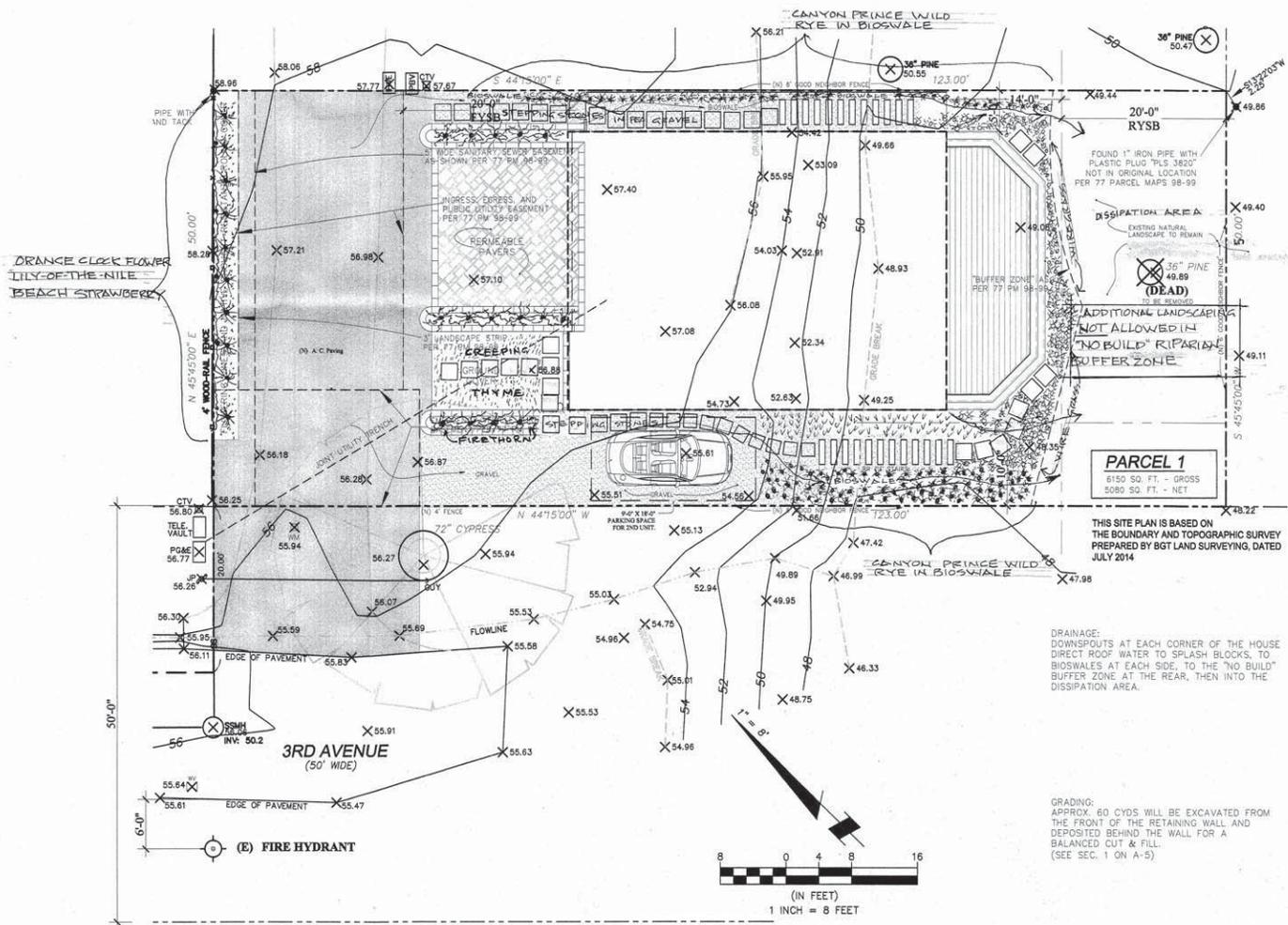
May 4, 2016

Date

ATTACHMENTS:

- A. Project Plans
- B. Biological Constraints and Environmentally Sensitive Habitat Areas Assessment Report, dated January 25, 2016, prepared by WRA Environmental Consultants
- C. Geotechnical Study, dated April 21, 2010, prepared by Sigma Prime Geosciences, Inc.
- D. California Historical Society Information System Comment Letter, dated May 3, 2016
- E. Energy Efficient Climate Action Plan Checklist, submitted by applicant on May 3, 2016
- F. Sigma Prime Geosciences, Inc., Email Response Letter, dated May 3, 2016

DPA:pac – DPAAA0231_WPH.DOCX



PLANT LIST					
SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE	REMARKS
	CLIMBING VINE	ORANGE GLENN	THUNBERGIA GREGORII	1 GAL	2'
	PERENNIAL	LILY OF THE VALLE	AGAPANTHUS CILIOLATUS	1 GAL	4'
	GROUND COVER	BEACH STRAWBERRY	FRAGARIA CHILOENSIS	FLATS	12" x 18"
	SHRUB	PIRETHORN	FRAGARIA ANTHUSPILA	1 GAL	3'
	GROUND COVER	WILD RYE	LYRAPHIS	FLATS	12" x 18"
	GROUND COVER	CREeping THyme	THYMUS PRAECOX	FLATS	6"
	GROUND COVER	WIRE GRASS	UNCLAS	FLATS	6"
	GROUND COVER	BLUE RUSH	VITIS A	FLATS	12"
	GROUND COVER	PERENNIAL	MADIA	FLATS	12"

1 LANDSCAPE PLAN
LP

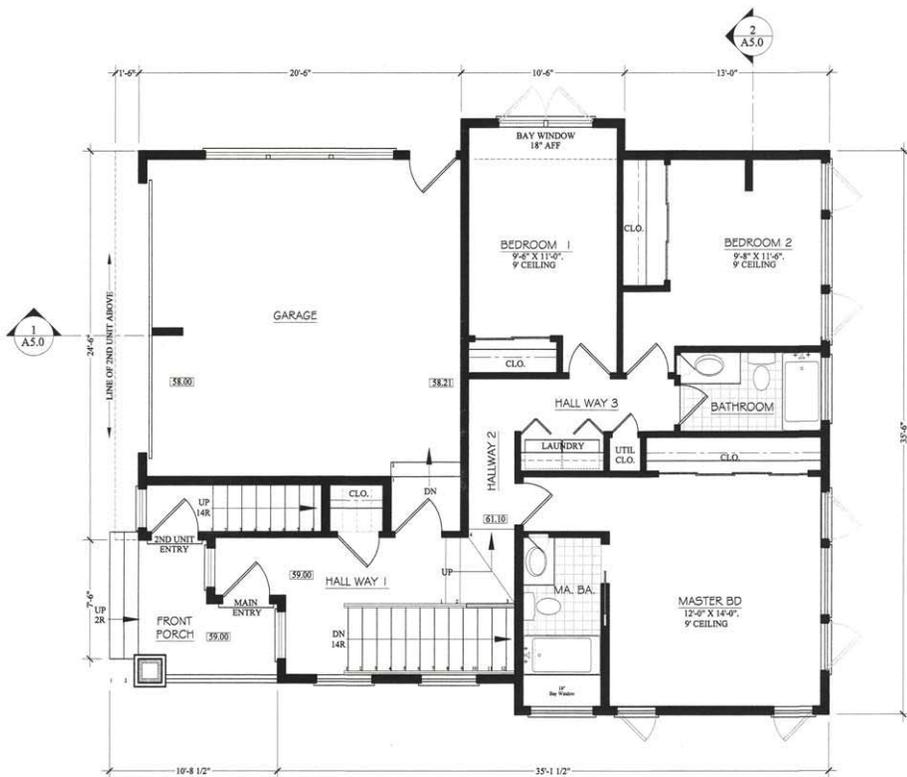
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San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

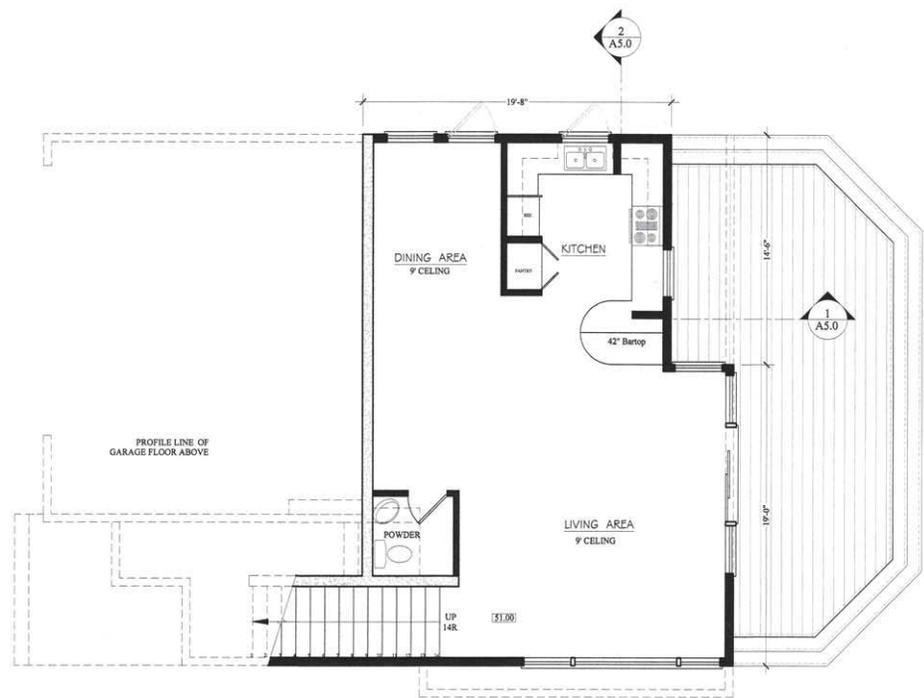
Attachment: **A**

File Numbers: **PLN 2015-00152**



1 PROPOSED SECOND FLOOR PLAN (Entry Level)
A2.0

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



2 PROPOSED FIRST FLOOR (Lowest Level)
A2.0

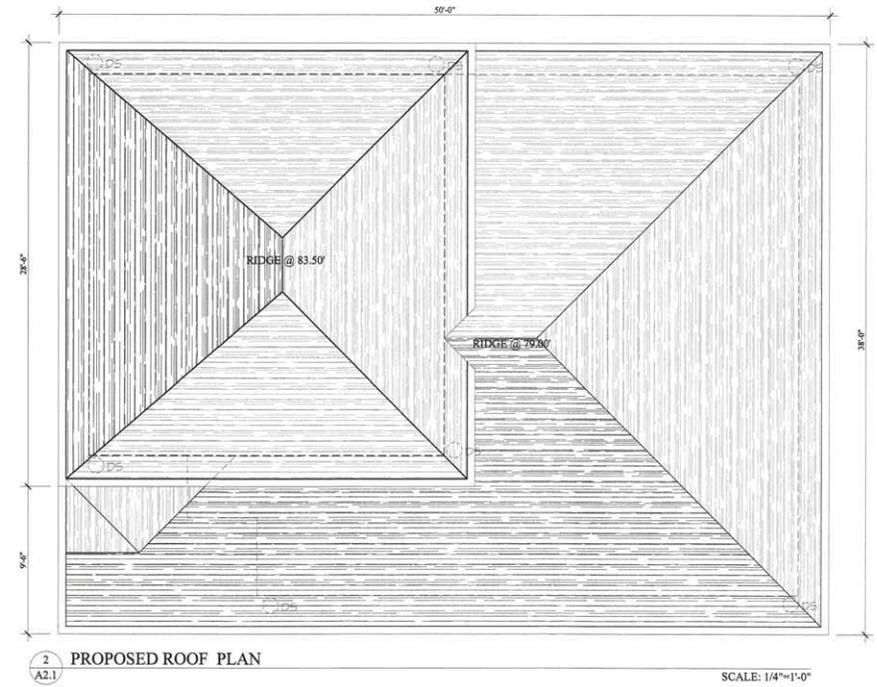
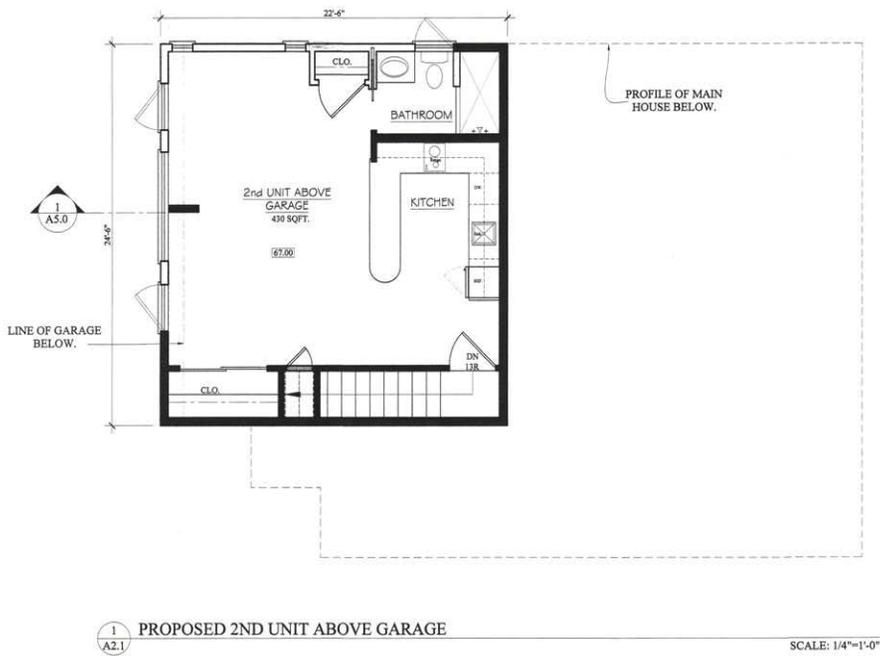
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San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**



San Mateo County Planning Commission Meeting

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Attachment: **A**

File Numbers: **PLN 2015-00152**



1
A4 PROPOSED FRONT ELEVATION (NORTH)

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



1
A4 PROPOSED REAR ELEVATION (SOUTH)

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

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

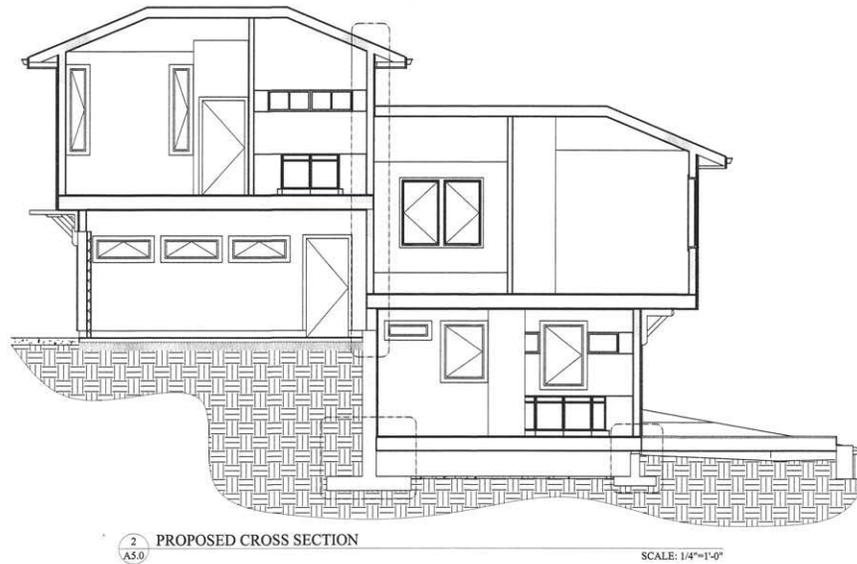
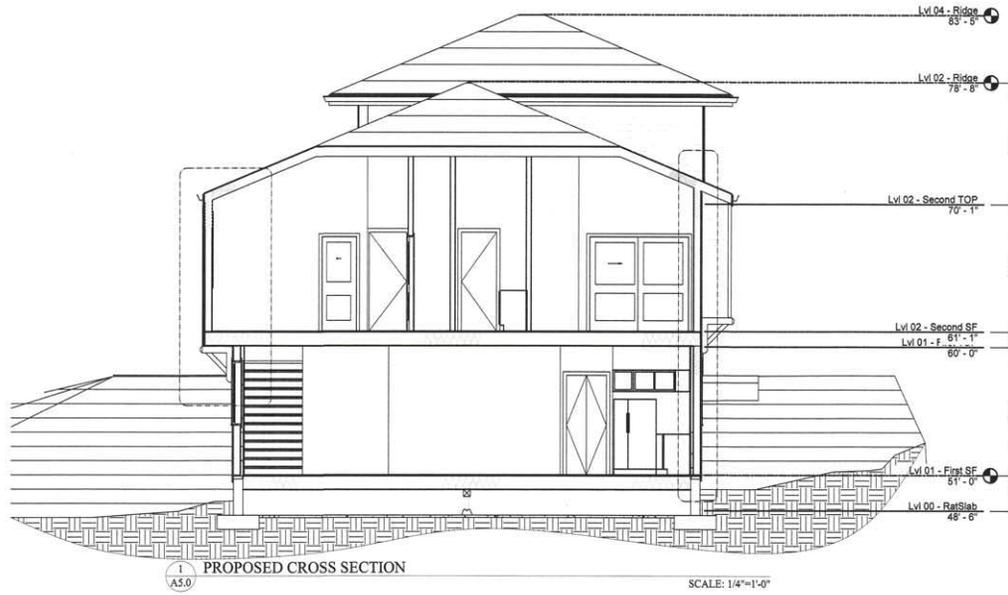


San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

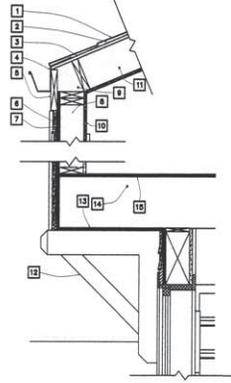


San Mateo County Planning Commission Meeting

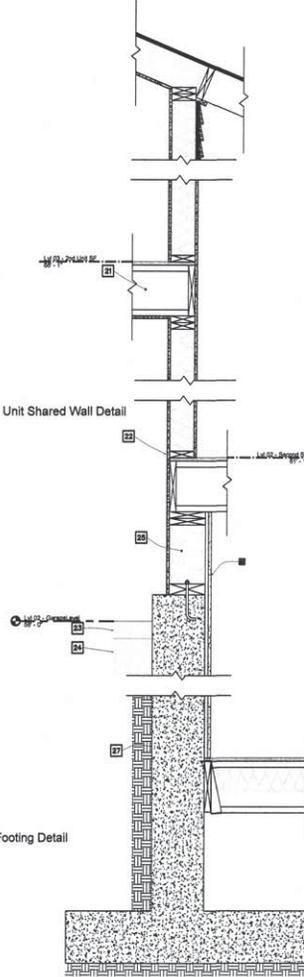
Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

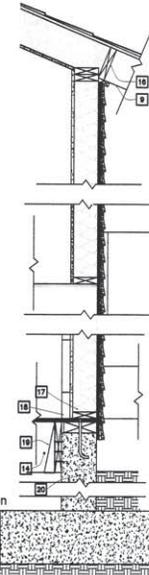


① Pop-Out Detail
3/4" = 1'-0"



② Garage / Second Unit Shared Wall Detail
3/4" = 1'-0"

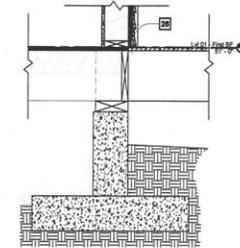
③ Retaining Wall / Footing Detail
3/4" = 1'-0"



Typ. Eave Detail
3/4" = 1'-0"

Typ. Wall to Floor
3/4" = 1'-0"

④ Typ. Wall to Foundation
3/4" = 1'-0"



⑤ Deck Connection Detail
3/4" = 1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**



January 25, 2016

Stephen Semprevivo
720 Mill Street
Half Moon Bay, CA 94019

Re: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment for APN 048-042-280 and -290 Half Moon Bay, San Mateo County, California

Dear Mr. Semprevivo,

The purpose of this letter is to inform you of the results of the biological constraints and Environmentally Sensitive Habitat Area (ESHA) assessments at two undeveloped parcels (APN 048-042-280 and 048-042-290) located at the end of 3rd Avenue, Half Moon Bay, San Mateo County, California (Figure 1). Construction of residences is proposed on the parcels (Project). The assessment encompassed both parcels and the surrounding 50 feet (Study Area) to identify any potential sensitive habitats in the vicinity. The purpose of these assessments is to comply with the San Mateo County Midcoast Local Coastal Program (LCP).

Figures are provided in Attachment A, the list of observed species from the 2015 site assessment are provided in Attachment B, and photographs depicting the current Study Area conditions are provided in Attachment C.

Survey Methods

A site visit to the Study Area was made on December 31, 2015 by WRA biologist Erich Schickenberg (wetland and plant ecologist) and reviewed by Patricia Valcarcel (wildlife biologist). Prior to the site visit, a review was conducted of background information including:

- San Mateo County Midcoast Local Coastal Program (LCP) biological resources policies
- San Mateo County Heritage Tree Ordinance
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2015)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2015)
- U.S. Fish and Wildlife Service (USFWS) 7.5' Quadrangle Species Lists for the Montara Mountain and Half Moon Bay quadrangles (USFWS 2015)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "California Bird Species of Special Concern" (Shuford and Gardali 2008)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)

The Study Area was traversed on foot by the WRA biologist and examined for: (a) sensitive natural communities as defined by the CDFW and LCP and, (b) for the presence, and potential to support, special-status plant and wildlife species. Vegetation within the Study Area and vicinity was also evaluated for riparian habitat criteria and/or unvegetated streams as defined by the LCP. If a special-status species was observed during the site visit, its presence is recorded and discussed further below. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described further below.

Survey Results

Study Area Description

The Study Area is located at the end of 3rd Avenue in the Miramar neighborhood of Half Moon Bay. It consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream. The southern portion of the Study Area is a mix of several vegetation types, including blue gum (*Eucalyptus globulus*) grove, ruderal/disturbed and arroyo willow scrub. Within the ordinary high water mark (OHWM) of Arroyo de en Medio minimal riparian vegetation is present except a small patch of arroyo willow scrub in the south. Wetland plants seen within the OHWM include water parsley (*Oenanthe sarmentosa*, OBL), California figwort (*Scrophularia californica*, FAC), dock (*Rumex pulcher*, FAC), and arroyo willow (*Salix lasiolepis*, FACW). Non-wetland plants within the OHWM include California blackberry (*Rubus ursinus*), English ivy (*Hedera helix*), veldt grass (*Ehrharta erecta*), sour clover (*Oxalis pes-carpe*), garden nasturtium (*Tropaeolum majus*), tower-of-jewels (*Echium* sp.), and cape ivy (*Delairea odorata*). Four 36-inch diameter breast height (dbh) Monterey pine trees and one 72-inch dbh Monterey cypress occur within the Study Area. The Study Area is bounded by residential development and neighborhood roads.

Vegetation Communities

Three vegetation communities are present in the Study Area: blue gum grove, ruderal/disturbed and arroyo willow scrub (Figure 2). Ruderal/disturbed habitat will be permanently and temporarily disturbed by the construction of a residence. Blue gum grove and arroyo willow occur only within the Arroyo de en Medio corridor and are not expected to be directly disturbed by the construction of a residence. Arroyo de en Medio is designated a Sensitive Habitat Area (Mid-Coast San Mateo County LCP Sensitive Habitats Map) and arroyo willow scrub is a riparian corridor and sensitive habitat by the LCP. Both ruderal/disturbed and blue gum grove are non-sensitive vegetation communities.

Non-Sensitive Vegetation Communities

The ruderal/disturbed vegetation is the dominant vegetation within the Study Area, and it encompasses approximately 0.47 acre. Non-native forbs dominate the ruderal vegetation. The ruderal uplands are dominated by weedy vegetation including ripgut brome (*Bromus diandrus*), slender oats (*Avena barbata*), garden nasturtium, tower-of-jewels, and sour clover. Several large, dead or decadent Monterey Pine (*Pinus radiata*) trees are present in this ruderal upland

area. The slopes leading down to Arroyo de en Medio creekbed are covered in veldt grass (*Ehrharta erecta*), garden nasturtium, cape ivy, poison oak (*Toxicodendron diversilobum*), and sour clover.

The blue gum grove is located along the Arroyo de en Medio at the eastern portion of the Study Area and encompassing approximately 0.10 acre. The blue gum grove forms an intermittent to dense canopy over the stream, depositing large amounts of litter within and along the banks. Blackwood acacia (*Acacia melanoxydon*) and silver wattle (*Acacia dealbata*) are also present in the canopy. The understory is sparse California blackberry, English ivy and cape ivy. One small arroyo willow and one California coffeeberry (*Frangula californica*) are present in this area.

Sensitive Vegetation Communities and Wetland and Waters Features

Approximately 0.01 acre of arroyo willow scrub is located in the southeast corner of the Study Area. Arroyo willow canopy is over 50 percent cover and considered a riparian corridor and Sensitive Habitat Area per the LCP. Understory is sparse with little to no cover, however edges around the arroyo willow scrub have an intermittent cover of garden nasturtium, California blackberry and cape ivy.

Riparian Corridor

Riparian Corridor and Buffer Zones Defined in the San Mateo County Local Coastal Program

Pursuant to the LCP, riparian corridors are defined as an association of plant and animal species containing at least 50 percent cover of the following species: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder. For perennial streams, the LCP requires a buffer 50 feet outward from the limit of riparian vegetation. For intermittent streams, the LCP requires a buffer 30 feet outward from the limit of riparian vegetation. Where no riparian vegetation exists, buffer zones along intermittent streams extend 30 feet from the stream midpoint as shown in Figure 2.

Within riparian corridors, the following uses are permitted: 1) education and research; 2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, 3) fish and wildlife management activities, 4) trails and scenic overlooks on public lands, and 5) necessary water supply projects. Relevant permitted uses in buffer zones include 1) uses permitted in riparian corridors, 2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation only if no feasible alternative exists and if no other building site on the parcel exists, 3) on parcels designated as Agriculture, Open Space, or Timber Production on the LCP Land Use Plan Map, residential structures or impervious surfaces only if no feasible alternative exists.

Riparian Corridor and Buffer Zones Applicable to the Study Area

Arroyo de en Medio drains west to the Pacific Ocean; however, it is dammed approximately 1.5 miles upstream from the Study Area. The portion of Arroyo de en Medio adjacent to the Study Area contained a small amount of running water at the time of the site visit on December 31, 2015. Based on available USGS topographic maps (USGS 1991) and aerial photographs (Google Earth 2015), Arroyo de en Medio is considered intermittent waters. Accordingly, a 30-

foot setback from edge of riparian is required. The arroyo willow identified in the Study Area is considered a riparian corridor under the LCP; however, a majority of the Arroyo de en Medio in the Study Area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek (Figure 2). For the purposes of this assessment, the limit of riparian vegetation is defined as the dripline of the arroyo willows to encompass the riparian corridor and sensitive habitat definitions in the LCP.

Special-Status Species

Special-Status Plants

Based upon a review of the resources and databases discussed previously, all special-status plant species documented in the vicinity of the Study Area were assessed. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). No special-status plant species were observed in the Study Area. Many species requiring certain habitat types not present in the Study Area, such as serpentine endemics and plants requiring coastal bluff or scrub habitats, were determined to have no potential to occur. Of the 27 special-status plant species evaluated, all were determined to have no potential or a low potential to occur based on the high disturbance levels in and around the Study Area and/or a lack of suitable habitat components in the Study Area. Although the site visit did not constitute a protocol-level rare plant survey, no special-status plants or their habitats were observed.

San Mateo County Heritage Tree and Significant Tree Ordinances

Pursuant to the County of San Mateo Heritage Tree Ordinance (Ordinance No. 2427), "Heritage" trees may be subject to regulation under the tree ordinance pursuant to the ordinance. Several native species above certain diameter breast height (dbh) are considered "Heritage" trees and include madrone, coast live oak, and California bay laurel trees. Permits may be required by the County for the trimming or removal of trees which qualify for heritage status under the Ordinance. Under the same ordinance, "Significant" trees are subject to regulation. "Significant" trees are any species which have dbh 38 inches or greater. The trees currently within the Study Area are silver wattle, blackwood acacia, white alder (*Alnus rhombifolia*), blue gum, California coffeeberry, Monterey cypress (*Hesperocyparis macrocarpa*), arroyo willow, lollypop tree (*Myoporum laetum*), Monterey pine (*Pinus radiata*), and coast redwood (*Sequoia sempervirens*). None of these species are covered under the San Mateo County Heritage Tree Ordinance; therefore no "Heritage" trees occur in the Study Area. However, one 72-inch Monterey cypress does occur in the Study Area and is considered a "Significant" tree. Removal of this tree may require a permit.

Special-Status Wildlife

Based upon a review of the databases and literature, 39 special-status wildlife species have been documented to occur in the vicinity of the Study Area. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). Of the 39 special-status wildlife species documented to occur in the vicinity, only one species, Allen's hummingbird (*Selasphorus sasin*), has a moderate potential to occur within the Study Area and is discussed further below. Most species do not have potential to occur because a lack of suitable habitat including no aquatic features for breeding, no serpentine habitat, no dense

understory vegetation, and barriers to dispersal. Cavities are not present in the trees within the Study Area; therefore, the Study Area is unlikely to support cavity nesting bird or bat species.

California red-legged frog (*Rana draytonii*; CRLF) is unlikely to be present because of a lack of suitable pond breeding habitat in the vicinity of the Study Area. Typical CRLF breeding habitat is characterized by deep and still or slow-moving water associated with emergent marsh and/or riparian vegetation. CRLF often seek upland refugia during the dry months, over-summering in small mammal burrows, moist leaf litter, incised stream channels, or large cracks in the bottom of dried ponds (Jennings and Hayes 1994). Adult and sub-adult CRLF may disperse between breeding habitats and nearby riparian and/or estivation habitats during the respective rainy season and summer. During such dispersals, frogs can travel up to one mile over a variety of topographic and habitat types during rain events or wet weather (Bulger et al. 2003, Fellers and Kleeman 2007, USFWS 2010); however, typical dispersal distances are less than 0.5 mile (Fellers 2005). Dispersal habitat is defined as accessible upland or riparian habitats between occupied locations within one mile of each other that allow for movement between these sites and do not contain barriers to movement (USFWS 2010). Moderate to high density urban or industrial developments, large reservoirs and heavily traveled roads without bridges or culverts are considered barriers to dispersal (USFWS 2010). Arroyo de en Medio in the vicinity of the Study Area is an intermittent creek and does not contain suitable breeding habitat based upon water levels and vegetation. The lower Arroyo de en Medio system is not known to support CRLF (CDFW 2015), and urban development is present between the Study Area and occupied habitats one mile to the northeast and southeast. Based upon the intermittent status of Arroyo de en Medio and the lack of suitable breeding habitat in the vicinity of the Study Area, it is unlikely CRLF is present within the Study Area and unlikely to use this section of Arroyo de en Medio as dispersal habitat.

San Francisco gartersnake (*Thamnophis sirtalis tetrataenia*; SFGS) is also unlikely to occur within the Study Area based upon a lack of suitable habitat in the vicinity. The preferred habitat of SFGS is a densely vegetated pond near an open hillside where they can sun themselves, feed, and find cover in rodent burrows; however, considerably less ideal habitats can be successfully occupied. Temporary ponds and other seasonal freshwater bodies are also used. Emergent and bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp. and *Eleocharis* spp.) apparently are preferred and used for cover. The area between stream and pond habitats and grasslands or bank sides is used for basking, while nearby dense vegetation or water often provide escape cover (USFWS 2006). During periods of heavy rain or shortly after, SFGS may make long-distance movements of up to 1.25 miles along drainages within the dense riparian cover, and are not documented to travel over open terrain (McGinnis 2001). The nearest SFGS occurrence is over 1.5 miles to the south and dispersal barriers including development are present between the occurrence and the Study Area. It is unlikely SFGS will occur in the Study Area or vicinity because of the lack of suitable pond habitat and distance from occupied habitat.

Allen's hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern. Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). It feeds on nectar, as well as insects and spiders. The willows and blue gum in the Study Area provide suitable nesting habitat and Allen's hummingbird is known to

nest in suburban habitats in the vicinity. Allen's hummingbird has a high potential to nest in the arroyo willow scrub and blue gum grove within the Study Area.

Impacts and Recommendations

The Study Area contains a riparian corridor and has potential to support one special-status bird species. In addition, most native bird nests are protected under the Migratory Bird Treaty Act. No rare, endangered, or unique species are anticipated to be present in the Study Area. Recommendations to protect the riparian corridor and nesting birds are described below.

Riparian Corridor

Per LCP guidelines, Arroyo de en Medio is an Environmentally Sensitive Habitat Area and setbacks are recommended to avoid impacts to the Arroyo de en Medio riparian corridor. The setback for an intermittent creek is 30 feet from edge of riparian habitat or centerline of the creek where no riparian vegetation is present. Based upon the vegetation in the Study Area, the setback is recommended to be 30 feet from the dripline of the arroyo willow habitat and from the centerline of the creek elsewhere in the Study Area. The setback is shown in Figure 2.

- It is recommended that any proposed construction or project activities remain outside of the 30-foot setback to remain in compliance with the LCP.

Special-Status and Non-Special-Status Nesting Birds

One special-status and several non-special-status bird species have potential to nest within the Study Area. Therefore, the following measures are recommended to avoid impacts to active nests of both special-status and non-special-status bird species:

- Trees or shrubs proposed for removal or trimming should be removed or trimmed during the bird non-nesting season (September 1 – February 14).
- If tree or shrub removal or Project activities are initiated during the nesting season (February 15 – August 31), a pre-construction nesting bird survey is recommended to avoid impacts to both special-status and non-special-status bird species.
 - If active nests are observed, a qualified biologist will determine suitable buffers based upon nest location and bird species. Buffers will be dependent upon species, nest location and project activities, but may range between 25-75 feet for passerine birds and up to 250 feet for raptors.

Summary

Based upon a review of databases and a site visit to the Study Area on December 31, 2015, one sensitive habitat is present within the Study Area, the Arroyo de en Medio riparian corridor. It is recommended that any proposed construction or project activities maintain a 30-foot setback from the riparian corridor as shown in Figure 2. Avoidance of the bird nesting season or pre-construction surveys for nesting birds are recommended for tree or shrub removal and initiation of Project activities. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. No heritage trees are present; however, one "Significant" tree is present. If the tree is planned for removal, it may require a permit from the County of San Mateo. No further measures are recommended.

Please feel free to contact me with any questions you may have.

Sincerely,



Patricia Valcarcel
Wildlife Biologist

Enclosures:

- Attachment A - Figures
- Attachment B - List of Observed Species
- Attachment C - Study Area Photographs

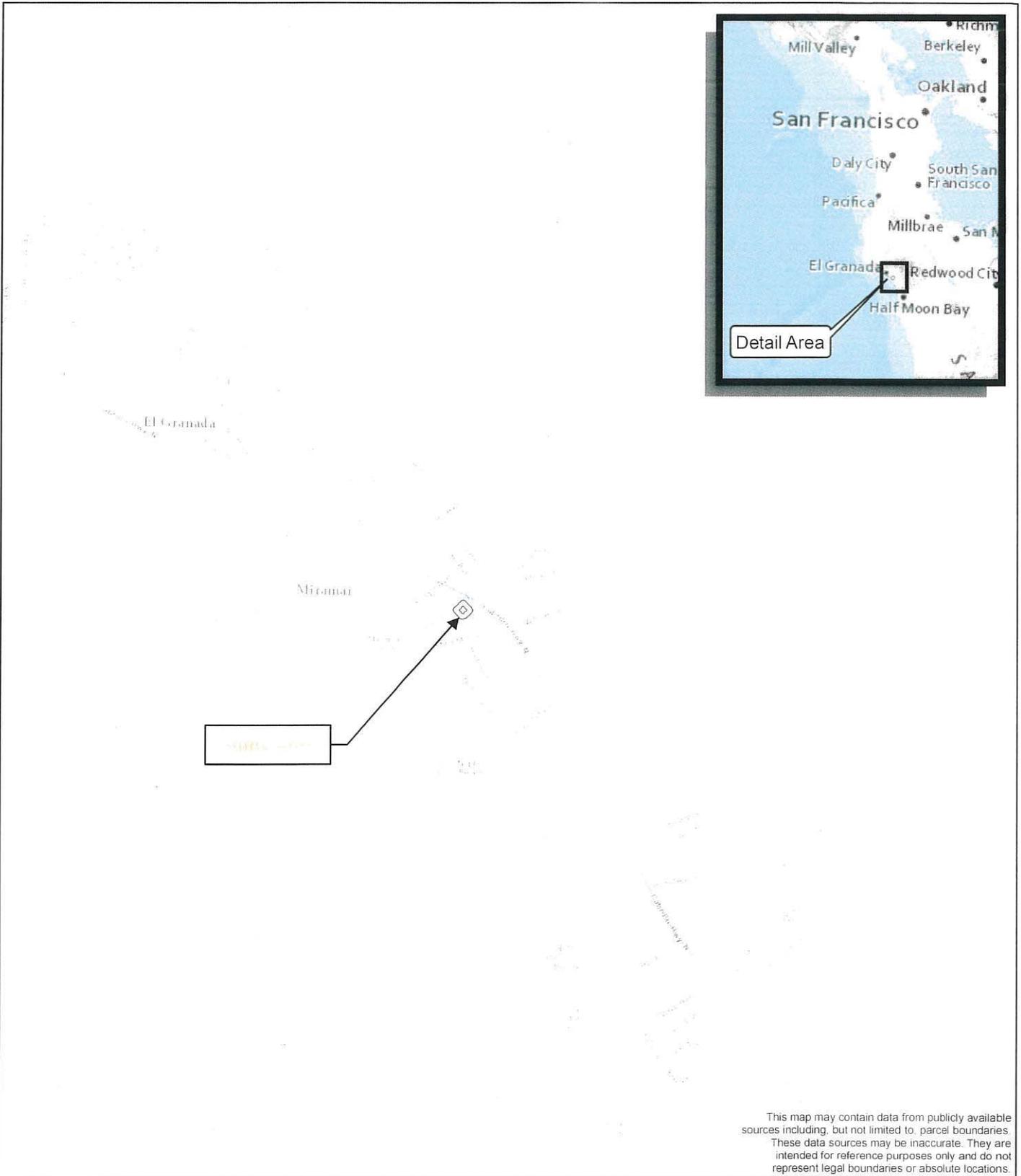
References

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Attachment A

Figures



This map may contain data from publicly available sources including, but not limited to, parcel boundaries. These data sources may be inaccurate. They are intended for reference purposes only and do not represent legal boundaries or absolute locations.

Figure 1. Study Area Location Map



Third Ave Miramar ESHA Assessment
Half Moon Bay, California



Map Prepared Date: 1/20/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

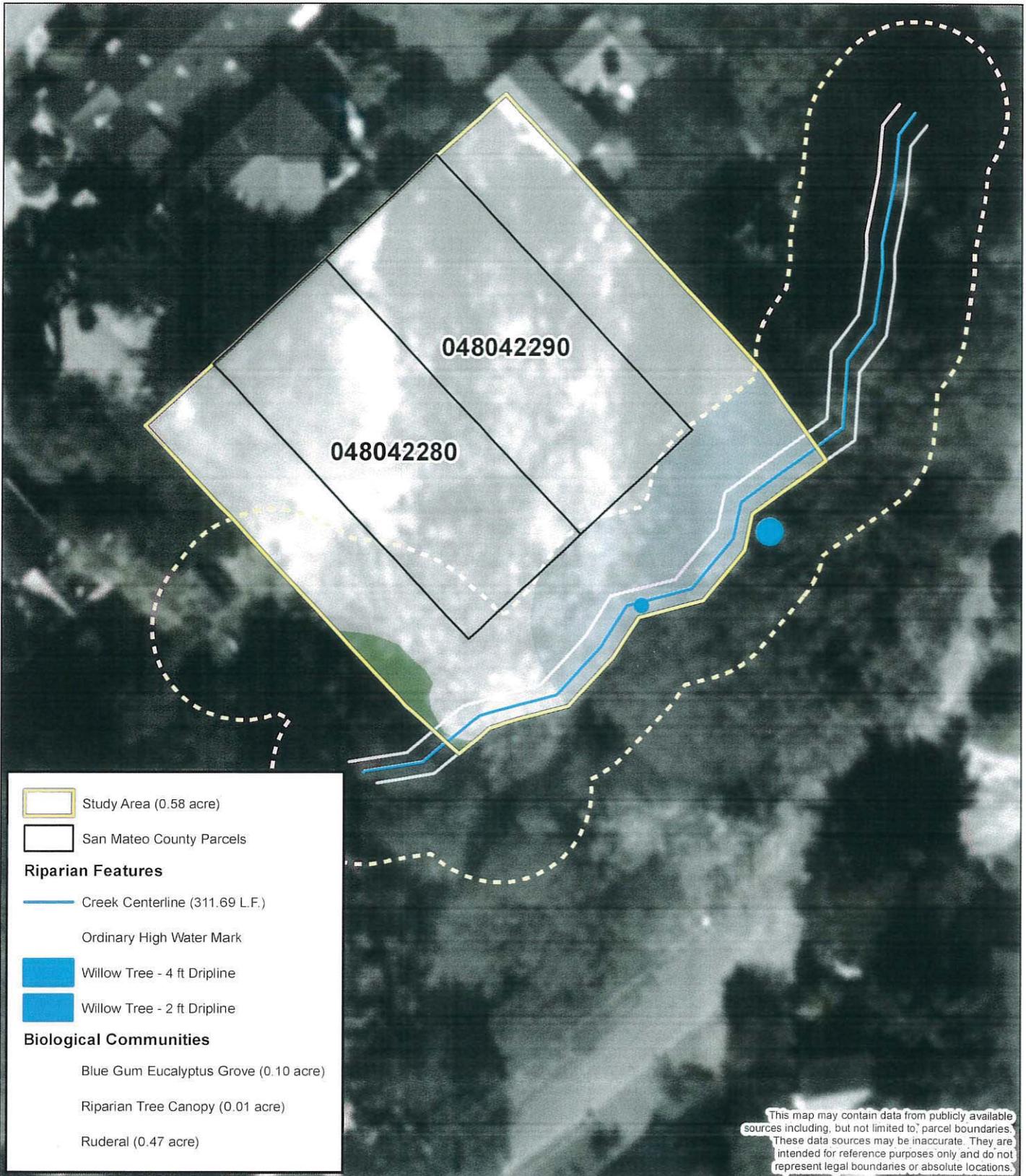


Figure 2. Biological Communities Map

Third Avenue Miramar ESHA Assessment
Half Moon Bay, California



0 10 20 40
Feet

Map Prepared Date: 1/25/2016
Map Prepared By: MRochelle
Base Source: Esri Streaming - Microsoft 2010
Data Source(s): WRA, San Mateo County

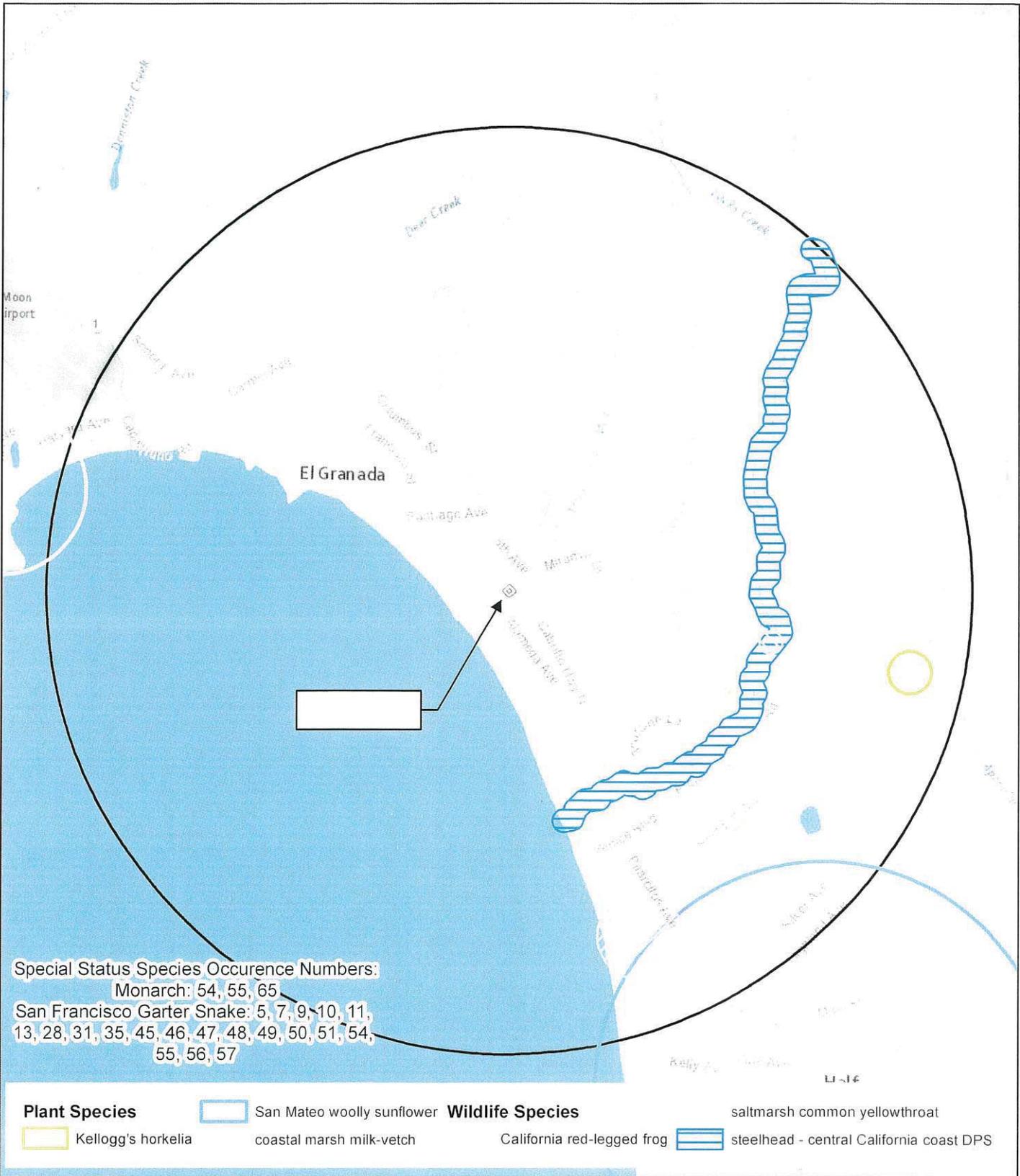
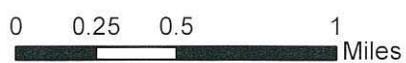


Figure 3. Special Status Plant and Wildlife Species within 2 miles of the Study Area



Third Ave Miramar ESHA Assessment
 Half Moon Bay, California



Map Prepared Date: 1/19/2016
 Map Prepared By: Fhourigan
 Base Source: Esri, National Geographic
 Data Source(s): WRA, CNDDB

Attachment B

List of Observed Species

Attachment B. Plant Species Observed in the Study Area on December 31, 2015.

Family	Scientific Name	Common Name
Adoxaceae	<i>Sambucus racemosa</i>	Red elderberry
Aizoaceae	<i>Carpobrotus chilensis</i>	Sea fig
Apiaceae	<i>Conium maculatum</i>	Poison hemlock
Apiaceae	<i>Daucus carota</i>	Carrot
Araceae	<i>Zantedeschia aethiopica</i>	Callalily
Araliaceae	<i>Hedera helix</i>	English ivy
Asteraceae	<i>Delairea odorata</i>	Cape ivy
Asteraceae	<i>Erigeron canadensis</i>	Canada horseweed
Asteraceae	<i>Eriophyllum staechadifolium</i>	Lizard tail
Betulaceae	<i>Alnus rhombifolia</i>	White alder
Boraginaceae	<i>Echium pininana</i>	Pine echium
Brassicaceae	<i>Nasturtium officinale</i>	Watercress
Brassicaceae	<i>Raphanus sativus</i>	Jointed charlock
Cornaceae	<i>Cornus sericea ssp. sericea</i>	Red osier dogwood
Cucurbitaceae	<i>Marah fabacea</i>	California man-root
Cupressaceae	<i>Hesperocyparis macrocarpa</i>	Monterey cypress
Cupressaceae	<i>Sequoia sempervirens</i>	Coast redwood
Cyperaceae	<i>Cyperus eragrostis</i>	Tall cyperus
Dryopteridaceae	<i>Polystichum munitum</i>	Western sword fern
Fabaceae	<i>Acacia dealbata</i>	Silver wattle
Fabaceae	<i>Acacia melanoxylon</i>	Blackwood acacia
Iridaceae	<i>Chasmanthe floribunda</i>	African cornflag
Myrtaceae	<i>Eucalyptus globulus</i>	Blue gum
Onagraceae	<i>Epilobium ciliatum ssp. ciliatum</i>	Willow herb
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda buttercup
Papaveraceae	<i>Fumaria officinalis</i>	Fumitory
Pinaceae	<i>Pinus radiata</i>	Monterey pine
Poaceae	<i>Bromus diandrus</i>	Ripgut brome
Poaceae	<i>Ehrharta erecta</i>	Upright veldt grass
Polygonaceae	<i>Persicaria hydropiper</i>	Common smartweed
Polygonaceae	<i>Rumex crispus</i>	Curly dock
Polygonaceae	<i>Rumex pulcher</i>	Fiddleleaf dock
Rhamnaceae	<i>Frangula californica</i>	California coffeeberry
Rosaceae	<i>Rubus ursinus</i>	California blackberry
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow
Scrophulariaceae	<i>Myoporum laetum</i>	Ngaio tree
Scrophulariaceae	<i>Scrophularia californica</i>	California bee plant
Solanaceae	<i>Solanum douglasii</i>	Douglas' nightshade
Tropaeolaceae	<i>Tropaeolum majus</i>	Garden nasturtium
Urticaceae	<i>Urtica dioica</i>	Stinging nettle

Attachment C
Representative Photographs

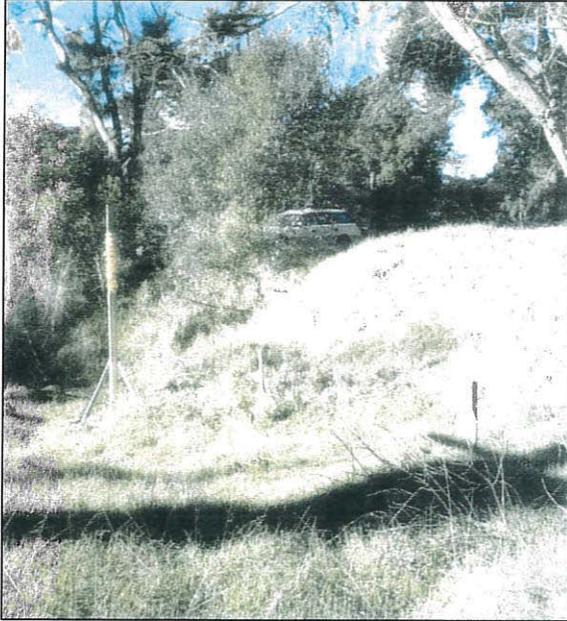


Photo 1. Photo of upland ruderal areas dominated by weedy grasses and forbs. Photo taken in westerly direction

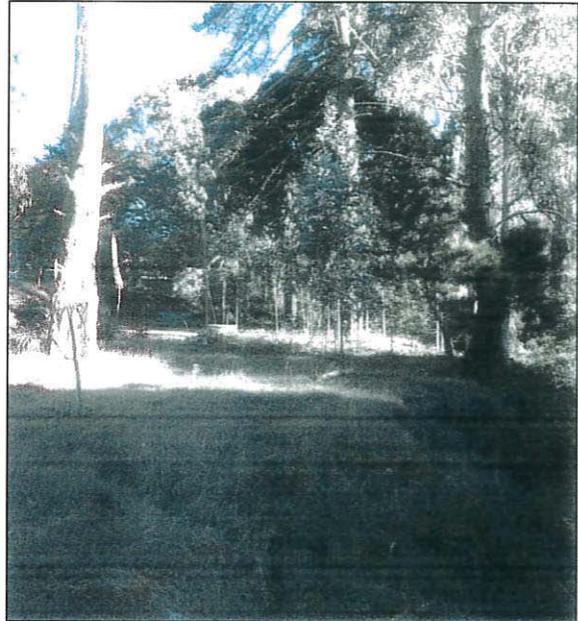


Photo 2. Photo showing ruderal upland area. Arroyo de en Medio is on the right. Photo taken in easterly direction.



Photo 3. Photo showing arroyo willow scrub along Arroyo de en Medio on the western side of the Study Area. Photo taken in a south west direction.

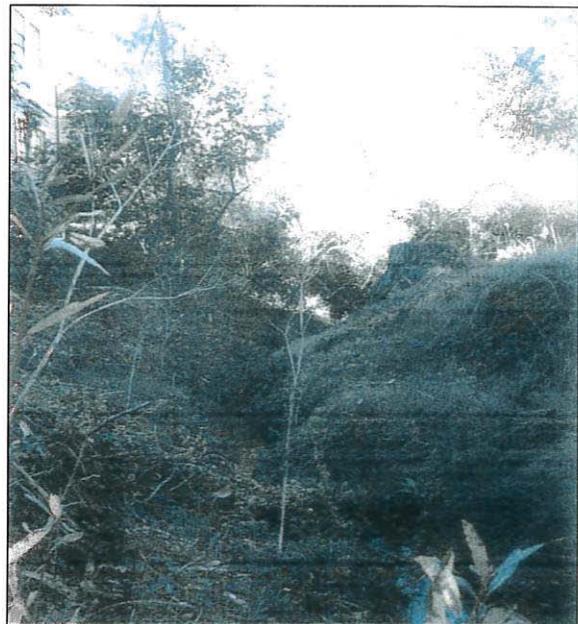


Photo 4. Photo showing Arroyo de en Medio. The Study Area is on the right. Photo taken in a westerly direction.



Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

**VELLA PROPERTY
3RD AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

RECEIVED

APR 15 2015

San Mateo County
Planning and Building Department

PLN2015-00152

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CALIFORNIA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 2010



Sigma Prime Geosciences, Inc.
Effective Solutions

April 21, 2010

Frank Vella
758 Vasquez Drive
Half Moon Bay, CA 94019

Re: Geotechnical Report: Vella Residence, 3rd Avenue, Miramar, California
APN 048-042-280
Sigma Prime Job No. 10-114

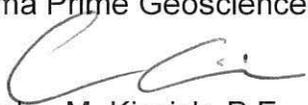
Dear Mr. Vella:

As per your request, we have performed a geotechnical study for your proposed residence at 3rd Avenue in Miramar, California. The accompanying report summarizes the results of our field study, laboratory testing, and engineering analyses, and presents geotechnical recommendations for the planned structure.

Thank you for the opportunity to work with you on this project. If you have any questions concerning our study, please call.

Yours,

Sigma Prime Geosciences, Inc.


Charles M. Kissick, P.E.





**GEOTECHNICAL STUDY
VELLA RESIDENCE
3rd AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 21, 2010



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1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed residence at 3rd Avenue in Miramar, California, at the location shown in Figure 1. The purpose of this investigation was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed construction.

1.1 PROJECT DESCRIPTION

We understand that you plan to construct a home on 3rd Avenue, in Miramar. The lot is on the west side of Highway 1, about two blocks from the beach. The 2-story structure is expected to be of wood frame construction and have wooden floors constructed over a crawl space. The lot has two level areas with a slope in between, as shown in Figure 2. Therefore, the house would have a lower level on the lower bench. Structural loads are expected to be relatively light as is typical for this type of construction.

1.2 SCOPE OF WORK

In order to complete this project we have performed the following tasks:

- Reviewed published information on the geologic and seismic conditions in the site vicinity;
- Geologic site reconnaissance;
- Subsurface study, including 2 soil borings at the site;
- Engineering analysis and evaluation of the subsurface data to develop geotechnical design criteria; and
- Preparation of this report presenting our recommendations for the proposed structure.



2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on April 1, 2010. The subsurface study consisted of advancing 2 soil borings with an augur bit. The soil borings were advanced to a depths of 20 feet and 21.5 feet. The approximate locations of the borings, numbered B-1 and B-2, are shown in Figure 2, Site Plan. The boring logs and the results of the laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the site was undeveloped, with homes built on properties to the east and north. The property consists of two level benches with a slope in between the benches. The slope is about 8 feet high and is inclined at about 30%, or about 3.3:1 (H:V). The vegetation consists of wild grasses and large pine trees.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Pampeyan (1994), the site vicinity is underlain by Holocene younger alluvial fan deposits. This unit is described as a poorly consolidated, fine to coarse grained sand, silt, and gravel.

2.4 SITE SUBSURFACE CONDITIONS

Based on the two soil borings, the subsurface conditions on the upper slope consist of about 5.5 feet of loose sandy clay fill, underlain by alternating layers of medium stiff sandy clay and loose sand. The clay has low plasticity. The soil under the lower bench consists of 11 feet of loose sand, underlain by 9 feet of very stiff sandy clay.

2.5 GROUNDWATER

Free groundwater was encountered at a depth of approximately 15.2 feet in the boring on the upper bench, and 6.4 feet in the boring on the lower bench. Groundwater may be encountered during construction, depending on the foundation system selected, as discussed in Section 3.4 below.



2.6 FAULTS AND SEISMICITY

The site is in an area of high seismicity, with active faults associated with the San Andreas fault system. The closest active fault to the site is the San Gregorio fault, located about 2.5 km to the west. Other faults most likely to produce significant seismic ground motions include the San Andreas, Hayward, Rodgers Creek, and Calaveras faults. Selected historical earthquakes in the area with an estimated magnitude greater than 6-1/4, are presented in Table 1 below.

**TABLE 1
HISTORICAL EARTHQUAKES**

<u>Date</u>	<u>Magnitude</u>	<u>Fault</u>	<u>Locale</u>
June 10, 1836	6.5 ¹	San Andreas	San Juan Bautista
June 1838	7.0 ²	San Andreas	Peninsula
October 8, 1865	6.3 ²	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0 ²	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9 ³	San Andreas	Golden Gate
July 1, 1911	6.6 ⁴	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1 ⁵	San Andreas	Loma Prieta, Santa Cruz Mountains
(1)	Borchardt & Topozada (1996)		
(2)	Topozada et al (1981)		
(3)	Petersen (1996)		
(4)	Topozada (1984)		
(5)	USGS (1989)		

2.7 2007 CBC EARTHQUAKE DESIGN PARAMETERS

Based on the 2007 California Building Code (CBC) and our site evaluation, we recommend using Site Class Definition D (stiff soil) for the site. The other pertinent CBC seismic parameters are given in Table 2 below.

**Table 2
CBC SEISMIC DESIGN PARAMETERS**

S_s	S₁	F_a	F_v	S_{MS}	S_{M1}	S_{DS}	S_{D1}
1.990	0.932	1.0	1.5	1.990	1.398	1.327	0.932

Because the S₁ value is greater than 0.75, Seismic Design Category E is recommended, per CBC Section 1613.5.6. The values in the table above were obtained from a USGS software program which provides the values based on the latitude and longitude of the site, and the Site Class Definition. The latitude and longitude were 37.4950 and -122.4565, respectively, and were accurately obtained from Google Earth™. These same values can be obtained directly from maps in the CBC, however the scale of the map makes it impractical to



achieve satisfactory accuracy. The map in the CBC was derived from the same work that led to the USGS software. The remaining parameters were also obtained by the same USGS program.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

It is our opinion that, from a geotechnical standpoint, the site is suitable for the proposed construction, provided the recommendations presented in this report are followed during design and construction. Detailed recommendations are presented in the following sections of this report.

Because subsurface conditions may vary from those encountered at the location of our borings, and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) Review the project plans for conformance with our report recommendations and 2) Observe and test the earthwork and foundation installation phases of construction.

3.2 GEOLOGIC HAZARDS

We reviewed the potential for geologic hazards to impact the site, considering the geologic setting, and the soils encountered during our investigation. The results of our review are presented below:

- Fault Rupture - The site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion.
- Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.



- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however precautions should be made to prevent expensive cosmetic damage.
- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at the site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.
- Slope Stability – Based on the geologic map and our site reconnaissance, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The slope that crosses the site is inclined at about 30%, and is about 8 feet high. This slope is likely to remain stable. The construction of the house will help to stabilize the slope by acting as a buttress. Therefore, the likelihood of a landslide impacting the house is low. Ground movement may be associated with earthquake-induced liquefaction, as discussed above. The precautions that we will recommend to counteract liquefaction induced ground movement will also account for any slope movements.

3.3 EARTHWORK

3.3.1 Clearing & Subgrade Preparation

All deleterious materials, including topsoil, roots, vegetation, designated utility lines, etc., should be cleared from building and driveway areas. The actual stripping depth required will depend on site usage prior to construction, and should be established by the Contractor during construction. Topsoil should be stockpiled separately for later use in landscaping areas.



3.3.2 Fills

Fills are not recommended beneath the base of foundations, unless the foundation is designed for this condition. (See Section 3.4) In landscaping areas, any fills greater than 3 feet in depth should be placed in loose lifts not exceeding 12 inches in height, and compacted to at least 90% of the maximum dry density, as determined by ASTM D1157-78.

3.3.3 Compaction

Scarified surface soils should be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1157-78. All trench backfill should also be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density.

3.3.4 Surface Drainage

The finish grades should be designed to drain surface water away from foundations and slab areas to suitable discharge points. Slopes of at least 2 percent within 10 feet of the structures are recommended. Ponding of water should not be allowed adjacent to the structure.

3.4 FOUNDATIONS

We recommend either a reinforced mat foundation or a pier and grade beam foundation. The site may be subject to liquefaction-induced ground deformation. Either foundation type will minimize potential structural damage to the house, if built properly. However, the house may move slightly, resulting in cosmetic damage.

Mat Foundation:

Although a mat slab would rest on fill material, the mat would be designed to bear on fill. Because the house would be built on two levels, the foundation system would consist of two mats. The mats should be tied together structurally to create one rigid unit.

A reinforced slab or mat foundation may be designed for allowable bearing pressures of 2,000 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces.



We recommend that the mat be underlain by at least 12 inches of non-expansive granular fill that is compacted as per the recommendations in Section 3.3.3 of this report. Where floor wetness would be detrimental, a vapor barrier, such as 10 mil visqueen, should be placed over the gravel. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 12 inches of granular fill recommended above.

The mat should be reinforced to provide structural continuity and to permit spanning of local irregularities. The mat should be capable of spanning 25 feet, point to point, and should cantilever a minimum of 8 feet. As a guideline to the structural engineer, we anticipate that the mat slab would be a minimum of 12 inches thick, with two layers of #5 reinforcing bars at top and bottom, both ways, spaced at 10 inches on center, or equivalent. The structural engineer may opt to include thicker perimeters. As discussed in Section 3.3.3 above, the subgrade should be compacted prior to the placement of granular fill. Our representative should observe the excavation prior to placing reinforcing steel to see that the subgrade has been properly prepared.

Pier and Grade Beam:

It should be noted that pier holes will penetrate loose sands and is likely to cave in while drilling. If this foundation method is selected, the contractor should expect to case the holes while drilling.

Piers should be drilled and cast-in-place, and be a minimum of 16 inches in diameter. The piers should be a minimum of 18 feet deep, as measured from the bottom of the adjacent grade beam. The actual pier depths should be determined by the structural engineer, based on the criteria given below.

The piers may gain support in skin friction acting along the sides of the piers within the clayey soil. A skin friction of 500 psf between the piers and the soil should be used in design. The uplift capacity of the piers may be based on a skin friction value of 350 pounds per square foot acting below a depth of 2 feet. The skin friction value may be increased by 1/3 for seismic loads and wind loads. Because of the difficulty in cleaning the bottoms of the pier holes, end bearing should be neglected, however the pier holes should be kept as clean as possible.

Drilled piers should have a center-to-center spacing of not less than three pier diameters. The concrete should not be allowed to free-fall more than 5 feet.



3.4.1 Lateral Loads

Mat Foundation:

Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. We recommend that an equivalent fluid weight of 300 pcf be used in design to calculate the passive pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. We recommend using a base friction coefficient of 0.30, multiplied by the vertical dead load, to calculate the base friction lateral resistance.

Pier and Grade Beam:

Resistance to lateral loads may be provided by passive pressure acting against the piers, neglecting the upper 2 feet of the pier, and acting across 1.5 pier diameters. We recommend that an equivalent fluid pressure of 300 pcf be used in design.

3.4.2 Slabs-on-Grade

We recommend that the slab-on-grade be underlain by at least 4 inches of non-expansive fill, preferably Class 2 base rock. Where floor wetness would be detrimental, a vapor barrier, such as 10-mil visqueen, should be placed over the fill. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 4-inches of fill recommended above.

3.5 RETAINING WALLS

Retaining walls should be designed to resist lateral earth pressure from the adjoining natural soils and/or backfill. The walls should be founded on drilled piers with the same requirements as those discussed above. We recommend that walls that are restrained from lateral movement be designed to resist an at-rest equivalent fluid pressure of 65 pounds per cubic foot (pcf). Retaining walls that are not restrained from lateral movement should be designed to resist an active equivalent fluid pressure of 45 pcf.

To account for seismic loads, we recommend adding a dynamic pressure increment of $18H$, where H is the height of the wall. The dynamic load is a rectangular distribution acting halfway up the wall. This value is obtained using a modified Mononobe-Okabe procedure, by first estimating the peak ground



acceleration at the site, based on the average of four published attenuation relationships. The peak ground acceleration at the project site is estimated to be 0.58g. This peak value is reduced by 0.65 (denoted as k_h) because peak accelerations are too short in duration to have an impact. Therefore, $k_h = 0.377g$. The static coefficient of lateral earth pressure, K_A , equal to 0.271 in this case, is applied. A relationship between k_h and K_A is used to obtain the total lateral earth pressure coefficient, K_{AE-TOT} , due to both the dynamic and the static increments. The static increment is then subtracted to obtain the dynamic increment, K_{AE-DYN} . The dynamic increment, K_{AE-DYN} , is then applied to obtain the dynamic pressure, P_{AE-DYN} , using the equation,

$$P_{AE-DYN}=0.5(\gamma)(K_{AE-DYN})(H^2),$$

where γ is the unit weight of soil.

Retaining walls should include a subsurface drainage system behind the walls to prevent any buildup of water pressure from surface water infiltration. The drainage system should consist of a 4-inch (Schedule 40 PVC) perforated pipe (perforations placed down) located below the adjacent slab elevation. The pipe should be embedded in a 12-inch width of 1/2-inch crushed rock. The remaining backfill may consist of 1/2-inch crushed rock, extending to within 2 feet of the level of the outside finish grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 2 feet of backfill should consist of native soil. The subdrain should slope to a free draining outlet. Cleanouts should be provided. Damp proofing of walls should be included in areas where wall moisture would be undesirable. Miridrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative. If used, the drainage fabric should extend from a depth of 2 feet to the drain pipe at the base of the wall. The 12-inch width of 1/2-inch crushed rock and filter fabric should be placed around the drainpipe, as discussed in the earlier section.

3.6 CONSTRUCTION OBSERVATION AND TESTING

The earthwork and foundation phases of construction should be observed and tested by us to 1) Establish that subsurface conditions are compatible with those used in the analysis and design; 2) Observe compliance with the design concepts, specifications and recommendations; and 3) Allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited number of borings. The nature and extent of variation across the site may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate our recommendations.



4. LIMITATIONS

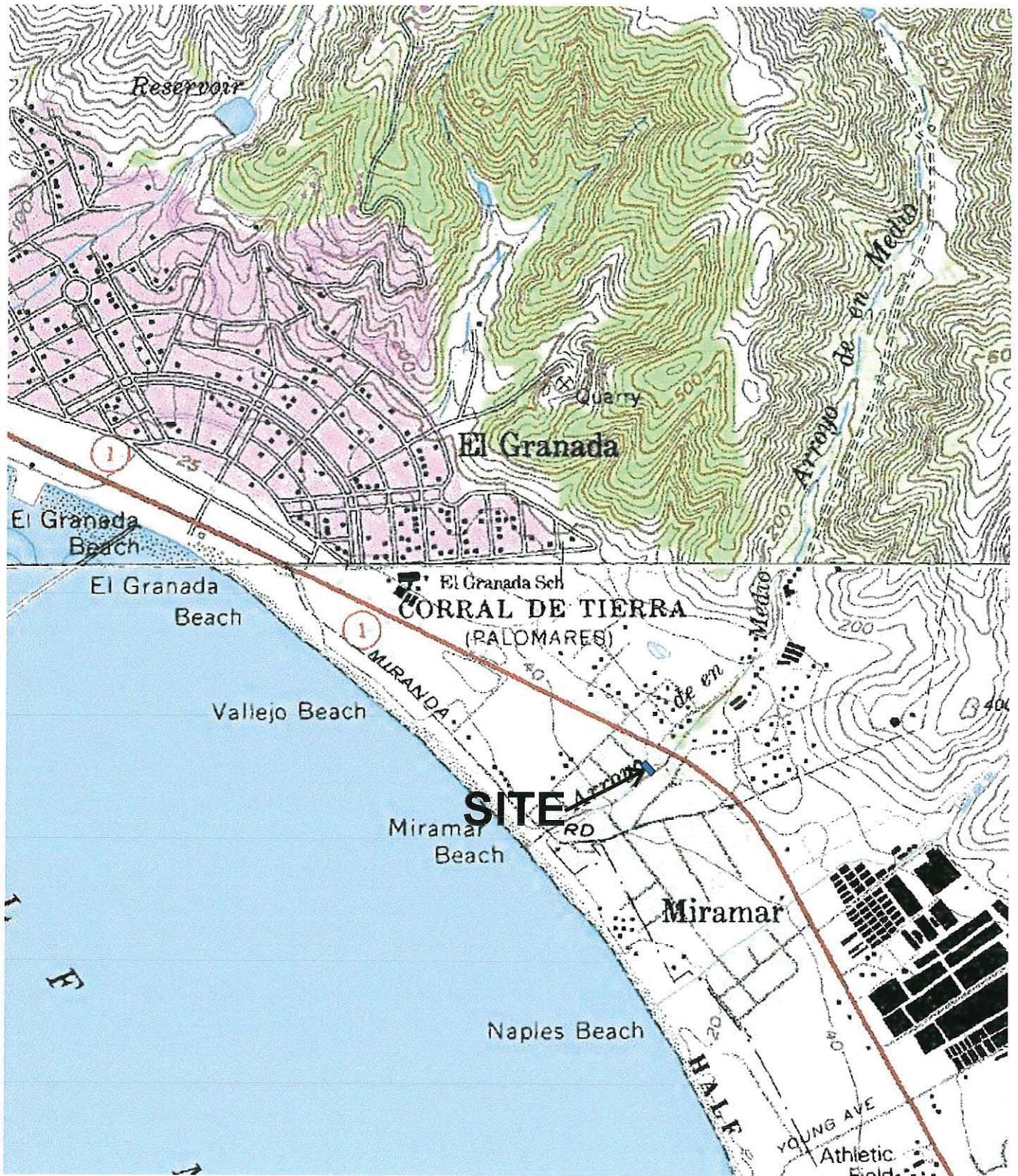
This report has been prepared for the exclusive use of the owner for specific application in developing geotechnical design criteria, for the currently planned residence on 3rd Avenue in Miramar, California (APN 048-042-280). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; the currently planned improvements; review of previous reports relevant to the site conditions; and laboratory results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.



5. REFERENCES

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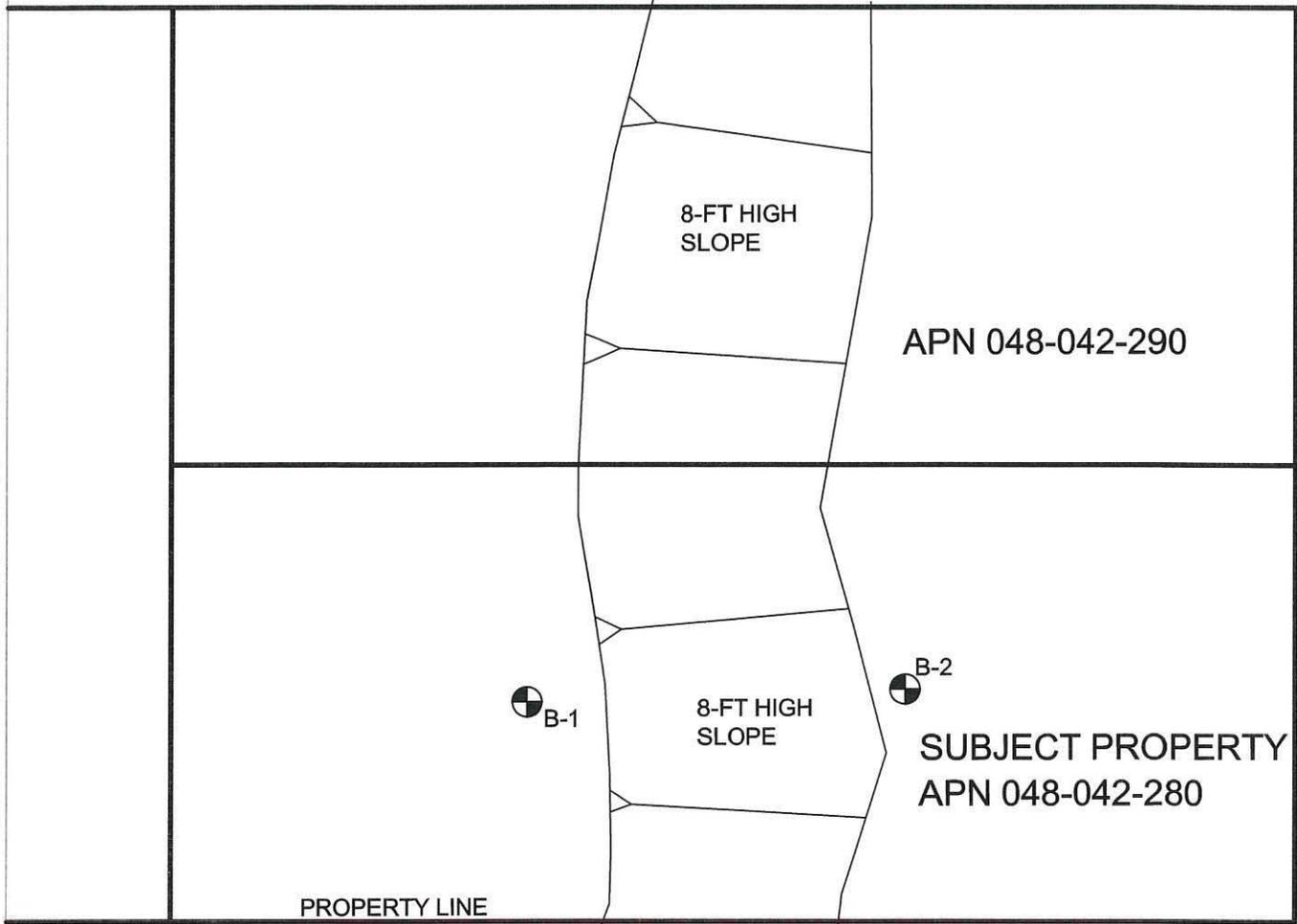
Figure 1

Date: 4/21/10

Job No.: 10-114

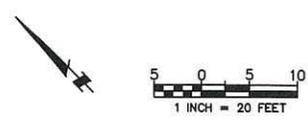
Location Map

Vella Property, 3rd Ave., Miramar APN 048-042-280



ARROYO de en MEDIO

← 3RD AVENUE
~500 FEET TO MEDIO AVE.



ASPHALT
(APPROX.)

1"=20'

EXPLANATION

	Soil Boring Location
--	----------------------

<p>Sigma Prime Geosciences, Inc.</p>	Figure	2
	Date:	4/21/10
	Job No.:	10-114
<p>Site Map</p> <p>Vella Property, 3rd Ave., Half Moon Bay APN 048-042-280</p>		



APPENDIX A

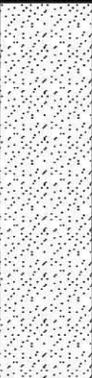
FIELD INVESTIGATION

The soils encountered during drilling were logged by our representative, and samples were obtained at depths appropriate to the investigation. The samples were taken to our laboratory where they were carefully observed and classified in accordance with the Unified Soil Classification System. The logs of our borings, as well as a summary of the soil classification system, are attached.

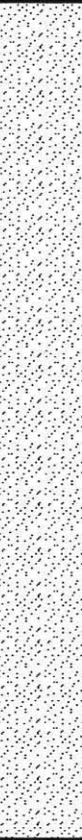
Several tests were performed in the field during drilling. The standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 18 inches. The standard penetration resistance is the number of blows required to drive the sampler the last 12 inches of the 18-inch drive. The results of these field tests are presented on the boring logs.

The boring logs and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and ground water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.

Project Name / Boring Location Vella #2 048-042-280 / Top of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum		
Auger	4"	21.5'	21.5'	0	56'	assumed	Boring No.	B-1
Drilling Company Cenozoic Drilling				Logged By: C. Kissick			Page	1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"			Date(s)	4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
0'-5.5'	<u>Sandy Clay (FILL)</u> : dark brown; soft; moist; coarse sand.		CL	2 3 3	1	MC	<u>Lab. Sample #1:</u> Moisture%=15.3% Dry Density=92.3 pcf LL=32, PL=19, PI=13
5.5'-10.5'	<u>Sand (NATIVE)</u> : yellowish brown; loose; moist; fine to medium grained.		SP	2 2 2	2	SPT	
10.5'-13'	<u>Silty Sand</u> : dark brown; loose; moist; coarse sand.		SM	4 3 3	3	SPT	
13'-20'	<u>Clayey Sand</u> : moderate brown; loose; moist.		SC	3 4 5	4	SPT	▽ Groundwater @ 15.2' <u>Lab. Sample #4:</u> % Passing #200: 32.2
20'	Medium dense.			6 8 9	5	SPT	Bottom of Hole @ 21.5' Groundwater @ 15.2'.

Project Name / Boring Location Vella #2 048-042-290 / Bottom of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum		
Auger	4"	20'	20'	0	49'	assumed	Boring No.	B-2
Drilling Company Cenozoic Drilling					Logged By: C. Kissick		Page	1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"			Date(s)	4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments		
0'-11':	Sand: tan; medium dense; moist; coarse sand.		SP	10			Lab. Sample #1: Moisture%=6.2% Dry Density=109.4 pcf		
				11				MC	
				13	1				
5	Loose.			6		6		2	SPT
		6		6					
		3		4	3	SPT			
10				5					
11'-20':	Clayey Sand: moderate brown; medium dense; moist.		SC	8			Hole caved; terminated at 20'.		
				5		8		4	SPT
				8		10			
15									
20	Bottom of Hole @ 20' Groundwater @ 6.4'.								

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS > 50% RETAINED ON NO. 4 SIEVE	GRAVELS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL
			$Cu < 4$ AND/OR $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SANDS < 5% FINES	$Cu > 6$ AND $1 < Cc < 3$	SW	WELL-GRADED SAND
			$Cu < 6$ AND/OR $1 > Cc > 3$	SP	POORLY-GRADED SAND
		SANDS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS > 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT < 50	INORGANIC	$PI > 7$ AND PLOTS > "A" LINE	CL	LOW-PLASTICITY CLAY
			$PI > 4$ AND PLOTS < "A" LINE	ML	LOW-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	PI PLOTS > "A" LINE	CH	HIGH-PLASTICITY CLAY
			PI PLOTS < "A" LINE	MH	HIGH-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK COLOR, ORGANIC ODOR		PT	PEAT

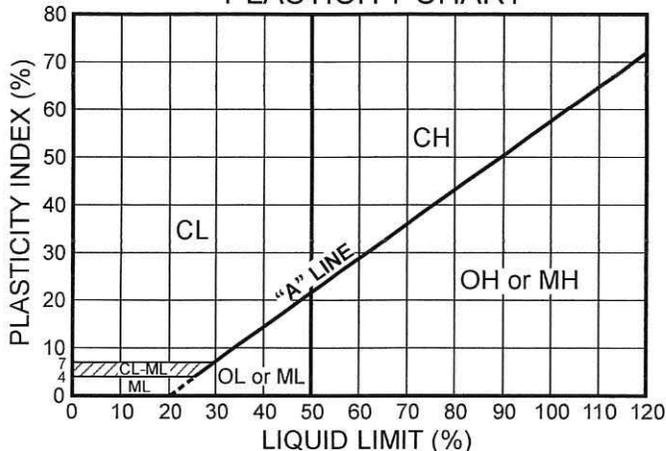
SAMPLE TYPES

- B BULK SAMPLE
- ST PUSHED SHELBY TUBE
- SPT STANDARD PENETRATION
- MC MODIFIED CALIFORNIA
- P PITCHER SAMPLE
- C ROCK CORE

ADDITIONAL TESTS

- CA - CHEMICAL ANALYSIS
- CN - CONSOLIDATION
- CP - COMPACTION
- DS - DIRECT SHEAR
- PM - PERMEABILITY
- PP - POCKET PENETROMETER
- Cor. - CORROSIVITY
- SA - GRAIN SIZE ANALYSIS (20%) - (PERCENT PASSING #200 SIEVE)
- SW - SWELL TEST
- TC - CYCLIC TRIAXIAL
- TU - CONSOLIDATED UNDRAINED TRIAXIAL
- TV - TORVANE SHEAR
- UC - UNCONFINED COMPRESSION
- WA - WASH ANALYSIS
- WATER LEVEL AT TIME OF DRILLING AND DATE MEASURED
- LATER WATER LEVEL AND DATE MEASURED

PLASTICITY CHART



LEGEND TO SOIL DESCRIPTIONS



FIGURE A-1



APPENDIX B

LABORATORY TESTS

Samples from the subsurface study were selected for tests to establish some of the physical and engineering properties of the soils. The tests performed are briefly described below.

The natural moisture content and dry density were determined in accordance with ASTM D 2216 on selected samples recovered from the borings. This test determines the moisture content and density, representative of field conditions, at the time the samples were collected. The results are presented on the boring logs, at the appropriate sample depth.

The plasticity of selected clayey soil samples was determined on two soil samples in accordance with ASTM D 422. These results are presented on the boring logs, at the appropriate sample depth.

The percentage of fines in one sample was determined in accordance with ASTM D 1140. The results are presented on the boring log, at the appropriate sample depth.

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA	HUMBOLDT	SAN FRANCISCO
COLUSA	LAKE	SAN MATEO
CONTRA COSTA	MARIN	SANTA CLATA
DEL NORTE	MENDOCINO	SANTA CRUZ
	MONTEREY	SOLANO
	NAPA	SONOMA
	SAN BENITO	YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
<http://www.sonoma.edu/nwic>

May 3, 2016

File No.: 15-1610

Dennis Aguirre, Project Planner
San Mateo County Planning and Building Division
455 County Center
Redwood City, CA 94063

re: County File Number: 2015-00152 / Third Avenue; APN: 048-042-280 / Edward C. Love, Architect

Dear Mr. Aguirre,

Records at this office were reviewed to determine if this project could adversely affect cultural resources.

Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.

Previous Studies:

XX Study #003082 (Dietz 1970), covering approximately 100% of the proposed project area, identified no cultural resources (see recommendation below).

Archaeological and Native American Resources Recommendations:

XX Due to the passage of time since the previous survey (Dietz 1970) and the changes in archaeological theory and method since that time, we recommend a qualified archaeologist conduct further archival and field study for the entire project area to identify archaeological resources.

XX We recommend you contact the local Native American tribes regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

Built Environment Recommendations:

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of San Mateo County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at <http://www.chrisinfo.org>. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,



Scott McGaughey
NWIC Researcher

cc: Edward C. Love
720 Mill Street
Half Moon Bay, CA 94019

COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

**NOTICE OF INTENT TO ADOPT
MITIGATED NEGATIVE DECLARATION**

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: New Vella/Semprevivo Single-Family Residence, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2015-00152

OWNER: Frank Vella and Steve Semprevivo

APPLICANT: Edward Love

ASSESSOR'S PARCEL NO.: 048-042-280

**POSTING
ONLY**
BESZ DE LA VEG.

MAY 04 2016

LOCATION: 3rd Avenue, unincorporated Miramar area of San Mateo County

PROJECT DESCRIPTION: The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. The project, as proposed and mitigated, will not adversely affect water or air quality or increase noise levels substantially.
2. The project, as proposed and mitigated, will not have adverse impacts on the flora or fauna of the area.
3. The project, as proposed and mitigated, will not degrade the aesthetic quality of the area.
4. The project, as proposed, will not have adverse impacts on traffic or land use.
5. In addition, the project, as proposed and mitigated, will not:
 - a. Create impacts which have the potential to degrade the quality of the environment.
 - b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

- c. Create impacts for a project which are individually limited, but cumulatively considerable.
- d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project is less than significant.

MITIGATION MEASURES recommended for project implementation to avoid potentially significant effects:

Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a

professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.

- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

RESPONSIBLE AGENCY CONSULTATION: None.

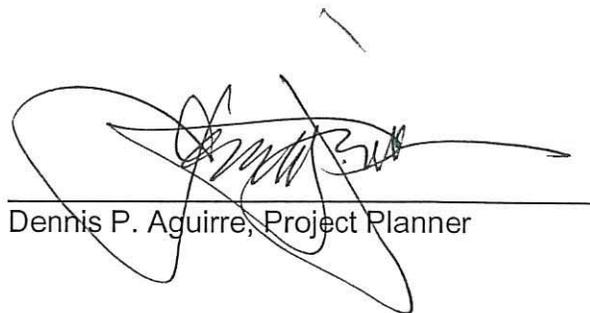
INITIAL STUDY: The San Mateo County Current Planning Section has reviewed the Environmental Evaluation of this project and has found that the probable environmental impacts are less than significant. A copy of the initial study is attached.

REVIEW PERIOD: May 4, 2016 to May 24, 2016

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., May 24, 2016.**

CONTACT PERSON

Dennis P. Aguirre
Project Planner, 650/363-1867
daguirre@smcgov.org



Dennis P. Aguirre, Project Planner

DPA:pac – DPAAA0232_WPH.DOCX

County of San Mateo
Planning and Building Department

**INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST**
(To Be Completed by Planning Department)

1. **Project Title:** New Vella/Semprevivo Single-Family Residence
2. **County File Number:** PLN 2015-00152
3. **Lead Agency Name and Address:** County of San Mateo Planning and Building Department, 455 County Center, Second Floor, Redwood City, CA 94063
4. **Contact Person and Phone Number:** Dennis P. Aguirre, Project Planner, 650/363-1867
5. **Project Location:** 3rd Avenue, unincorporated Miramar area of San Mateo County
6. **Assessor's Parcel Number and Size of Parcel:** 048-042-280; 6,150 sq. ft.
7. **Project Sponsor's Name and Address:** Frank Vella and Steve Semprevivo, 758 Vasques Drive, Half Moon Bay
8. **General Plan Designation:** Medium High Density Residential
9. **Zoning:** R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development)
10. **Description of the Project:** The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.
11. **Surrounding Land Uses and Setting:** The project site is a vacant lot located on 3rd Avenue in the unincorporated Miramar area of San Mateo County, within a general area of developed parcels. The subject site is mildly sloped (approximately 10%) in topography with vegetation consisting of non-native invasive plant species, ruderal and disturbed vegetation, and areas of riparian vegetation. An intermittent stream, Arroyo de en Medio, runs along the southern boundary of the site. 3rd Avenue westward and developed parcels to the north, south and west bound this parcel.
12. **Other Public Agencies Whose Approval is Required:** None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

There are environmental factors that would be potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Significant Unless Mitigated", as indicated by the checklist on the following pages.

	Aesthetics		Climate Change		Population/Housing
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Public Services
	Air Quality	X	Hydrology/Water Quality		Recreation
X	Biological Resources		Land Use/Planning		Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities/Service Systems
X	Geology/Soils		Noise	X	Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" 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 "No Impact" answer should be explained 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).
2. All answers must take account of the whole 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.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.

- b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. AESTHETICS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1.a. Have a significant adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	
<p>Discussion: The proposed project site is not located within any designated State or County Scenic Corridor. The site is would not visible from Cabrillo Highway due to existing mature vegetation and proposed landscaping that provide screening for the project and minimize any significant visual impacts from this main thoroughfare. The project is located in a Design Review (DR) District. The Coastside Design Review Committee (CDRC) considered the project at its August 13, 2015 meeting, and recommended approval of the project, as submitted.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				
1.b. Significantly damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				

1.c. Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief features, and/or development on a ridgeline?			X	
<p>Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project is consistent with the existing residential character of the neighborhood, as determined by the CDRC.</p> <p>Source: Project Plans and Field Observation.</p>				
1.d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?			X	
<p>Discussion: As the project involves the installation of exterior lighting fixtures that are downward directed, as required by the Design Review standards, no significant source of light and glare will be created that would affect views in the area.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
1.f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?			X	
<p>Discussion: The subject parcel is zoned R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development). The project is subject to the approval of a Coastal Development Permit and Design Review Permit, pursuant to Sections 6328.4, and 6565.3 of the San Mateo County Zoning Regulations. The project, as proposed, is generally consistent with these regulations. The proposed development conforms to the use requirements of the R-1 Zoning District and the development standards of the S-17 Zoning District.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.g. Visually intrude into an area having natural scenic qualities?			X	
<p>Discussion: The project site is bordered by 3rd Avenue to the west and developed parcels to the north, south and west bound this parcel. The proposed residence would blend in with existing houses in the area. As mitigated, the project would protect the Arroyo de en Medio creek and</p>				

associated riparian vegetation, located at the rear of the parcel. Reference response to Section 1.a., above.

Source: Project Plans and Field Observation.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2.a. For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

Discussion: N/A. The project site does not contain farmland and is not located in an agricultural zoning district, nor is it adjacent to such lands. The project site does not contain an open space easement and is not subject to a Williamson Act contract.

Source: Project Plans and Field Observation.

2.b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
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Discussion: Reference response to Section 2.a., above.

Source: Project Plans and Field Observation.

2.c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X
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Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.d.	For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.e.	Result in damage to soil capability or loss of agricultural land?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.f.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? <i>Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.</i>			X
Discussion: N/A. The project site does not contain and is not located in an area containing forestland/timberland.				
Source: Project Plans and Field Observation.				

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
Discussion: The construction of the new residence may result in temporary generation of pollutants related to construction and minor earthwork (60 cubic yards). However, the proposed single family residential use would not result in the regular generation of air pollutants. Section					

<p>2-1-113 (<i>Exemption, Sources and Operations</i>) of the General Requirements of the Bay Area Air Quality Management District exempts sources of air pollution associated with construction of a single-family dwelling used solely for residential purposes, as well as road construction. No mitigation measures are necessary.</p> <p>Source: Bay Area Air Quality Management District (BAAQMD) Regulation 2, Rule 1: General Requirements.</p>					
3.b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?			X	
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.d.	Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.e.	Create objectionable odors affecting a significant number of people?				X
<p>Discussion: While project construction for the new residence may create temporary construction-related odors, the project would not result in the regular generation of odors, nor would temporary odors affect a significant number of people, as the project is located on private property within a single-family residential neighborhood.</p> <p>Source: Project Application/Plans.</p>					
3.f.	Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?			X	

Discussion: Reference response to Section 3.a., above.

Source: BAAQMD Regulation 2, Rule 1: General Requirements.

4. BIOLOGICAL RESOURCES. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
4.a. Have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion: A Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, was prepared by WRA Environmental Consultants (Biological Report), included as Attachment B. The Biological Report examines the project site as well as areas around it within a designated “study area.” The Biological Report finds that the study area consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream located southeasterly of the site. The Biological Report also indicates that the study area includes arroyo willow scrub, which is considered riparian corridor. However, a majority of Arroyo de en Medio Creek in the study area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek. The 30-foot riparian setback for development on the project site is shown in Figure 2 of Attachment B. The Biological report also finds that one special-status and several non-special-status bird species have potential to nest within the study area. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. The following mitigation measures, which are recommendations of the Biological Report, help to ensure that potential impacts to both special-status and non-special-status bird species are mitigated to a less than significant level:

Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of

<p>species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.</p> <p>Source: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, by WRA Environmental Consultants; San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>					
4.b.	Have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
<p>Discussion: Reference response to Section 4.a., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.c.	Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
<p>Discussion: The project site does not contain federally protected wetlands.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.d.	Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
<p>Discussion: Reference response to Section 4.a. and c., above. The project would not interfere significantly with the movement of any native resident or migratory fish as the project would not directly affect Arroyo de en Medio Creek, which is located approximately 30 feet from the project site. The project does not contain and, therefore, would not impede the use of native wildlife nursery sites.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or			X	

ordinance (including the County Heritage and Significant Tree Ordinances)?				
<p>Discussion: While no heritage trees are present and one significant tree is present, no live trees are proposed for removal. One dead Monterey pine tree (36-inch dbh) is proposed for removal.</p> <p>Source: Project Plans, Field Observation.</p>				
4.f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?			X	
<p>Discussion: As proposed and mitigated, the residence would be located a minimum of 30 feet from riparian vegetation and in areas of no riparian vegetation 30 feet from the centerline of the creek, as required by the Local Coastal Program. The project does not involve the removal of riparian vegetation or associated sensitive habitat.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
<p>Discussion: The site is not located inside or within 200 feet of a marine or wildlife reserve.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.h. Result in loss of oak woodlands or other non-timber woodlands?				X
<p>Discussion: Reference response to Section 4.e., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				

5. CULTURAL RESOURCES. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
5.a. Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?		X		
<p>Discussion: The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level for historical resources:</p> <p>Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the</p>				

Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Source: Project Application/Plans, San Mateo County General Plan and California Historical Resources File System Results.

5.b. Cause a significant adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?		X		
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Discussion: Staff forwarded the project referral to California Historical Resources Information System (CHRIS) for review and comments. Based on the review of their records, Study #003082 (Dietz 1970) identified no cultural resources existed on the project area (see Attachment D). Due to this passage of time since the study, the corresponding recommendation from CHRIS requires that a qualified archaeologist conduct further field studies for the entire project area. The applicant will submit this study for review prior to the Planning Commission meeting in order for staff to prepare an updated status on potential environmental impacts. In the event that archaeological resources could be potentially significantly impacted by the project, the Initial Study/Negative Declaration will be revised and re-circulated, pursuant to California Environmental Quality Act (CEQA).

The following mitigation measure is also recommended to ensure that potential impacts are mitigated to a less than significant level in the event that archaeological and/or cultural resources are encountered during grading or construction activities:

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Source: Project Application/Plans and San Mateo County General Plan.

5.c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
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Discussion: The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level in the event paleontological specimen are discovered:

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Source: Project Application/Plans and San Mateo County General Plan.

5.d. Disturb any human remains, including those interred outside of formal cemeteries?				X
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Discussion: Reference response to Section 5.a., above.

Source: Project Application/Plans and San Mateo County General Plan.

6. GEOLOGY AND SOILS. Would the project:				
	Potentially Significant Impacts	Significant Unless Mitigated	Less Than Significant Impact	No Impact
6.a. Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault? <i>Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.</i>		X		
<p>Discussion: A Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study), submitted for the project, determined the following:</p> <p>"Fault Rupture - The site is not located in the Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion."</p> <p>To incorporate the full recommendations of the Geotechnical Study the following mitigation measure has been added:</p> <p>Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
ii. Strong seismic ground shaking?		X		
<p>Discussion: The following discussion is from on the Geotechnical Report cited above:</p> <p>"Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30- to 50-year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as</p>				

is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.”

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iii. Seismic-related ground failure, including liquefaction and differential settling?		X		
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Discussion: The following discussion is based on the Report cited above:

“Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however, precautions should be made to prevent expensive cosmetic damage.”

“Liquefaction – Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at this site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.”

As the site may be subject to liquefaction-induced ground deformation, the Geotechnical Study recommends either a reinforced mat foundation or a pier and grade beam foundation. Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iv. Landslides?		X		
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Discussion: The parcel has been designated as an area with Landslide Susceptibility I based on information gathered from the U.S. Geological Survey. Such areas have the lowest susceptibility to soil instability and a decreased potential for occurrences of a landslide.

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: State of California Seismic Hazard Zone Map/San Mateo County Landslide Susceptibility Map and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010

<p>v. Coastal cliff/bluff instability or erosion?</p> <p><i>Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).</i></p>				X
<p>Discussion: N/A. The site is not located on or adjacent to a cliff or bluff.</p> <p>Source: Project Plans/County GIS Resource Map.</p>				
<p>6.b. Result in significant soil erosion or the loss of topsoil?</p>		X		
<p>Discussion: The project involves minor earthwork of approximately 60 cubic yards. The addition of Mitigation Measure 9, below, would minimize erosion and loss of top soil resulting from the project:</p> <p>Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.</p> <p>Source: Project Application/Plans.</p>				
<p>6.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?</p>		X		
<p>Discussion: Reference responses to Section 6.a, above.</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation and County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
<p>6.d. Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?</p>				X
<p>Discussion: The Geotechnical Study does not identify expansive soils as a significant concern at the property.</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation; County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
<p>6.e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?</p>				X

Discussion: The project does not involve a septic system for wastewater disposal as the project incorporates a sewer connection. Granada Community Services District (GCSD) has confirmed that it can provide sewer service to the project.

Source: Project Application/Plans and San Mateo County GIS Resource Maps.

7. CLIMATE CHANGE. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7.a. Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?			X	
<p>Discussion: To ensure that new development projects are compliant with the County's Energy Efficiency Climate Action Plan (EECAP), the County provides the EECAP Development Checklist. The applicant has provided staff with a completed Checklist indicating the voluntary measures to be taken in order to comply with EECAP (see Attachment E). At the building permit stage, the project is also required to comply with the California Green Building Standards Code, which includes requirements for energy saving measures. Based on the voluntary measures provided by the applicant, staff has determined that no mitigation measures are required. Also, reference response to Section 3.a., above.</p> <p>Source: San Mateo County Energy Efficiency Climate Action Plan (EECAP) and BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X
<p>Discussion: Reference response to Section 3.a. above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
<p>Discussion: The project does not involve loss or conversion of forestland, as the project site does not contain forestland. The project does not involve removal of live trees.</p> <p>Source: Project Application/Plans.</p>				

7.d.	Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
<p>Discussion: The project site is not located on or adjacent to a cliff or bluff.</p> <p>Source: San Mateo County GIS Resource Maps.</p>					
7.e.	Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
<p>Discussion: The projected site is not located along a shoreline area.</p> <p>Source: Project Application/Plans.</p>					
7.f.	Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
<p>Discussion: The project site is located in Flood Zone X designated as an area of minimal flood hazard, usually depicted on FIRMS as above the 500-year flood level (Community Panel No. 060311 0225 C, map revised October 16, 2012).</p> <p>Source: FEMA Flood Insurance Rate Map.</p>					
7.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>					

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X

<p>Discussion: N/A. The project involves the construction of a residence and does not involve the routine transport, use, or disposal of hazardous materials.</p> <p>Source: Project Application/Plans.</p>					
8.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
<p>Discussion: The project involves the construction of a residence and would not involve the release of hazardous materials into the environment.</p> <p>Source: Project Application/Plans.</p>					
8.c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
<p>Discussion: The project involves the construction of a residence and would not involve hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste.</p> <p>Source: Project Application/Plans.</p>					
8.d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
<p>Discussion: The project parcel has not been identified as a hazardous material site, based on staff's review of the current Hazardous Waste and Substances Site List posted by the California Department of Toxic Substances Control (mandated by Government Code Section 65962.5).</p> <p>Source: California Department of Toxic Substances Control, Hazardous Waste and Substances Site List.</p>					
8.e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Based on the Half Moon Bay Airport Land Use Compatibility Plan, as adopted on October 9, 2014, the project site is located outside Zone 7 - Airport Influence Area (AIA). Aircraft accident level is considered to be low at the site.</p> <p>Source: Project Application/Plans, San Mateo County GIS Resource Maps and Half Moon Bay ALUCP.</p>					

8.f. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Reference response to Section 8.e., above.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
<p>Discussion: The project will not physically interfere with an adopted emergency plan. The project site is located in a developed coastal area and is served by emergency response agencies such as the Coastside Fire Protection District and the San Mateo County Sheriff's Department.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
<p>Discussion: The project site is not located within a wildland urban interface area nor is the project site within a designated moderate, high, or very high fire severity zone.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
8.i. Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>				
8.j. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?			X	
<p>Discussion: Reference response to Section 7.f., above.</p> <p>Source: FEMA Flood Insurance Rate Map.</p>				
8.k. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	

Discussion: The Biological Report identified the presence of a dam located 1.5 miles upstream from the project site. In an email to staff dated May 3, 2016, the project consultant Geologist, Sigma Prime Geosciences, Inc., (Consultant) estimated the potential runoff resulting from a dam break and determined that a 3.6% increase in the runoff for this watershed area would potentially occur (Attachment F). Based on this increase, the potential impact on the areas located downstream has been determined by the Consultant to be less than significant. Also reference response to Section 7.f., above.

Source: FEMA Flood Insurance Rate Map, Sigma Prime response letter dated May 3, 2016.

8.i. Inundation by seiche, tsunami, or mudflow?			X	
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Discussion: Reference response to Section 7.e., above. Regarding mudflows, the site and vicinity area are relatively flat and would not be impacted by mudflows as generated from upslope areas.

Source: Project Application/Plans.

9. HYDROLOGY AND WATER QUALITY. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9.a. Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?			X	

Discussion: The project, as proposed, would result in less than significant impacts in this area upon implementation of a proposed Erosion Control Plan and Best Management Practices (BMPs).

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program “General Construction and Site Supervision Guidelines,” including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

Source: Project Application/Plans.

<p>9.b. Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>				X
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<p>Discussion: The project will not involve direct use of groundwater as a domestic water source as the project site is located in a developed residential zone already serviced by Coastside County Water District (CCWD). Coastside County Water District has verified the ability to provide domestic water service to this project.</p> <p>Source: Project Application/Plans.</p>					
9.c.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?			X	
<p>Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project would not significantly alter site topography and would not impact the creek southeast of the parcel due to the proposed 30-foot creek setback. The project's impervious areas will increase but proposed new drainage facilities (as shown on the site plan) would capture and filter increased site runoff flow and volume in compliance with the County's Guidelines for Drainage Review.</p> <p>Source: Project Application/Plans.</p>					
9.d.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans.</p>					
9.e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?			X	
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans and San Mateo County Drainage Policy.</p>					
9.f.	Significantly degrade surface or ground-water water quality?				X
<p>Discussion: Reference response to Section 9.c., above.</p> <p>Source: Project Application/Plans.</p>					

9.g. Result in increased impervious surfaces and associated increased runoff?			X	
Discussion: Reference response to Section 9.c., above.				
Source: Project Application/Plans.				

10. LAND USE AND PLANNING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10.a. Physically divide an established community?				X
Discussion: The project involves development of a vacant parcel, or infilling, of an existing developed residential neighborhood that will not divide the established community.				
Source: Project Application/Plans.				
10.b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
Discussion: Reference response to Section 1.f., above.				
Source: Project Plans, San Mateo County General Plan and San Mateo Zoning Regulations.				
10.c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
Discussion: The project site is located adjacent to the riparian corridor of Arroyo de en Medio. The Local Coastal Program regulates development adjacent to intermittent creeks. Reference response to Section 4.a., above.				
Source: California Department of Fish and Wildlife, Habitat Conservation Planning.				
10.d. Result in the congregating of more than 50 people on a regular basis?				X
Discussion: The project does not involve the congregation of more than 50 people as the project is for a new single-family residence.				
Source: Project Application/Plans.				

10.e.	Result in the introduction of activities not currently found within the community?				X
<p>Discussion: The proposed project would not result in the introduction of new activities in the area. The subject R-1 Zoning District permits single-family residential use and such use is established within the subject community.</p> <p>Source: Project Application/Plans.</p>					
10.f.	Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
<p>Discussion: The addition of a new residence on the vacant parcel designated for residential use will not encourage off-site development as the project, including proposed utilities, will result in development of the subject parcel. The project would be served by water and sewer services already provided in the area. The project does not involve the establishment of new industry, commercial facilities or recreation activities.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					
10.g.	Create a significant new demand for housing?				X
<p>Discussion: N/A. The project does not create any permanent jobs in the area and provides one additional dwelling in the area. Therefore, the project would not create a significant new demand for housing.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					

11. MINERAL RESOURCES. Would the project:					
		<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11.a.	Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X
<p>Discussion: The project site is not located in an area known for mineral resources nor does the project involve mineral extraction.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>					

11.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
<p>Discussion: Reference response to Section 11.a., above.</p> <p>Source: Project Plans and San Mateo County GIS Resource Maps.</p>				

12. NOISE. Would the project result in:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12.a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
<p>Discussion: While this project will not generate noise levels in excess of residential levels once implemented, during construction activities increased noise levels may occur. However, noise sources associated with demolition, construction or grading of any real property are exempt from the County Noise Ordinance provided these activities occur during designated timeframes.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?			X	
<p>Discussion: Pile driving for pier foundations can be a potential source of excessive ground-borne vibration or ground-borne noise levels. While the foundation involves a pier and grade beam foundation, the Geotechnical Study recommends drilled piers or cast in place piers. Therefore, the project does not involve pile driving. Also, reference response to Section 12.a, above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.c. A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
<p>Discussion: Reference response to Section 12.a, above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				

12.d. A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
<p>Discussion: Reference response to Section 12.a., above.</p> <p>Source: Project Application/Plans and San Mateo County Noise Ordinance.</p>				
12.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?			X	
<p>Discussion: The project site is located outside the Community Noise Equivalent Level (CNEL) airport noise exposure contours identified in the Half Moon Bay Airport Land Use Plan and is therefore not exposed to significant levels of aircraft noise.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				
12.f. For a project within the vicinity of a private airstrip, exposure to people residing or working in the project area to excessive noise levels?				X
<p>Discussion: The project site is located within an existing single-family residential neighborhood and is not located within the vicinity of a private air strip.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				

13. POPULATION AND HOUSING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13.a. Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

Discussion: Reference response to Section 10.f., above. The project involves the construction of only one new home and does not involve the establishment of a business. The project involves pavement of a road shoulder along 3rd Avenue to connect the property to the existing paved portion 3rd Avenue and does not involve extension of a road.

Source: Project Application/Plans.

13.b. Displace existing housing (including low- or moderate-income housing), in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X
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Discussion: The project does not displace housing but involves the construction of a new dwelling on a vacant parcel within an existing single-family residential area.

Source: Project Application/Plans.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14.a. Fire protection?			X	
14.b. Police protection?			X	
14.c. Schools?			X	
14.d. Parks?			X	
14.e. Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?			X	

Discussion: The current level of public services will not be significantly affected by the addition of one new single-family residence in the neighborhood.

Source: Project Application/Plans.

15. RECREATION. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15.a. Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?			X	
<p>Discussion: The project will not generate an increase in the use of existing recreational facilities beyond the service levels anticipated for the area.</p> <p>Source: Project Application/Plans.</p>				
15.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
<p>Discussion: The project does not include any recreational facilities. As described in Section 15.a., New or expanded recreational facilities will not be required by this project.</p> <p>Source: Project Application/Plans.</p>				

16. TRANSPORTATION/TRAFFIC. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
<p>Discussion: The proposed single-family residence will not significantly increase the vehicular or pedestrian traffic nor change their patterns in the area beyond the levels anticipated for the area.</p> <p>Source: Project Plans and Field Observation.</p>				

16.b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?			X	
<p>Discussion: Reference response to Section 16.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
<p>Discussion: N/A. The project will not result in a change in air traffic patterns.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
16.d. Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
<p>Discussion: The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved.</p> <p>Source: Project Plans and Field Observation.</p>				
16.e. Result in inadequate emergency access?				X
<p>Discussion: The project will not impact emergency access to the area. Reference response to Section 8.g., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
<p>Discussion: No sidewalks are present in this area; however, pedestrians likely use road shoulders for access. The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved. The project involves the development of residential uses on a residentially zoned parcel and would not conflict with pedestrian facilities or adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.</p> <p>Source: Project Plans and Field Observation.</p>				

16.g. Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?			X	
<p>Discussion: Reference response to Section 16.f., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.h. Result in inadequate parking capacity?			X	
<p>Discussion: The project complies with applicable County's Parking Regulations, as it includes two on-site covered parking spaces.</p> <p>Source: Project Plans and Field Observation.</p>				

17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
<p>Discussion: The project site would be serviced by Granada Community Services District (GCSD) for sanitary sewer service. GCSD has confirmed that it has the capacity to serve the project at the subject property. Any increase in the total wastewater treatment by GCSD would be minimal associated with one new single-family dwelling and associated residents.</p> <p>Source: Project Application/Plans.</p>				
17.b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
<p>Discussion: Reference response to Section 17.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
<p>Discussion: Proposed new on-site drainage facilities would minimize the impacts of runoff to off-site areas and facilities. Reference Section 9.c., above.</p> <p>Source: Project Application/Plans.</p>				

17.d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
<p>Discussion: Reference response to Section 9.b., above.</p> <p>Source: Project Application/Plans; Letter from CCWD dated August 14, 2014 and Letter from GCSD dated August 14, 2014.</p>				
17.e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
<p>Discussion: Reference response to Section 17.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.f. Be served by a landfill with insufficient permitted capacity to accommodate the project's needs?				X
<p>Discussion: The project site is located in a developed residential area already adequately serviced by GCSD, provides solid waste disposal service via an exclusive franchise agreement with Recology of the Coast. Any increase in the total solid waste would be minimal associated with one new single-family dwelling and associated residents.</p> <p>Source: Project Application/Plans; GCSD website.</p>				
17.g. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
<p>Discussion: Reference response to Section 17.f., above.</p> <p>Source: Project Application/Plans.</p>				
17.h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?			X	
<p>Discussion: Reference Section 7.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?			X	

Discussion: Reference response to Section 14 and Sections 17.a. through 17.f., above.

Source: Project Application/Plans.

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
18.a. Does the project have the potential to degrade the quality of the environment, significantly 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		
<p>Discussion: Yes, as discussed in Section 4.a., above, the project has the potential to impact plant and wildlife species in the area. Implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.</p> <p>Source: San Mateo County General Plan Sensitive Habitats Map.</p>				
18.b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
<p>Discussion: One recently approved project located at 420 - 3rd Avenue (PLN 2015-00024) involves an addition to the existing residential development. Therefore, the project would not have impacts that are individually limited, but cumulatively considerable. Also, reference response to 16.f., above. No cumulative effects have been identified for this project.</p> <p>Source: Project Application/Plans.</p>				
18.c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?		X		

Discussion: As previously discussed, the project could result in environmental impacts that could both directly and indirectly cause impacts on human beings. However, implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.

Source: Project Application/Plans.

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)		X	
State Water Resources Control Board		X	
Regional Water Quality Control Board		X	
State Department of Public Health		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
U.S. Environmental Protection Agency (EPA)		X	
County Airport Land Use Commission (ALUC)		X	
CalTrans		X	
Bay Area Air Quality Management District		X	
U.S. Fish and Wildlife Service		X	
Coastal Commission		X	
Sewer District: Granada Community Services District		X	
Water District: Coastside County Water District		X	

<u>MITIGATION MEASURES</u>		
	<u>Yes</u>	<u>No</u>
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	
<p>The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:</p> <p><u>Mitigation Measure 1:</u> Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the</p>		

issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 6: If archaeological and/or cultural resources are encountered during grading or construction activities, work shall be temporarily halted in the vicinity within 30 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 12: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

DETERMINATION (to be completed by the Lead Agency).

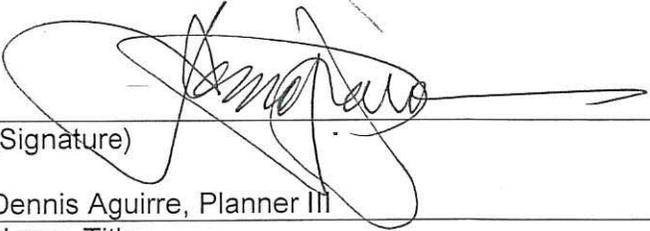
On the basis of this initial evaluation:

I find the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared by the Planning Department.

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 of the mitigation measures in the discussion that have been included as part of the proposed project. A **NEGATIVE DECLARATION** will be prepared.

X

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.



(Signature)
Dennis Aguirre, Planner III

Name, Title

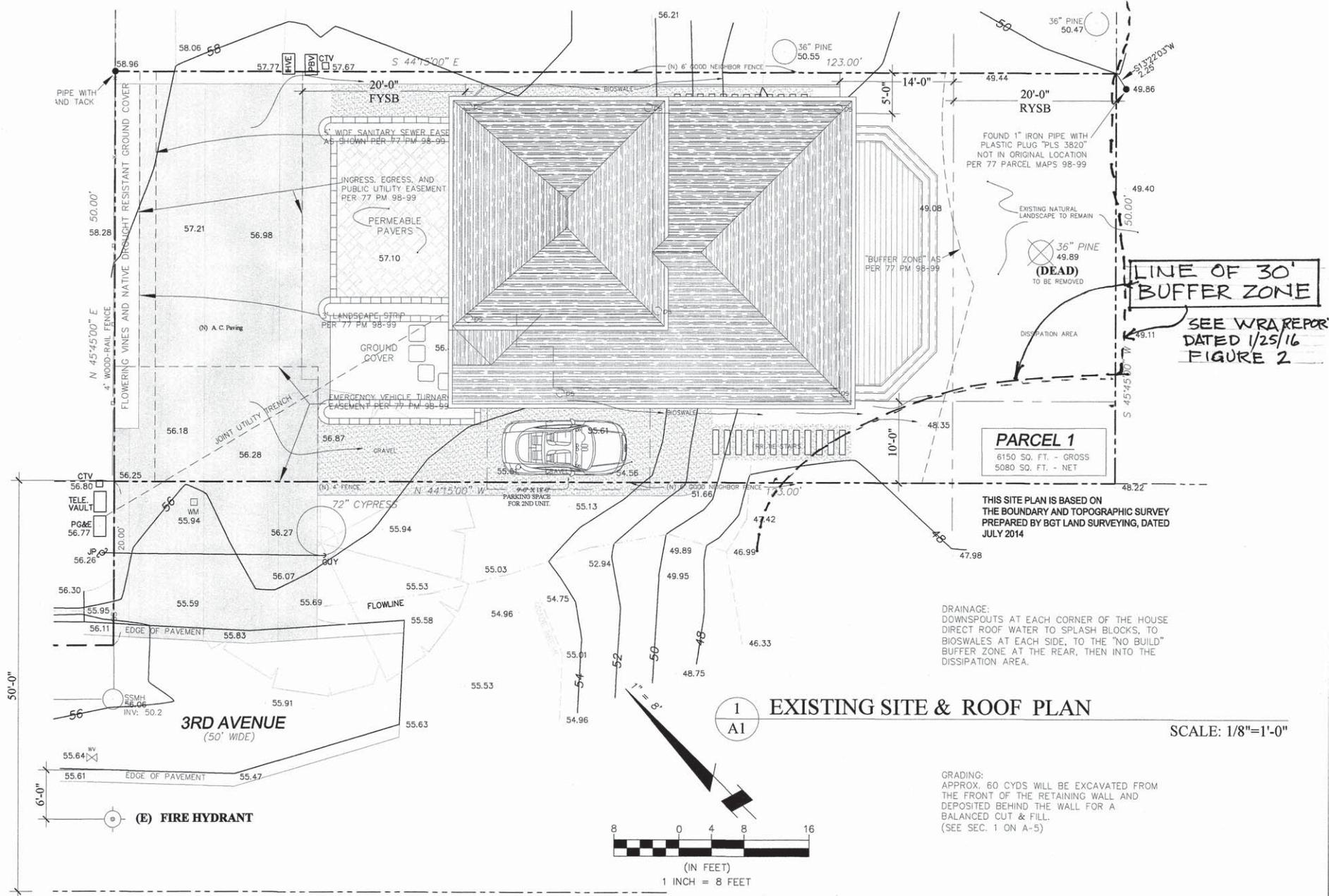
May 4, 2016

Date

ATTACHMENTS:

- A. Project Plans
- B. Biological Constraints and Environmentally Sensitive Habitat Areas Assessment Report, dated January 25, 2016, prepared by WRA Environmental Consultants
- C. Geotechnical Study, dated April 21, 2010, prepared by Sigma Prime Geosciences, Inc.
- D. California Historical Society Information System Comment Letter, dated May 3, 2016
- E. Energy Efficient Climate Action Plan Checklist, submitted by applicant on May 3, 2016
- F. Sigma Prime Geosciences, Inc., Email Response Letter, dated May 3, 2016

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1
A1

EXISTING SITE & ROOF PLAN

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

GRADING:
APPROX. 60 CYDS WILL BE EXCAVATED FROM THE FRONT OF THE RETAINING WALL AND DEPOSITED BEHIND THE WALL FOR A BALANCED CUT & FILL.
(SEE SEC. 1 ON A-5)



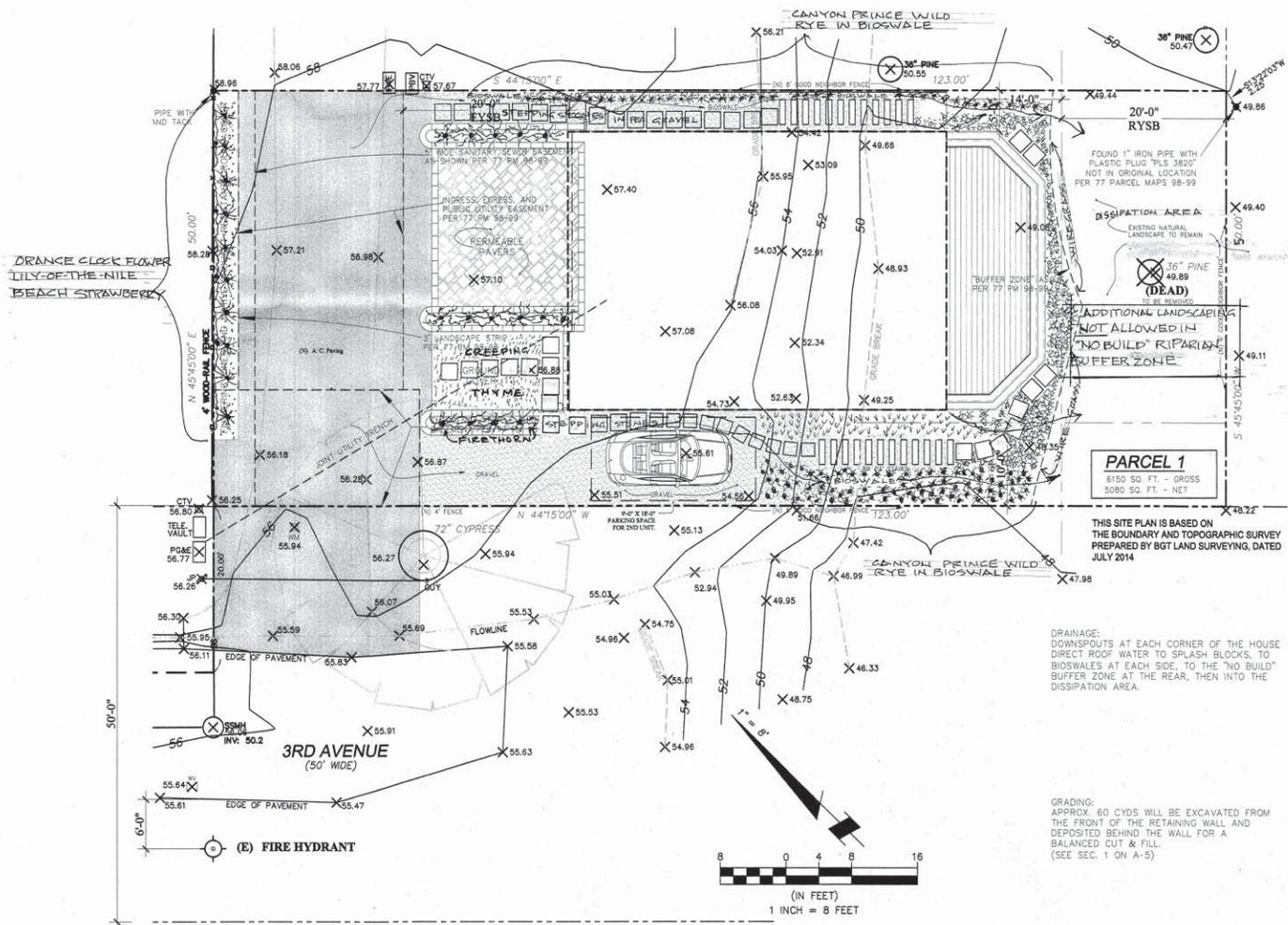
(IN FEET)
1 INCH = 8 FEET

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**



PLANT LIST					
SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE	REMARKS
	CLIMBING VINE	ORANGE GLOOM	THUNBERGIA GREGORII	1 GAL	8'
	PERENNIAL	LILY OF THE NILE	AGAPANTHUS CILICENTHUS	1 GAL	4'
	GROUND COVER	BEACH STRAWBERRY	FRAGARIA CHILOENSIS	FLATS	12" x 18"
	SHRUB	STREPTOCARPA	FRAGARIA CHILOENSIS	1 GAL	3'
	GROUND COVER	STAY-GREEN	LEYNIS	FLATS	12" x 18"
	GROUND COVER	WILD RYE	POA	FLATS	6"
	GROUND COVER	WIRE GRASS	DIAPYCNON	FLATS	6"
	GROUND COVER	BLUE RUSH	VIOLA	FLATS	12"

1 LANDSCAPE PLAN

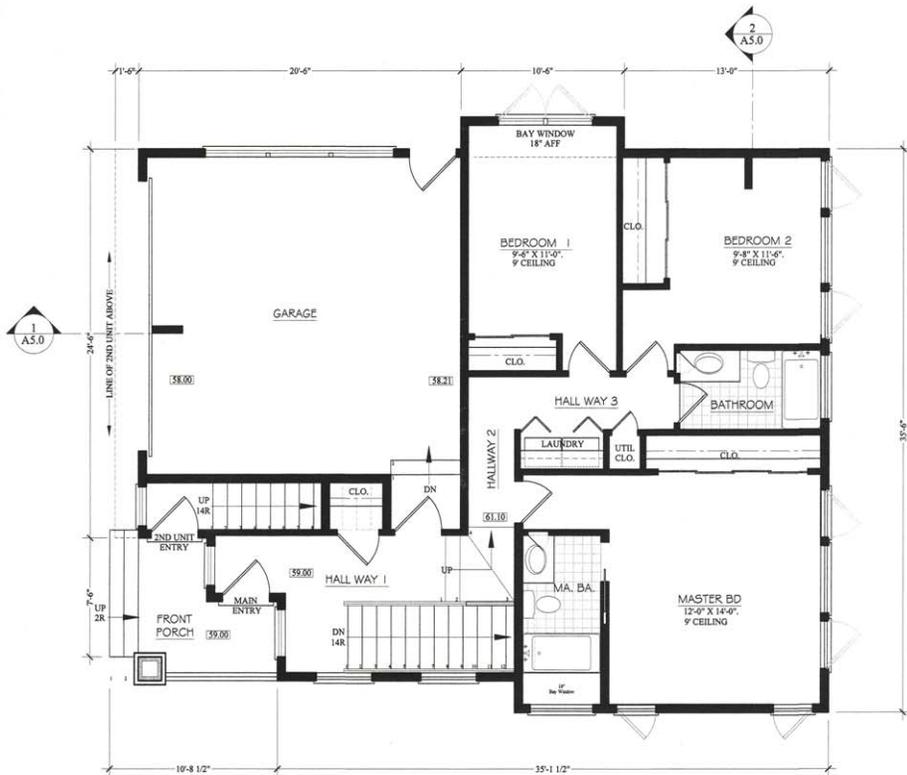
SCALE: 1/8"=1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

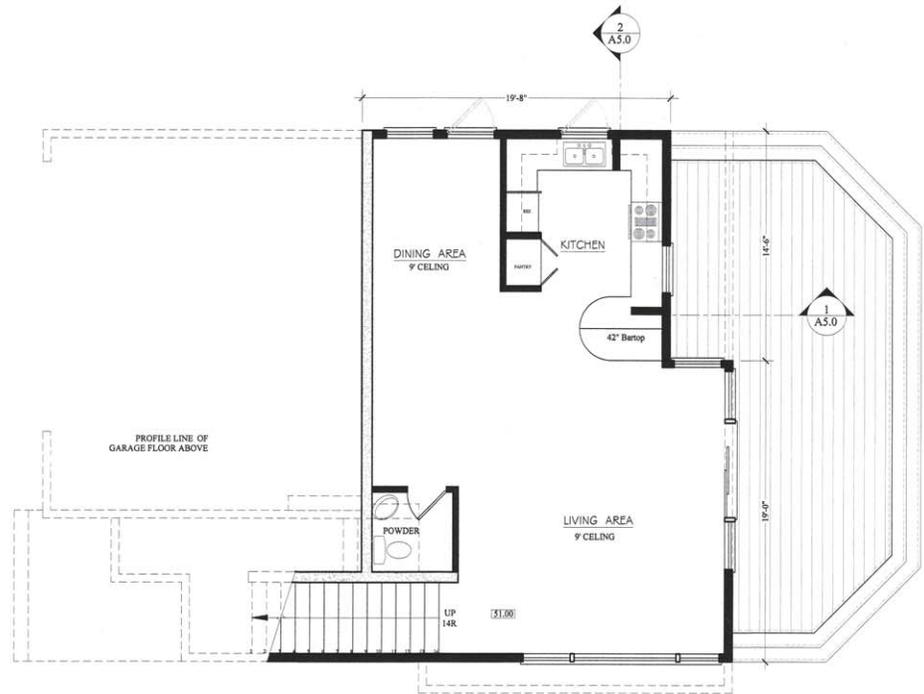
Attachment: **A**

File Numbers: **PLN 2015-00152**



1 PROPOSED SECOND FLOOR PLAN (Entry Level)
A2.0

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



2 PROPOSED FIRST FLOOR (Lowest Level)
A2.0

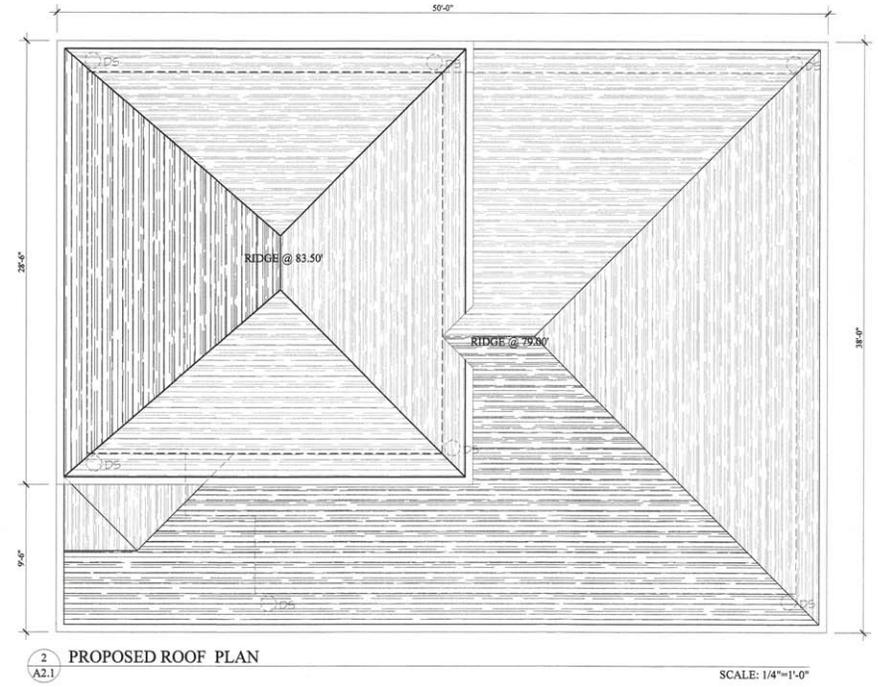
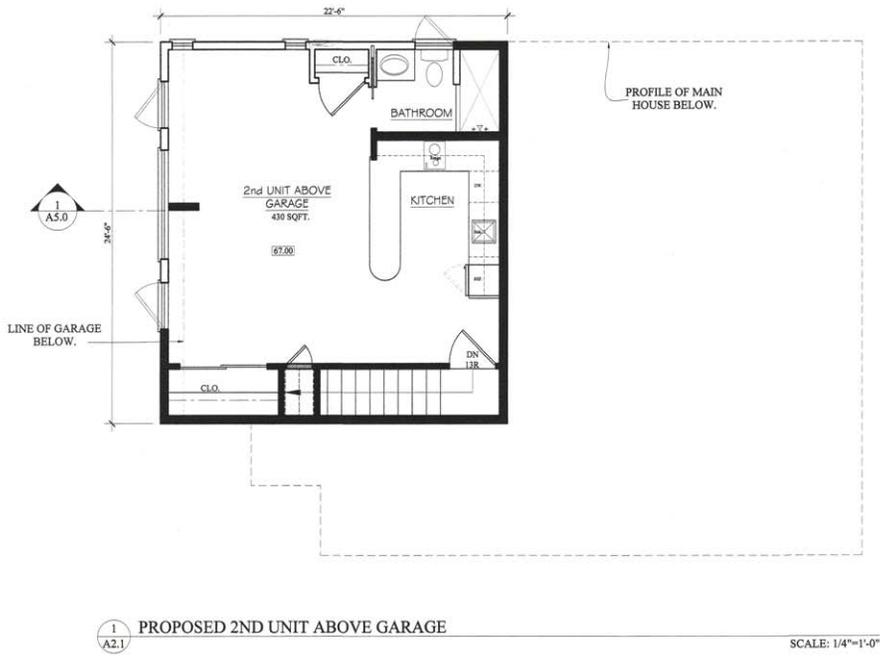
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Attachment: **A**

File Numbers: **PLN 2015-00152**



San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**



1
A4 PROPOSED FRONT ELEVATION (NORTH)

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



1
A4 PROPOSED REAR ELEVATION (SOUTH)

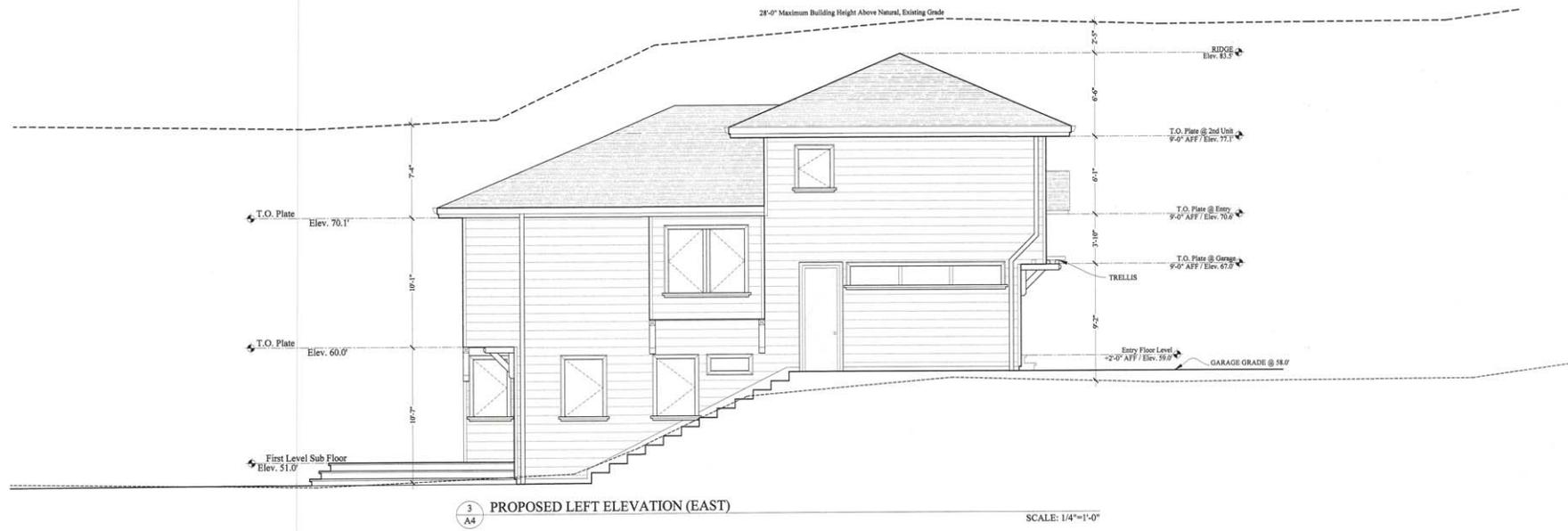
SCALE: 1/4"=1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

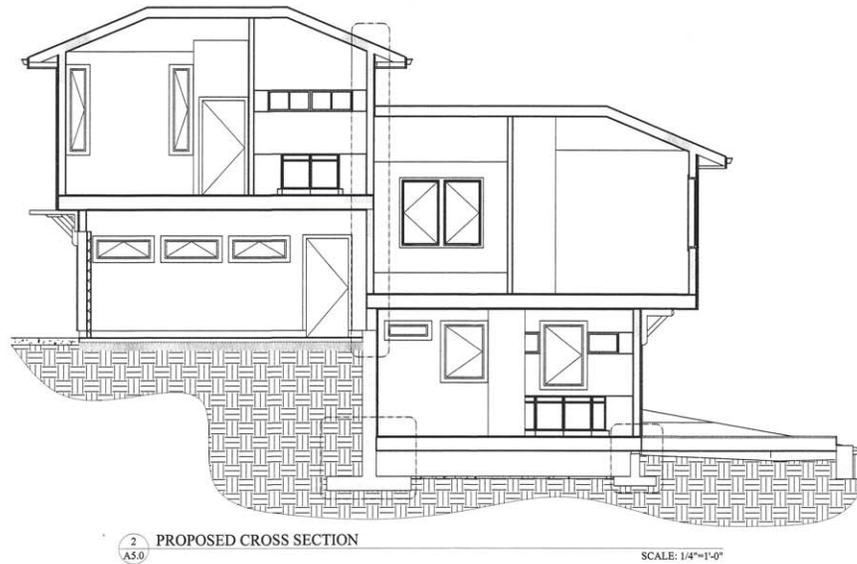


San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

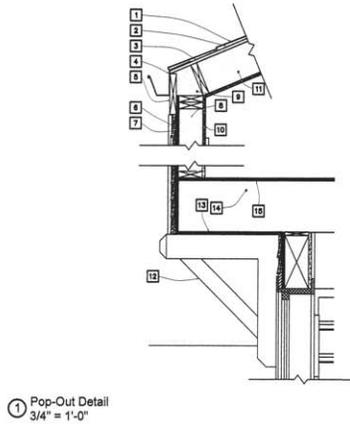


San Mateo County Planning Commission Meeting

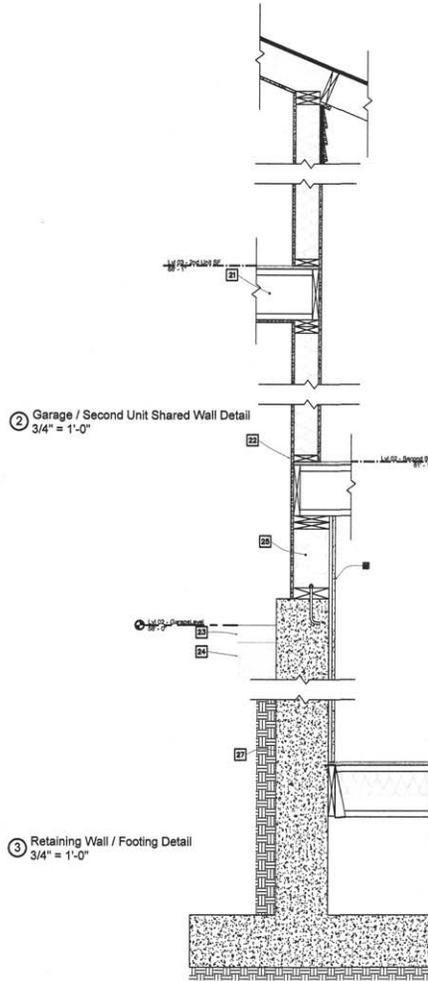
Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**

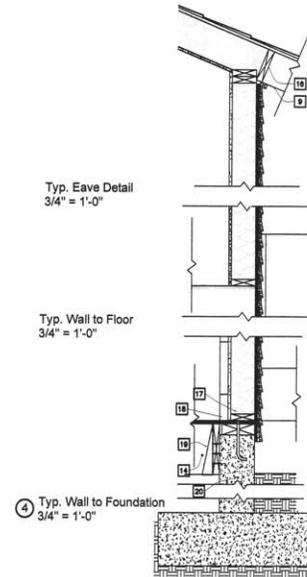


① Pop-Out Detail
3/4" = 1'-0"



② Garage / Second Unit Shared Wall Detail
3/4" = 1'-0"

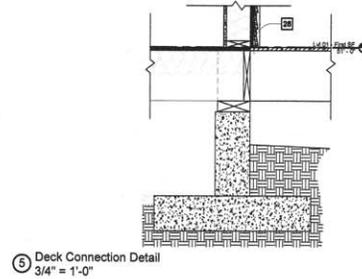
③ Retaining Wall / Footing Detail
3/4" = 1'-0"



Typ. Eave Detail
3/4" = 1'-0"

Typ. Wall to Floor
3/4" = 1'-0"

④ Typ. Wall to Foundation
3/4" = 1'-0"



⑤ Deck Connection Detail
3/4" = 1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: **Frank Vella/Steve Semprevivo / Edward Love**

Attachment: **A**

File Numbers: **PLN 2015-00152**



January 25, 2016

Stephen Semprevivo
720 Mill Street
Half Moon Bay, CA 94019

Re: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment for APN 048-042-280 and -290 Half Moon Bay, San Mateo County, California

Dear Mr. Semprevivo,

The purpose of this letter is to inform you of the results of the biological constraints and Environmentally Sensitive Habitat Area (ESHA) assessments at two undeveloped parcels (APN 048-042-280 and 048-042-290) located at the end of 3rd Avenue, Half Moon Bay, San Mateo County, California (Figure 1). Construction of residences is proposed on the parcels (Project). The assessment encompassed both parcels and the surrounding 50 feet (Study Area) to identify any potential sensitive habitats in the vicinity. The purpose of these assessments is to comply with the San Mateo County Midcoast Local Coastal Program (LCP).

Figures are provided in Attachment A, the list of observed species from the 2015 site assessment are provided in Attachment B, and photographs depicting the current Study Area conditions are provided in Attachment C.

Survey Methods

A site visit to the Study Area was made on December 31, 2015 by WRA biologist Erich Schickenberg (wetland and plant ecologist) and reviewed by Patricia Valcarcel (wildlife biologist). Prior to the site visit, a review was conducted of background information including:

- San Mateo County Midcoast Local Coastal Program (LCP) biological resources policies
- San Mateo County Heritage Tree Ordinance
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2015)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2015)
- U.S. Fish and Wildlife Service (USFWS) 7.5' Quadrangle Species Lists for the Montara Mountain and Half Moon Bay quadrangles (USFWS 2015)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "California Bird Species of Special Concern" (Shuford and Gardali 2008)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)

The Study Area was traversed on foot by the WRA biologist and examined for: (a) sensitive natural communities as defined by the CDFW and LCP and, (b) for the presence, and potential to support, special-status plant and wildlife species. Vegetation within the Study Area and vicinity was also evaluated for riparian habitat criteria and/or unvegetated streams as defined by the LCP. If a special-status species was observed during the site visit, its presence is recorded and discussed further below. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described further below.

Survey Results

Study Area Description

The Study Area is located at the end of 3rd Avenue in the Miramar neighborhood of Half Moon Bay. It consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream. The southern portion of the Study Area is a mix of several vegetation types, including blue gum (*Eucalyptus globulus*) grove, ruderal/disturbed and arroyo willow scrub. Within the ordinary high water mark (OHWM) of Arroyo de en Medio minimal riparian vegetation is present except a small patch of arroyo willow scrub in the south. Wetland plants seen within the OHWM include water parsley (*Oenanthe sarmentosa*, OBL), California figwort (*Scrophularia californica*, FAC), dock (*Rumex pulcher*, FAC), and arroyo willow (*Salix lasiolepis*, FACW). Non-wetland plants within the OHWM include California blackberry (*Rubus ursinus*), English ivy (*Hedera helix*), veldt grass (*Ehrharta erecta*), sour clover (*Oxalis pes-carpe*), garden nasturtium (*Tropaeolum majus*), tower-of-jewels (*Echium* sp.), and cape ivy (*Delairea odorata*). Four 36-inch diameter breast height (dbh) Monterey pine trees and one 72-inch dbh Monterey cypress occur within the Study Area. The Study Area is bounded by residential development and neighborhood roads.

Vegetation Communities

Three vegetation communities are present in the Study Area: blue gum grove, ruderal/disturbed and arroyo willow scrub (Figure 2). Ruderal/disturbed habitat will be permanently and temporarily disturbed by the construction of a residence. Blue gum grove and arroyo willow occur only within the Arroyo de en Medio corridor and are not expected to be directly disturbed by the construction of a residence. Arroyo de en Medio is designated a Sensitive Habitat Area (Mid-Coast San Mateo County LCP Sensitive Habitats Map) and arroyo willow scrub is a riparian corridor and sensitive habitat by the LCP. Both ruderal/disturbed and blue gum grove are non-sensitive vegetation communities.

Non-Sensitive Vegetation Communities

The ruderal/disturbed vegetation is the dominant vegetation within the Study Area, and it encompasses approximately 0.47 acre. Non-native forbs dominate the ruderal vegetation. The ruderal uplands are dominated by weedy vegetation including ripgut brome (*Bromus diandrus*), slender oats (*Avena barbata*), garden nasturtium, tower-of-jewels, and sour clover. Several large, dead or decadent Monterey Pine (*Pinus radiata*) trees are present in this ruderal upland

area. The slopes leading down to Arroyo de en Medio creekbed are covered in veldt grass (*Ehrharta erecta*), garden nasturtium, cape ivy, poison oak (*Toxicodendron diversilobum*), and sour clover.

The blue gum grove is located along the Arroyo de en Medio at the eastern portion of the Study Area and encompassing approximately 0.10 acre. The blue gum grove forms an intermittent to dense canopy over the stream, depositing large amounts of litter within and along the banks. Blackwood acacia (*Acacia melanoxydon*) and silver wattle (*Acacia dealbata*) are also present in the canopy. The understory is sparse California blackberry, English ivy and cape ivy. One small arroyo willow and one California coffeeberry (*Frangula californica*) are present in this area.

Sensitive Vegetation Communities and Wetland and Waters Features

Approximately 0.01 acre of arroyo willow scrub is located in the southeast corner of the Study Area. Arroyo willow canopy is over 50 percent cover and considered a riparian corridor and Sensitive Habitat Area per the LCP. Understory is sparse with little to no cover, however edges around the arroyo willow scrub have an intermittent cover of garden nasturtium, California blackberry and cape ivy.

Riparian Corridor

Riparian Corridor and Buffer Zones Defined in the San Mateo County Local Coastal Program

Pursuant to the LCP, riparian corridors are defined as an association of plant and animal species containing at least 50 percent cover of the following species: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder. For perennial streams, the LCP requires a buffer 50 feet outward from the limit of riparian vegetation. For intermittent streams, the LCP requires a buffer 30 feet outward from the limit of riparian vegetation. Where no riparian vegetation exists, buffer zones along intermittent streams extend 30 feet from the stream midpoint as shown in Figure 2.

Within riparian corridors, the following uses are permitted: 1) education and research; 2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, 3) fish and wildlife management activities, 4) trails and scenic overlooks on public lands, and 5) necessary water supply projects. Relevant permitted uses in buffer zones include 1) uses permitted in riparian corridors, 2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation only if no feasible alternative exists and if no other building site on the parcel exists, 3) on parcels designated as Agriculture, Open Space, or Timber Production on the LCP Land Use Plan Map, residential structures or impervious surfaces only if no feasible alternative exists.

Riparian Corridor and Buffer Zones Applicable to the Study Area

Arroyo de en Medio drains west to the Pacific Ocean; however, it is dammed approximately 1.5 miles upstream from the Study Area. The portion of Arroyo de en Medio adjacent to the Study Area contained a small amount of running water at the time of the site visit on December 31, 2015. Based on available USGS topographic maps (USGS 1991) and aerial photographs (Google Earth 2015), Arroyo de en Medio is considered intermittent waters. Accordingly, a 30-

foot setback from edge of riparian is required. The arroyo willow identified in the Study Area is considered a riparian corridor under the LCP; however, a majority of the Arroyo de en Medio in the Study Area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek (Figure 2). For the purposes of this assessment, the limit of riparian vegetation is defined as the dripline of the arroyo willows to encompass the riparian corridor and sensitive habitat definitions in the LCP.

Special-Status Species

Special-Status Plants

Based upon a review of the resources and databases discussed previously, all special-status plant species documented in the vicinity of the Study Area were assessed. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). No special-status plant species were observed in the Study Area. Many species requiring certain habitat types not present in the Study Area, such as serpentine endemics and plants requiring coastal bluff or scrub habitats, were determined to have no potential to occur. Of the 27 special-status plant species evaluated, all were determined to have no potential or a low potential to occur based on the high disturbance levels in and around the Study Area and/or a lack of suitable habitat components in the Study Area. Although the site visit did not constitute a protocol-level rare plant survey, no special-status plants or their habitats were observed.

San Mateo County Heritage Tree and Significant Tree Ordinances

Pursuant to the County of San Mateo Heritage Tree Ordinance (Ordinance No. 2427), "Heritage" trees may be subject to regulation under the tree ordinance pursuant to the ordinance. Several native species above certain diameter breast height (dbh) are considered "Heritage" trees and include madrone, coast live oak, and California bay laurel trees. Permits may be required by the County for the trimming or removal of trees which qualify for heritage status under the Ordinance. Under the same ordinance, "Significant" trees are subject to regulation. "Significant" trees are any species which have dbh 38 inches or greater. The trees currently within the Study Area are silver wattle, blackwood acacia, white alder (*Alnus rhombifolia*), blue gum, California coffeeberry, Monterey cypress (*Hesperocyparis macrocarpa*), arroyo willow, lollypop tree (*Myoporum laetum*), Monterey pine (*Pinus radiata*), and coast redwood (*Sequoia sempervirens*). None of these species are covered under the San Mateo County Heritage Tree Ordinance; therefore no "Heritage" trees occur in the Study Area. However, one 72-inch Monterey cypress does occur in the Study Area and is considered a "Significant" tree. Removal of this tree may require a permit.

Special-Status Wildlife

Based upon a review of the databases and literature, 39 special-status wildlife species have been documented to occur in the vicinity of the Study Area. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). Of the 39 special-status wildlife species documented to occur in the vicinity, only one species, Allen's hummingbird (*Selasphorus sasin*), has a moderate potential to occur within the Study Area and is discussed further below. Most species do not have potential to occur because a lack of suitable habitat including no aquatic features for breeding, no serpentine habitat, no dense

understory vegetation, and barriers to dispersal. Cavities are not present in the trees within the Study Area; therefore, the Study Area is unlikely to support cavity nesting bird or bat species.

California red-legged frog (*Rana draytonii*; CRLF) is unlikely to be present because of a lack of suitable pond breeding habitat in the vicinity of the Study Area. Typical CRLF breeding habitat is characterized by deep and still or slow-moving water associated with emergent marsh and/or riparian vegetation. CRLF often seek upland refugia during the dry months, over-summering in small mammal burrows, moist leaf litter, incised stream channels, or large cracks in the bottom of dried ponds (Jennings and Hayes 1994). Adult and sub-adult CRLF may disperse between breeding habitats and nearby riparian and/or estivation habitats during the respective rainy season and summer. During such dispersals, frogs can travel up to one mile over a variety of topographic and habitat types during rain events or wet weather (Bulger et al. 2003, Fellers and Kleeman 2007, USFWS 2010); however, typical dispersal distances are less than 0.5 mile (Fellers 2005). Dispersal habitat is defined as accessible upland or riparian habitats between occupied locations within one mile of each other that allow for movement between these sites and do not contain barriers to movement (USFWS 2010). Moderate to high density urban or industrial developments, large reservoirs and heavily traveled roads without bridges or culverts are considered barriers to dispersal (USFWS 2010). Arroyo de en Medio in the vicinity of the Study Area is an intermittent creek and does not contain suitable breeding habitat based upon water levels and vegetation. The lower Arroyo de en Medio system is not known to support CRLF (CDFW 2015), and urban development is present between the Study Area and occupied habitats one mile to the northeast and southeast. Based upon the intermittent status of Arroyo de en Medio and the lack of suitable breeding habitat in the vicinity of the Study Area, it is unlikely CRLF is present within the Study Area and unlikely to use this section of Arroyo de en Medio as dispersal habitat.

San Francisco gartersnake (*Thamnophis sirtalis tetrataenia*; SFGS) is also unlikely to occur within the Study Area based upon a lack of suitable habitat in the vicinity. The preferred habitat of SFGS is a densely vegetated pond near an open hillside where they can sun themselves, feed, and find cover in rodent burrows; however, considerably less ideal habitats can be successfully occupied. Temporary ponds and other seasonal freshwater bodies are also used. Emergent and bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp. and *Eleocharis* spp.) apparently are preferred and used for cover. The area between stream and pond habitats and grasslands or bank sides is used for basking, while nearby dense vegetation or water often provide escape cover (USFWS 2006). During periods of heavy rain or shortly after, SFGS may make long-distance movements of up to 1.25 miles along drainages within the dense riparian cover, and are not documented to travel over open terrain (McGinnis 2001). The nearest SFGS occurrence is over 1.5 miles to the south and dispersal barriers including development are present between the occurrence and the Study Area. It is unlikely SFGS will occur in the Study Area or vicinity because of the lack of suitable pond habitat and distance from occupied habitat.

Allen's hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern. Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). It feeds on nectar, as well as insects and spiders. The willows and blue gum in the Study Area provide suitable nesting habitat and Allen's hummingbird is known to

nest in suburban habitats in the vicinity. Allen's hummingbird has a high potential to nest in the arroyo willow scrub and blue gum grove within the Study Area.

Impacts and Recommendations

The Study Area contains a riparian corridor and has potential to support one special-status bird species. In addition, most native bird nests are protected under the Migratory Bird Treaty Act. No rare, endangered, or unique species are anticipated to be present in the Study Area. Recommendations to protect the riparian corridor and nesting birds are described below.

Riparian Corridor

Per LCP guidelines, Arroyo de en Medio is an Environmentally Sensitive Habitat Area and setbacks are recommended to avoid impacts to the Arroyo de en Medio riparian corridor. The setback for an intermittent creek is 30 feet from edge of riparian habitat or centerline of the creek where no riparian vegetation is present. Based upon the vegetation in the Study Area, the setback is recommended to be 30 feet from the dripline of the arroyo willow habitat and from the centerline of the creek elsewhere in the Study Area. The setback is shown in Figure 2.

- It is recommended that any proposed construction or project activities remain outside of the 30-foot setback to remain in compliance with the LCP.

Special-Status and Non-Special-Status Nesting Birds

One special-status and several non-special-status bird species have potential to nest within the Study Area. Therefore, the following measures are recommended to avoid impacts to active nests of both special-status and non-special-status bird species:

- Trees or shrubs proposed for removal or trimming should be removed or trimmed during the bird non-nesting season (September 1 – February 14).
- If tree or shrub removal or Project activities are initiated during the nesting season (February 15 – August 31), a pre-construction nesting bird survey is recommended to avoid impacts to both special-status and non-special-status bird species.
 - If active nests are observed, a qualified biologist will determine suitable buffers based upon nest location and bird species. Buffers will be dependent upon species, nest location and project activities, but may range between 25-75 feet for passerine birds and up to 250 feet for raptors.

Summary

Based upon a review of databases and a site visit to the Study Area on December 31, 2015, one sensitive habitat is present within the Study Area, the Arroyo de en Medio riparian corridor. It is recommended that any proposed construction or project activities maintain a 30-foot setback from the riparian corridor as shown in Figure 2. Avoidance of the bird nesting season or pre-construction surveys for nesting birds are recommended for tree or shrub removal and initiation of Project activities. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. No heritage trees are present; however, one "Significant" tree is present. If the tree is planned for removal, it may require a permit from the County of San Mateo. No further measures are recommended.

Please feel free to contact me with any questions you may have.

Sincerely,



Patricia Valcarcel
Wildlife Biologist

Enclosures:

- Attachment A - Figures
- Attachment B - List of Observed Species
- Attachment C - Study Area Photographs

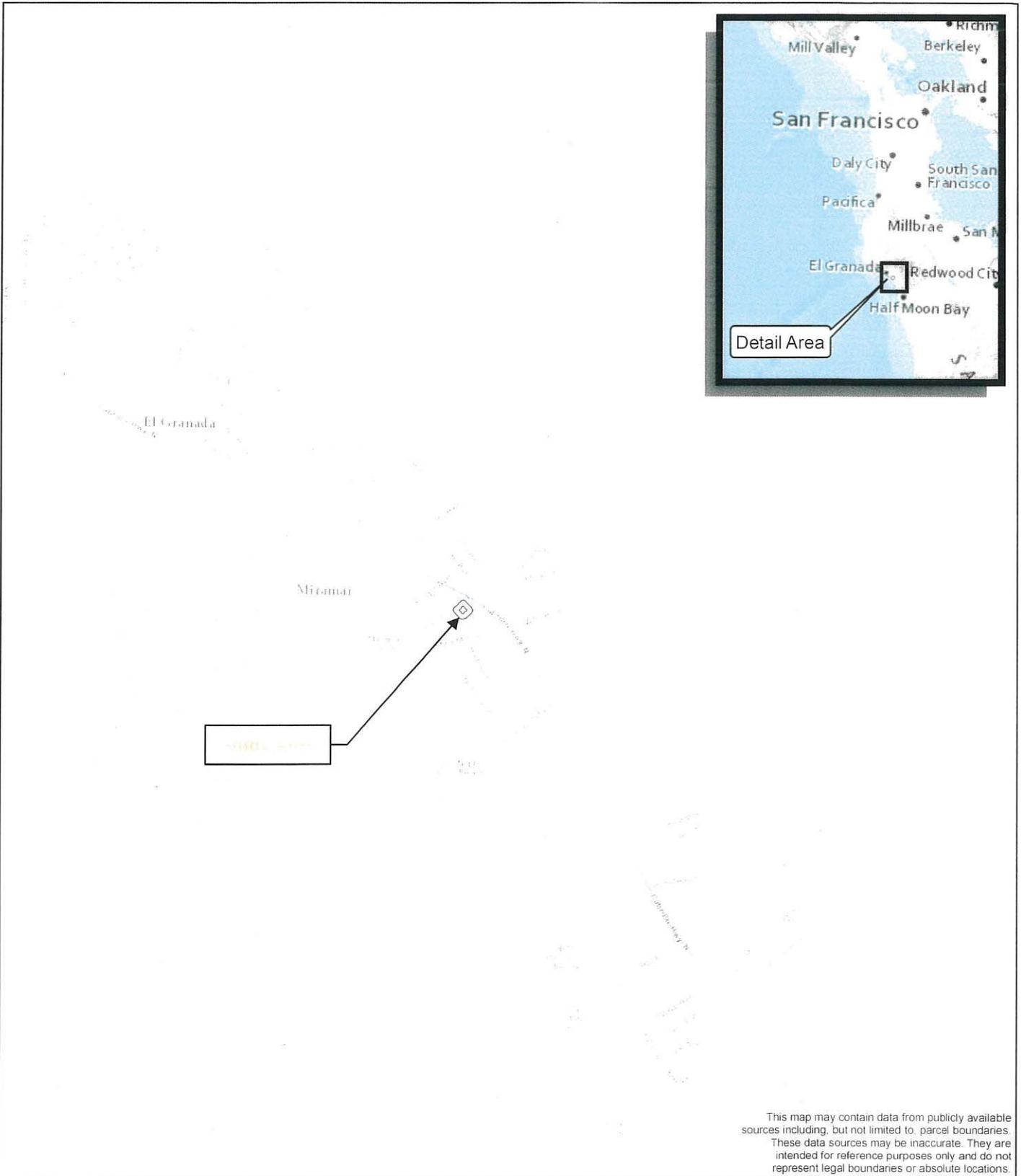
References

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Attachment A

Figures



This map may contain data from publicly available sources including, but not limited to, parcel boundaries. These data sources may be inaccurate. They are intended for reference purposes only and do not represent legal boundaries or absolute locations.

Figure 1. Study Area Location Map



Third Ave Miramar ESHA Assessment
Half Moon Bay, California



Map Prepared Date: 1/20/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

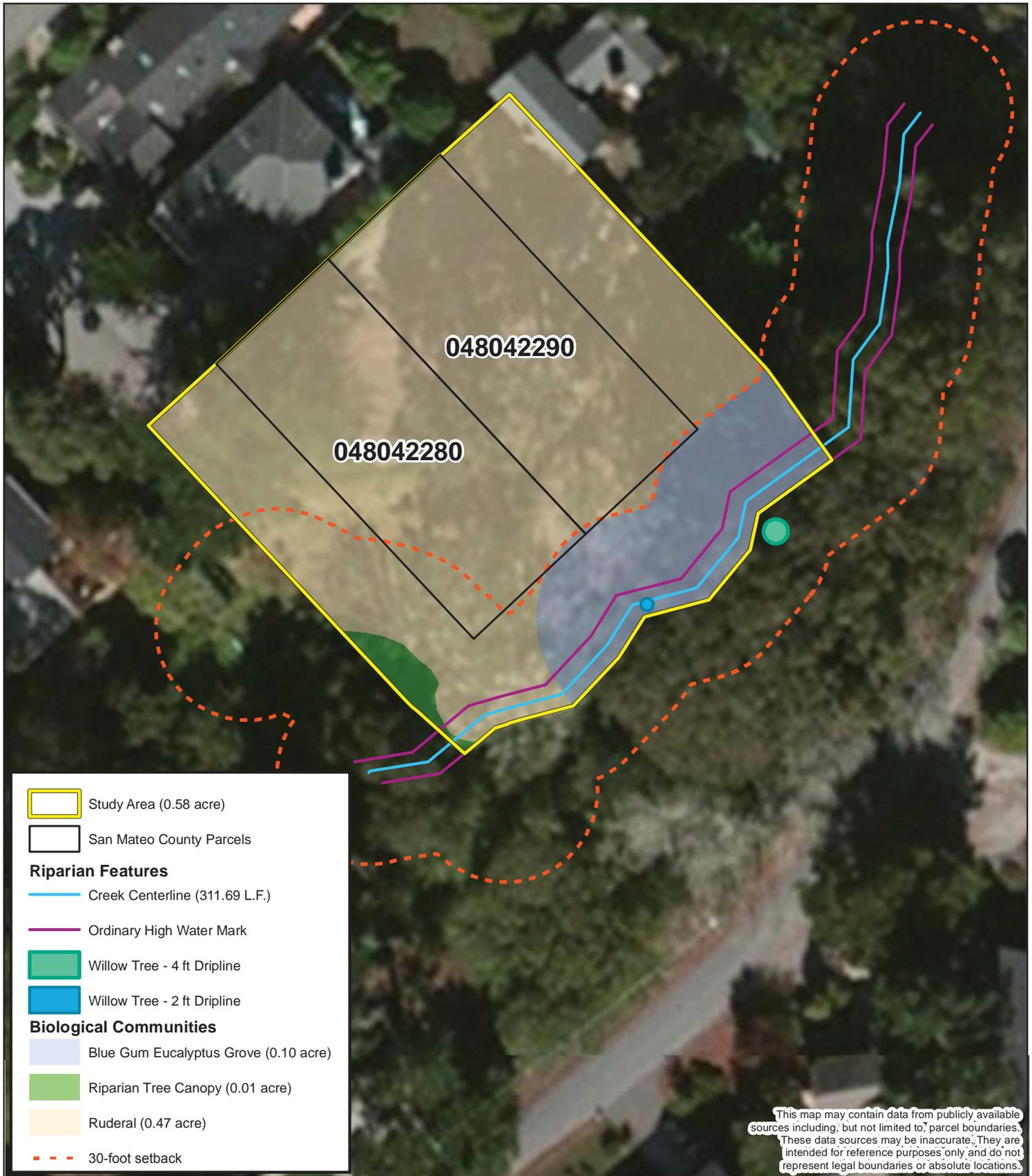


Figure 2. Biological Communities Map



Third Avenue Miramar ESHA Assessment
Half Moon Bay, California

0 10 20 40
Feet

Map Prepared Date: 1/25/2016
Map Prepared By: MRochelle
Base Source: Esri Streaming - Microsoft 2010
Data Source(s): WRA, San Mateo County

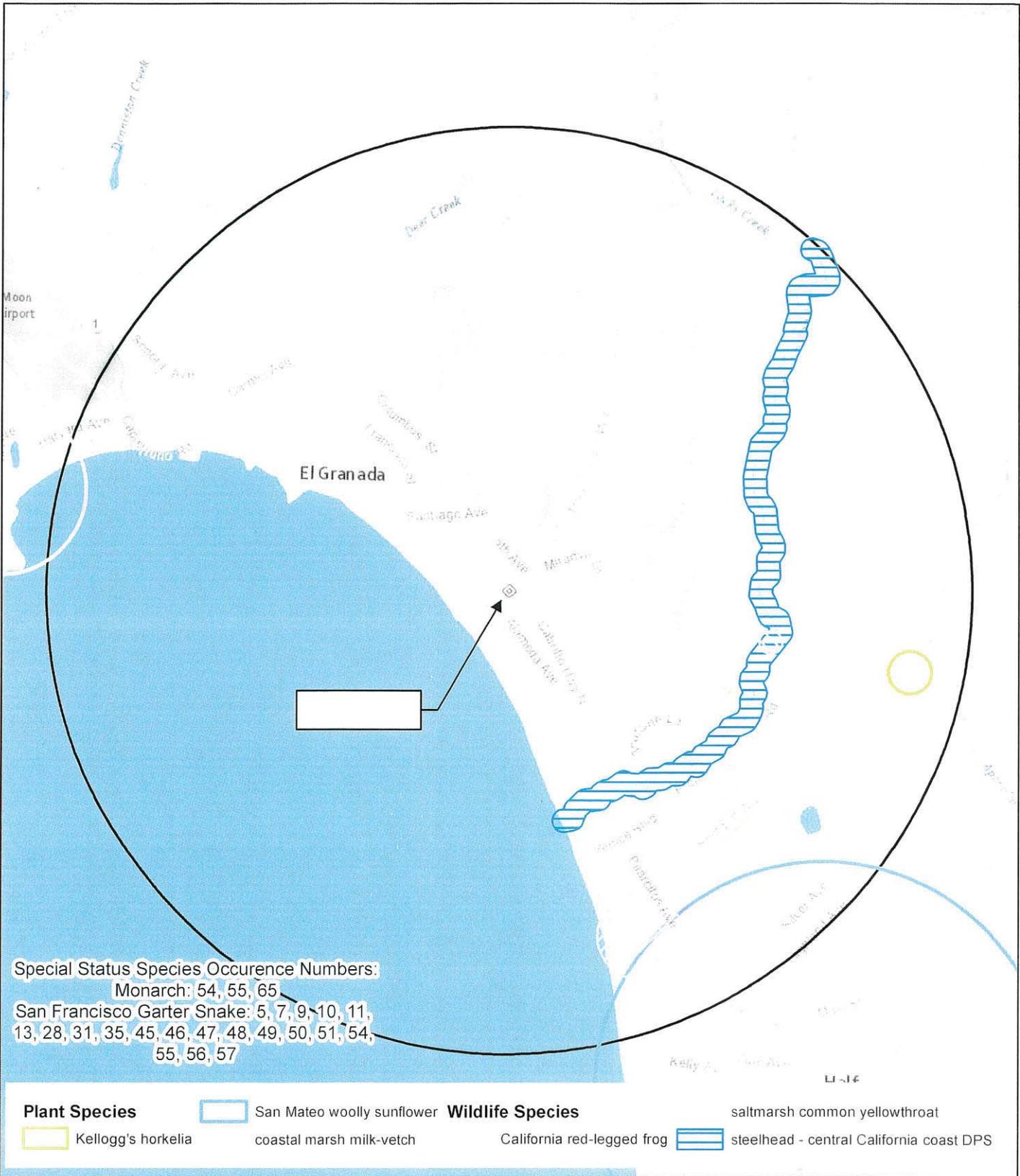
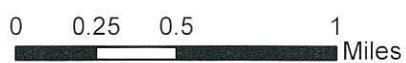


Figure 3. Special Status Plant and Wildlife Species within 2 miles of the Study Area



Third Ave Miramar ESHA Assessment
 Half Moon Bay, California



Map Prepared Date: 1/19/2016
 Map Prepared By: Fhourigan
 Base Source: Esri, National Geographic
 Data Source(s): WRA, CNDDB

Attachment B

List of Observed Species

Attachment B. Plant Species Observed in the Study Area on December 31, 2015.

Family	Scientific Name	Common Name
Adoxaceae	<i>Sambucus racemosa</i>	Red elderberry
Aizoaceae	<i>Carpobrotus chilensis</i>	Sea fig
Apiaceae	<i>Conium maculatum</i>	Poison hemlock
Apiaceae	<i>Daucus carota</i>	Carrot
Araceae	<i>Zantedeschia aethiopica</i>	Callalily
Araliaceae	<i>Hedera helix</i>	English ivy
Asteraceae	<i>Delairea odorata</i>	Cape ivy
Asteraceae	<i>Erigeron canadensis</i>	Canada horseweed
Asteraceae	<i>Eriophyllum staechadifolium</i>	Lizard tail
Betulaceae	<i>Alnus rhombifolia</i>	White alder
Boraginaceae	<i>Echium pininana</i>	Pine echium
Brassicaceae	<i>Nasturtium officinale</i>	Watercress
Brassicaceae	<i>Raphanus sativus</i>	Jointed charlock
Cornaceae	<i>Cornus sericea ssp. sericea</i>	Red osier dogwood
Cucurbitaceae	<i>Marah fabacea</i>	California man-root
Cupressaceae	<i>Hesperocyparis macrocarpa</i>	Monterey cypress
Cupressaceae	<i>Sequoia sempervirens</i>	Coast redwood
Cyperaceae	<i>Cyperus eragrostis</i>	Tall cyperus
Dryopteridaceae	<i>Polystichum munitum</i>	Western sword fern
Fabaceae	<i>Acacia dealbata</i>	Silver wattle
Fabaceae	<i>Acacia melanoxylon</i>	Blackwood acacia
Iridaceae	<i>Chasmanthe floribunda</i>	African cornflag
Myrtaceae	<i>Eucalyptus globulus</i>	Blue gum
Onagraceae	<i>Epilobium ciliatum ssp. ciliatum</i>	Willow herb
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda buttercup
Papaveraceae	<i>Fumaria officinalis</i>	Fumitory
Pinaceae	<i>Pinus radiata</i>	Monterey pine
Poaceae	<i>Bromus diandrus</i>	Ripgut brome
Poaceae	<i>Ehrharta erecta</i>	Upright veldt grass
Polygonaceae	<i>Persicaria hydropiper</i>	Common smartweed
Polygonaceae	<i>Rumex crispus</i>	Curly dock
Polygonaceae	<i>Rumex pulcher</i>	Fiddleleaf dock
Rhamnaceae	<i>Frangula californica</i>	California coffeeberry
Rosaceae	<i>Rubus ursinus</i>	California blackberry
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow
Scrophulariaceae	<i>Myoporum laetum</i>	Ngaio tree
Scrophulariaceae	<i>Scrophularia californica</i>	California bee plant
Solanaceae	<i>Solanum douglasii</i>	Douglas' nightshade
Tropaeolaceae	<i>Tropaeolum majus</i>	Garden nasturtium
Urticaceae	<i>Urtica dioica</i>	Stinging nettle

Attachment C
Representative Photographs

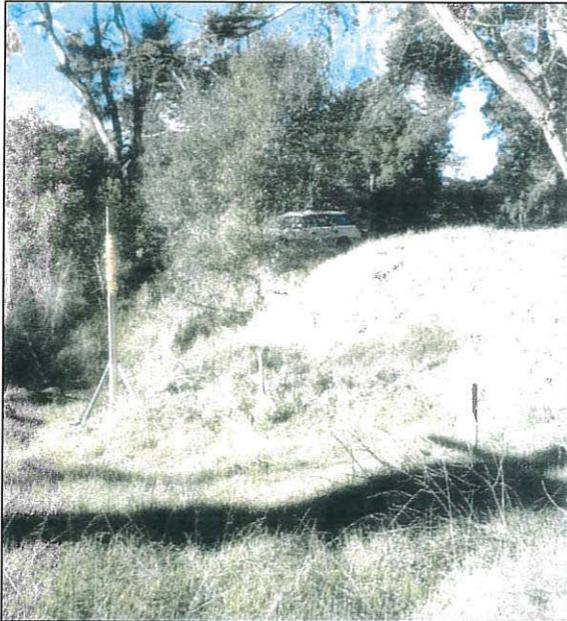


Photo 1. Photo of upland ruderal areas dominated by weedy grasses and forbs. Photo taken in westerly direction

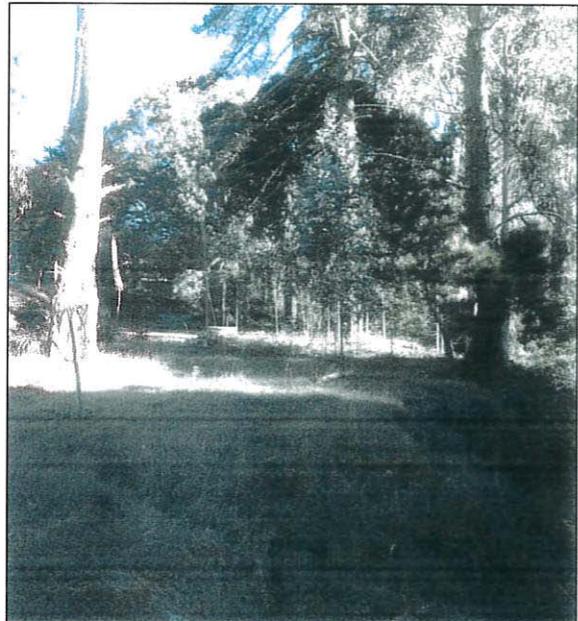


Photo 2. Photo showing ruderal upland area. Arroyo de en Medio is on the right. Photo taken in easterly direction.



Photo 3. Photo showing arroyo willow scrub along Arroyo de en Medio on the western side of the Study Area. Photo taken in a south west direction.

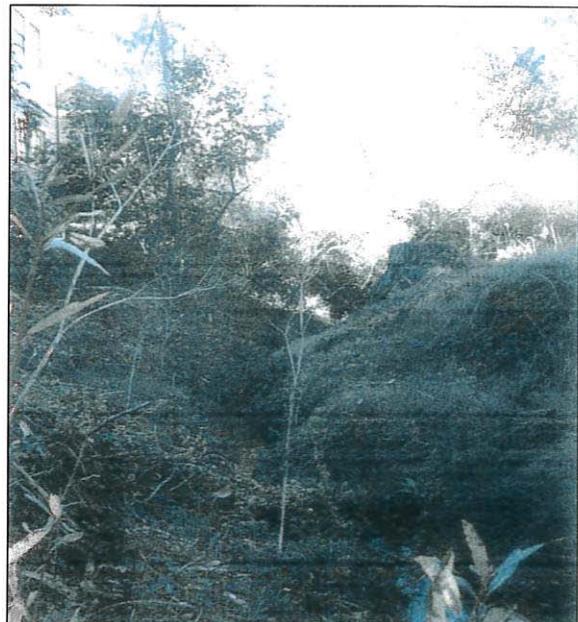


Photo 4. Photo showing Arroyo de en Medio. The Study Area is on the right. Photo taken in a westerly direction.



Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

**VELLA PROPERTY
3RD AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

RECEIVED

APR 15 2015

San Mateo County
Planning and Building Department

PLN2015-00152

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CALIFORNIA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 2010



Sigma Prime Geosciences, Inc.
Effective Solutions

April 21, 2010

Frank Vella
758 Vasquez Drive
Half Moon Bay, CA 94019

Re: Geotechnical Report: Vella Residence, 3rd Avenue, Miramar, California
APN 048-042-280
Sigma Prime Job No. 10-114

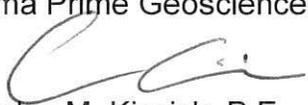
Dear Mr. Vella:

As per your request, we have performed a geotechnical study for your proposed residence at 3rd Avenue in Miramar, California. The accompanying report summarizes the results of our field study, laboratory testing, and engineering analyses, and presents geotechnical recommendations for the planned structure.

Thank you for the opportunity to work with you on this project. If you have any questions concerning our study, please call.

Yours,

Sigma Prime Geosciences, Inc.


Charles M. Kissick, P.E.





**GEOTECHNICAL STUDY
VELLA RESIDENCE
3rd AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 21, 2010



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1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed residence at 3rd Avenue in Miramar, California, at the location shown in Figure 1. The purpose of this investigation was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed construction.

1.1 PROJECT DESCRIPTION

We understand that you plan to construct a home on 3rd Avenue, in Miramar. The lot is on the west side of Highway 1, about two blocks from the beach. The 2-story structure is expected to be of wood frame construction and have wooden floors constructed over a crawl space. The lot has two level areas with a slope in between, as shown in Figure 2. Therefore, the house would have a lower level on the lower bench. Structural loads are expected to be relatively light as is typical for this type of construction.

1.2 SCOPE OF WORK

In order to complete this project we have performed the following tasks:

- Reviewed published information on the geologic and seismic conditions in the site vicinity;
- Geologic site reconnaissance;
- Subsurface study, including 2 soil borings at the site;
- Engineering analysis and evaluation of the subsurface data to develop geotechnical design criteria; and
- Preparation of this report presenting our recommendations for the proposed structure.



2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on April 1, 2010. The subsurface study consisted of advancing 2 soil borings with an augur bit. The soil borings were advanced to a depths of 20 feet and 21.5 feet. The approximate locations of the borings, numbered B-1 and B-2, are shown in Figure 2, Site Plan. The boring logs and the results of the laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the site was undeveloped, with homes built on properties to the east and north. The property consists of two level benches with a slope in between the benches. The slope is about 8 feet high and is inclined at about 30%, or about 3.3:1 (H:V). The vegetation consists of wild grasses and large pine trees.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Pampeyan (1994), the site vicinity is underlain by Holocene younger alluvial fan deposits. This unit is described as a poorly consolidated, fine to coarse grained sand, silt, and gravel.

2.4 SITE SUBSURFACE CONDITIONS

Based on the two soil borings, the subsurface conditions on the upper slope consist of about 5.5 feet of loose sandy clay fill, underlain by alternating layers of medium stiff sandy clay and loose sand. The clay has low plasticity. The soil under the lower bench consists of 11 feet of loose sand, underlain by 9 feet of very stiff sandy clay.

2.5 GROUNDWATER

Free groundwater was encountered at a depth of approximately 15.2 feet in the boring on the upper bench, and 6.4 feet in the boring on the lower bench. Groundwater may be encountered during construction, depending on the foundation system selected, as discussed in Section 3.4 below.



2.6 FAULTS AND SEISMICITY

The site is in an area of high seismicity, with active faults associated with the San Andreas fault system. The closest active fault to the site is the San Gregorio fault, located about 2.5 km to the west. Other faults most likely to produce significant seismic ground motions include the San Andreas, Hayward, Rodgers Creek, and Calaveras faults. Selected historical earthquakes in the area with an estimated magnitude greater than 6-1/4, are presented in Table 1 below.

**TABLE 1
HISTORICAL EARTHQUAKES**

<u>Date</u>	<u>Magnitude</u>	<u>Fault</u>	<u>Locale</u>
June 10, 1836	6.5 ¹	San Andreas	San Juan Bautista
June 1838	7.0 ²	San Andreas	Peninsula
October 8, 1865	6.3 ²	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0 ²	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9 ³	San Andreas	Golden Gate
July 1, 1911	6.6 ⁴	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1 ⁵	San Andreas	Loma Prieta, Santa Cruz Mountains
(1)	Borchardt & Topozada (1996)		
(2)	Topozada et al (1981)		
(3)	Petersen (1996)		
(4)	Topozada (1984)		
(5)	USGS (1989)		

2.7 2007 CBC EARTHQUAKE DESIGN PARAMETERS

Based on the 2007 California Building Code (CBC) and our site evaluation, we recommend using Site Class Definition D (stiff soil) for the site. The other pertinent CBC seismic parameters are given in Table 2 below.

**Table 2
CBC SEISMIC DESIGN PARAMETERS**

S_s	S₁	F_a	F_v	S_{MS}	S_{M1}	S_{DS}	S_{D1}
1.990	0.932	1.0	1.5	1.990	1.398	1.327	0.932

Because the S₁ value is greater than 0.75, Seismic Design Category E is recommended, per CBC Section 1613.5.6. The values in the table above were obtained from a USGS software program which provides the values based on the latitude and longitude of the site, and the Site Class Definition. The latitude and longitude were 37.4950 and -122.4565, respectively, and were accurately obtained from Google Earth™. These same values can be obtained directly from maps in the CBC, however the scale of the map makes it impractical to



achieve satisfactory accuracy. The map in the CBC was derived from the same work that led to the USGS software. The remaining parameters were also obtained by the same USGS program.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

It is our opinion that, from a geotechnical standpoint, the site is suitable for the proposed construction, provided the recommendations presented in this report are followed during design and construction. Detailed recommendations are presented in the following sections of this report.

Because subsurface conditions may vary from those encountered at the location of our borings, and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) Review the project plans for conformance with our report recommendations and 2) Observe and test the earthwork and foundation installation phases of construction.

3.2 GEOLOGIC HAZARDS

We reviewed the potential for geologic hazards to impact the site, considering the geologic setting, and the soils encountered during our investigation. The results of our review are presented below:

- Fault Rupture - The site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion.
- Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.



- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however precautions should be made to prevent expensive cosmetic damage.
- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at the site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.
- Slope Stability – Based on the geologic map and our site reconnaissance, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The slope that crosses the site is inclined at about 30%, and is about 8 feet high. This slope is likely to remain stable. The construction of the house will help to stabilize the slope by acting as a buttress. Therefore, the likelihood of a landslide impacting the house is low. Ground movement may be associated with earthquake-induced liquefaction, as discussed above. The precautions that we will recommend to counteract liquefaction induced ground movement will also account for any slope movements.

3.3 EARTHWORK

3.3.1 Clearing & Subgrade Preparation

All deleterious materials, including topsoil, roots, vegetation, designated utility lines, etc., should be cleared from building and driveway areas. The actual stripping depth required will depend on site usage prior to construction, and should be established by the Contractor during construction. Topsoil should be stockpiled separately for later use in landscaping areas.



3.3.2 Fills

Fills are not recommended beneath the base of foundations, unless the foundation is designed for this condition. (See Section 3.4) In landscaping areas, any fills greater than 3 feet in depth should be placed in loose lifts not exceeding 12 inches in height, and compacted to at least 90% of the maximum dry density, as determined by ASTM D1157-78.

3.3.3 Compaction

Scarified surface soils should be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1157-78. All trench backfill should also be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density.

3.3.4 Surface Drainage

The finish grades should be designed to drain surface water away from foundations and slab areas to suitable discharge points. Slopes of at least 2 percent within 10 feet of the structures are recommended. Ponding of water should not be allowed adjacent to the structure.

3.4 FOUNDATIONS

We recommend either a reinforced mat foundation or a pier and grade beam foundation. The site may be subject to liquefaction-induced ground deformation. Either foundation type will minimize potential structural damage to the house, if built properly. However, the house may move slightly, resulting in cosmetic damage.

Mat Foundation:

Although a mat slab would rest on fill material, the mat would be designed to bear on fill. Because the house would be built on two levels, the foundation system would consist of two mats. The mats should be tied together structurally to create one rigid unit.

A reinforced slab or mat foundation may be designed for allowable bearing pressures of 2,000 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces.



We recommend that the mat be underlain by at least 12 inches of non-expansive granular fill that is compacted as per the recommendations in Section 3.3.3 of this report. Where floor wetness would be detrimental, a vapor barrier, such as 10 mil visqueen, should be placed over the gravel. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 12 inches of granular fill recommended above.

The mat should be reinforced to provide structural continuity and to permit spanning of local irregularities. The mat should be capable of spanning 25 feet, point to point, and should cantilever a minimum of 8 feet. As a guideline to the structural engineer, we anticipate that the mat slab would be a minimum of 12 inches thick, with two layers of #5 reinforcing bars at top and bottom, both ways, spaced at 10 inches on center, or equivalent. The structural engineer may opt to include thicker perimeters. As discussed in Section 3.3.3 above, the subgrade should be compacted prior to the placement of granular fill. Our representative should observe the excavation prior to placing reinforcing steel to see that the subgrade has been properly prepared.

Pier and Grade Beam:

It should be noted that pier holes will penetrate loose sands and is likely to cave in while drilling. If this foundation method is selected, the contractor should expect to case the holes while drilling.

Piers should be drilled and cast-in-place, and be a minimum of 16 inches in diameter. The piers should be a minimum of 18 feet deep, as measured from the bottom of the adjacent grade beam. The actual pier depths should be determined by the structural engineer, based on the criteria given below.

The piers may gain support in skin friction acting along the sides of the piers within the clayey soil. A skin friction of 500 psf between the piers and the soil should be used in design. The uplift capacity of the piers may be based on a skin friction value of 350 pounds per square foot acting below a depth of 2 feet. The skin friction value may be increased by 1/3 for seismic loads and wind loads. Because of the difficulty in cleaning the bottoms of the pier holes, end bearing should be neglected, however the pier holes should be kept as clean as possible.

Drilled piers should have a center-to-center spacing of not less than three pier diameters. The concrete should not be allowed to free-fall more than 5 feet.



3.4.1 Lateral Loads

Mat Foundation:

Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. We recommend that an equivalent fluid weight of 300 pcf be used in design to calculate the passive pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. We recommend using a base friction coefficient of 0.30, multiplied by the vertical dead load, to calculate the base friction lateral resistance.

Pier and Grade Beam:

Resistance to lateral loads may be provided by passive pressure acting against the piers, neglecting the upper 2 feet of the pier, and acting across 1.5 pier diameters. We recommend that an equivalent fluid pressure of 300 pcf be used in design.

3.4.2 Slabs-on-Grade

We recommend that the slab-on-grade be underlain by at least 4 inches of non-expansive fill, preferably Class 2 base rock. Where floor wetness would be detrimental, a vapor barrier, such as 10-mil visqueen, should be placed over the fill. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 4-inches of fill recommended above.

3.5 RETAINING WALLS

Retaining walls should be designed to resist lateral earth pressure from the adjoining natural soils and/or backfill. The walls should be founded on drilled piers with the same requirements as those discussed above. We recommend that walls that are restrained from lateral movement be designed to resist an at-rest equivalent fluid pressure of 65 pounds per cubic foot (pcf). Retaining walls that are not restrained from lateral movement should be designed to resist an active equivalent fluid pressure of 45 pcf.

To account for seismic loads, we recommend adding a dynamic pressure increment of $18H$, where H is the height of the wall. The dynamic load is a rectangular distribution acting halfway up the wall. This value is obtained using a modified Mononobe-Okabe procedure, by first estimating the peak ground



acceleration at the site, based on the average of four published attenuation relationships. The peak ground acceleration at the project site is estimated to be 0.58g. This peak value is reduced by 0.65 (denoted as k_h) because peak accelerations are too short in duration to have an impact. Therefore, $k_h = 0.377g$. The static coefficient of lateral earth pressure, K_A , equal to 0.271 in this case, is applied. A relationship between k_h and K_A is used to obtain the total lateral earth pressure coefficient, K_{AE-TOT} , due to both the dynamic and the static increments. The static increment is then subtracted to obtain the dynamic increment, K_{AE-DYN} . The dynamic increment, K_{AE-DYN} , is then applied to obtain the dynamic pressure, P_{AE-DYN} , using the equation,

$$P_{AE-DYN}=0.5(\text{gamma})(K_{AE-DYN})(H^2),$$

where gamma is the unit weight of soil.

Retaining walls should include a subsurface drainage system behind the walls to prevent any buildup of water pressure from surface water infiltration. The drainage system should consist of a 4-inch (Schedule 40 PVC) perforated pipe (perforations placed down) located below the adjacent slab elevation. The pipe should be embedded in a 12-inch width of 1/2-inch crushed rock. The remaining backfill may consist of 1/2-inch crushed rock, extending to within 2 feet of the level of the outside finish grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 2 feet of backfill should consist of native soil. The subdrain should slope to a free draining outlet. Cleanouts should be provided. Damp proofing of walls should be included in areas where wall moisture would be undesirable. Miridrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative. If used, the drainage fabric should extend from a depth of 2 feet to the drain pipe at the base of the wall. The 12-inch width of 1/2-inch crushed rock and filter fabric should be placed around the drainpipe, as discussed in the earlier section.

3.6 CONSTRUCTION OBSERVATION AND TESTING

The earthwork and foundation phases of construction should be observed and tested by us to 1) Establish that subsurface conditions are compatible with those used in the analysis and design; 2) Observe compliance with the design concepts, specifications and recommendations; and 3) Allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited number of borings. The nature and extent of variation across the site may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate our recommendations.



4. LIMITATIONS

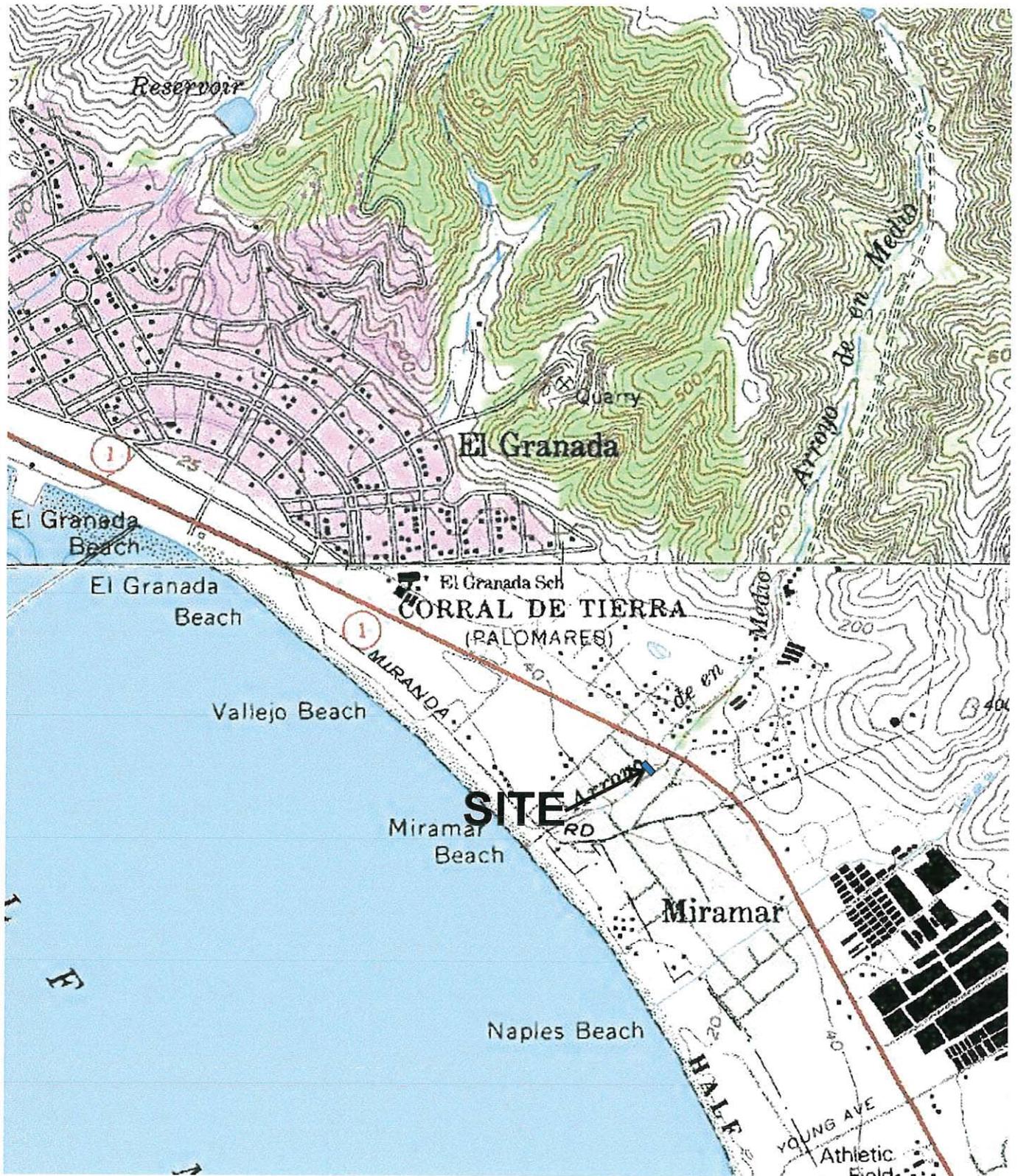
This report has been prepared for the exclusive use of the owner for specific application in developing geotechnical design criteria, for the currently planned residence on 3rd Avenue in Miramar, California (APN 048-042-280). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; the currently planned improvements; review of previous reports relevant to the site conditions; and laboratory results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.



5. REFERENCES

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Sigma Prime Geosciences, Inc.

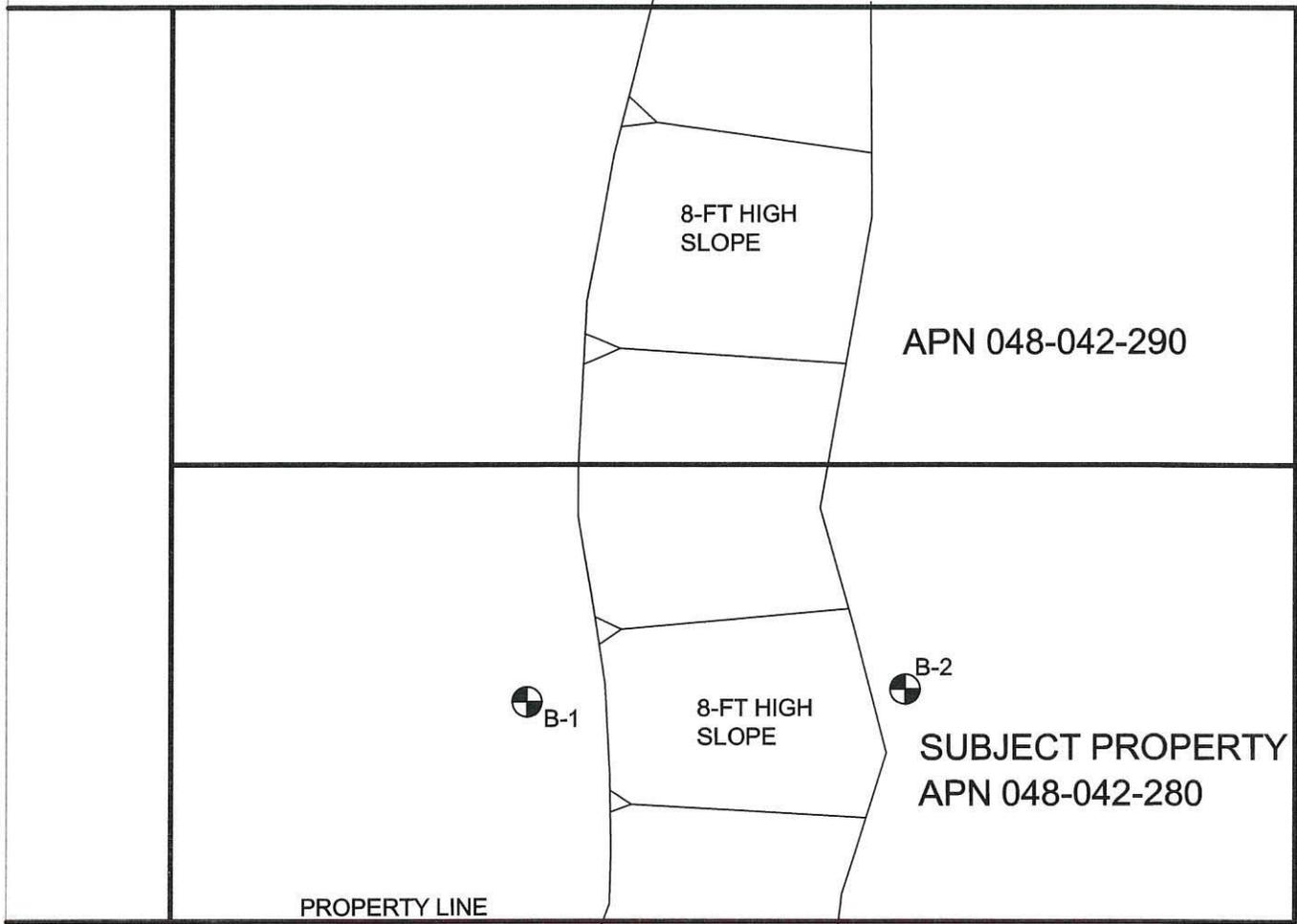
Figure 1

Date: 4/21/10

Job No.: 10-114

Location Map

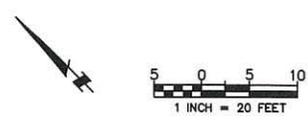
Vella Property, 3rd Ave., Miramar APN 048-042-280



ARROYO de en MEDIO

← 3RD AVENUE
~500 FEET TO MEDIO AVE.

ASPHALT
(APPROX.)



1"=20'

EXPLANATION

	Soil Boring Location
--	----------------------

<p>Sigma Prime Geosciences, Inc.</p>	Figure	2
	Date:	4/21/10
	Job No.:	10-114
<p>Site Map</p> <p>Vella Property, 3rd Ave., Half Moon Bay APN 048-042-280</p>		



APPENDIX A

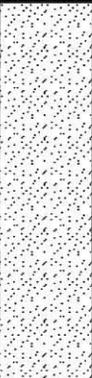
FIELD INVESTIGATION

The soils encountered during drilling were logged by our representative, and samples were obtained at depths appropriate to the investigation. The samples were taken to our laboratory where they were carefully observed and classified in accordance with the Unified Soil Classification System. The logs of our borings, as well as a summary of the soil classification system, are attached.

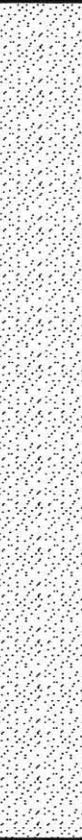
Several tests were performed in the field during drilling. The standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 18 inches. The standard penetration resistance is the number of blows required to drive the sampler the last 12 inches of the 18-inch drive. The results of these field tests are presented on the boring logs.

The boring logs and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and ground water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.

Project Name / Boring Location Vella #2 048-042-280 / Top of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum		
Auger	4"	21.5'	21.5'	0	56'	assumed	Boring No.	B-1
Drilling Company Cenozoic Drilling				Logged By: C. Kissick			Page	1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"			Date(s)	4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
0'-5.5'	<u>Sandy Clay (FILL)</u> : dark brown; soft; moist; coarse sand.		CL	2 3 3	1	MC	<u>Lab. Sample #1:</u> Moisture%=15.3% Dry Density=92.3 pcf LL=32, PL=19, PI=13
5.5'-10.5'	<u>Sand (NATIVE)</u> : yellowish brown; loose; moist; fine to medium grained.		SP	2 2 2	2	SPT	
10.5'-13'	<u>Silty Sand</u> : dark brown; loose; moist; coarse sand.		SM	4 3 3	3	SPT	
13'-20'	<u>Clayey Sand</u> : moderate brown; loose; moist.		SC	3 4 5	4	SPT	▽ Groundwater @ 15.2' <u>Lab. Sample #4:</u> % Passing #200: 32.2
20'	Medium dense.			6 8 9	5	SPT	Bottom of Hole @ 21.5' Groundwater @ 15.2'.

Project Name / Boring Location Vella #2 048-042-290 / Bottom of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum		
Auger	4"	20'	20'	0	49'	assumed	Boring No.	B-2
Drilling Company Cenozoic Drilling					Logged By: C. Kissick		Page	1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"			Date(s)	4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments		
0'-11':	Sand: tan; medium dense; moist; coarse sand.		SP	10			Lab. Sample #1: Moisture%=6.2% Dry Density=109.4 pcf		
				11				MC	
				13	1				
5	Loose.			6		6		2	SPT
				3			 Groundwater @ 6.4'		
10				4					
				5	3	SPT			
11'-20':	Clayey Sand: moderate brown; medium dense; moist.		SC	8			Hole caved; terminated at 20'.		
				5		8		4	SPT
15						10			
20	Bottom of Hole @ 20' Groundwater @ 6.4'.								

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS > 50% RETAINED ON NO. 4 SIEVE	GRAVELS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL
			$Cu < 4$ AND/OR $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SANDS < 5% FINES	$Cu > 6$ AND $1 < Cc < 3$	SW	WELL-GRADED SAND
			$Cu < 6$ AND/OR $1 > Cc > 3$	SP	POORLY-GRADED SAND
		SANDS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS > 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT < 50	INORGANIC	$PI > 7$ AND PLOTS > "A" LINE	CL	LOW-PLASTICITY CLAY
			$PI > 4$ AND PLOTS < "A" LINE	ML	LOW-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	PI PLOTS > "A" LINE	CH	HIGH-PLASTICITY CLAY
			PI PLOTS < "A" LINE	MH	HIGH-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK COLOR, ORGANIC ODOR		PT	PEAT

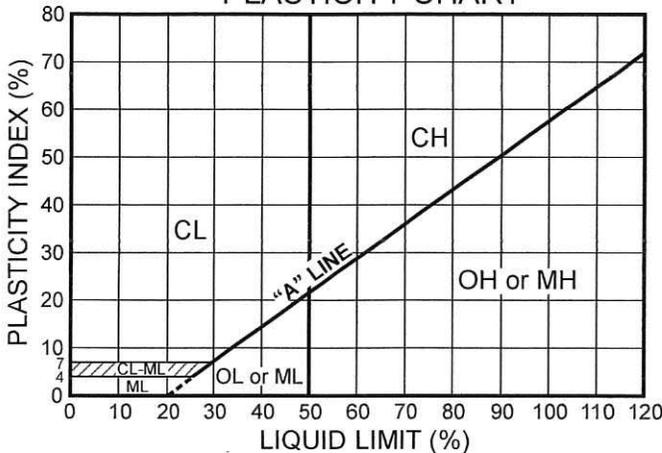
SAMPLE TYPES

- B BULK SAMPLE
- ST PUSHED SHELBY TUBE
- SPT STANDARD PENETRATION
- MC MODIFIED CALIFORNIA
- P PITCHER SAMPLE
- C ROCK CORE

ADDITIONAL TESTS

- CA - CHEMICAL ANALYSIS
- CN - CONSOLIDATION
- CP - COMPACTION
- DS - DIRECT SHEAR
- PM - PERMEABILITY
- PP - POCKET PENETROMETER
- Cor. - CORROSIVITY
- SA - GRAIN SIZE ANALYSIS (20%) - (PERCENT PASSING #200 SIEVE)
- SW - SWELL TEST
- TC - CYCLIC TRIAXIAL
- TU - CONSOLIDATED UNDRAINED TRIAXIAL
- TV - TORVANE SHEAR
- UC - UNCONFINED COMPRESSION
- WA - WASH ANALYSIS
- WATER LEVEL AT TIME OF DRILLING AND DATE MEASURED
- LATER WATER LEVEL AND DATE MEASURED

PLASTICITY CHART



LEGEND TO SOIL DESCRIPTIONS



FIGURE A-1



APPENDIX B

LABORATORY TESTS

Samples from the subsurface study were selected for tests to establish some of the physical and engineering properties of the soils. The tests performed are briefly described below.

The natural moisture content and dry density were determined in accordance with ASTM D 2216 on selected samples recovered from the borings. This test determines the moisture content and density, representative of field conditions, at the time the samples were collected. The results are presented on the boring logs, at the appropriate sample depth.

The plasticity of selected clayey soil samples was determined on two soil samples in accordance with ASTM D 422. These results are presented on the boring logs, at the appropriate sample depth.

The percentage of fines in one sample was determined in accordance with ASTM D 1140. The results are presented on the boring log, at the appropriate sample depth.

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA	HUMBOLDT	SAN FRANCISCO
COLUSA	LAKE	SAN MATEO
CONTRA COSTA	MARIN	SANTA CLATA
DEL NORTE	MENDOCINO	SANTA CRUZ
	MONTEREY	SOLANO
	NAPA	SONOMA
	SAN BENITO	YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
<http://www.sonoma.edu/nwic>

May 3, 2016

File No.: 15-1610

Dennis Aguirre, Project Planner
San Mateo County Planning and Building Division
455 County Center
Redwood City, CA 94063

re: County File Number: 2015-00152 / Third Avenue; APN: 048-042-280 / Edward C. Love, Architect

Dear Mr. Aguirre,

Records at this office were reviewed to determine if this project could adversely affect cultural resources.

Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.

Previous Studies:

XX Study #003082 (Dietz 1970), covering approximately 100% of the proposed project area, identified no cultural resources (see recommendation below).

Archaeological and Native American Resources Recommendations:

XX Due to the passage of time since the previous survey (Dietz 1970) and the changes in archaeological theory and method since that time, we recommend a qualified archaeologist conduct further archival and field study for the entire project area to identify archaeological resources.

XX We recommend you contact the local Native American tribes regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

Built Environment Recommendations:

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of San Mateo County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at <http://www.chrisinfo.org>. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,



Scott McGaughey
NWIC Researcher

cc: Edward C. Love
720 Mill Street
Half Moon Bay, CA 94019

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

APPENDIX F

EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
1.1	Energy Upgrade California Participate in an energy retrofit rebate program, to achieve a minimum of 30% energy savings.			X	
1.2	Residential Energy Efficiency Financing Participate in a residential energy efficiency financing program, to achieve 30% energy savings.			X	
1.3	Low-Income Weatherization Complete weatherization, to achieve average energy savings of 25%.			X	
1.4	Tree Planting Tree plantings to shade new or existing homes.	X			X
1.5	Propane Switch Switch from propane heater to more energy-efficient options, such as Energy Star furnaces or electric air-source pumps.			X	
2.1	Commercial and Industrial Efficiency Complete energy efficiency upgrades through third-party programs.			X	
2.2	Commercial Financing Participate in commercial energy efficiency financing programs, to achieve a minimum of 30% energy savings.			X	
2.3	Institutional Energy Efficiency Complete energy efficiency retrofits at large institutional facilities.			X	
3.1	Green Building Ordinance Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, for all construction projects subject to the Green Building Ordinance.	X			

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance				
		Complies	Does Not Comply	N/A	See Discussion	
3.2	Green Building Incentives	Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, regardless of applicability of the Green Building Ordinance.	X			
3.3	Urban Heat Island	Install shading, "cool" surfaces design, and/or open-grid paving to reduce hardscape through strategies such as interlocking concrete pavement, stones, or blocks.	X			
3.6	Regional Energy Efficiency Efforts	Procure and install energy-efficient equipment, through programs such as bulk-purchasing, to achieve a minimum of 8% energy savings.			X	
4.1	Solar PV Incentives	Install a solar photovoltaic system, using private resources and/or local or state incentives, including County incentives, and state rebates through the California Solar Initiative.				X
4.2	Solar Water Heater Incentives	Install solar water heaters, using private resources and/or local or state incentives, including County incentives and state rebates through the California Solar Initiative.				X
4.3	Pre-Wired Solar Homes	Pre-wire and pre-plumb for solar thermal or PV systems.	X			
4.4	Pilot Solar Program	Install a solar photovoltaic system through a development project program.				X
4.5	Renewable Financing	Install a solar photovoltaic system or solar water heater using financing programs such as power purchase agreements or Property Assessed Clean Energy.				X

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

IX F

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
4.7	Incentivize Wind Energy			X	
4.9	Emissions Offset Programs			X	
5.1	General Plan and Zoning Updates			X	
5.3	Pedestrian Design			X	
6.1	Neighborhood Retail			X	
6.2	Traffic Calming in New Construction			X	
6.4	Expand Transit			X	
7.1	Parking Ordinance			X	
7.3	Unbundled Parking			X	

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
8.1	Employee Commute			X	
8.2	Workplace Parking			X	
8.3	Employer Transit Subsidies			X	
8.4	Work Shuttles			X	
10.1	Low Carbon Fuel Infrastructure			X	
13.1	Use of Recycled Materials	X			
13.2	Zero Waste			X	
14.1	Smart Water Meters			X	
14.2	Water Reuse				X
15.1	Construction Idling			X	
15.2	Electrification in New Homes	X			

Discussion (please list policy #)

- 1.4 } EXISTING TREES TO BE MAINTAINED
4.1 } TO SHADE NEW HOUSE
4.2 }
4.4 } OWNER MAY CHOOSE TO INSTALL
4.5 } SOLAR PANELS AT A LATER DATE

14.2 SURFACE RUN-OFF IS DIRECTED
TO DRY WELLS WHICH RE-CHARGE
THE AQUIFER.

From: Charlie Kissick <sigmaprm@pacbell.net>
Sent: Tuesday, May 03, 2016 11:56 AM
To: Dennis Aguirre
Subject: RE: PLN2015-00152Miramar
Attachments: Rational Method - Runoff.pdf

Hello Dennis,

Abbie asked me to make an estimate of the effect of a dam failure during a 100-year storm.

I estimate the volume of the reservoir to be 2 acre-feet. I estimate the area of the watershed to be about 800 acres. At first glance, the volume of the reservoir appears to be negligible, compared to the size of the watershed. To get the most accurate estimate of the impact of a dam failure, a computer model would have to be used. We do not perform such analyses, however I made a rough estimate of the impact, using the Rational Method.

To get a rough estimate, I added the equivalent area that the 2 acre-foot reservoir would be if it were spread out to become 0.81 inches deep, per the hourly rainfall intensity of a 100-year storm. Therefore, the 800 acre watershed becomes the equivalent of 829 acres. This increase in area results in an increase in runoff from 194.4 ft³/sec to 201.4 ft³/sec, or an increase of 3.6%.

This, to me, does represent a negligible impact. It should be noted that the peak flow during a 100-year storm is not likely to coincide with the peak flow resulting from a dam break. Therefore, the 3.6% increase is likely to flow at a time when the flow rate is less than the maximum flow rate during the design storm. The potential impact on the life and safety of people downstream is negligible.

See my calculations, attached. And keep in mind this is a rough estimate.

Charles Kissick
Sigma Prime Geosciences, Inc.
332 Princeton Avenue
Half Moon Bay, CA 94019
650-728-3590

From: [Dennis Aguirre](#)
Sent: Tuesday, May 3, 2016 10:10 AM
To: [Ab Goldstein](#)
Subject: PLN2015-00152Miramar

Hi Abbie,

Attaching your report and WRA's. Their comment is at the bottom of page 3. The question in the Initial Study is as follows: Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? Hope you can help me here.

Thanks,
Dennis

Rational Method / Flow Estimate

Job: Vella
No.: 10-114
Date 5/3/2016
by: CMK

Rational Method to Estimate Storm Runoff (page 20-13)

$$Q_p = CIA_d \quad \text{Reference: Civil Engineering Reference Manual}$$

Area, A_d (acres):

800

C (Appendix 20.A):

0.3

Storm Frequency:

100

 years
Time of Concentration, t_c $t_c = L_o / \text{vel}$
 L_o :

12000

 feet, longest flow distance in watershed
elev change:

1100

Slope:

9.2

 percent
vel.:

0.7

 ft/sec (from Fig 20.4, page 20-4)
 t_c :

17142.9

 seconds

285.7

 minutes

therefore, $I =$

0.81

 in/hr

$$Q_p = \mathbf{194.4000} \text{ ft}^3/\text{sec} = \mathbf{87025.10} \text{ gal/min}$$

Add Reservoir's equivalent area, at 2 acre-feet converted to 0.81 inches

Area, A_d (acres):

829

C (Appendix 20.A):

0.3

Storm Frequency:

100

 years
Time of Concentration, t_c $t_c = L_o / \text{vel}$
 L_o :

12000

 feet, longest flow distance in watershed
elev change:

1100

Slope:

9.2

 percent
vel.:

0.7

 ft/sec (from Fig 20.4, page 20-4)
 t_c :

17142.9

 seconds

285.7

 minutes

therefore, $I =$

0.81

 in/hr

$$Q_p = \mathbf{201.4470} \text{ ft}^3/\text{sec} = \mathbf{90179.76} \text{ gal/min}$$

Difference:

3.6

 = percent increase in runoff

ATTACHMENT F

COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT RE-CIRCULATED MITIGATED NEGATIVE DECLARATION

POSTING
ONLY
JAN 31 2017
DIANA SIRON

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: New Vella/Semprevivo Single-Family Residence, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2015-00152

OWNER: Frank Vella and Steve Semprevivo

APPLICANT: Edward Love

ASSESSOR'S PARCEL NO.: 048-042-280

LOCATION: 3rd Avenue, unincorporated Miramar area of San Mateo County

PROJECT DESCRIPTION: The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. The project, as proposed and mitigated, will not adversely affect water or air quality or increase noise levels substantially.
2. The project, as proposed and mitigated, will not have adverse impacts on the flora or fauna of the area.
3. The project, as proposed and mitigated, will not degrade the aesthetic quality of the area.
4. The project, as proposed, will not have adverse impacts on traffic or land use.
5. In addition, the project, as proposed and mitigated, will not:
 - a. Create impacts which have the potential to degrade the quality of the environment.
 - b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

- c. Create impacts for a project which are individually limited, but cumulatively considerable.
- d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project is less than significant.

MITIGATION MEASURES recommended for project implementation to avoid potentially significant effects (Changes as underlined):

Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: If concentrations of prehistoric or historic-era materials are encountered during project activities, all work in the immediate vicinity stop until a qualified archaeologist can evaluate the finds and make recommendations.

Mitigation Measure 6: The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately, along with a qualified archaeologist. If the remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours. The NAHC then shall notify the Most Likely Descendent,

who has 48 hours to make recommendations to the landowner for the disposition of the remains.

Mitigation Measure 9: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 10: Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. An equivalent fluid weight of 300 pcf shall be used in design to calculate the passive pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. A base friction coefficient of 0.30, multiplied by the vertical dead load shall be used to calculate the base friction lateral resistance.

Mitigation Measure 11: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 12: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.

- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 13: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 14: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

RESPONSIBLE AGENCY CONSULTATION: None.

INITIAL STUDY: The San Mateo County Current Planning Section has reviewed the Environmental Evaluation of this project and has found that the probable environmental impacts are less than significant. A copy of the initial study is attached.

REVIEW PERIOD: January 31, 2017 to February 20, 2017

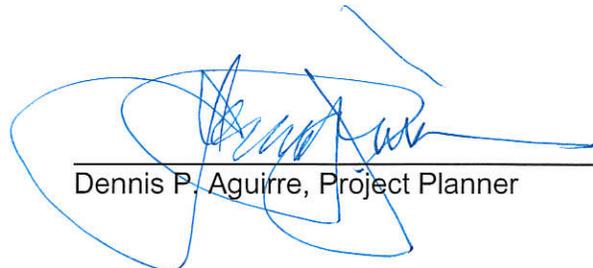
DATE AND TIME OF PUBLIC HEARING: March 8, 2017, 9:00 AM.

PLACE OF PUBLIC HEARING: Board of Supervisors' Chambers, 400 County Center, Redwood City

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., February 20, 2017.**

CONTACT PERSON

Dennis P. Aguirre
Project Planner, 650/363-1867
daguirre@smcgov.org



Dennis P. Aguirre, Project Planner

DPA:pac – DPAAA0232_WPH.DOCX

County of San Mateo
Planning and Building Department

REVISED
INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST
(Additions to original document are underlined)

1. **Project Title:** New Vella/Semprevivo Single-Family Residence
2. **County File Number:** PLN 2015-00152
3. **Lead Agency Name and Address:** County of San Mateo Planning and Building Department, 455 County Center, Second Floor, Redwood City, CA 94063
4. **Contact Person and Phone Number:** Dennis P. Aguirre, Project Planner, 650/363-1867
5. **Project Location:** 3rd Avenue, unincorporated Miramar area of San Mateo County
6. **Assessor's Parcel Number and Size of Parcel:** 048-042-280; 6,150 sq. ft.
7. **Project Sponsor's Name and Address:** Frank Vella and Steve Semprevivo, 758 Vasques Drive, Half Moon Bay
8. **General Plan Designation:** Medium High Density Residential
9. **Zoning:** R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development)
10. **Description of the Project:** The applicant requests approval of a Coastal Development Permit and Design Review Permit to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. second unit, on an existing 6,150 sq. ft. legal parcel. One dead Monterey pine tree (36-inch dbh) is proposed for removal. Arroyo de en Medio Creek is located approximately 30 feet to the southeast of the parcel. The project is appealable to the California Coastal Commission.
11. **Surrounding Land Uses and Setting:** The project site is a vacant lot located on 3rd Avenue in the unincorporated Miramar area of San Mateo County, within a general area of developed parcels. The subject site is mildly sloped (approximately 10%) in topography with vegetation consisting of non-native invasive plant species, ruderal and disturbed vegetation, and areas of riparian vegetation. An intermittent stream, Arroyo de en Medio, runs along the southern boundary of the site. 3rd Avenue westward and developed parcels to the north, south and west bound this parcel.
12. **Other Public Agencies Whose Approval is Required:** None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

There are environmental factors that would be potentially be affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Significant Unless Mitigated”, as indicated by the checklist on the following pages.

	Aesthetics		Climate Change		Population/Housing
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Public Services
	Air Quality	X	Hydrology/Water Quality		Recreation
X	Biological Resources		Land Use/Planning		Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities/Service Systems
X	Geology/Soils		Noise	X	Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites. A “No Impact” 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 “No Impact” answer should be explained 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).
2. All answers must take account of the whole 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.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in 5. below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.

- b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. AESTHETICS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1.a. Have a significant adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	
<p>Discussion: The proposed project site is not located within any designated State or County Scenic Corridor. The site is would not visible from Cabrillo Highway due to existing mature vegetation and proposed landscaping that provide screening for the project and minimize any significant visual impacts from this main thoroughfare. The project is located in a Design Review (DR) District. The Coastside Design Review Committee (CDRC) considered the project at its August 13, 2015 meeting, and recommended approval of the project, as submitted.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				
1.b. Significantly damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans, Field Observation and County GIS Resource Maps.</p>				

1.c. Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief features, and/or development on a ridgeline?			X	
<p>Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project is consistent with the existing residential character of the neighborhood, as determined by the CDRC.</p> <p>Source: Project Plans and Field Observation.</p>				
1.d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?			X	
<p>Discussion: As the project involves the installation of exterior lighting fixtures that are downward directed, as required by the Design Review standards, no significant source of light and glare will be created that would affect views in the area.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?			X	
<p>Discussion: Reference response to Section 1.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
1.f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?			X	
<p>Discussion: The subject parcel is zoned R-1/S-17/DR/CD (Single-Family Residential District/S-17 Combining District with 5,000 sq. ft. minimum parcel size/Design Review/Coastal Development). The project is subject to the approval of a Coastal Development Permit and Design Review Permit, pursuant to Sections 6328.4, and 6565.3 of the San Mateo County Zoning Regulations. The project, as proposed, is generally consistent with these regulations. The proposed development conforms to the use requirements of the R-1 Zoning District and the development standards of the S-17 Zoning District.</p> <p>Source: Project Plans and San Mateo County Zoning Regulations.</p>				
1.g. Visually intrude into an area having natural scenic qualities?			X	
<p>Discussion: The project site is bordered by 3rd Avenue to the west and developed parcels to the north, south and west bound this parcel. The proposed residence would blend in with existing houses in the area. <u>As stated in Section 1.a, the proposed project site is not located within any designated State or County Scenic Corridor. The proposed earth-toned color scheme of the residence, existing mature vegetation, and proposed landscaping provide screening for the project</u></p>				

and minimize any significant visual impacts to viewing locations from Highway 1 and 3rd Avenue.
Reference response to Section 1.a., above.

Source: Project Plans and Field Observation.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2.a. For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
<p>Discussion: N/A. The project site does not contain farmland and is not located in an agricultural zoning district, nor is it adjacent to such lands. The project site does not contain an open space easement and is not subject to a Williamson Act contract.</p> <p>Source: Project Plans and Field Observation.</p>				
2.b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
<p>Discussion: Reference response to Section 2.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
2.c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X

Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.d.	For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.e.	Result in damage to soil capability or loss of agricultural land?			X
Discussion: Reference response to Section 2.a., above.				
Source: Project Plans and Field Observation.				
2.f.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? <i>Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.</i>			X
Discussion: N/A. The project site does not contain and is not located in an area containing forestland/timberland.				
Source: Project Plans and Field Observation.				

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
		Potentially Significant Impacts	Significant Unless Mitigated	Less Than Significant Impact	No Impact
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
Discussion: The construction of the new residence may result in temporary generation of pollutants related to construction and minor earthwork (60 cubic yards). However, the proposed single family residential use would not result in the regular generation of air pollutants. Section					

<p>2-1-113 (<i>Exemption, Sources and Operations</i>) of the General Requirements of the Bay Area Air Quality Management District exempts sources of air pollution associated with construction of a single-family dwelling used solely for residential purposes, as well as road construction. No mitigation measures are necessary.</p> <p>Source: Bay Area Air Quality Management District (BAAQMD) Regulation 2, Rule 1: General Requirements.</p>					
3.b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?			X	
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.d.	Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?				X
<p>Discussion: Reference response to Section 3.a., above.</p> <p>Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>					
3.e.	Create objectionable odors affecting a significant number of people?				X
<p>Discussion: While project construction for the new residence may create temporary construction-related odors, the project would not result in the regular generation of odors, nor would temporary odors affect a significant number of people, as the project is located on private property within a single-family residential neighborhood.</p> <p>Source: Project Application/Plans.</p>					
3.f.	Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?			X	

Discussion: Reference response to Section 3.a., above.

Source: BAAQMD Regulation 2, Rule 1: General Requirements.

4. BIOLOGICAL RESOURCES. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
4.a. Have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
<p>Discussion: A Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, was prepared by WRA Environmental Consultants (Biological Report), included as Attachment B. The Biological Report examines the project site as well as areas around it within a designated “study area.” The Biological Report finds that the study area consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream located southeasterly of the site. The Biological Report also indicates that the study area includes arroyo willow scrub, which is considered riparian corridor. However, a majority of Arroyo de en Medio Creek in the study area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek. The 30-foot riparian setback for development on the project site is shown in Figure 2 of Attachment B. The Biological report also finds that one special-status and several non-special-status bird species have potential to nest within the study area. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. The following mitigation measures, which are recommendations of the Biological Report, help to ensure that potential impacts to both special-status and non-special-status bird species are mitigated to a less than significant level:</p> <p>Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.</p> <p>Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14), <u>unless performed in compliance with Mitigation Measure 3.</u></p> <p>Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.</p> <p>Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of</p>				

<p>species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.</p> <p>Source: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment (Biological Report), dated January 25, 2016, by WRA Environmental Consultants; San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>					
4.b.	Have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
<p>Discussion: Reference response to Section 4.a., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.c.	Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
<p>Discussion: The project site does not contain federally protected wetlands.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.d.	Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
<p>Discussion: Reference response to Section 4.a. and c., above. The project would not interfere significantly with the movement of any native resident or migratory fish as the project would not directly affect Arroyo de en Medio Creek, which is located approximately 30 feet from the project site. The project does not contain and, therefore, would not impede the use of native wildlife nursery sites.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps, Evaluation and Biotic Survey Reports.</p>					
4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or			X	

ordinance (including the County Heritage and Significant Tree Ordinances)?				
<p>Discussion: While no heritage trees are present and one significant tree is present, no live trees are proposed for removal. One dead Monterey pine tree (36-inch dbh) is proposed for removal.</p> <p>Source: Project Plans, Field Observation.</p>				
4.f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?			X	
<p>Discussion: As proposed and mitigated, the residence would be located a minimum of 30 feet from riparian vegetation and in areas of no riparian vegetation 30 feet from the centerline of the creek, as required by the Local Coastal Program. <u>The project does not involve the removal of riparian vegetation or associated sensitive habitat and therefore would not conflict with any adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan.</u></p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
<p>Discussion: The site is not located inside or within 200 feet of a marine or wildlife reserve.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				
4.h. Result in loss of oak woodlands or other non-timber woodlands?				X
<p>Discussion: Reference response to Section 4.e., above.</p> <p>Source: San Mateo County General Plan Sensitive Habitats and GIS Resource Maps.</p>				

<p>5. CULTURAL RESOURCES. Would the project:</p>				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
5.a. Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?		X		
<p>Discussion: <u>No structures are located on the property. The project site does not contain any historical resource. Reference response to Section 5.b., below.</u></p> <p>Source: <u>Project Application/Plans, San Mateo County General Plan and California Historical Resources File System Results.</u></p>				

5.b. Cause a significant adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?		X		
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Discussion: An archeological report (Archaeological Report) was prepared by Michael Newland, Staff Archaeologist, Anthropological Studies Center, Sonoma State University, dated August 2016 (Attachment G). The Archaeological Report concludes that the records and literature search identified no previously recorded cultural resources in the Project Area (project site). No information has been received from the Native American Heritage Commission (NAHC) or the Native American people on the list of contact provided by the NAHC that suggests the presence of cultural resources in the Project Area. While the background research indicates sensitivity for prehistoric archeological resources within the Project Area, no evidence of archeological deposits were found on the surface in the pedestrian survey, in the sidewalls of a trench bordering the northwestern edge of the Project Area, in a cleared natural cut within the Project Area, or in any of the auger-testing units. The entire parcel appears to consist of alluvial deposits mixed with local fill. The Archaeological Report states that, in sum, while the corridor on either side of the Arroyo de en Medio in general should be considered sensitive for archeological resources, the current Project Area does not appear to contain any. Local geomorphology suggests that buried archeological resources are unlikely to be present in the upper portions of the deposits in these parcels.

The Archaeological Report states that there is a low possibility that unrecognized surficial resources or subsurface archeological deposits are present within the Project Area. Prehistoric and historic- era resources may be obscured by colluvium, alluvium, vegetation, or other factors.

The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level in the event that archaeological and/or cultural resources are encountered during grading or construction activities:

Mitigation Measure 5: If concentrations of prehistoric or historic-era materials are encountered during project activities, all work in the immediate vicinity stop until a qualified archaeologist can evaluate the finds and make recommendations.

Mitigation Measure 6: The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Source: Archaeological Report, Project Application/Plans and San Mateo County General Plan.

5.c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
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Discussion: The following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level in the event paleontological specimen are discovered:

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Source: Project Application/Plans and San Mateo County General Plan.					
5.d.	Disturb any human remains, including those interred outside of formal cemeteries?		X		
<p>Discussion: <u>Although there were no human remains found within the project area, the following mitigation measure has been recommended to ensure that potential impacts are mitigated to a less than significant level in the event that they are discovered:</u></p> <p>Mitigation Measure 8: <u>The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately, along with a qualified archaeologist. If the remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours. The NAHC then shall notify the Most Likely Descendent, who has 48 hours to make recommendations to the landowner for the disposition of the remains.</u></p> <p>Source: Archaeological Report, Project Application/Plans and San Mateo County General Plan.</p>					

6. GEOLOGY AND SOILS. Would the project:					
		Potentially Significant Impacts	Significant Unless Mitigated	Less Than Significant Impact	No Impact
6.a.	Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
	<p>i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault?</p> <p><i>Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.</i></p>		X		
<p>Discussion: A Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study), submitted for the project, determined the following:</p> <p>“Fault Rupture - The site is not located in the Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active</p>					

faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion.”

To incorporate the full recommendations of the Geotechnical Study the following mitigation measure has been added:

Mitigation Measure 9: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

ii. Strong seismic ground shaking?		X		
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Discussion: The following discussion is from on the Geotechnical Report cited above:

“Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30- to 50-year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.”

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iii. Seismic-related ground failure, including liquefaction and differential settling?		X		
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Discussion: The following discussion is based on the Report cited above:

“Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however, precautions should be made to prevent expensive cosmetic damage.”

“Liquefaction – Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at this site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.”

Mitigation Measure 10: Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. An equivalent fluid weight of 300 pcf shall be used in design to calculate the passive

pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. A base friction coefficient of 0.30, multiplied by the vertical dead load shall be used to calculate the base friction lateral resistance. Compliance with this mitigation measure shall be demonstrated prior to building permit issuance.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation, County GIS Resource Maps, and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

iv. Landslides?		X		
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Discussion: The parcel has been designated as an area with Landslide Susceptibility I based on information gathered from the U.S. Geological Survey. Such areas have the lowest susceptibility to soil instability and a decreased potential for occurrences of a landslide.

Mitigation Measure 8 has been added to require the project to comply with the full recommendations of the Geotechnical Study.

Source: State of California Seismic Hazard Zone Map/San Mateo County Landslide Susceptibility Map and Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010

v. Coastal cliff/bluff instability or erosion? <i>Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).</i>				X
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Discussion: N/A. The site is not located on or adjacent to a cliff or bluff.

Source: Project Plans/County GIS Resource Map.

6.b. Result in significant soil erosion or the loss of topsoil?		X		
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Discussion: The project involves minor earthwork of approximately 60 cubic yards. The addition of Mitigation Measure 9, below, would minimize erosion and loss of top soil resulting from the project:

Mitigation Measure 11: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Source: Project Application/Plans.

6.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?		X		
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Discussion: Reference responses to Section 6.a, above.

Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation and County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.

6.d. Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?				X
<p>Discussion: The Geotechnical Study does not identify expansive soils as a significant concern at the property.</p> <p>Source: San Mateo County Geotechnical Hazards Synthesis Map, California Geological Survey - Alquist-Priolo Earthquake Fault Zones, Project Plans, Field Observation; County GIS Resource Maps; Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010.</p>				
6.e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
<p>Discussion: The project does not involve a septic system for wastewater disposal as the project incorporates a sewer connection. Granada Community Services District (GCSD) has confirmed that it can provide sewer service to the project.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				

7. CLIMATE CHANGE. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7.a. Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?			X	
<p>Discussion: To ensure that new development projects are compliant with the County's Energy Efficiency Climate Action Plan (EECAP), the County provides the EECAP Development Checklist. The applicant has provided staff with a completed Checklist indicating the voluntary measures to be taken in order to comply with EECAP (see Attachment E). At the building permit stage, the project is also required to comply with the California Green Building Standards Code, which includes requirements for energy saving measures. Based on the voluntary measures provided by the applicant, staff has determined that no mitigation measures are required. Also, reference response to Section 3.a., above.</p> <p>Source: San Mateo County Energy Efficiency Climate Action Plan (EECAP) and BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the				X

purpose of reducing the emissions of greenhouse gases?				
<p>Discussion: Reference response to Section 3.a. above. Source: BAAQMD Regulation 2, Rule 1: General Requirements.</p>				
7.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
<p>Discussion: The project does not involve loss or conversion of forestland, as the project site does not contain forestland. The project does not involve removal of live trees. Source: Project Application/Plans.</p>				
7.d. Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
<p>Discussion: The project site is not located on or adjacent to a cliff or bluff. Source: San Mateo County GIS Resource Maps.</p>				
7.e. Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
<p>Discussion: The projected site is not located along a shoreline area. Source: Project Application/Plans.</p>				
7.f. Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
<p>Discussion: The project site is located in Flood Zone X designated as an area of minimal flood hazard, usually depicted on FIRMS as above the 500-year flood level (Community Panel No. 060311 0225 C, map revised October 16, 2012). Also, reference Section 8.k, below. Source: FEMA Flood Insurance Rate Map.</p>				
7.g. Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?			X	
<p>Discussion: Reference response to Section 7.f., above. Source: FEMA Flood Insurance Rate Map.</p>				

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8.a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
<p>Discussion: N/A. The project involves the construction of a residence and does not involve the routine transport, use, or disposal of hazardous materials.</p> <p>Source: Project Application/Plans.</p>				
8.b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
<p>Discussion: The project involves the construction of a residence and would not involve the release of hazardous materials into the environment.</p> <p>Source: Project Application/Plans.</p>				
8.c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
<p>Discussion: The project involves the construction of a residence and would not involve hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste.</p> <p>Source: Project Application/Plans.</p>				
8.d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
<p>Discussion: The project parcel has not been identified as a hazardous material site, based on staff's review of the current Hazardous Waste and Substances Site List posted by the California Department of Toxic Substances Control (mandated by Government Code Section 65962.5).</p>				

Source: California Department of Toxic Substances Control, Hazardous Waste and Substances Site List.					
8.e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Based on the Half Moon Bay Airport Land Use Compatibility Plan, as adopted on October 9, 2014, the project site is located outside Zone 7 - Airport Influence Area (AIA). Aircraft accident level is considered to be low at the site.</p> <p>Source: Project Application/Plans, San Mateo County GIS Resource Maps and Half Moon Bay ALUCP.</p>					
8.f.	For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?			X	
<p>Discussion: Reference response to Section 8.e., above.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>					
8.g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
<p>Discussion: The project will not physically interfere with an adopted emergency plan. The project site is located in a developed coastal area and is served by emergency response agencies such as the Coastside Fire Protection District and the San Mateo County Sheriff's Department.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>					
8.h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
<p>Discussion: The project site is not located within a wildland urban interface area nor is the project site within a designated moderate, high, or very high fire severity zone.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>					
8.i.	Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	

Discussion: Reference response to Section 7.f., above.

Source: FEMA Flood Insurance Rate Map.

8.j. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?			X	
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Discussion: Reference response to Section 7.f., above.

Source: FEMA Flood Insurance Rate Map.

8.k. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
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Discussion: The Biological Report identified the presence of a dam located 1.5 miles upstream from the project site. In an email to staff dated May 3, 2016, the project consultant Geologist, Sigma Prime Geosciences, Inc., (Consultant) estimated the potential runoff resulting from a dam break and determined that a 3.6% increase in the runoff for this watershed area would potentially occur (Attachment F). Based on this increase, the potential impact on the areas located downstream has been determined by the Consultant to be less than significant. Also reference response to Section 7.f., above.

A response letter from the Consultant dated September 12, 2016, and October 25, 2016 (Attachments H and I), also determined the following:

“The [California Coastal Commission] CCC says that the site is likely to be flooded because it is in a flood plain of a creek. FEMA does not designate the area as a flood plain. The site is in an area designated as "Zone X", which is an area that does not flood (part of Attachment H). The creek is seasonal, draining a watershed of about 720 acres. We constructed a typical cross section of the creek, which is incised to a depth of about 5 feet, and with tops of banks about 20 feet apart. The cross-sectional area of the creek is about 60 square feet. Upstream of the site, there are two concrete culverts under Highway 1, each 5 feet in diameter, for a total area of 39.3 square feet. We performed a hydrologic analysis of the watershed (part of Attachment H), and found that the depth of water in the cross is estimated to be about 2.5 feet during a 100-year storm. Therefore, the water would not leave the incised creek bed. The house site is not likely to become flooded.

The CCC says that the channel of the creek is likely to migrate over the lifetime of the proposed house and possibly threaten the house, which will be a little over 30 feet from the current creek bank. There is no evidence that this would be the case. The property lines were established about 110 years ago, and were defined by the centerline of the creek. The property lines are still in the centerline of the creek, suggesting that the creek has not migrated at all in 110 years.”

“The reservoir is located 7,500 feet upstream of the subject property. It covers an area of about 30,000 square feet. An aerial photograph of the reservoir when it was nearly dry shows a maximum depth of about 5 to 7 feet. Based on an average depth of the entire reservoir of 5 feet, the volume of the reservoir is about 3.4 acre-feet. The watershed area is about 720 acres.

Based on the method of Froehlich (1995), we estimated that the volume of flow at the subject site due to a dam break would be 212 cubic feet per second (cfs). The attached spreadsheet outlines the procedure with the equation. The estimate is based on a very conservative reservoir volume and the assumption that the entire dam would be removed instantly. In reality, the dam would breach over a period of time, and the breach is unlikely to be as wide as the whole dam. We had already estimated

a peak flow during a 100-year storm of 119 cfs. In the somewhat unlikely event that the two peak flows coincided, a total flow of volume of 331 cfs would result. Our earlier estimate of flow heights within the creek channel yields an estimated peak elevation within the creek bed of about 48.5 feet. The ground elevation of the property where the lower portion of the house is to be located ranges from 49.7 feet to 51.0 feet. Therefore, the house would not be flooded (Attachment I)."

Source: FEMA Flood Insurance Rate Map, Sigma Prime response letters dated May 3, September 12 and October 25, 2016.

8.l. Inundation by seiche, tsunami, or mudflow?			X	
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Discussion: Reference response to Section 7.e., above. Regarding mudflows, the site and vicinity area are relatively flat and would not be impacted by mudflows as generated from upslope areas.

Source: Project Application/Plans.

9. HYDROLOGY AND WATER QUALITY. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9.a. Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?			X	

Discussion: The project, as proposed, would result in less than significant impacts in this area upon implementation of a proposed Erosion Control Plan and Best Management Practices (BMPs).

Mitigation Measure 12: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 13: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 14: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

Source: Project Application/Plans.

<p>9.b. Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>				X
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Discussion: The project will not involve direct use of groundwater as a domestic water source as the project site is located in a developed residential zone already serviced by Coastside County

Water District (CCWD). Coastside County Water District has verified the ability to provide domestic water service to this project. Source: Project Application/Plans.					
9.c.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?			X	
Discussion: The project involves only minor grading (approximately 60 cubic yards associated with a new retaining wall necessary for the split-level home design) and would not involve significant change in existing site topography. The project would not significantly alter site topography and would not impact the creek southeast of the parcel due to the proposed 30-foot creek setback. The project's impervious areas will increase but proposed new drainage facilities (as shown on the site plan) would capture and filter increased site runoff flow and volume in compliance with the County's Guidelines for Drainage Review. Source: Project Application/Plans.					
9.d.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
Discussion: Reference response to Section 9.c., above. Source: Project Application/Plans.					
9.e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?			X	
Discussion: Reference response to Section 9.c., above. Source: Project Application/Plans and San Mateo County Drainage Policy.					
9.f.	Significantly degrade surface or ground-water water quality?				X
Discussion: Reference response to Section 9.c., above. Source: Project Application/Plans.					
9.g.	Result in increased impervious surfaces and associated increased runoff?			X	

Discussion: Reference response to Section 9.c., above.

Source: Project Application/Plans.

10. LAND USE AND PLANNING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10.a. Physically divide an established community?				X
<p>Discussion: The project involves development of a vacant parcel, or infilling, of an existing developed residential neighborhood that will not divide the established community.</p> <p>Source: Project Application/Plans.</p>				
10.b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
<p>Discussion: Reference response to Section 1.f., above.</p> <p>Source: Project Plans, San Mateo County General Plan and San Mateo Zoning Regulations.</p>				
10.c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
<p>Discussion: The project site is located adjacent to the riparian corridor of Arroyo de en Medio. The Local Coastal Program regulates development adjacent to intermittent creeks. Reference response to Section 4.a., above.</p> <p>Source: California Department of Fish and Wildlife, Habitat Conservation Planning.</p>				
10.d. Result in the congregating of more than 50 people on a regular basis?				X
<p>Discussion: The project does not involve the congregation of more than 50 people as the project is for a new single-family residence.</p> <p>Source: Project Application/Plans.</p>				
10.e. Result in the introduction of activities not currently found within the community?				X

Discussion: The proposed project would not result in the introduction of new activities in the area. The subject R-1 Zoning District permits single-family residential use and such use is established within the subject community.

Source: Project Application/Plans.

10.f. Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
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Discussion: The addition of a new residence on the vacant parcel designated for residential use will not encourage off-site development as the project, including proposed utilities, will result in development of the subject parcel. The project would be served by water and sewer services already provided in the area. The project does not involve the establishment of new industry, commercial facilities or recreation activities.

Source: Project Plans and San Mateo County GIS Resource Maps.

10.g. Create a significant new demand for housing?				X
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Discussion: N/A. The project does not create any permanent jobs in the area and provides one additional dwelling in the area. Therefore, the project would not create a significant new demand for housing.

Source: Project Plans and San Mateo County GIS Resource Maps.

11. MINERAL RESOURCES. Would the project:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11.a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X

Discussion: The project site is not located in an area known for mineral resources nor does the project involve mineral extraction.

Source: Project Plans and San Mateo County GIS Resource Maps.

11.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local				X
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general plan, specific plan or other land use plan?				
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Discussion: Reference response to Section 11.a., above.

Source: Project Plans and San Mateo County GIS Resource Maps.

12. NOISE. Would the project result in:

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12.a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	

Discussion: While this project will not generate noise levels in excess of residential levels once implemented, during construction activities increased noise levels may occur. However, noise sources associated with demolition, construction or grading of any real property are exempt from the County Noise Ordinance provided these activities occur during designated timeframes.

Source: Project Application/Plans and San Mateo County Noise Ordinance.

12.b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?			X	
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Discussion: Pile driving for pier foundations can be a potential source of excessive ground-borne vibration or ground-borne noise levels. While the foundation involves a pier and grade beam foundation, the Geotechnical Study recommends drilled piers or cast in place piers. Therefore, the project does not involve pile driving. Also, reference response to Section 12.a, above.

Source: Project Application/Plans and San Mateo County Noise Ordinance.

12.c. A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
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Discussion: Reference response to Section 12.a, above.

Source: Project Application/Plans and San Mateo County Noise Ordinance.

12.d. A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
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Discussion: Reference response to Section 12.a., above.

Source: Project Application/Plans and San Mateo County Noise Ordinance.				
12.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?			X	
<p>Discussion: The project site is located outside the Community Noise Equivalent Level (CNEL) airport noise exposure contours identified in the Half Moon Bay Airport Land Use Plan and is therefore not exposed to significant levels of aircraft noise.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				
12.f. For a project within the vicinity of a private airstrip, exposure to people residing or working in the project area to excessive noise levels?				X
<p>Discussion: The project site is located within an existing single-family residential neighborhood and is not located within the vicinity of a private air strip.</p> <p>Source: Project Application/Plans, San Mateo County Noise Ordinance and Airport Land Use Compatibility Plan (ALUCP).</p>				

13. POPULATION AND HOUSING. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13.a. Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

Discussion: Reference response to Section 10.f., above. The project involves the construction of only one new home and does not involve the establishment of a business. The project involves pavement of a road shoulder along 3rd Avenue to connect the property to the existing paved portion 3rd Avenue and does not involve extension of a road.

Source: Project Application/Plans.

13.b. Displace existing housing (including low- or moderate-income housing), in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X
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Discussion: The project does not displace housing but involves the construction of a new dwelling on a vacant parcel within an existing single-family residential area.

Source: Project Application/Plans.

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

	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14.a. Fire protection?			X	
14.b. Police protection?			X	
14.c. Schools?			X	
14.d. Parks?			X	
14.e. Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?			X	

Discussion: The current level of public services will not be significantly affected by the addition of one new single-family residence in the neighborhood.

Source: Project Application/Plans.

15. RECREATION. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15.a. Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?			X	
<p>Discussion: The project will not generate an increase in the use of existing recreational facilities beyond the service levels anticipated for the area.</p> <p>Source: Project Application/Plans.</p>				
15.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
<p>Discussion: The project does not include any recreational facilities. As described in Section 15.a., New or expanded recreational facilities will not be required by this project.</p> <p>Source: Project Application/Plans.</p>				

16. TRANSPORTATION/TRAFFIC. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
<p>Discussion: The proposed single-family residence will not significantly increase the vehicular or pedestrian traffic nor change their patterns in the area beyond the levels anticipated for the area.</p> <p>Source: Project Plans and Field Observation.</p>				

16.b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?			X	
<p>Discussion: Reference response to Section 16.a., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
<p>Discussion: N/A. The project will not result in a change in air traffic patterns.</p> <p>Source: Project Application/Plans and San Mateo County GIS Resource Maps.</p>				
16.d. Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
<p>Discussion: The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved.</p> <p>Source: Project Plans and Field Observation.</p>				
16.e. Result in inadequate emergency access?				X
<p>Discussion: The project will not impact emergency access to the area. Reference response to Section 8.g., above.</p> <p>Source: Project Plans and Field Observation.</p>				
16.f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
<p>Discussion: No sidewalks are present in this area; however, pedestrians likely use road shoulders for access. The project includes pavement of the road shoulder for 3rd Avenue and a new driveway accessed directly from 3rd Avenue, which has been reviewed by the Department of Public Works and preliminarily approved. The project involves the development of residential uses on a residentially zoned parcel and would not conflict with pedestrian facilities or adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.</p> <p>Source: Project Plans and Field Observation.</p>				

16.g. Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?			X	
Discussion: Reference response to Section 16.f., above.				
Source: Project Plans and Field Observation.				
16.h. Result in inadequate parking capacity?			X	
Discussion: The project complies with applicable County's Parking Regulations, as it includes two on-site covered parking spaces.				
Source: Project Plans and Field Observation.				

17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
Discussion: The project site would be serviced by Granada Community Services District (GCSD) for sanitary sewer service. GCSD has confirmed that it has the capacity to serve the project at the subject property. Any increase in the total wastewater treatment by GCSD would be minimal associated with one new single-family dwelling and associated residents.				
Source: Project Application/Plans.				
17.b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
Discussion: Reference response to Section 17.a., above.				
Source: Project Application/Plans.				
17.c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
Discussion: Proposed new on-site drainage facilities would minimize the impacts of runoff to off-site areas and facilities. Reference Section 9.c., above.				
Source: Project Application/Plans.				

17.d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
<p>Discussion: Reference response to Section 9.b., above.</p> <p>Source: Project Application/Plans; Letter from CCWD dated August 14, 2014 and Letter from GCSD dated August 14, 2014.</p>				
17.e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
<p>Discussion: Reference response to Section 17.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.f. Be served by a landfill with insufficient permitted capacity to accommodate the project's needs?				X
<p>Discussion: The project site is located in a developed residential area already adequately serviced by GCSD, provides solid waste disposal service via an exclusive franchise agreement with Recology of the Coast. Any increase in the total solid waste would be minimal associated with one new single-family dwelling and associated residents.</p> <p>Source: Project Application/Plans; GCSD website.</p>				
17.g. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
<p>Discussion: Reference response to Section 17.f., above.</p> <p>Source: Project Application/Plans.</p>				
17.h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?			X	
<p>Discussion: Reference Section 7.a., above.</p> <p>Source: Project Application/Plans.</p>				
17.i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?			X	

Discussion: Reference response to Section 14 and Sections 17.a. through 17.f., above.

Source: Project Application/Plans.

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
	<i>Potentially Significant Impacts</i>	<i>Significant Unless Mitigated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
18.a. Does the project have the potential to degrade the quality of the environment, significantly 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		
<p>Discussion: Yes, as discussed in Section 4.a., above, the project has the potential to impact plant and wildlife species in the area. Implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.</p> <p>Source: San Mateo County General Plan Sensitive Habitats Map.</p>				
18.b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
<p>Discussion: One recently approved project located at 420 - 3rd Avenue (PLN 2015-00024) involves an addition to the existing residential development. Therefore, the project would not have impacts that are individually limited, but cumulatively considerable. Also, reference response to 16.f., above. No cumulative effects have been identified for this project.</p> <p>Source: Project Application/Plans.</p>				
18.c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?		X		

Discussion: As previously discussed, the project could result in environmental impacts that could both directly and indirectly cause impacts on human beings. However, implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level.

Source: Project Application/Plans.

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)		X	
State Water Resources Control Board		X	
Regional Water Quality Control Board		X	
State Department of Public Health		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
U.S. Environmental Protection Agency (EPA)		X	
County Airport Land Use Commission (ALUC)		X	
CalTrans		X	
Bay Area Air Quality Management District		X	
U.S. Fish and Wildlife Service		X	
Coastal Commission		X	
Sewer District: Granada Community Services District		X	
Water District: Coastside County Water District		X	

MITIGATION MEASURES

	<u>Yes</u>	<u>No</u>
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	
<p>The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:</p> <p>Mitigation Measure 1: Any proposed construction or project related activities shall occur outside of the 30-foot buffer zone setback as required by the Local Coastal Program (LCP). Prior to the</p>		

issuance of a building permit, the edge of the 30-foot buffer zone shall be surveyed in consultation with the biologist and added to the project survey and site plan for submittal and review by the Current Planning Section.

Mitigation Measure 2: Any initiation of project grading or construction or proposed trimming or removal of trees or shrubs shall occur only during bird non-nesting season (September 1 - February 14).

Mitigation Measure 3: In the event of initiation of project grading or construction or trimming or removal of trees or shrubs during the nesting season (February 15 - August 31), the applicant shall submit a pre-construction nesting bird survey prepared by a biologist.

Mitigation Measure 4: In the event that active nests are observed within the project site, suitable buffers shall be established, as determined by a qualified biologist, depending on the types of species observed, location of nests, and project construction activities conducted and may range from 25 to 75-foot buffers for passerine birds and up to 250-foot buffers for raptors.

Mitigation Measure 5: If concentrations of prehistoric or historic-era materials are encountered during project activities, all work in the immediate vicinity stop until a qualified archaeologist can evaluate the finds and make recommendations.

Mitigation Measure 6: The project applicant or archaeologist shall immediately notify the Current Planning Section of any discoveries made and shall provide the Current Planning Section with a copy of the archaeologist's report and recommendations prior to any further grading or construction activity in the vicinity.

Mitigation Measure 7: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 8: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately, along with a qualified archaeologist. If the remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours. The NAHC then shall notify the Most Likely Descendent, who has 48 hours to make recommendations to the landowner for the disposition of the remains.

Mitigation Measure 9: Prior to Planning approval of the building permit for the project, the applicant shall demonstrate compliance with the recommendations of the Geotechnical Study prepared by Sigma Prime Geosciences, Inc., dated April 21, 2010 (Geotechnical Study).

Mitigation Measure 10: Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. An equivalent fluid weight of 300 pcf shall be used in design to calculate the passive pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. A base friction coefficient of 0.30, multiplied by the vertical dead load shall be used to calculate the base friction lateral resistance.

Mitigation Measure 11: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 12: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan. Erosion

control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

- a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
- b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
- c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.
- e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- h. Performing clearing and earth-moving activities only during dry weather.
- i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.
- j. Limiting construction access routes and stabilizing designated access points.
- k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.
- l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.
- m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 13: The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Such activities shall not commence until the associated building permit for the project has been issued.

Mitigation Measure 14: The project shall include water runoff prevention measures for the operation and maintenance of the project for the review and approval by the Community Development Director. The project shall identify best management practices (BMPs) appropriate to the uses conducted on-site to effectively prohibit the discharge of pollutants with stormwater runoff and other water runoff produced from the project.

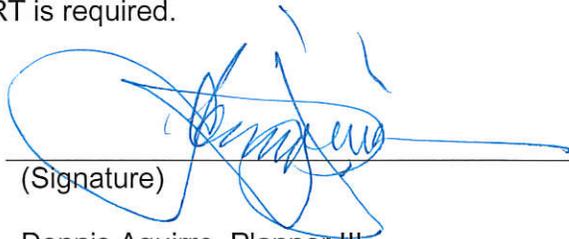
DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.

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 of the mitigation measures in the discussion that have been included as part of the proposed 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.



(Signature)

January 31, 2016

Date

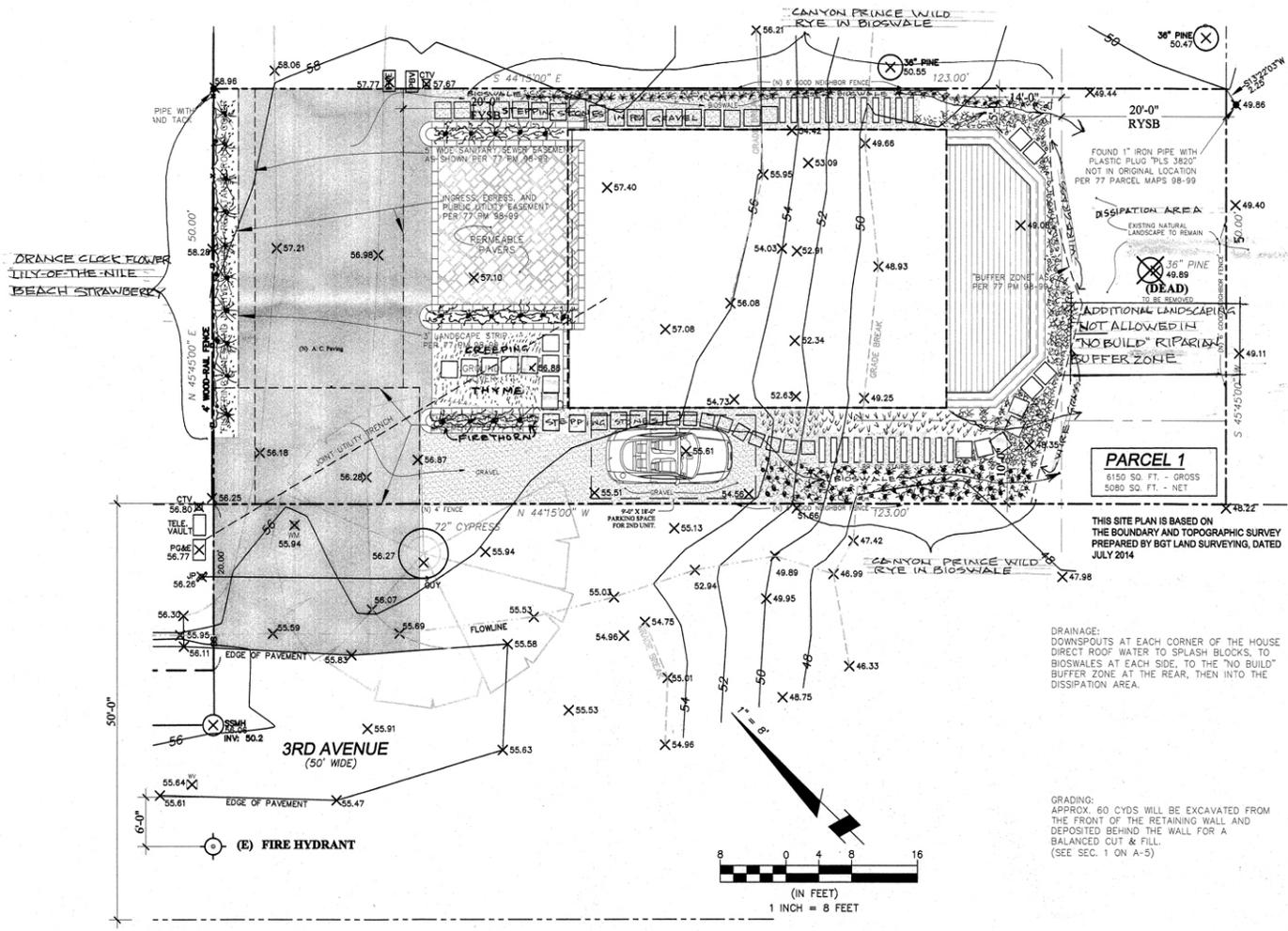
Dennis Aguirre, Planner III

Name, Title

ATTACHMENTS:

- A. Project Plans
- B. Biological Constraints and Environmentally Sensitive Habitat Areas Assessment Report, dated January 25, 2016, prepared by WRA Environmental Consultants
- C. Geotechnical Study, dated April 21, 2010, prepared by Sigma Prime Geosciences, Inc.
- D. California Historical Society Information System Comment Letter, dated May 3, 2016
- E. Energy Efficient Climate Action Plan Checklist, submitted by applicant on May 3, 2016
- F. Sigma Prime Geosciences, Inc., Email Response Letter, dated May 3, 2016
- G. Archaeological Resources Study prepared by Michael Newland, Staff Archaeologist, Anthropological Studies Center, Sonoma State University, dated August 2016.
- H. Sigma Prime Geosciences, Inc., Email Response Letter, dated September 12, 2016
- I. Sigma Prime Geosciences, Inc., Email Response Letter, dated October 25, 2016

DPA:pac – DPAAA0231_WPH.DOCX



PLANT LIST					
SYMBOL	TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE/SPACING	REMARKS
	CLIMBING VINE	ORANGE GLOOM	THUNBERGIA GREGORII	1 GAL 8'	
	PERENNIAL	LILY-OF-THE-VALLEY	AGAPATHUS CRYPTOLUS	1 GAL 4'	
	GROUND COVER	BEACH STRAWBERRY	FRAGARIA CHILOENSIS	FLATS 12" x 18"	
	SHRUB	PIRETHORN	FRAGARIA ANTHISTEMIA	1 GAL 3'	
	GROUND COVER	SLIMY RYER	LEYNIS GONIMUS	FLATS 12" x 18"	
	GRASS	CANYON PRINCE WILD RYE	BIOSWALE	FLATS 12" x 18"	
	GROUND COVER	CREeping THYME	THYME	FLATS 6"	
	GROUND COVER	WIRE GRASS	DRABCOX	FLATS 6"	
	GROUND COVER	BLUE ROSE	UNUS PATENS	FLATS 6"	
	GROUND COVER	PERENNIAL	MANOR	FLATS 12"	

1 LANDSCAPE PLAN
LP

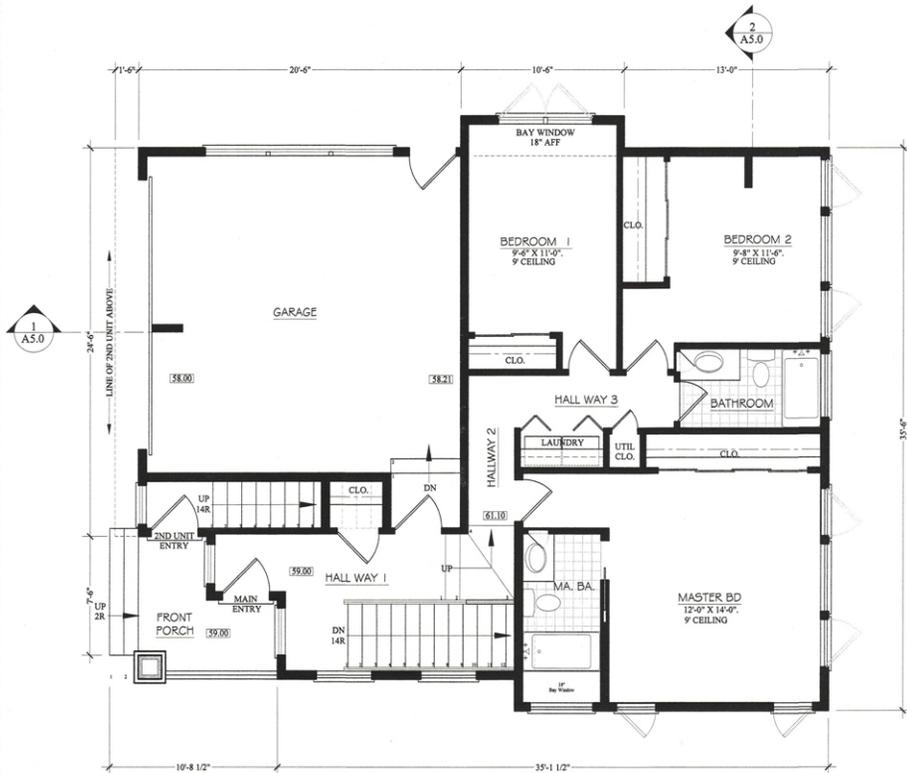
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San Mateo County Planning Commission Meeting

Owner/Applicant:

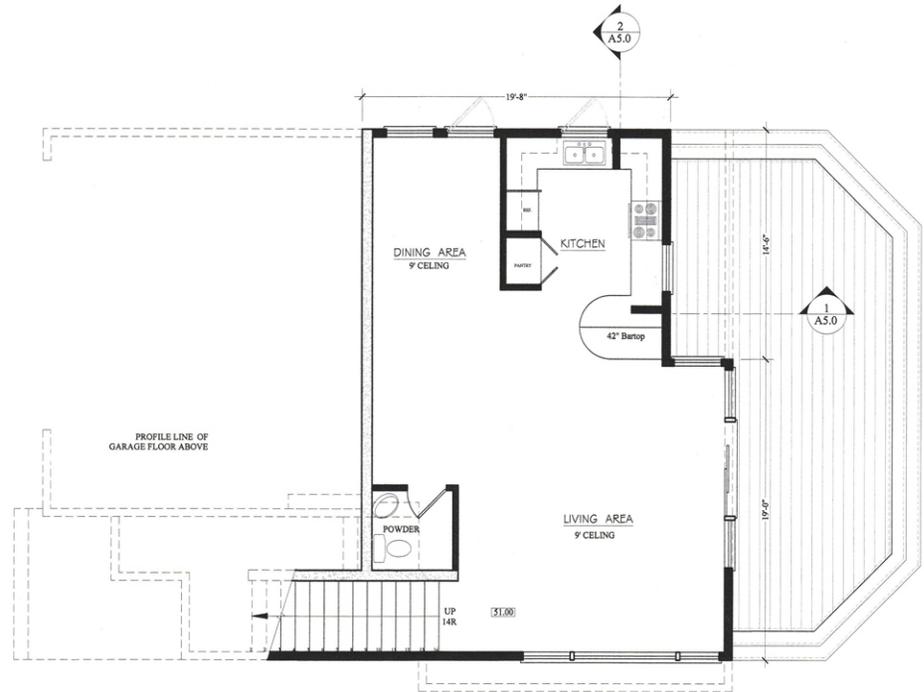
Attachment:

File Numbers:



1 PROPOSED SECOND FLOOR PLAN (Entry Level)
A2.0

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



2 PROPOSED FIRST FLOOR (Lowest Level)
A2.0

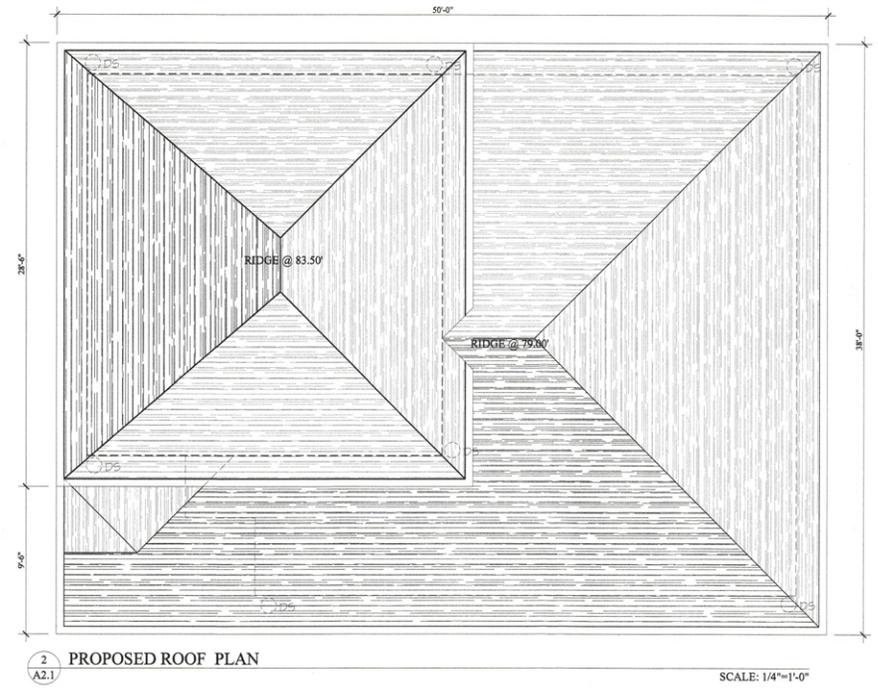
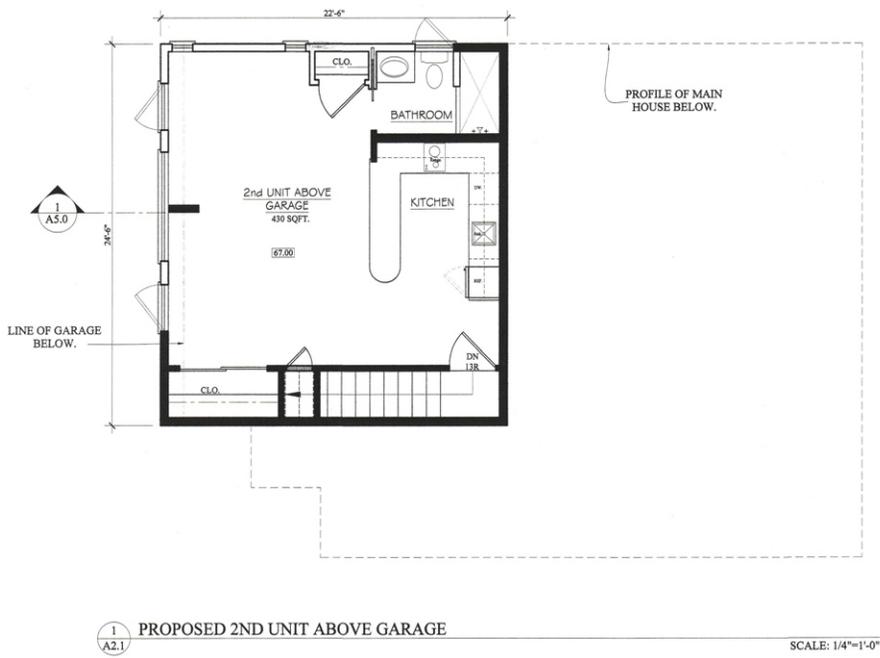
SCALE: 1/4"=1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant:

Attachment:

File Numbers:



San Mateo County Planning Commission Meeting

Owner/Applicant: _____

Attachment: _____

File Numbers: _____



1
A4 PROPOSED FRONT ELEVATION (NORTH)

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



1
A4 PROPOSED REAR ELEVATION (SOUTH)

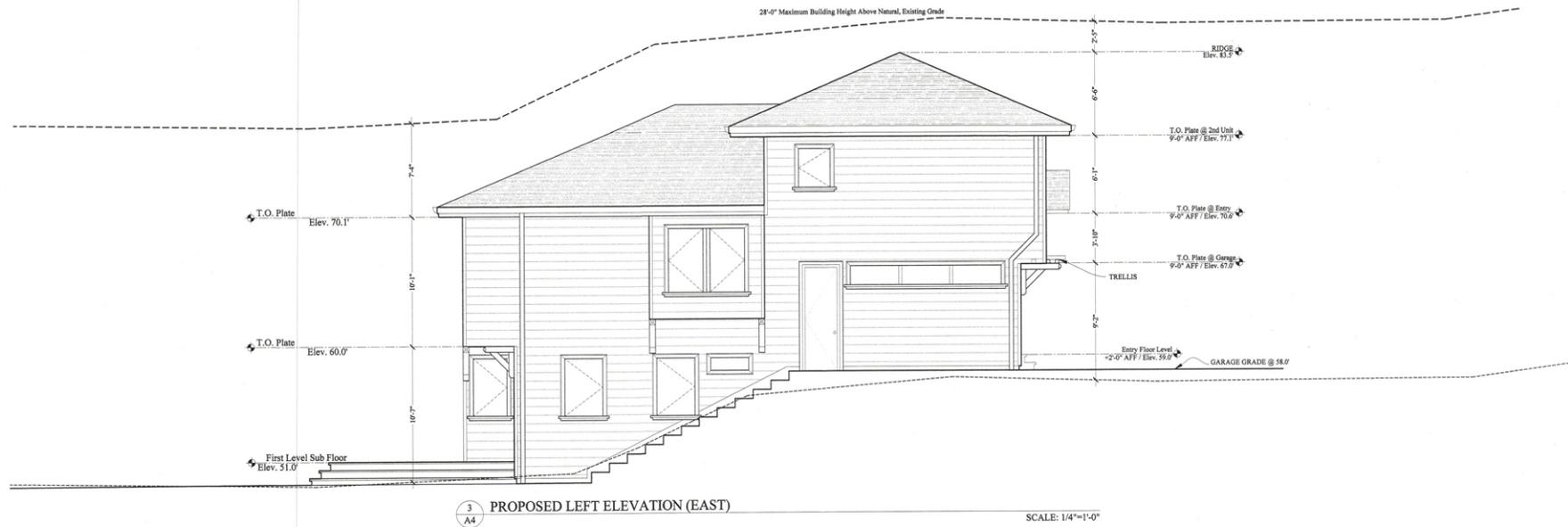
SCALE: 1/4"=1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant:

Attachment:

File Numbers:

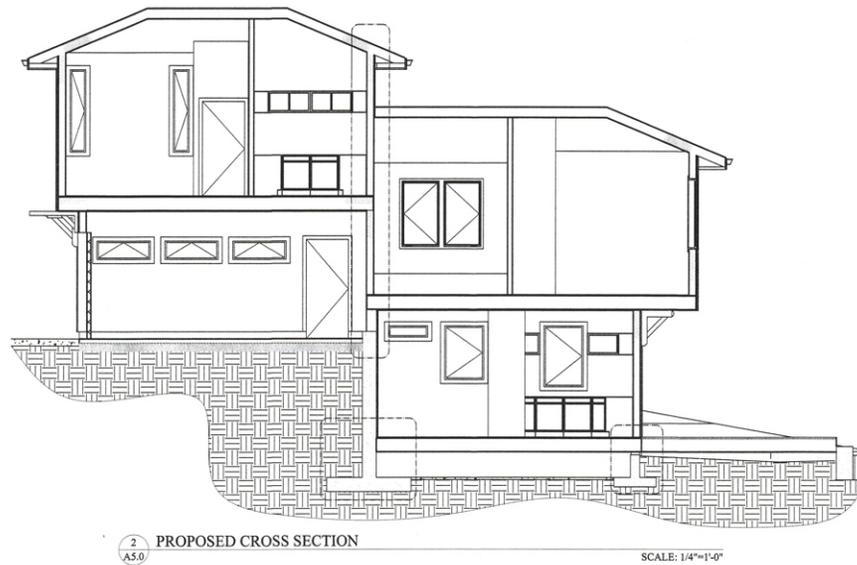
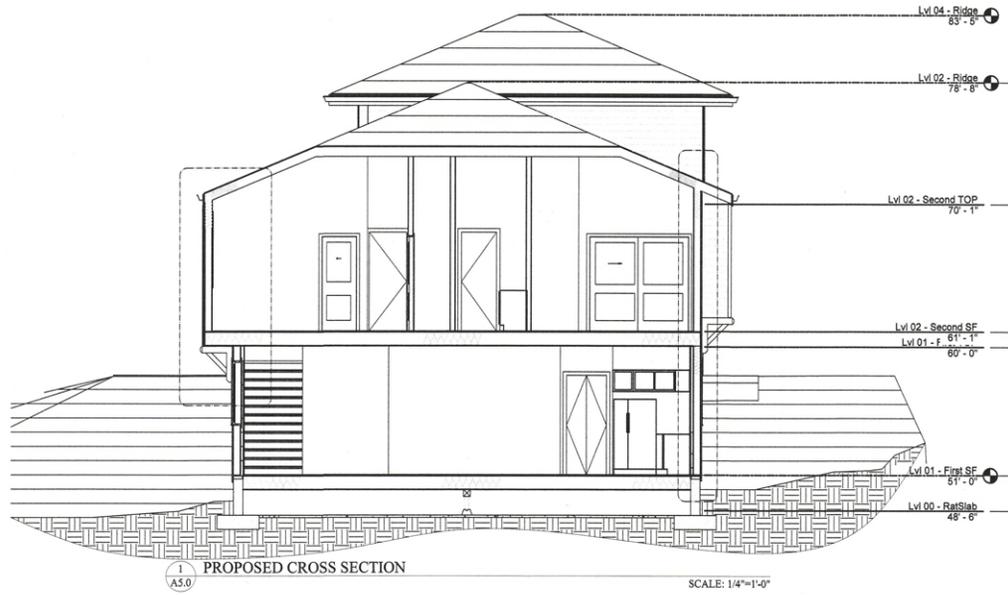


San Mateo County Planning Commission Meeting

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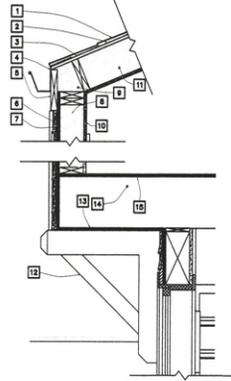


San Mateo County Planning Commission Meeting

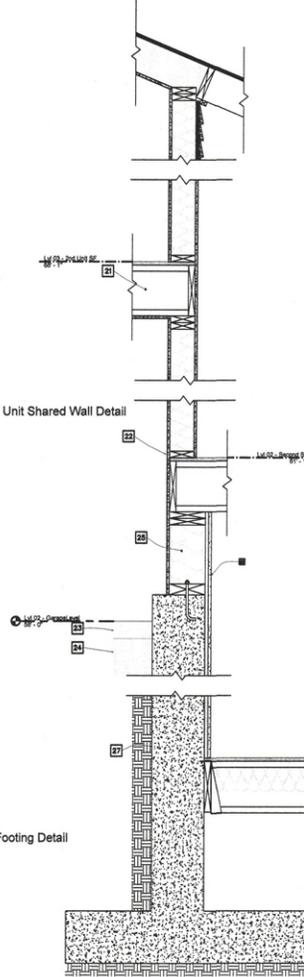
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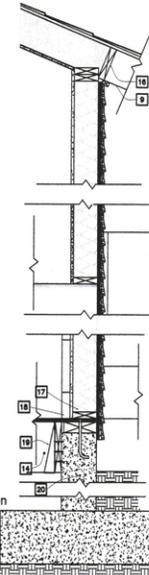


① Pop-Out Detail
3/4" = 1'-0"



② Garage / Second Unit Shared Wall Detail
3/4" = 1'-0"

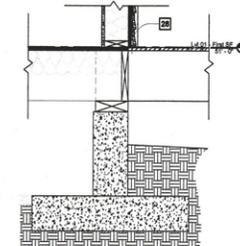
③ Retaining Wall / Footing Detail
3/4" = 1'-0"



Typ. Eave Detail
3/4" = 1'-0"

Typ. Wall to Floor
3/4" = 1'-0"

④ Typ. Wall to Foundation
3/4" = 1'-0"



⑤ Deck Connection Detail
3/4" = 1'-0"

San Mateo County Planning Commission Meeting

Owner/Applicant: _____

File Numbers: _____

Attachment: _____



January 25, 2016

Stephen Semprevivo
720 Mill Street
Half Moon Bay, CA 94019

Re: Biological Constraints and Environmentally Sensitive Habitat Areas Assessment for APN 048-042-280 and -290 Half Moon Bay, San Mateo County, California

Dear Mr. Semprevivo,

The purpose of this letter is to inform you of the results of the biological constraints and Environmentally Sensitive Habitat Area (ESHA) assessments at two undeveloped parcels (APN 048-042-280 and 048-042-290) located at the end of 3rd Avenue, Half Moon Bay, San Mateo County, California (Figure 1). Construction of residences is proposed on the parcels (Project). The assessment encompassed both parcels and the surrounding 50 feet (Study Area) to identify any potential sensitive habitats in the vicinity. The purpose of these assessments is to comply with the San Mateo County Midcoast Local Coastal Program (LCP).

Figures are provided in Attachment A, the list of observed species from the 2015 site assessment are provided in Attachment B, and photographs depicting the current Study Area conditions are provided in Attachment C.

Survey Methods

A site visit to the Study Area was made on December 31, 2015 by WRA biologist Erich Schickenberg (wetland and plant ecologist) and reviewed by Patricia Valcarcel (wildlife biologist). Prior to the site visit, a review was conducted of background information including:

- San Mateo County Midcoast Local Coastal Program (LCP) biological resources policies
- San Mateo County Heritage Tree Ordinance
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2015)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2015)
- U.S. Fish and Wildlife Service (USFWS) 7.5' Quadrangle Species Lists for the Montara Mountain and Half Moon Bay quadrangles (USFWS 2015)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "California Bird Species of Special Concern" (Shuford and Gardali 2008)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)

The Study Area was traversed on foot by the WRA biologist and examined for: (a) sensitive natural communities as defined by the CDFW and LCP and, (b) for the presence, and potential to support, special-status plant and wildlife species. Vegetation within the Study Area and vicinity was also evaluated for riparian habitat criteria and/or unvegetated streams as defined by the LCP. If a special-status species was observed during the site visit, its presence is recorded and discussed further below. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described further below.

Survey Results

Study Area Description

The Study Area is located at the end of 3rd Avenue in the Miramar neighborhood of Half Moon Bay. It consists of undeveloped ruderal uplands and Arroyo de en Medio, an intermittent stream. The southern portion of the Study Area is a mix of several vegetation types, including blue gum (*Eucalyptus globulus*) grove, ruderal/disturbed and arroyo willow scrub. Within the ordinary high water mark (OHWM) of Arroyo de en Medio minimal riparian vegetation is present except a small patch of arroyo willow scrub in the south. Wetland plants seen within the OHWM include water parsley (*Oenanthe sarmentosa*, OBL), California figwort (*Scrophularia californica*, FAC), dock (*Rumex pulcher*, FAC), and arroyo willow (*Salix lasiolepis*, FACW). Non-wetland plants within the OHWM include California blackberry (*Rubus ursinus*), English ivy (*Hedera helix*), veldt grass (*Ehrharta erecta*), sour clover (*Oxalis pes-carpe*), garden nasturtium (*Tropaeolum majus*), tower-of-jewels (*Echium* sp.), and cape ivy (*Delairea odorata*). Four 36-inch diameter breast height (dbh) Monterey pine trees and one 72-inch dbh Monterey cypress occur within the Study Area. The Study Area is bounded by residential development and neighborhood roads.

Vegetation Communities

Three vegetation communities are present in the Study Area: blue gum grove, ruderal/disturbed and arroyo willow scrub (Figure 2). Ruderal/disturbed habitat will be permanently and temporarily disturbed by the construction of a residence. Blue gum grove and arroyo willow occur only within the Arroyo de en Medio corridor and are not expected to be directly disturbed by the construction of a residence. Arroyo de en Medio is designated a Sensitive Habitat Area (Mid-Coast San Mateo County LCP Sensitive Habitats Map) and arroyo willow scrub is a riparian corridor and sensitive habitat by the LCP. Both ruderal/disturbed and blue gum grove are non-sensitive vegetation communities.

Non-Sensitive Vegetation Communities

The ruderal/disturbed vegetation is the dominant vegetation within the Study Area, and it encompasses approximately 0.47 acre. Non-native forbs dominate the ruderal vegetation. The ruderal uplands are dominated by weedy vegetation including ripgut brome (*Bromus diandrus*), slender oats (*Avena barbata*), garden nasturtium, tower-of-jewels, and sour clover. Several large, dead or decadent Monterey Pine (*Pinus radiata*) trees are present in this ruderal upland

area. The slopes leading down to Arroyo de en Medio creekbed are covered in veldt grass (*Ehrharta erecta*), garden nasturtium, cape ivy, poison oak (*Toxicodendron diversilobum*), and sour clover.

The blue gum grove is located along the Arroyo de en Medio at the eastern portion of the Study Area and encompassing approximately 0.10 acre. The blue gum grove forms an intermittent to dense canopy over the stream, depositing large amounts of litter within and along the banks. Blackwood acacia (*Acacia melanoxydon*) and silver wattle (*Acacia dealbata*) are also present in the canopy. The understory is sparse California blackberry, English ivy and cape ivy. One small arroyo willow and one California coffeeberry (*Frangula californica*) are present in this area.

Sensitive Vegetation Communities and Wetland and Waters Features

Approximately 0.01 acre of arroyo willow scrub is located in the southeast corner of the Study Area. Arroyo willow canopy is over 50 percent cover and considered a riparian corridor and Sensitive Habitat Area per the LCP. Understory is sparse with little to no cover, however edges around the arroyo willow scrub have an intermittent cover of garden nasturtium, California blackberry and cape ivy.

Riparian Corridor

Riparian Corridor and Buffer Zones Defined in the San Mateo County Local Coastal Program

Pursuant to the LCP, riparian corridors are defined as an association of plant and animal species containing at least 50 percent cover of the following species: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder. For perennial streams, the LCP requires a buffer 50 feet outward from the limit of riparian vegetation. For intermittent streams, the LCP requires a buffer 30 feet outward from the limit of riparian vegetation. Where no riparian vegetation exists, buffer zones along intermittent streams extend 30 feet from the stream midpoint as shown in Figure 2.

Within riparian corridors, the following uses are permitted: 1) education and research; 2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, 3) fish and wildlife management activities, 4) trails and scenic overlooks on public lands, and 5) necessary water supply projects. Relevant permitted uses in buffer zones include 1) uses permitted in riparian corridors, 2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation only if no feasible alternative exists and if no other building site on the parcel exists, 3) on parcels designated as Agriculture, Open Space, or Timber Production on the LCP Land Use Plan Map, residential structures or impervious surfaces only if no feasible alternative exists.

Riparian Corridor and Buffer Zones Applicable to the Study Area

Arroyo de en Medio drains west to the Pacific Ocean; however, it is dammed approximately 1.5 miles upstream from the Study Area. The portion of Arroyo de en Medio adjacent to the Study Area contained a small amount of running water at the time of the site visit on December 31, 2015. Based on available USGS topographic maps (USGS 1991) and aerial photographs (Google Earth 2015), Arroyo de en Medio is considered intermittent waters. Accordingly, a 30-

foot setback from edge of riparian is required. The arroyo willow identified in the Study Area is considered a riparian corridor under the LCP; however, a majority of the Arroyo de en Medio in the Study Area does not contain riparian vegetation and in these areas the buffer is extended 30-feet from the midpoint of the creek (Figure 2). For the purposes of this assessment, the limit of riparian vegetation is defined as the dripline of the arroyo willows to encompass the riparian corridor and sensitive habitat definitions in the LCP.

Special-Status Species

Special-Status Plants

Based upon a review of the resources and databases discussed previously, all special-status plant species documented in the vicinity of the Study Area were assessed. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). No special-status plant species were observed in the Study Area. Many species requiring certain habitat types not present in the Study Area, such as serpentine endemics and plants requiring coastal bluff or scrub habitats, were determined to have no potential to occur. Of the 27 special-status plant species evaluated, all were determined to have no potential or a low potential to occur based on the high disturbance levels in and around the Study Area and/or a lack of suitable habitat components in the Study Area. Although the site visit did not constitute a protocol-level rare plant survey, no special-status plants or their habitats were observed.

San Mateo County Heritage Tree and Significant Tree Ordinances

Pursuant to the County of San Mateo Heritage Tree Ordinance (Ordinance No. 2427), "Heritage" trees may be subject to regulation under the tree ordinance pursuant to the ordinance. Several native species above certain diameter breast height (dbh) are considered "Heritage" trees and include madrone, coast live oak, and California bay laurel trees. Permits may be required by the County for the trimming or removal of trees which qualify for heritage status under the Ordinance. Under the same ordinance, "Significant" trees are subject to regulation. "Significant" trees are any species which have dbh 38 inches or greater. The trees currently within the Study Area are silver wattle, blackwood acacia, white alder (*Alnus rhombifolia*), blue gum, California coffeeberry, Monterey cypress (*Hesperocyparis macrocarpa*), arroyo willow, lollypop tree (*Myoporum laetum*), Monterey pine (*Pinus radiata*), and coast redwood (*Sequoia sempervirens*). None of these species are covered under the San Mateo County Heritage Tree Ordinance; therefore no "Heritage" trees occur in the Study Area. However, one 72-inch Monterey cypress does occur in the Study Area and is considered a "Significant" tree. Removal of this tree may require a permit.

Special-Status Wildlife

Based upon a review of the databases and literature, 39 special-status wildlife species have been documented to occur in the vicinity of the Study Area. Figure 3 shows occurrences documented within 2 miles of the Study Area in the CNDDDB (CDFW 2015). Of the 39 special-status wildlife species documented to occur in the vicinity, only one species, Allen's hummingbird (*Selasphorus sasin*), has a moderate potential to occur within the Study Area and is discussed further below. Most species do not have potential to occur because a lack of suitable habitat including no aquatic features for breeding, no serpentine habitat, no dense

understory vegetation, and barriers to dispersal. Cavities are not present in the trees within the Study Area; therefore, the Study Area is unlikely to support cavity nesting bird or bat species.

California red-legged frog (*Rana draytonii*; CRLF) is unlikely to be present because of a lack of suitable pond breeding habitat in the vicinity of the Study Area. Typical CRLF breeding habitat is characterized by deep and still or slow-moving water associated with emergent marsh and/or riparian vegetation. CRLF often seek upland refugia during the dry months, over-summering in small mammal burrows, moist leaf litter, incised stream channels, or large cracks in the bottom of dried ponds (Jennings and Hayes 1994). Adult and sub-adult CRLF may disperse between breeding habitats and nearby riparian and/or estivation habitats during the respective rainy season and summer. During such dispersals, frogs can travel up to one mile over a variety of topographic and habitat types during rain events or wet weather (Bulger et al. 2003, Fellers and Kleeman 2007, USFWS 2010); however, typical dispersal distances are less than 0.5 mile (Fellers 2005). Dispersal habitat is defined as accessible upland or riparian habitats between occupied locations within one mile of each other that allow for movement between these sites and do not contain barriers to movement (USFWS 2010). Moderate to high density urban or industrial developments, large reservoirs and heavily traveled roads without bridges or culverts are considered barriers to dispersal (USFWS 2010). Arroyo de en Medio in the vicinity of the Study Area is an intermittent creek and does not contain suitable breeding habitat based upon water levels and vegetation. The lower Arroyo de en Medio system is not known to support CRLF (CDFW 2015), and urban development is present between the Study Area and occupied habitats one mile to the northeast and southeast. Based upon the intermittent status of Arroyo de en Medio and the lack of suitable breeding habitat in the vicinity of the Study Area, it is unlikely CRLF is present within the Study Area and unlikely to use this section of Arroyo de en Medio as dispersal habitat.

San Francisco gartersnake (*Thamnophis sirtalis tetrataenia*; SFGS) is also unlikely to occur within the Study Area based upon a lack of suitable habitat in the vicinity. The preferred habitat of SFGS is a densely vegetated pond near an open hillside where they can sun themselves, feed, and find cover in rodent burrows; however, considerably less ideal habitats can be successfully occupied. Temporary ponds and other seasonal freshwater bodies are also used. Emergent and bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp. and *Eleocharis* spp.) apparently are preferred and used for cover. The area between stream and pond habitats and grasslands or bank sides is used for basking, while nearby dense vegetation or water often provide escape cover (USFWS 2006). During periods of heavy rain or shortly after, SFGS may make long-distance movements of up to 1.25 miles along drainages within the dense riparian cover, and are not documented to travel over open terrain (McGinnis 2001). The nearest SFGS occurrence is over 1.5 miles to the south and dispersal barriers including development are present between the occurrence and the Study Area. It is unlikely SFGS will occur in the Study Area or vicinity because of the lack of suitable pond habitat and distance from occupied habitat.

Allen's hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern. Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). It feeds on nectar, as well as insects and spiders. The willows and blue gum in the Study Area provide suitable nesting habitat and Allen's hummingbird is known to

nest in suburban habitats in the vicinity. Allen's hummingbird has a high potential to nest in the arroyo willow scrub and blue gum grove within the Study Area.

Impacts and Recommendations

The Study Area contains a riparian corridor and has potential to support one special-status bird species. In addition, most native bird nests are protected under the Migratory Bird Treaty Act. No rare, endangered, or unique species are anticipated to be present in the Study Area. Recommendations to protect the riparian corridor and nesting birds are described below.

Riparian Corridor

Per LCP guidelines, Arroyo de en Medio is an Environmentally Sensitive Habitat Area and setbacks are recommended to avoid impacts to the Arroyo de en Medio riparian corridor. The setback for an intermittent creek is 30 feet from edge of riparian habitat or centerline of the creek where no riparian vegetation is present. Based upon the vegetation in the Study Area, the setback is recommended to be 30 feet from the dripline of the arroyo willow habitat and from the centerline of the creek elsewhere in the Study Area. The setback is shown in Figure 2.

- It is recommended that any proposed construction or project activities remain outside of the 30-foot setback to remain in compliance with the LCP.

Special-Status and Non-Special-Status Nesting Birds

One special-status and several non-special-status bird species have potential to nest within the Study Area. Therefore, the following measures are recommended to avoid impacts to active nests of both special-status and non-special-status bird species:

- Trees or shrubs proposed for removal or trimming should be removed or trimmed during the bird non-nesting season (September 1 – February 14).
- If tree or shrub removal or Project activities are initiated during the nesting season (February 15 – August 31), a pre-construction nesting bird survey is recommended to avoid impacts to both special-status and non-special-status bird species.
 - If active nests are observed, a qualified biologist will determine suitable buffers based upon nest location and bird species. Buffers will be dependent upon species, nest location and project activities, but may range between 25-75 feet for passerine birds and up to 250 feet for raptors.

Summary

Based upon a review of databases and a site visit to the Study Area on December 31, 2015, one sensitive habitat is present within the Study Area, the Arroyo de en Medio riparian corridor. It is recommended that any proposed construction or project activities maintain a 30-foot setback from the riparian corridor as shown in Figure 2. Avoidance of the bird nesting season or pre-construction surveys for nesting birds are recommended for tree or shrub removal and initiation of Project activities. No special-status plant species have potential to be present. No rare, endangered, or unique species have potential to be present. No heritage trees are present; however, one "Significant" tree is present. If the tree is planned for removal, it may require a permit from the County of San Mateo. No further measures are recommended.

Please feel free to contact me with any questions you may have.

Sincerely,



Patricia Valcarcel
Wildlife Biologist

Enclosures:

- Attachment A - Figures
- Attachment B - List of Observed Species
- Attachment C - Study Area Photographs

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Attachment A

Figures

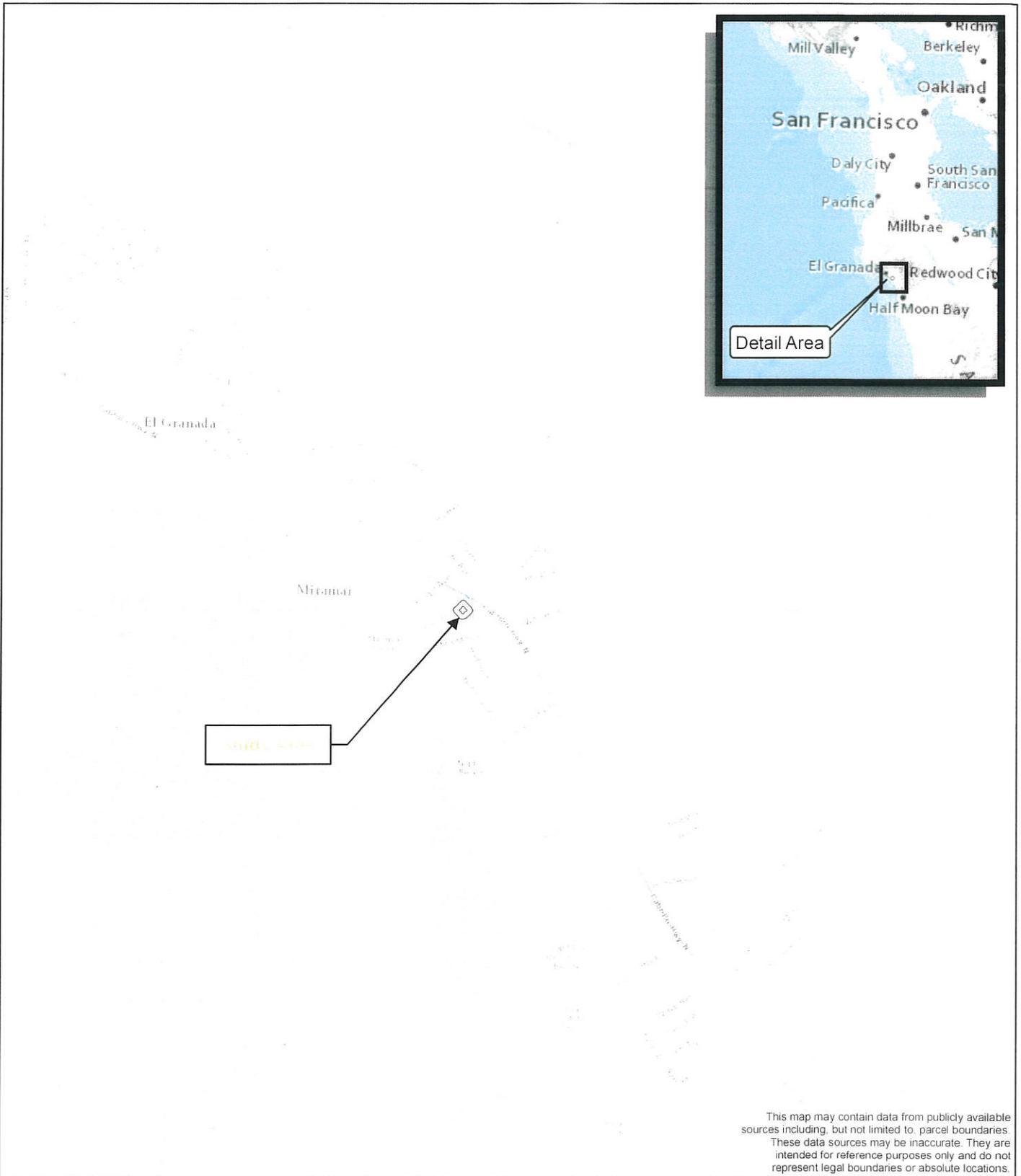


Figure 1. Study Area Location Map

Third Ave Miramar ESHA Assessment
Half Moon Bay, California



Map Prepared Date: 1/20/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

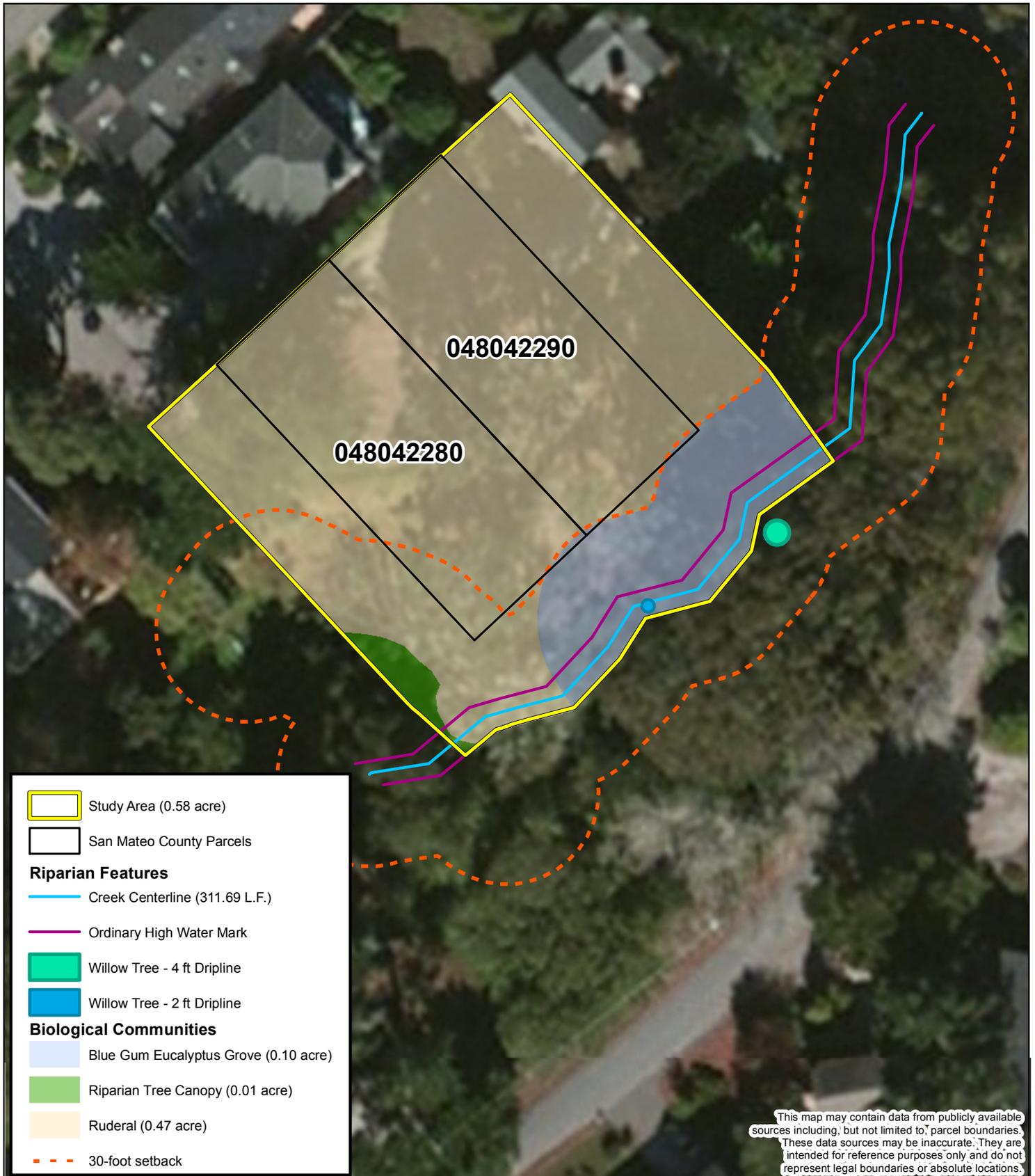


Figure 2. Biological Communities Map



Third Avenue Miramar ESHA Assessment
Half Moon Bay, California

0 10 20 40
Feet

Map Prepared Date: 1/25/2016
Map Prepared By: MRochelle
Base Source: Esri Streaming - Microsoft 2010
Data Source(s): WRA, San Mateo County

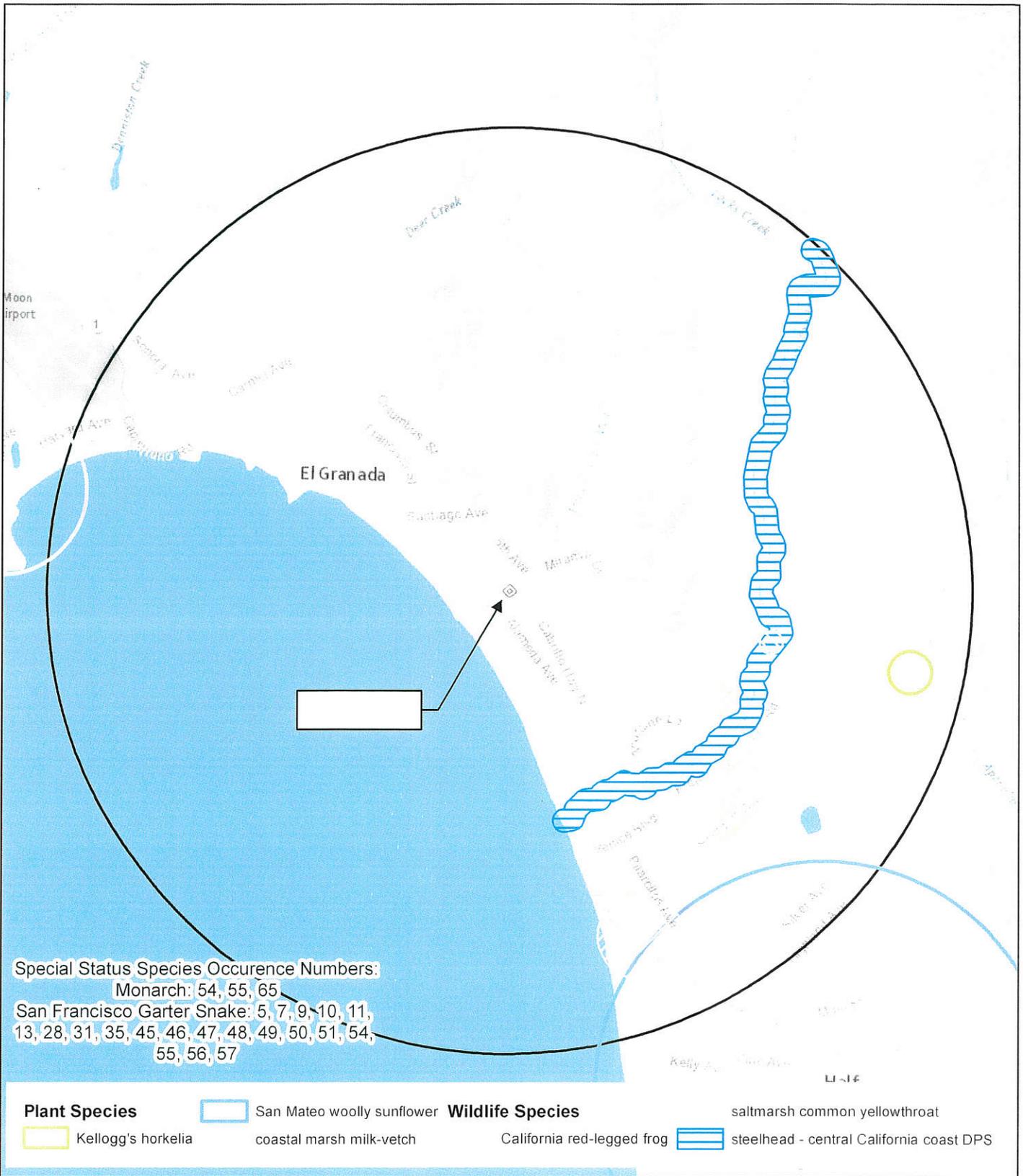


Figure 3. Special Status Plant and Wildlife Species within 2 miles of the Study Area



Third Ave Miramar ESHA Assessment
Half Moon Bay, California



Map Prepared Date: 1/19/2016
Map Prepared By: Fhourigan
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB

Attachment B

List of Observed Species

Attachment B. Plant Species Observed in the Study Area on December 31, 2015.

Family	Scientific Name	Common Name
Adoxaceae	<i>Sambucus racemosa</i>	Red elderberry
Aizoaceae	<i>Carpobrotus chilensis</i>	Sea fig
Apiaceae	<i>Conium maculatum</i>	Poison hemlock
Apiaceae	<i>Daucus carota</i>	Carrot
Araceae	<i>Zantedeschia aethiopica</i>	Callalily
Araliaceae	<i>Hedera helix</i>	English ivy
Asteraceae	<i>Delairea odorata</i>	Cape ivy
Asteraceae	<i>Erigeron canadensis</i>	Canada horseweed
Asteraceae	<i>Eriophyllum staechadifolium</i>	Lizard tail
Betulaceae	<i>Alnus rhombifolia</i>	White alder
Boraginaceae	<i>Echium pininana</i>	Pine echium
Brassicaceae	<i>Nasturtium officinale</i>	Watercress
Brassicaceae	<i>Raphanus sativus</i>	Jointed charlock
Cornaceae	<i>Cornus sericea ssp. sericea</i>	Red osier dogwood
Cucurbitaceae	<i>Marah fabacea</i>	California man-root
Cupressaceae	<i>Hesperocyparis macrocarpa</i>	Monterey cypress
Cupressaceae	<i>Sequoia sempervirens</i>	Coast redwood
Cyperaceae	<i>Cyperus eragrostis</i>	Tall cyperus
Dryopteridaceae	<i>Polystichum munitum</i>	Western sword fern
Fabaceae	<i>Acacia dealbata</i>	Silver wattle
Fabaceae	<i>Acacia melanoxylon</i>	Blackwood acacia
Iridaceae	<i>Chasmanthe floribunda</i>	African cornflag
Myrtaceae	<i>Eucalyptus globulus</i>	Blue gum
Onagraceae	<i>Epilobium ciliatum ssp. ciliatum</i>	Willow herb
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda buttercup
Papaveraceae	<i>Fumaria officinalis</i>	Fumitory
Pinaceae	<i>Pinus radiata</i>	Monterey pine
Poaceae	<i>Bromus diandrus</i>	Ripgut brome
Poaceae	<i>Ehrharta erecta</i>	Upright veldt grass
Polygonaceae	<i>Persicaria hydropiper</i>	Common smartweed
Polygonaceae	<i>Rumex crispus</i>	Curly dock
Polygonaceae	<i>Rumex pulcher</i>	Fiddleleaf dock
Rhamnaceae	<i>Frangula californica</i>	California coffeeberry
Rosaceae	<i>Rubus ursinus</i>	California blackberry
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow
Scrophulariaceae	<i>Myoporum laetum</i>	Ngaio tree
Scrophulariaceae	<i>Scrophularia californica</i>	California bee plant
Solanaceae	<i>Solanum douglasii</i>	Douglas' nightshade
Tropaeolaceae	<i>Tropaeolum majus</i>	Garden nasturtium
Urticaceae	<i>Urtica dioica</i>	Stinging nettle

Attachment C
Representative Photographs

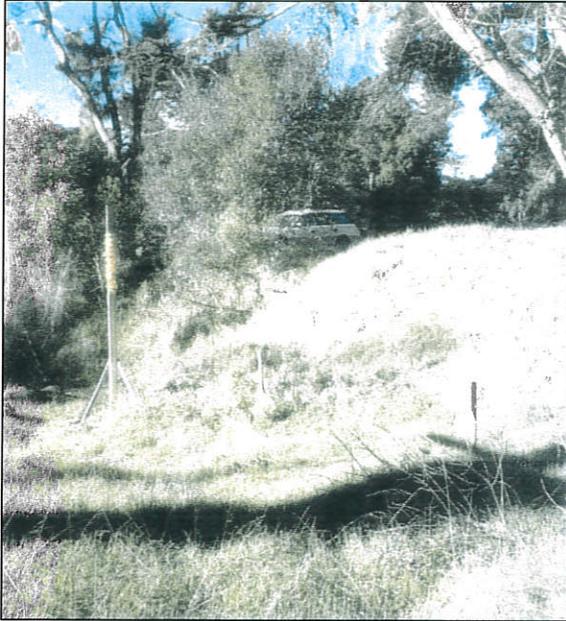


Photo 1. Photo of upland ruderal areas dominated by weedy grasses and forbs. Photo taken in westerly direction

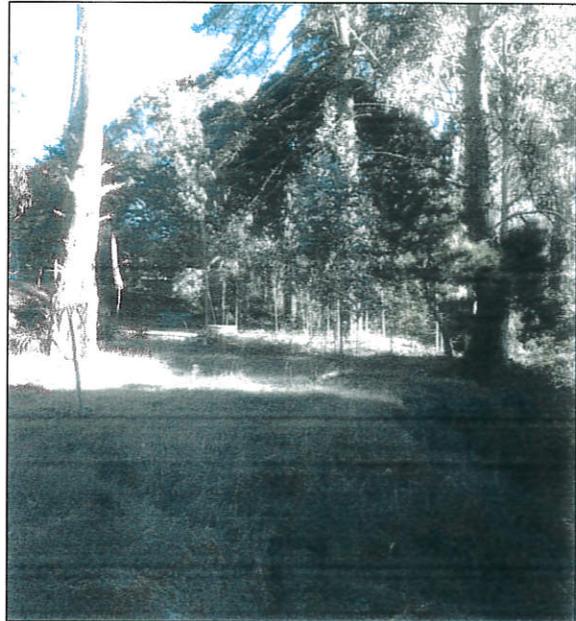


Photo 2. Photo showing ruderal upland area. Arroyo de en Medio is on the right. Photo taken in easterly direction.



Photo 3. Photo showing arroyo willow scrub along Arroyo de en Medio on the western side of the Study Area. Photo taken in a south west direction.



Photo 4. Photo showing Arroyo de en Medio. The Study Area is on the right. Photo taken in a westerly direction.



Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

**VELLA PROPERTY
3RD AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

RECEIVED

APR 15 2015

San Mateo County
Planning and Building Department

PLN2015-00152

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CALIFORNIA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 2010



Sigma Prime Geosciences, Inc.
Effective Solutions

April 21, 2010

Frank Vella
758 Vasquez Drive
Half Moon Bay, CA 94019

Re: Geotechnical Report: Vella Residence, 3rd Avenue, Miramar, California
APN 048-042-280
Sigma Prime Job No. 10-114

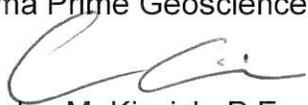
Dear Mr. Vella:

As per your request, we have performed a geotechnical study for your proposed residence at 3rd Avenue in Miramar, California. The accompanying report summarizes the results of our field study, laboratory testing, and engineering analyses, and presents geotechnical recommendations for the planned structure.

Thank you for the opportunity to work with you on this project. If you have any questions concerning our study, please call.

Yours,

Sigma Prime Geosciences, Inc.


Charles M. Kissick, P.E.





**GEOTECHNICAL STUDY
VELLA RESIDENCE
3rd AVENUE
APN 048-042-280
MIRAMAR, CALIFORNIA**

**PREPARED FOR:
FRANK VELLA
758 VASQUEZ DRIVE
HALF MOON BAY, CA 94019**

**PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
111 VASSAR STREET
HALF MOON BAY, CALIFORNIA 94019**

APRIL 21, 2010



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FIGURE 2 - SITE MAP

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APPENDIX B - LABORATORY TESTS



1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed residence at 3rd Avenue in Miramar, California, at the location shown in Figure 1. The purpose of this investigation was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed construction.

1.1 PROJECT DESCRIPTION

We understand that you plan to construct a home on 3rd Avenue, in Miramar. The lot is on the west side of Highway 1, about two blocks from the beach. The 2-story structure is expected to be of wood frame construction and have wooden floors constructed over a crawl space. The lot has two level areas with a slope in between, as shown in Figure 2. Therefore, the house would have a lower level on the lower bench. Structural loads are expected to be relatively light as is typical for this type of construction.

1.2 SCOPE OF WORK

In order to complete this project we have performed the following tasks:

- Reviewed published information on the geologic and seismic conditions in the site vicinity;
- Geologic site reconnaissance;
- Subsurface study, including 2 soil borings at the site;
- Engineering analysis and evaluation of the subsurface data to develop geotechnical design criteria; and
- Preparation of this report presenting our recommendations for the proposed structure.



2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on April 1, 2010. The subsurface study consisted of advancing 2 soil borings with an augur bit. The soil borings were advanced to a depths of 20 feet and 21.5 feet. The approximate locations of the borings, numbered B-1 and B-2, are shown in Figure 2, Site Plan. The boring logs and the results of the laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the site was undeveloped, with homes built on properties to the east and north. The property consists of two level benches with a slope in between the benches. The slope is about 8 feet high and is inclined at about 30%, or about 3.3:1 (H:V). The vegetation consists of wild grasses and large pine trees.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Pampeyan (1994), the site vicinity is underlain by Holocene younger alluvial fan deposits. This unit is described as a poorly consolidated, fine to coarse grained sand, silt, and gravel.

2.4 SITE SUBSURFACE CONDITIONS

Based on the two soil borings, the subsurface conditions on the upper slope consist of about 5.5 feet of loose sandy clay fill, underlain by alternating layers of medium stiff sandy clay and loose sand. The clay has low plasticity. The soil under the lower bench consists of 11 feet of loose sand, underlain by 9 feet of very stiff sandy clay.

2.5 GROUNDWATER

Free groundwater was encountered at a depth of approximately 15.2 feet in the boring on the upper bench, and 6.4 feet in the boring on the lower bench. Groundwater may be encountered during construction, depending on the foundation system selected, as discussed in Section 3.4 below.



2.6 FAULTS AND SEISMICITY

The site is in an area of high seismicity, with active faults associated with the San Andreas fault system. The closest active fault to the site is the San Gregorio fault, located about 2.5 km to the west. Other faults most likely to produce significant seismic ground motions include the San Andreas, Hayward, Rodgers Creek, and Calaveras faults. Selected historical earthquakes in the area with an estimated magnitude greater than 6-1/4, are presented in Table 1 below.

**TABLE 1
HISTORICAL EARTHQUAKES**

<u>Date</u>	<u>Magnitude</u>	<u>Fault</u>	<u>Locale</u>
June 10, 1836	6.5 ¹	San Andreas	San Juan Bautista
June 1838	7.0 ²	San Andreas	Peninsula
October 8, 1865	6.3 ²	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0 ²	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9 ³	San Andreas	Golden Gate
July 1, 1911	6.6 ⁴	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1 ⁵	San Andreas	Loma Prieta, Santa Cruz Mountains
(1)	Borchardt & Topozada (1996)		
(2)	Topozada et al (1981)		
(3)	Petersen (1996)		
(4)	Topozada (1984)		
(5)	USGS (1989)		

2.7 2007 CBC EARTHQUAKE DESIGN PARAMETERS

Based on the 2007 California Building Code (CBC) and our site evaluation, we recommend using Site Class Definition D (stiff soil) for the site. The other pertinent CBC seismic parameters are given in Table 2 below.

**Table 2
CBC SEISMIC DESIGN PARAMETERS**

S_s	S₁	F_a	F_v	S_{MS}	S_{M1}	S_{DS}	S_{D1}
1.990	0.932	1.0	1.5	1.990	1.398	1.327	0.932

Because the S₁ value is greater than 0.75, Seismic Design Category E is recommended, per CBC Section 1613.5.6. The values in the table above were obtained from a USGS software program which provides the values based on the latitude and longitude of the site, and the Site Class Definition. The latitude and longitude were 37.4950 and -122.4565, respectively, and were accurately obtained from Google Earth™. These same values can be obtained directly from maps in the CBC, however the scale of the map makes it impractical to



achieve satisfactory accuracy. The map in the CBC was derived from the same work that led to the USGS software. The remaining parameters were also obtained by the same USGS program.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

It is our opinion that, from a geotechnical standpoint, the site is suitable for the proposed construction, provided the recommendations presented in this report are followed during design and construction. Detailed recommendations are presented in the following sections of this report.

Because subsurface conditions may vary from those encountered at the location of our borings, and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) Review the project plans for conformance with our report recommendations and 2) Observe and test the earthwork and foundation installation phases of construction.

3.2 GEOLOGIC HAZARDS

We reviewed the potential for geologic hazards to impact the site, considering the geologic setting, and the soils encountered during our investigation. The results of our review are presented below:

- Fault Rupture - The site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion.
- Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the design life of the structure, as is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.



- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Due to the upper 11 feet of loose sand, differential compaction is likely to occur during an earthquake, with about 1 to 2 inches of differential settlement estimated. The likelihood of significant structural damage to the structure from differential compaction is low, however precautions should be made to prevent expensive cosmetic damage.
- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose sands were found below the water table. Therefore, in our opinion, the likelihood of liquefaction occurring at the site is high. Liquefaction is estimated to result in as much as 2 inches of vertical settlement, based on Idriss and Boulanger (2008). Lateral spreading toward the nearby creek is difficult to quantify. The maximum amount that may be expected adjacent to the creek is about 21 inches (Idriss and Boulanger, 2008). At the house location, this value is likely to be lower. It is our opinion that about 5 to 10 inches of lateral spreading may be possible.
- Slope Stability – Based on the geologic map and our site reconnaissance, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The slope that crosses the site is inclined at about 30%, and is about 8 feet high. This slope is likely to remain stable. The construction of the house will help to stabilize the slope by acting as a buttress. Therefore, the likelihood of a landslide impacting the house is low. Ground movement may be associated with earthquake-induced liquefaction, as discussed above. The precautions that we will recommend to counteract liquefaction induced ground movement will also account for any slope movements.

3.3 EARTHWORK

3.3.1 Clearing & Subgrade Preparation

All deleterious materials, including topsoil, roots, vegetation, designated utility lines, etc., should be cleared from building and driveway areas. The actual stripping depth required will depend on site usage prior to construction, and should be established by the Contractor during construction. Topsoil should be stockpiled separately for later use in landscaping areas.



3.3.2 Fills

Fills are not recommended beneath the base of foundations, unless the foundation is designed for this condition. (See Section 3.4) In landscaping areas, any fills greater than 3 feet in depth should be placed in loose lifts not exceeding 12 inches in height, and compacted to at least 90% of the maximum dry density, as determined by ASTM D1157-78.

3.3.3 Compaction

Scarified surface soils should be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1157-78. All trench backfill should also be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density.

3.3.4 Surface Drainage

The finish grades should be designed to drain surface water away from foundations and slab areas to suitable discharge points. Slopes of at least 2 percent within 10 feet of the structures are recommended. Ponding of water should not be allowed adjacent to the structure.

3.4 FOUNDATIONS

We recommend either a reinforced mat foundation or a pier and grade beam foundation. The site may be subject to liquefaction-induced ground deformation. Either foundation type will minimize potential structural damage to the house, if built properly. However, the house may move slightly, resulting in cosmetic damage.

Mat Foundation:

Although a mat slab would rest on fill material, the mat would be designed to bear on fill. Because the house would be built on two levels, the foundation system would consist of two mats. The mats should be tied together structurally to create one rigid unit.

A reinforced slab or mat foundation may be designed for allowable bearing pressures of 2,000 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces.



We recommend that the mat be underlain by at least 12 inches of non-expansive granular fill that is compacted as per the recommendations in Section 3.3.3 of this report. Where floor wetness would be detrimental, a vapor barrier, such as 10 mil visqueen, should be placed over the gravel. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 12 inches of granular fill recommended above.

The mat should be reinforced to provide structural continuity and to permit spanning of local irregularities. The mat should be capable of spanning 25 feet, point to point, and should cantilever a minimum of 8 feet. As a guideline to the structural engineer, we anticipate that the mat slab would be a minimum of 12 inches thick, with two layers of #5 reinforcing bars at top and bottom, both ways, spaced at 10 inches on center, or equivalent. The structural engineer may opt to include thicker perimeters. As discussed in Section 3.3.3 above, the subgrade should be compacted prior to the placement of granular fill. Our representative should observe the excavation prior to placing reinforcing steel to see that the subgrade has been properly prepared.

Pier and Grade Beam:

It should be noted that pier holes will penetrate loose sands and is likely to cave in while drilling. If this foundation method is selected, the contractor should expect to case the holes while drilling.

Piers should be drilled and cast-in-place, and be a minimum of 16 inches in diameter. The piers should be a minimum of 18 feet deep, as measured from the bottom of the adjacent grade beam. The actual pier depths should be determined by the structural engineer, based on the criteria given below.

The piers may gain support in skin friction acting along the sides of the piers within the clayey soil. A skin friction of 500 psf between the piers and the soil should be used in design. The uplift capacity of the piers may be based on a skin friction value of 350 pounds per square foot acting below a depth of 2 feet. The skin friction value may be increased by 1/3 for seismic loads and wind loads. Because of the difficulty in cleaning the bottoms of the pier holes, end bearing should be neglected, however the pier holes should be kept as clean as possible.

Drilled piers should have a center-to-center spacing of not less than three pier diameters. The concrete should not be allowed to free-fall more than 5 feet.



3.4.1 Lateral Loads

Mat Foundation:

Resistance to lateral loads may be provided by passive pressure acting against the sides of foundation, neglecting the upper 1 foot of the soil, and by base friction below the foundations. We recommend that an equivalent fluid weight of 300 pcf be used in design to calculate the passive pressure. Although the upper 1 foot of soil should be neglected for passive resistance, the passive pressure should be calculated from the ground surface. We recommend using a base friction coefficient of 0.30, multiplied by the vertical dead load, to calculate the base friction lateral resistance.

Pier and Grade Beam:

Resistance to lateral loads may be provided by passive pressure acting against the piers, neglecting the upper 2 feet of the pier, and acting across 1.5 pier diameters. We recommend that an equivalent fluid pressure of 300 pcf be used in design.

3.4.2 Slabs-on-Grade

We recommend that the slab-on-grade be underlain by at least 4 inches of non-expansive fill, preferably Class 2 base rock. Where floor wetness would be detrimental, a vapor barrier, such as 10-mil visqueen, should be placed over the fill. The vapor barrier should be covered with a 2-inch sand buffer to protect it during construction. The sand should be lightly moistened just prior to placing the concrete. The 2 inches of sand should be considered as additional to the 4-inches of fill recommended above.

3.5 RETAINING WALLS

Retaining walls should be designed to resist lateral earth pressure from the adjoining natural soils and/or backfill. The walls should be founded on drilled piers with the same requirements as those discussed above. We recommend that walls that are restrained from lateral movement be designed to resist an at-rest equivalent fluid pressure of 65 pounds per cubic foot (pcf). Retaining walls that are not restrained from lateral movement should be designed to resist an active equivalent fluid pressure of 45 pcf.

To account for seismic loads, we recommend adding a dynamic pressure increment of $18H$, where H is the height of the wall. The dynamic load is a rectangular distribution acting halfway up the wall. This value is obtained using a modified Mononobe-Okabe procedure, by first estimating the peak ground



acceleration at the site, based on the average of four published attenuation relationships. The peak ground acceleration at the project site is estimated to be 0.58g. This peak value is reduced by 0.65 (denoted as k_h) because peak accelerations are too short in duration to have an impact. Therefore, $k_h = 0.377g$. The static coefficient of lateral earth pressure, K_A , equal to 0.271 in this case, is applied. A relationship between k_h and K_A is used to obtain the total lateral earth pressure coefficient, K_{AE-TOT} , due to both the dynamic and the static increments. The static increment is then subtracted to obtain the dynamic increment, K_{AE-DYN} . The dynamic increment, K_{AE-DYN} , is then applied to obtain the dynamic pressure, P_{AE-DYN} , using the equation,

$$P_{AE-DYN}=0.5(\text{gamma})(K_{AE-DYN})(H^2),$$

where gamma is the unit weight of soil.

Retaining walls should include a subsurface drainage system behind the walls to prevent any buildup of water pressure from surface water infiltration. The drainage system should consist of a 4-inch (Schedule 40 PVC) perforated pipe (perforations placed down) located below the adjacent slab elevation. The pipe should be embedded in a 12-inch width of 1/2-inch crushed rock. The remaining backfill may consist of 1/2-inch crushed rock, extending to within 2 feet of the level of the outside finish grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 2 feet of backfill should consist of native soil. The subdrain should slope to a free draining outlet. Cleanouts should be provided. Damp proofing of walls should be included in areas where wall moisture would be undesirable. Miridrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative. If used, the drainage fabric should extend from a depth of 2 feet to the drain pipe at the base of the wall. The 12-inch width of 1/2-inch crushed rock and filter fabric should be placed around the drainpipe, as discussed in the earlier section.

3.6 CONSTRUCTION OBSERVATION AND TESTING

The earthwork and foundation phases of construction should be observed and tested by us to 1) Establish that subsurface conditions are compatible with those used in the analysis and design; 2) Observe compliance with the design concepts, specifications and recommendations; and 3) Allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited number of borings. The nature and extent of variation across the site may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate our recommendations.



4. LIMITATIONS

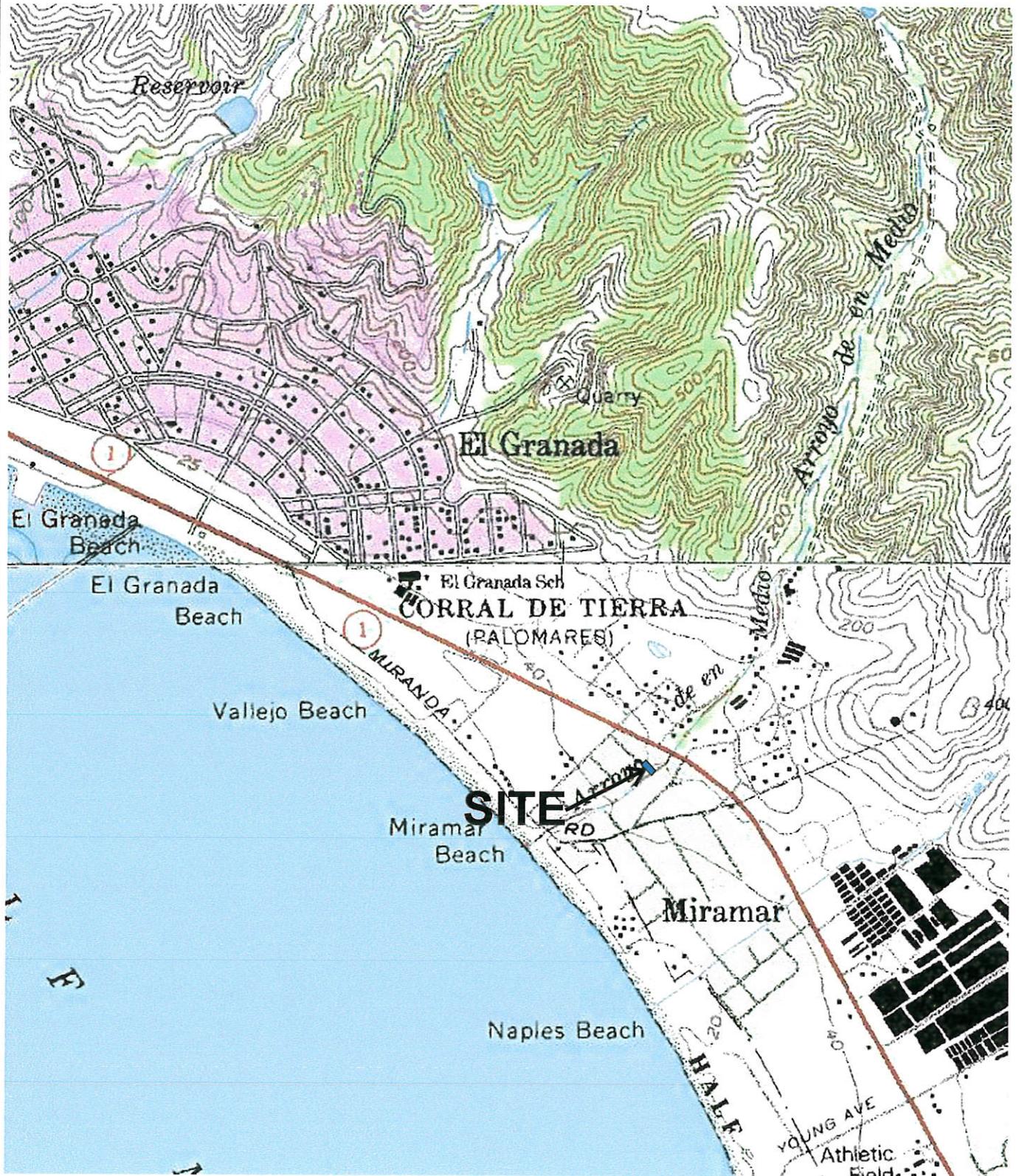
This report has been prepared for the exclusive use of the owner for specific application in developing geotechnical design criteria, for the currently planned residence on 3rd Avenue in Miramar, California (APN 048-042-280). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; the currently planned improvements; review of previous reports relevant to the site conditions; and laboratory results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.



5. REFERENCES

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- International Conference of Building Officials, February, 1998, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada. (To be used with 1997 Uniform Building Code)
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- Topozada, T.R., 1984, History of Earthquake Damage in Santa Clara County and Comparison of 1911 and 1984 Earthquakes.
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- Working Group on California Earthquake Probabilities, 1999, Earthquake Probabilities in the San Francisco Bay Region: 2000 to 2030 – A Summary of Findings, U.S. Geological Survey Open File Report 99-517, version 1.



Sigma Prime Geosciences, Inc.

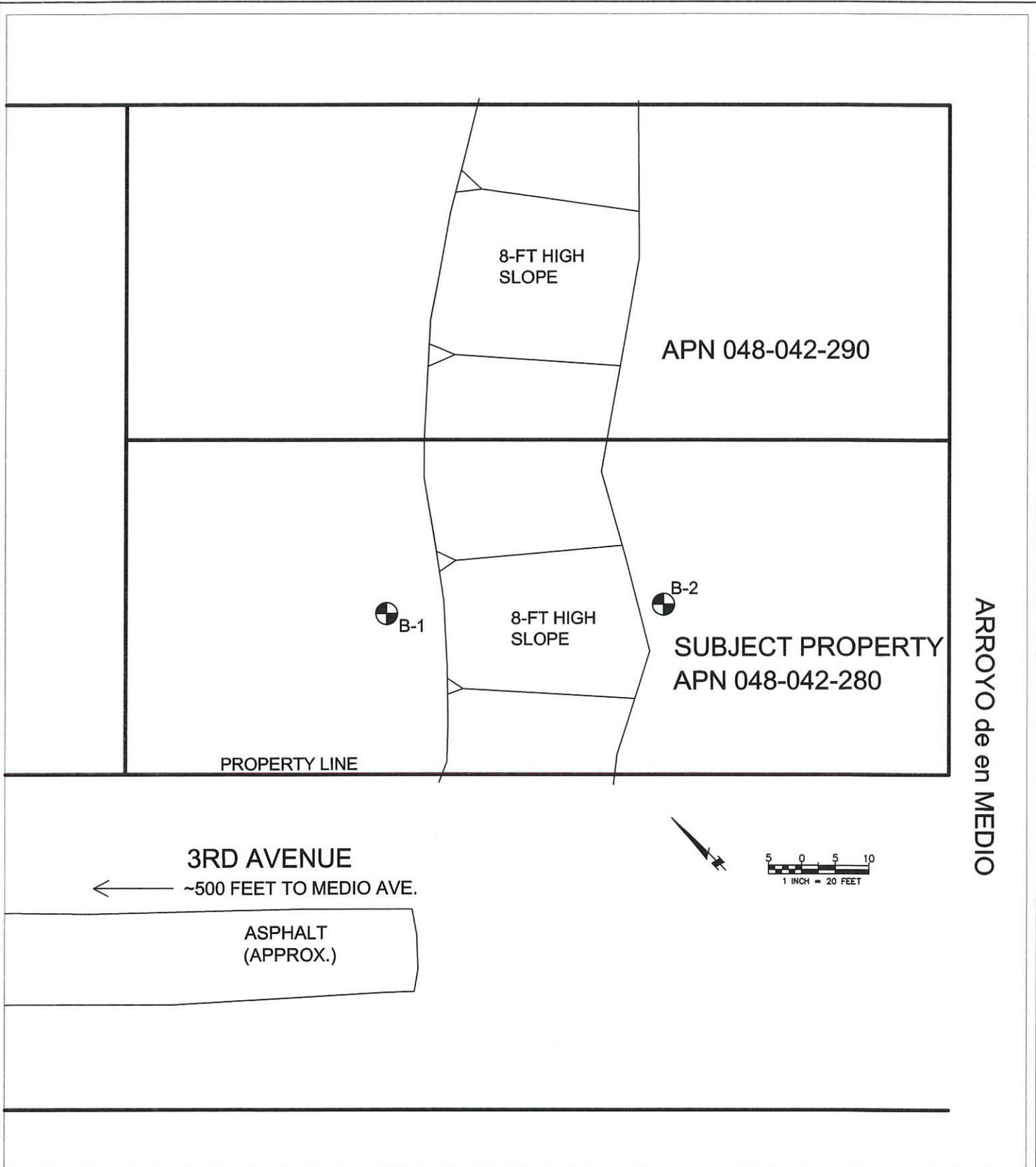
Figure 1

Date: 4/21/10

Job No.: 10-114

Location Map

Vella Property, 3rd Ave., Miramar APN 048-042-280



1"=20'

EXPLANATION

 B-1 Soil Boring Location



Sigma Prime Geosciences, Inc.

Figure	2
Date:	4/21/10
Job No.:	10-114

Site Map

Vella Property, 3rd Ave., Half Moon Bay APN 048-042-280



APPENDIX A

FIELD INVESTIGATION

The soils encountered during drilling were logged by our representative, and samples were obtained at depths appropriate to the investigation. The samples were taken to our laboratory where they were carefully observed and classified in accordance with the Unified Soil Classification System. The logs of our borings, as well as a summary of the soil classification system, are attached.

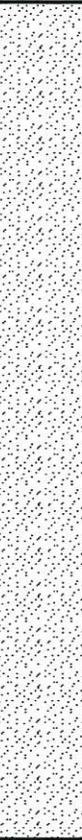
Several tests were performed in the field during drilling. The standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 18 inches. The standard penetration resistance is the number of blows required to drive the sampler the last 12 inches of the 18-inch drive. The results of these field tests are presented on the boring logs.

The boring logs and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and ground water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.

Project Name / Boring Location Vella #2 048-042-280 / Top of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum		
Auger	4"	21.5'	21.5'	0	56'	assumed	Boring No.	B-1
Drilling Company Cenozoic Drilling					Logged By: C. Kissick		Page	1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"			Date(s)	4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
0'-5.5'	<u>Sandy Clay (FILL)</u> : dark brown; soft; moist; coarse sand.		CL	2 3 3	1	MC	<u>Lab. Sample #1:</u> Moisture%=15.3% Dry Density=92.3 pcf LL=32, PL=19, PI=13
5.5'-10.5'	<u>Sand (NATIVE)</u> : yellowish brown; loose; moist; fine to medium grained.		SP	2 2 2	2	SPT	
10.5'-13'	<u>Silty Sand</u> : dark brown; loose; moist; coarse sand.		SM	4 3 3	3	SPT	
13'-20'	<u>Clayey Sand</u> : moderate brown; loose; moist.		SC	3 4 5	4	SPT	▽ Groundwater @ 15.2' <u>Lab. Sample #4:</u> % Passing #200: 32.2
20'	Medium dense.			6 8 9	5	SPT	Bottom of Hole @ 21.5' Groundwater @ 15.2'.

Project Name / Boring Location Vella #2 048-042-290 / Bottom of Slope					Project Number 10-114		 Sigma Prime Geosciences, Inc.	
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum	Boring No.	B-2
Auger	4"	20'	20'	0	49'	assumed		
Drilling Company Cenozoic Drilling				Logged By: C. Kissick		Page		1 of 1
Type of Drill Rig Simco 2400		Type of Sampler(s) MC, SPT		Hammer Weight and Fall 140 lb, 30"		Date(s)		4/1/10

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments	
0'-11':	Sand: tan; medium dense; moist; coarse sand.		SP	10			Lab. Sample #1: Moisture%=6.2% Dry Density=109.4 pcf	
				11				MC
				13	1			
5	Loose.			6				
				6	2	SPT	 Groundwater @ 6.4'	
				6				
				3				
10				4	3	SPT		
				5				
				8				
11'-20':	Clayey Sand: moderate brown; medium dense; moist.		SC	5			Hole caved; terminated at 20'.	
				8				
				10	4			SPT
15								
20	Bottom of Hole @ 20' Groundwater @ 6.4'.							

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS > 50% RETAINED ON NO. 4 SIEVE	GRAVELS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL
			$Cu < 4$ AND/OR $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SANDS < 5% FINES	$Cu > 6$ AND $1 < Cc < 3$	SW	WELL-GRADED SAND
			$Cu < 6$ AND/OR $1 > Cc > 3$	SP	POORLY-GRADED SAND
		SANDS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS > 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT < 50	INORGANIC	$PI > 7$ AND PLOTS > "A" LINE	CL	LOW-PLASTICITY CLAY
			$PI > 4$ AND PLOTS < "A" LINE	ML	LOW-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	PI PLOTS > "A" LINE	CH	HIGH-PLASTICITY CLAY
			PI PLOTS < "A" LINE	MH	HIGH-PLASTICITY SILT
		ORGANIC	LL (oven dried)/ LL (not dried) < 0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK COLOR, ORGANIC ODOR		PT	PEAT

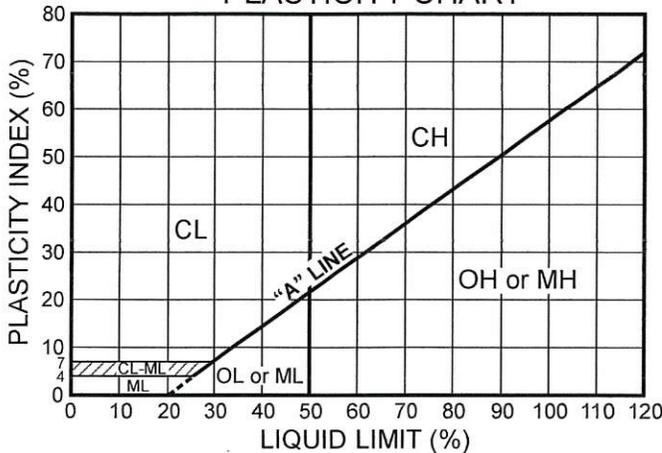
SAMPLE TYPES

- B BULK SAMPLE
- ST PUSHED SHELBY TUBE
- SPT STANDARD PENETRATION
- MC MODIFIED CALIFORNIA
- P PITCHER SAMPLE
- C ROCK CORE

ADDITIONAL TESTS

- CA - CHEMICAL ANALYSIS
- CN - CONSOLIDATION
- CP - COMPACTION
- DS - DIRECT SHEAR
- PM - PERMEABILITY
- PP - POCKET PENETROMETER
- Cor. - CORROSIVITY
- SA - GRAIN SIZE ANALYSIS
(20%) - (PERCENT PASSING #200 SIEVE)
- SW - SWELL TEST
- TC - CYCLIC TRIAXIAL
- TU - CONSOLIDATED UNDRAINED TRIAXIAL
- TV - TORVANE SHEAR
- UC - UNCONFINED COMPRESSION
- WA - WASH ANALYSIS
- WATER LEVEL AT TIME OF DRILLING
AND DATE MEASURED
- LATER WATER LEVEL AND DATE
MEASURED

PLASTICITY CHART



LEGEND TO SOIL DESCRIPTIONS



FIGURE A-1



APPENDIX B

LABORATORY TESTS

Samples from the subsurface study were selected for tests to establish some of the physical and engineering properties of the soils. The tests performed are briefly described below.

The natural moisture content and dry density were determined in accordance with ASTM D 2216 on selected samples recovered from the borings. This test determines the moisture content and density, representative of field conditions, at the time the samples were collected. The results are presented on the boring logs, at the appropriate sample depth.

The plasticity of selected clayey soil samples was determined on two soil samples in accordance with ASTM D 422. These results are presented on the boring logs, at the appropriate sample depth.

The percentage of fines in one sample was determined in accordance with ASTM D 1140. The results are presented on the boring log, at the appropriate sample depth.

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA	HUMBOLDT	SAN FRANCISCO
COLUSA	LAKE	SAN MATEO
CONTRA COSTA	MARIN	SANTA CLATA
DEL NORTE	MENDOCINO	SANTA CRUZ
	MONTEREY	SOLANO
	NAPA	SONOMA
	SAN BENITO	YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
<http://www.sonoma.edu/nwic>

May 3, 2016

File No.: 15-1610

Dennis Aguirre, Project Planner
San Mateo County Planning and Building Division
455 County Center
Redwood City, CA 94063

re: County File Number: 2015-00152 / Third Avenue; APN: 048-042-280 / Edward C. Love, Architect

Dear Mr. Aguirre,

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Previous Studies:

XX Study #003082 (Dietz 1970), covering approximately 100% of the proposed project area, identified no cultural resources (see recommendation below).

Archaeological and Native American Resources Recommendations:

XX Due to the passage of time since the previous survey (Dietz 1970) and the changes in archaeological theory and method since that time, we recommend a qualified archaeologist conduct further archival and field study for the entire project area to identify archaeological resources.

XX We recommend you contact the local Native American tribes regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

Built Environment Recommendations:

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of San Mateo County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at <http://www.chrisinfo.org>. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott McGaughey", with a long horizontal flourish extending to the right.

Scott McGaughey
NWIC Researcher

cc: Edward C. Love
720 Mill Street
Half Moon Bay, CA 94019

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

APPENDIX F

EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
1.1	Energy Upgrade California Participate in an energy retrofit rebate program, to achieve a minimum of 30% energy savings.			X	
1.2	Residential Energy Efficiency Financing Participate in a residential energy efficiency financing program, to achieve 30% energy savings.			X	
1.3	Low-income Weatherization Complete weatherization, to achieve average energy savings of 25%.			X	
1.4	Tree Planting Tree plantings to shade new or existing homes.	X			X
1.5	Propane Switch Switch from propane heater to more energy-efficient options, such as Energy Star furnaces or electric air-source pumps.			X	
2.1	Commercial and Industrial Efficiency Complete energy efficiency upgrades through third-party programs.			X	
2.2	Commercial Financing Participate in commercial energy efficiency financing programs, to achieve a minimum of 30% energy savings.			X	
2.3	Institutional Energy Efficiency Complete energy efficiency retrofits at large institutional facilities.			X	
3.1	Green Building Ordinance Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, for all construction projects subject to the Green Building Ordinance.	X			

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
3.2	Green Building Incentives Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, regardless of applicability of the Green Building Ordinance.	X			
3.3	Urban Heat Island Install shading, "cool" surfaces design, and/or open-grid paving to reduce hardscape through strategies such as interlocking concrete pavement, stones, or blocks.	X			
3.6	Regional Energy Efficiency Efforts Procure and install energy-efficient equipment, through programs such as bulk-purchasing, to achieve a minimum of 8% energy savings.			X	
4.1	Solar PV Incentives Install a solar photovoltaic system, using private resources and/or local or state incentives, including County incentives, and state rebates through the California Solar Initiative.				X
4.2	Solar Water Heater Incentives Install solar water heaters, using private resources and/or local or state incentives, including County incentives and state rebates through the California Solar Initiative.				X
4.3	Pre-Wired Solar Homes Pre-wire and pre-plumb for solar thermal or PV systems.	X			
4.4	Pilot Solar Program Install a solar photovoltaic system through a development project program.				X
4.5	Renewable Financing Install a solar photovoltaic system or solar water heater using financing programs such as power purchase agreements or Property Assessed Clean Energy.				X

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
4.7	Incentivize Wind Energy			X	
4.9	Emissions Offset Programs			X	
5.1	General Plan and Zoning Updates			X	
5.3	Pedestrian Design			X	
6.1	Neighborhood Retail			X	
6.2	Traffic Calming in New Construction			X	
6.4	Expand Transit			X	
7.1	Parking Ordinance			X	
7.3	Unbundled Parking			X	

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

Measure	Description & Performance Criteria	Compliance		
		Complies	Does Not Comply	N/A
8.1	Employee Commute Provide a Commute Trip Reduction program to discourage single-occupancy vehicle trips and encourage other modes of alternative transportation.			X
8.2	Workplace Parking Implement workplace parking pricing programs.			X
8.3	Employer Transit Subsidies Provide transit subsidies or transit passes to employees.			X
8.4	Work Shuttles Expand worker shuttle programs.			X
10.1	Low Carbon Fuel Infrastructure Install electric vehicle charging stations or provide neighborhood electric vehicle networks.			X
13.1	Use of Recycled Materials Incorporate a minimum of 15% recycled materials into construction.	X		
13.2	Zero Waste Provide trash, recycling, and composting collection enclosures.			X
14.1	Smart Water Meters Install smart water meters.			X
14.2	Water Reuse Use grey, rain, and recycled water for landscaping or agricultural purposes.			X
15.1	Construction Idling Construction equipment for new development to comply with best management practices from Bay Area Air Quality Management District guidance.			X
15.2	Electrification in New Homes Provide outdoor electrical outlets for charging outdoor household equipment.	X		

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

KF

Discussion (please list policy #)

1.4 } EXISTING TREES TO BE MAINTAINED
4.1 } TO SHADE NEW HOUSE
4.2 } OWNER MAY CHOOSE TO INSTALL
4.4 } SOLAR PANELS AT A LATER DATE
4.5 }

14.2 SURFACE RUN-OFF IS DIRECTED
TO DRY WELLS WHICH RE-CHARGE
THE AQUIFER.

From: Charlie Kissick <sigmaprm@pacbell.net>
Sent: Tuesday, May 03, 2016 11:56 AM
To: Dennis Aguirre
Subject: RE: PLN2015-00152Miramar
Attachments: Rational Method - Runoff.pdf

Hello Dennis,

Abbie asked me to make an estimate of the effect of a dam failure during a 100-year storm.

I estimate the volume of the reservoir to be 2 acre-feet. I estimate the area of the watershed to be about 800 acres. At first glance, the volume of the reservoir appears to be negligible, compared to the size of the watershed. To get the most accurate estimate of the impact of a dam failure, a computer model would have to be used. We do not perform such analyses, however I made a rough estimate of the impact, using the Rational Method.

To get a rough estimate, I added the equivalent area that the 2 acre-foot reservoir would be if it were spread out to become 0.81 inches deep, per the hourly rainfall intensity of a 100-year storm. Therefore, the 800 acre watershed becomes the equivalent of 829 acres. This increase in area results in an increase in runoff from 194.4 ft³/sec to 201.4 ft³/sec, or an increase of 3.6%.

This, to me, does represent a negligible impact. It should be noted that the peak flow during a 100-year storm is not likely to coincide with the peak flow resulting from a dam break. Therefore, the 3.6% increase is likely to flow at a time when the flow rate is less than the maximum flow rate during the design storm. The potential impact on the life and safety of people downstream is negligible.

See my calculations, attached. And keep in mind this is a rough estimate.

Charles Kissick
Sigma Prime Geosciences, Inc.
332 Princeton Avenue
Half Moon Bay, CA 94019
650-728-3590

From: [Dennis Aguirre](#)
Sent: Tuesday, May 3, 2016 10:10 AM
To: [Ab Goldstein](#)
Subject: PLN2015-00152Miramar

Hi Abbie,

Attaching your report and WRA's. Their comment is at the bottom of page 3. The question in the Initial Study is as follows: Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? Hope you can help me here.

Thanks,
Dennis

Rational Method / Flow Estimate

Job: Vella
No.: 10-114
Date 5/3/2016
by: CMK

Rational Method to Estimate Storm Runoff (page 20-13)

$Q_p = CIA_d$ Reference: Civil Engineering Reference Manual

Area, A_d (acres):

800

C (Appendix 20.A):

0.3

Storm Frequency:

100

 years
Time of Concentration, t_c $t_c = L_o / \text{vel}$
 L_o :

12000

 feet, longest flow distance in watershed
elev change:

1100

Slope:

9.2

 percent
vel.:

0.7

 ft/sec (from Fig 20.4, page 20-4)
 t_c :

17142.9

 seconds

285.7

 minutes

therefore, $I =$

0.81

 in/hr

$Q_p =$

194.4000

 ft³/sec =

87025.10

 gal/min

Add Reservoir's equivalent area, at 2 acre-feet converted to 0.81 inches

Area, A_d (acres):

829

C (Appendix 20.A):

0.3

Storm Frequency:

100

 years
Time of Concentration, t_c $t_c = L_o / \text{vel}$
 L_o :

12000

 feet, longest flow distance in watershed
elev change:

1100

Slope:

9.2

 percent
vel.:

0.7

 ft/sec (from Fig 20.4, page 20-4)
 t_c :

17142.9

 seconds

285.7

 minutes

therefore, $I =$

0.81

 in/hr

$Q_p =$

201.4470

 ft³/sec =

90179.76

 gal/min

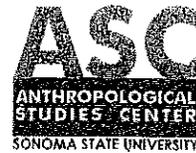
Difference:

3.6

 = percent increase in runoff

**ARCHAEOLOGICAL RESOURCES STUDY OF
APNS 048-042-280 AND -290, THIRD AVENUE SOUTH,
CITY OF HALF MOON BAY, SAN MATEO COUNTY,
CALIFORNIA**

Prepared for
Stephen Semprevivo
Revised August 2016



**ARCHAEOLOGICAL RESOURCES STUDY OF
APNS 048-042-280 AND -290, THIRD AVENUE SOUTH,
CITY OF HALF MOON BAY, SAN MATEO COUNTY,
CALIFORNIA**

Prepared for

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Prepared by

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revised August 2016
NT235 ASC1537

This project was completed under the supervision of Dr. Adrian Praetzelis (Registered Professional Archaeologist), Director, Anthropological Studies Center.

CONFIDENTIAL

This report contains confidential cultural resource location information; distribution should be restricted to those with a need to know. Cultural resources are nonrenewable, and their cultural, scientific, and aesthetic values can be significantly reduced by disturbance. To deter vandalism, artifact collection, and other activities that can damage cultural resources, their locations should be kept confidential. The legal authority to restrict cultural resource information is in the National Historic Preservation Act of 1966, Section 304; the Archaeological Resource Protection Act of 1979, Section 9(a); and California Government Code 6254.10.

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NAHC/Organization Correspondence

INTRODUCTION AND SUMMARY

The Anthropological Studies Center (ASC) of Sonoma State University conducted an archaeological-resources study of two adjacent 6150-square-foot (0.14-acre) parcels on 3rd Avenue South, in the community of Miramar, City of Half Moon Bay, San Mateo County at the request of Stephen Semprevivo, owner of the properties. It was completed as part of the environmental review documentation required by the County of San Mateo Planning and Building Department pursuant to the California Environmental Quality Act of 1970 (CEQA), including the recent amendments to it by Assembly Bill 52. The proposed project includes the construction of two single-family houses on the property.

The archaeological-resources study comprised five main parts: a records and literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), administered by the California Office of Historic Preservation (CA-OHP); a further literature review of publications, files, and maps at ASC and online for ethnographic, historic-era, and prehistoric resources and background information; communication with the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File and contact information for the appropriate Tribal communities, who ASC then contacted regarding the project; a pedestrian archaeological survey of the parcel; and a program of auger testing for subsurface deposits. Based on the results of this study, this report concludes with an assessment of the potential for surficial and buried archaeological resources in the project area.

ASC Staff Archaeologist Michael Newland conducted the records and literature search at the NWIC on 22 June 2016, supplemented by further literature review at ASC and online. Michael Newland handled the NAHC contacts and, with ASC Project Coordinator Robert Watson, carried out the pedestrian archaeological field survey of the parcels on 27 June 2016.

The records search found no previously recorded cultural resources on the parcel. The pedestrian archaeological survey and the auger-testing program identified no archaeological resources on the property.

REGULATORY CONTEXT

The California Environmental Quality Act (CEQA) regulates discretionary projects proposed to be carried out or approved by public agencies of the state of California or political subdivisions of the state, whether directly undertaken by the agency, undertaken by a person supported, in whole or in part, by the agency; or involving the issuance of a lease, permit, license, certificate, or other entitlement for use by the agency, which may directly or indirectly cause a physical change in the environment (California Public Resources Code (PRC), Division 13, §21063, §21065, and §21080). A project "that may cause a substantial adverse change in the significance of an historical resource" is considered one

that "may have a significant effect on the environment" (California Code of Regulations [CCR] Title 14, Chapter 3, §15064.5[b]).

A historical resource under CEQA (also called a cultural resource [14 CCR Appendix A]) is "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California . . . Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources [CRHR]" (CCR §15065.5[a][3]). The eligibility criteria for listing cultural resources, both archaeological and historical, in the CRHR are defined in CRHR publications (CA-OHP 1998) and in the CEQA guidelines (CCR §15064.5).

Any resource that is eligible for listing in the California Register must be given consideration under the CEQA process (PRC §21084.1; CCR §15064.5; CCR §15021); adverse effects to cultural resources eligible for listing on the CRHR must be avoided or the effect must be mitigated (CCR §15021).

The first step in satisfying these regulations is to ascertain whether any historical resource might be affected by the activity. The present archaeological resources study is intended to facilitate compliance with this requirement by identifying any previously recorded or currently observable archaeological resources that might be affected, and by assessing the likelihood of encountering currently unknown resources in the course of the activity.

PROJECT AREA AND STUDY AREA

The Project Area (Figure 1) comprises two adjacent parcels on 3rd Avenue, Half Moon Bay that total 12,300 square feet (0.28 acre). It lies within unsectioned land within the Rancho Corral de Tierra (Palomares) land grant of Township 5 North, Range 5 West, Mt. Diablo Base and Meridian, as depicted on the United States Geological Survey (USGS) Half Moon Bay, California 7.5-minute topographic quadrangle map (USGS 1991). Elevation is between approximately 40 and 60 feet above mean sea level.

The Project Area steps down the northern bank of the Arroyo de en Medio in two terrace levels separated by steeper slopes. It does not reach all the way down to the stream bed, from which it is separated by a narrow strip of property connected to a parcel on the other side of the arroyo.

The Study Area for reports (Figure 1) comprises the Project Area and a 0.2-mile-wide strip along the Arroyo de Medio to a distance of 0.5 mile from the ocean edge inland, deemed sufficient to capture any recorded resources likely to be affected by the project, to provide contextual background, and to indicate the potential for unknown resources in the Project Area based on the sensitivity of this landform. The Study Area for site records extends 0.5 mile from the Project Area.

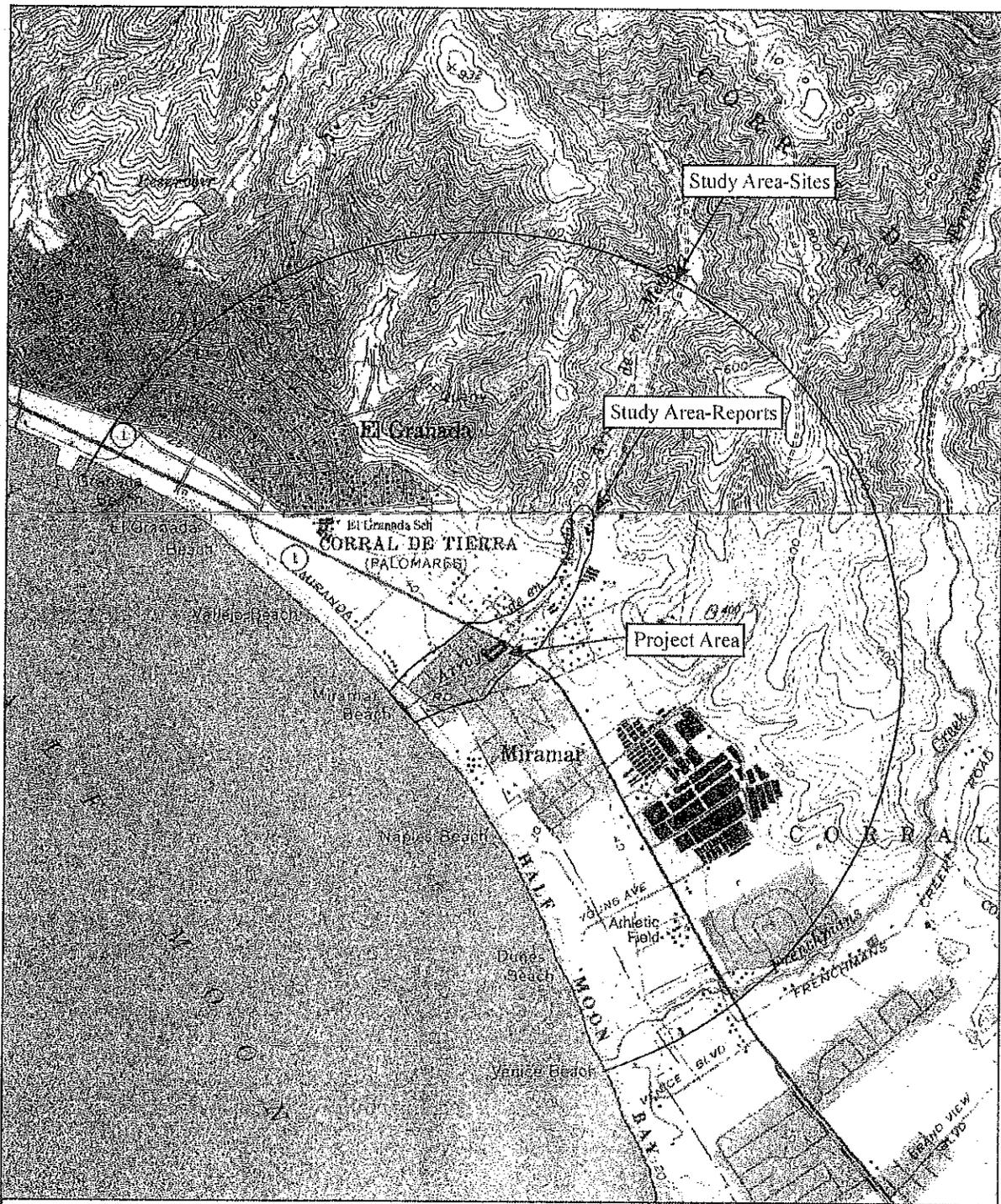
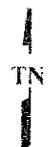
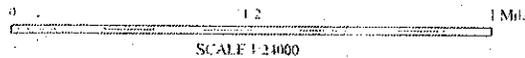


Figure 1. Project Area and Study Areas Map
 Archaeological Resources Study of Two Parcels on Third Avenue,
 Half Moon Bay, San Mateo, California



Half Moon Bay, Calif. (1991) and Montara Mountain, Calif (1956, pr 1980)

GEOLOGICAL AND ECOLOGICAL SETTING

The Project Area and Study Area rest on undifferentiated Holocene alluvial fan deposits (Knudsen et al. 2000; Witter et al. 2006). The soils are of the Watsonville-Elkhorn-Tierra land complex, a well-drained, shallow, silty sandy loam soil that extends 18 to 39 inches below the surface before reaching decomposing bedrock (United States Department of Agriculture 2016). The slope for this soil profile is nearly level to slightly sloping, ranging from 5 to 10 percent.

The natural vegetation in the Study Area in historical times has been California coastal prairie and scrub. The prairie is somewhat open and occasionally dense expanses of a medium tall bunchgrass, dominated by oatgrass (*Danthonia californica*) and red fescue (*Festuca rubra*). The coastal scrub habitat is characterized by medium-tall bunchgrass and broad-leaved evergreen shrubs, primarily coyote brush (*Baccharis pilularis*) (Küchler 1977).

Current vegetation in the Project Area is mostly native trees, bushes, and grasses. The Project Area vegetation is consistent with a Coastal Prairie-Scrub Mosaic (*Baccharis, Danthonia-Festuca*), which includes: Coastal Prairie (*Danthonia-Festuca*), which is made up of low-to-medium-height perennial bunchgrasses and forbs that grow up to 50 cm and 10 cm, respectively, and Coastal Scrub (*Baccharis pilularis ssp. Consanguinea*), which is made up of dense, broad-leaved evergreen shrubs, subshrubs, vines, forbs and graminoids that grow up to 30-50 cm high.

RECORDS SEARCH AND LITERATURE REVIEW

This study began with a records search and literature review in order to (1) determine whether cultural resources had been recorded within or near the Project Area; (2) assess the likelihood of unrecorded resources existing in the Project Area, based on archaeological, ethnographic, and historical documents and literature, and on the distribution and environmental setting of nearby sites; and (3) develop regional background and context information to aid in identifying resources and making preliminary assessments of them.

METHODS

Prior to the pedestrian archaeological survey, ASC Staff Archaeologist Michael Newland conducted a records search and literature review on 22 June 2016 at the NWIC. The NWIC, at Sonoma State University in Rohnert Park, California, is administered by the State of California Office of Historic Preservation (CA-OHP) as part of the system that maintains the California Historical Resources Information System (CHRIS), the official state repository for records and reports on historical resources, including archaeological resources. The NWIC's records cover an 18-county area that includes San Mateo County.

Additional research was conducted using maps, files, reports, and publications at ASC and online.

The records search and literature review examined the following documents:

- NWIC maps (USGS 7.5-minute topographic maps with NWIC annotations), to identify recorded archaeological sites, recorded archaeological surveys, and recorded historic-era resources of the built environment (buildings, structures, and objects) within the Study Area.
- Site records and study reports on file at the NWIC corresponding to those marked on the NWIC maps within the Study Area.
- The California Department of Parks and Recreation's (1976) *California Inventory of Historic Resources* and the OHP's (2012) *Historic Properties Directory* (HPD, updated 5 April 2012), to identify California Historical Landmarks, California Points of Historic Interest, and California historic properties that are listed in, or determined eligible for listing in, the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) located within the Study Area. This edition of the HPD includes the most updated consolidated listings of these registries available.
- Historic-era maps (*diseños*, General Land Office maps, and 19th- and early-20th-century USGS 15- and 7.5-minute topographic maps), to identify additional historic-era buildings, structures, objects, and areas of archaeological sensitivity located in or near the Study Area.
- *Handbook of North American Indians, Volume 8: California* (Heizer 1978) to identify ethnographic village locations in or near the Study Area.
- Online resources including historical map collections, the United States Department of Agriculture (USDA) Web Soil Survey website, United States Geological Survey online map and geological information, websites of local historical museums and societies, tribal websites, and subject-specific search results.

RESULTS OF RECORDS SEARCH

The records search identified four recorded cultural resources in the Study Area, none of which are in the Project Area.

Recorded Cultural Resources in the Project Area

The records search identified no previously recorded cultural resources within the Project Area.

Recorded Cultural Resources in the Study Area

The records search identified four prehistoric cultural resources outside the Project Area, but within the 1-mile radius of the Study Area (Table 1).

Table 1. Recorded cultural resources in the Study Area.

Primary No.	Trinomial	Era	OHP Status	Description	Recorder	Relation to Project Area
P-41-000140	CA-SMA-138	Prehistoric	Not evaluated	Shell midden	Hines and Rivers 1985	1 mile south
P-41-000143	CA-SMA-141	Prehistoric	Not evaluated	Shell midden, noted as possible habitation site	Melandry and Gardener 1982	1 mile southeast
P-41-000151	CA-SMA-149	Prehistoric	Not evaluated	Shell midden and lithic concentration	Bordeau 1997	0.10 mile northwest
P-41-000429	CA-SMA-340	Prehistoric	Not evaluated	Lithic and shell concentration	Clark 1993	1 mile southeast

Recorded Cultural-Resource Studies in the Project Area

The records search identified no previously recorded cultural-resource studies that included any of the Project Area.

Recorded Cultural-Resource Studies in the Study Area

The records search identified 27 recorded cultural-resource studies outside the Project Area but within the study area defined on Figure 1 (Table 2).

Table 2. Recorded cultural-resource studies in the Study Area.

Study No.	Date	Author	Relation to Project Area	Findings
S-18399	1996	Cartier et al.	0.05 miles northwest of the Project Area	None
S-3121	1979	Chaloupka	0.10 miles northwest of the Project Area	Auger tests of an impacted section of CA-SMA-149 found no cultural remains
S-19510	1997	Clark	0.05 miles northwest of the Project Area	None
S-22653	2000	Clark	0.10 miles southwest of the Project Area	None
S-9376	1987	Cartier	0.07 miles southwest of the Project Area	None
S-23897	2001	Desmond	0.1 mile east of the Project Area	None
S-21452	1987	Hylkema	0.1 mile southwest of the Project Area	None
S-20197	1998c	Clark	0.07 miles southwest of the Project Area	None
S-20484	1998a	Clark	0.10 miles southwest of the Project Area	None
S-17649	1995	Clark	0.10 miles northwest of the Project Area	Discovered and recovered one burial during construction over a portion of CA-SMA-149
S-9569	1988	Bordeau	0.07 mile southwest of the Project Area	None

S-10539	1989	Clark	0.1 mile west of the Project Area	None
S-10671	1988	Baker and Smith	0.15 mile west of the Project Area	None
S-13714	1992	Clark	0.15 mile southwest of the Project Area	None
S-18864	1997a	Bourdeau	0.08 mile northeast of the project Area	Component of CA-SMA-149 identified
S-19214	1997b	Bourdeau	0.08 mile northeast of the project Area	Monitoring finds at CA-SMA-149
S-19221	1997c	Bourdeau	0.08 mile northeast of the project Area	Components of CA-SMA-149 identified
S-21450	1999b	Clark	0.13 mile southwest of the Project Area	None
S-22252	1998	Clark	0.01 mile south of the Project Area	None
S-22392	1999a	Clark	0.18 mile southwest of the Project Area	None
S-22585	2000a	Clark	0.12 mile east of the Project Area	None
S-22586	2000b	Clark	0.16 mile northeast of the Project Area	None
S-14107	1992	Clark	0.10 miles northwest of the Project Area	Test excavations and augering at CA-SMA-149 identified shell midden and sparse lithic artifacts
S-22382	1999	Losee	0.08 mile south of the Project Area	None
S-24405	2001	Clark	0.11 mile southwest of the Project Area	None
S-3112	1979	Brown and Landry	0.10 miles northwest of the Project Area	Referred to CA-SMA-149, but did not investigate it
S-3113	1979	Chaloupka	0.10 miles northwest of the Project Area	Monitoring recommendations for CA-SMA-149 do not mention any investigation
S-3114	1979	Clark and Holman	0.10 miles northwest of the Project Area	Mitigation recommendations for CA-SMA-149 do not mention any investigation
S-18395	1995	Cartier	0.05 mile northwest of the Project Area	None
S-11974	1989	Cartier	0.08 mile east of the Project Area	None

RESULTS OF LITERATURE REVIEW

The literature review provides context for cultural resources in the region.

Ethnographic Overview

The Study Area is within the northern area of the territory occupied at the period of European contact by people collectively called the Ramaytush Ohlone by ethnographers. The term Ohlone includes several distinct groups who spoke separate languages within the Costanoan language family, the speakers of which included populations from the southern and eastern San Francisco Bay areas to south of Monterey Bay and east into the Coast Range (Levy 1978:485). The primary sociopolitical unit appears to have been the multi-village tribelets that characterized much of California (Levy 1978:487). The recorded villages closest to the Project Area were *ʔOlxon* to the south near Half Moon Bay and *Kotxen* to the north near La Granada.

The Ohlone hunted and gathered plants in a variety of environments. Their territory included both coastal and open-valley environments. The latter provided a wide variety of resources, including acorns, grass seeds, bulbs and tubers, deer, elk, antelope, several bird species, rabbits, and other small mammals. Marine foods were particularly important. Ohlone captured surf and bay fish, bullhead, steelhead, and salmon, and gathered shellfish, including mussels and clams, from rocks and beaches (Levy 1978:491).

Prehistoric Overview

Fredrickson (1974a) outlined an analytical framework for interpreting the prehistory of the San Francisco Bay and North Coast Ranges that divides human history in California into three broad periods: The Paleoindian period, the Archaic period, and the Emergent period. It differentiates cultural units based on sociopolitical complexity, trade networks, population, and the introduction and variations of artifact types. The scientific significance of prehistoric sites rests partly on their ability to help archaeologists explain the reasons for these changes in different places and at different times in prehistory. With minor revisions (Fredrickson 1994), this scheme remains the dominant framework for prehistoric archaeological research in the region.

The Paleoindian period (10,000 to 6,000 B.C.) was characterized by small, highly mobile groups occupying broad geographic areas. During the Archaic period, subdivided into the Lower Archaic (6000 to 3000 B.C.), Middle Archaic (3000 B.C. to 500 B.C.), and Upper Archaic (500 B.C. to A.D. 1000), some groups may have remained mobile, while others began to establish longer-term base camps in places from which a more diverse range of resources could be exploited. The addition of milling tools and concave-base projectile points of obsidian and chert, together with the occurrence of sites in a wider range of environments, suggest that the economic base had become more diverse. By the Upper Archaic, mobility was being replaced by a more sedentary adaptation. With the development of numerous small villages, the beginnings of a more complex society and

economy began to emerge. During the Emergent period (A.D. 1000 to 1800), social complexity developed toward the ethnographic pattern of large, central villages where political leaders resided, with associated hamlets and specialized activity sites. Artifacts associated with the Emergent period include the bow and arrow, small corner-notched points, mortars and pestles, and a diversity of beads and ornaments.

Historic-era Overview

The historic era began at different times in different parts of California, as Euro-Americans moved into regions where indigenous populations had been reduced or eliminated completely by waves of Old World diseases that preceded them. Subsequent government policies and ad-hoc vigilante efforts by settlers led to forced removals and violence towards local indigenous communities, resulting in new, mostly immigrant communities embedded in the new economies of ranching, timber harvesting, and farming.

Portola Expedition

The first known Euro-American exploration in the vicinity of the Study Area was likely that of the Portola expedition, which passed east and south of the Study Area in 1769 as they hiked north along the California coast to find Monterey Bay. The expedition failed to recognize Monterey Bay and continued past it, but on November 2, a hunting party discovered the inner San Francisco Bay from a peak on Sweeny Ridge, some 2 miles east of the Project Area (Hoover et al. 1990:369). The expedition crossed Sweeny Peak and travelled east to explore the southern San Francisco Bay area.

Early Euro-American Settlement

The stretch of coastline between Pedro Mountain and Pilarcitos Creek was divided into extensive horse and ox ranches during the late 1700s and early 1800s. The Rancho Corral de Tierra was granted in two parts, the first of which was given to Josefa Haro de Guerrero, the widow of Francisco Guerrero Palomares in the 1860s; some sources place it earlier in time, during the 1830s and 40s (Dietz and Jackson 1970:22; Hoover et al. 1990:372). The Project Area lies within this earlier portion of the Rancho Corral de Tierra grant, on the northern bank of the Arroyo de en Medio, which, as the name suggests, ran in between the two portions of the land grant.

James Johnston, a Scottish immigrant, arrived in California in 1849 and made a fortune in business enterprises in San Francisco. He started a large cattle ranch near the current location of Half Moon Bay, starting work on a large home there by 1853. Johnston and his brothers were involved in a variety of local businesses and held a number of public offices during the mid- and late 1800s (Dietz and Jackson 1970:24-25). The town plat for what was then known as Spanishtown was laid out and initial plots sold during the 1860s; the name was later changed to Half Moon Bay (Dietz and Jackson 1970:36). Stage lines reached the area in the 1860s, and a whaling station was established at Pillar Point, roughly two miles to the south (Dietz and Jackson 1970:30, 31).

A number of agricultural enterprises were launched throughout the second half of the 19th century, particularly emphasizing potato and flax, but they did not survive. The discovery of oil in the Purisima area in 1880s led to a flurry of claims, but this industry, too, was short-lived (Dietz and Jackson 1970:38).

AGENCY AND TRIBAL COMMUNICATION

ASC contacted the Native American Heritage Commission (NAHC) on 28 June 2016, requesting a review of the Sacred Lands File for information on Native American cultural resources in the project area. On 7 July 2016, the NAHC responded with a list of groups and individuals who may wish to be contacted about the project. On 11 July, Robert Watson sent letters to individuals identified on the NAHC contact list. (See Appendix for these documents). As of this report date, no responses have been received.

SENSITIVITY FOR BURIED ARCHAEOLOGICAL RESOURCES

The likelihood that an area includes surface or buried archaeological remains is referred to as its archaeological sensitivity. Landform and physical processes play fundamental roles in the creation, preservation, burial, and eventual discovery of archaeological sites in much of California (Meyer and Rosenthal 1997; Rosenthal and Meyer 2004).

Although the presence of known archaeological sites is an indicator of the sensitivity of the general landscape, the results of the records search and NAHC review of the Sacred Lands File reflect only available information on resources that have already been documented. Predictions of an area's sensitivity are based on additional factors, including geological and soil conditions determined from maps and environmental factors based on terrain surface modeling (Meyer et al. 2011: 126).

The Project Area lies on Holocene alluvial fan deposits (Witter et al. 2006). The age and composition of these deposits affects their potential to contain prehistoric buried sites. Landforms that developed in the Holocene may contain buried archaeological remains, as they formed during the time that humans were present. Due to the presence of the Arroyo de en Medio corridor, the overall sensitivity for buried archaeological resources in the Holocene deposits that characterize the Project Area is **High**.

POTENTIAL FOR ARCHAEOLOGICAL RESOURCES

Records of four small prehistoric lithic deposits within one mile of the Project Area indicate that the sensitivity for similar limited archaeological remains on the surface is high. As discussed above, the sensitivity of the Project Area for buried archaeological resources is high. Historical research and the absence of known historic-era resources within a mile of the Project Area, despite the numerous cultural-resources studies that have sought them in

the Study Area, indicate that the potential for historic-era archaeological resources to be found on the surface within the Project Area is low.

PEDESTRIAN ARCHAEOLOGICAL SURVEY

Following the records search and literature review, ASC staff conducted a pedestrian archaeological survey of the Project Area in order to (1) identify prehistoric and historic-era archaeological resources visible on the surface, and (2) assess the likelihood that additional resources not currently visible on the surface exist in the Project Area.

METHODS

Michael Newland, ASC Staff Archaeologist, and Robert Watson, ASC Project Coordinator, conducted a pedestrian archaeological survey of the entire 0.28-acre Project Area on 27 June 2016. They walked parallel linear transects separated by 5 m, examining the ground surface for archaeological artifacts and features. Ground visibility was uniformly poor (approximately 10%) due to dense grass and duff, with only pockets of exposed soil or rodent back dirt visible. To offset the poor visibility, the field crew cleared sections of vegetation with hand tools at varying distances along the transects in order to expose the ground surface and inspect it for indicators of archaeological deposits. They also inspected soil brought to the surface by burrowing animals and other natural processes. They examined the profiles of trench that had been excavated adjacent to the northwestern edge of the Project Area, and cleared a natural cut in the southern portion of the Project Area. In addition, the surveyors were prepared to note non-archaeological cultural resources of the built environment at a basic level, although none were encountered.

RESULTS OF PEDESTRIAN SURVEY

The pedestrian archaeological survey found no evidence of archaeological resources on the surface or in soil brought to the surface by burrowing rodents. Because of the poor visibility, however, the existence of buried or hidden cultural resources cannot be entirely ruled out.

An open trench (Figure 2) bordering the northwestern edge of the Project Area lay within the easement for the property and was available for review at the time of survey. The 50-cm-wide trench appears to have been excavated for a water line related to a project on a neighboring property that shares the easement. It exposed profiles of blackish brown sandy silt extending about 1 m below the surface, capped by apparently artificial fill. No midden, artifacts, or features were noted in the sidewalls of the trench.

A cleared cut (Figure 3) along the creek bank of the arroyo revealed a thick cap of bedded sand and pea gravel deposits, indicating that the upper levels of sediment reflect a

dynamic alluvial environment on the lower terrace that would be unlikely to contain in-situ archaeological resources.

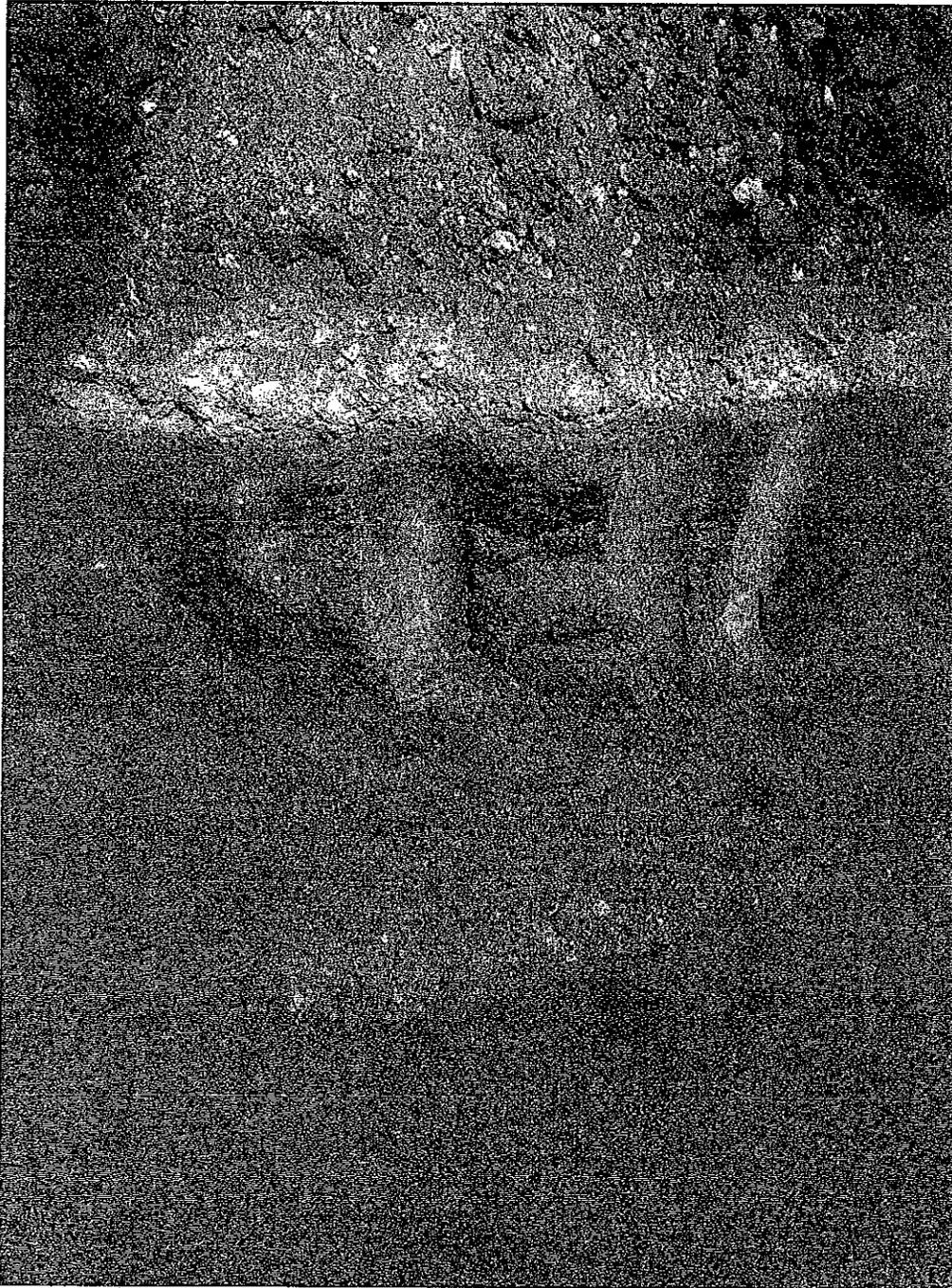


Figure 2. North profile of a trench outside the northwest edge of the Project Area, extending about one meter below the surface, showing artificial fill capping featureless sediment (photo acc. #1537-01).



Figure 3. Cleaned creek bank cut showing bedded sand and gravel, north side of the Arroyo de Medio, looking north (Image acc. # 1537-02).

AUGER TESTING

In consideration of the proximity of CA-SMA-138, -141, -149, and -340, the inconclusive findings from earlier studies regarding the potential for buried deposits, and the poor visibility encountered in the pedestrian survey, the authors conducted a program of subsurface survey using auger testing to directly evaluate the possibility of buried archaeological deposits being present.

METHODS

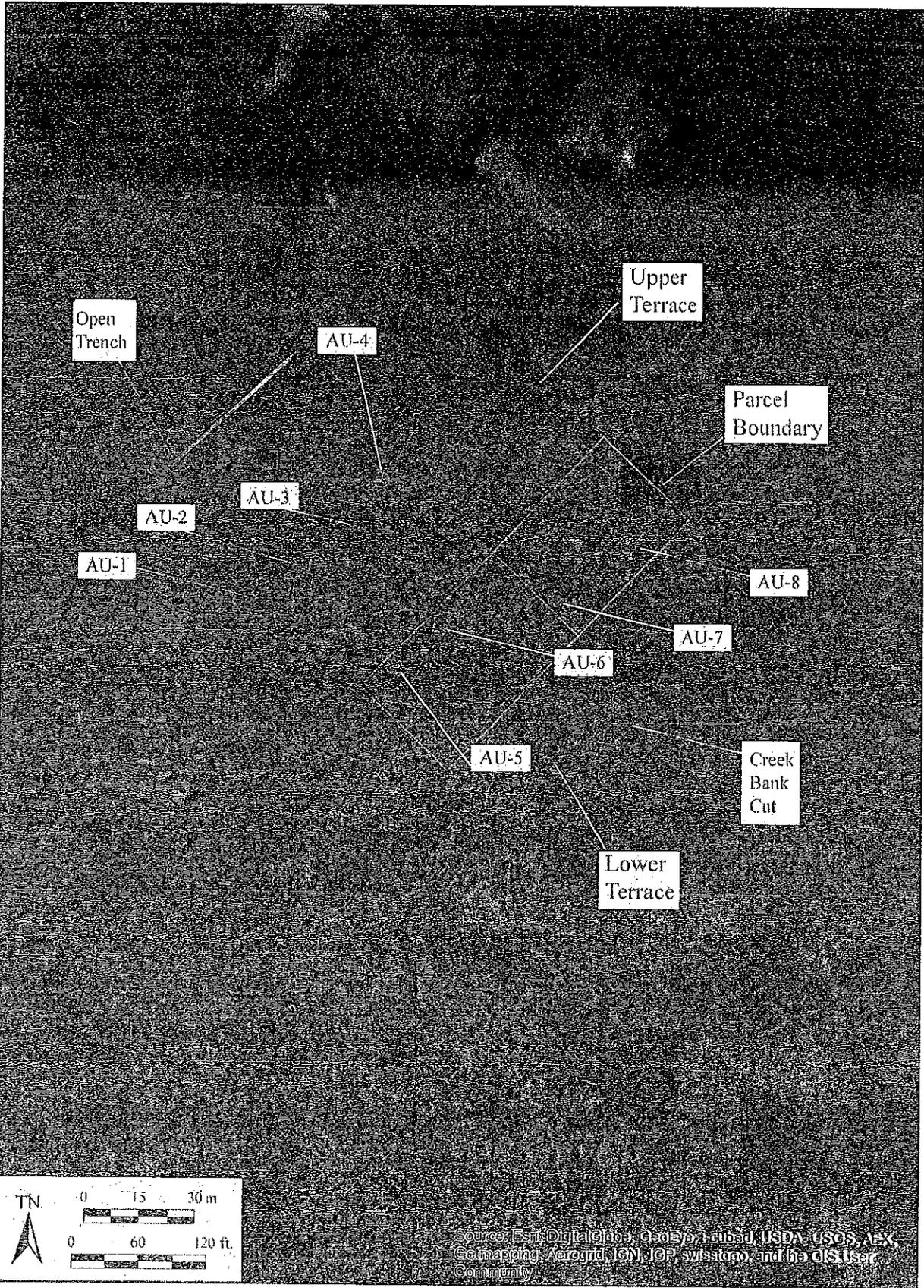
The authors placed eight auger-testing units in two roughly parallel lines across the parcels (Figure 4). The pattern was designed to sample areas of in-situ deposits on the upper and lower terrace levels that were neither inaccessible due to heavy vegetation cover nor buried too deeply by redeposited sediment. The northwest row of four auger tests sampled the upper terrace level. The two lines of two auger tests to the southeast sampled the lower terrace. Each auger test was taken to 35 to 120 cm below surface, with each unit terminated at the encounter with obstructions. The auger tests were excavated by hand using a post-hole auger and documented with notes describing the soil stratigraphy in 10-cm arbitrary levels. The excavated material was passed through a 1/4-inch screen to separate any cultural remains such as shell, bone, or lithic fragments.

RESULTS OF AUGER TESTING

No evidence of archaeological deposits was found in any of the auger-testing units.

All four auger tests in the upper terrace level near the northwest edge of the Project Area were negative. They ranged in depth from 35 cm to 80 cm. The sediments encountered suggested that the top 60 cm of soil along the northwestern, upper terrace of the property is likely to be artificial fill that would not contain any in-situ archaeological resources.

The four auger tests on the lower terrace near the creek were also all negative. This extended 100 to 120 cm in depth. The stratigraphy was dominated by silty sand deposits that appear bedded, which corresponds with the flat, low-lying terrain and steep slope up to the upper terrace to suggest that this landform is a flood terrace of the arroyo. Such a geologically active location would not be likely to accumulate in-situ archaeological remains.



CONCLUSIONS

The records and literature search identified no previously recorded cultural resources in the Project Area. No information has been received from the NAHC or the people on the list of contacts provided by the NAHC that suggests the presence of cultural resources in the Project Area. While background research indicates some sensitivity for small prehistoric archaeological resources within the Project Area, no evidence of archaeological deposits was found on the surface in the pedestrian survey, in the sidewalls of a trench adjacent to the Project Area, in a cleared natural cut within the Project Area, or in any of the auger-testing units. The trench and sediments observed in the auger units in the upper terrace suggest that it is capped by roughly 60 cm of artificial fill that would not contain in-situ archaeological deposits. The landform of the lower terrace, the sediments observed in the auger units there, and the cleared natural cut suggest that the upper meter or more of sediments on the lower terrace reflect an active alluvial environment that is unlikely to have accumulated in-situ archaeological deposits.

In sum, while the corridor on either side of the Arroyo de en Medio in general should be considered sensitive for archaeological resources, the current Project Area does not appear to contain any, and sediment observations suggest that buried archaeological resources are unlikely to be present in the upper portions of the deposits in these parcels.

ENCOUNTERING UNRECORDED ARCHAEOLOGICAL RESOURCES

There is a low possibility that unrecognized surficial resources or subsurface archaeological deposits are present within the Project Area. Prehistoric and historic-era resources may be obscured by colluvium, alluvium, vegetation, or other factors.

If concentrations of prehistoric or historic-era materials are encountered during project activities, it is recommended that all work in the immediate vicinity stop until a qualified archaeologist can evaluate the finds and make recommendations.

Prehistoric materials might include obsidian and/or chert flaked-stone tools such as projectile points, knives, or scrapers; the debris from making, sharpening, and using them ("debitage"); culturally darkened soil containing shell, dietary bone, heat-altered rock, and carbonized plant material ("midden"); or stone milling equipment such as mortars, pestles, handstones, or milling slabs.

Historic-era materials might include adobe, stone, brick, or concrete footings or walls; buildings or other remains with cut nails; filled privies or wells; or deposits of metal, glass, and/or ceramic artifacts.

ENCOUNTERING HUMAN REMAINS

While there is no indication of human remains within the Project Area, the possibility of encountering archaeological resources that contain human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, work must halt in the vicinity and, as required by law, the County Coroner must be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation.

If human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of that determination. The Commission then notifies the Most Likely Descendant, who has 48 hours to make recommendations to the landowner for the disposition of the remains.

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- 1998b *An Archaeological Reconnaissance of Parcel 048-054-130, on Miramar Drive, in the Community of Miramar, San Mateo County, California.* MRC Consulting, El Granada, California. Prepared for Fredrick Herring, Redwood City, California.
- 1998c *An Archaeological Reconnaissance of a Portion of the Welch Parcel (048-054-090) at 340 Miramar Avenue, in the Community of Miramar, San Mateo County, California.* MRC Consulting, El Granada, California. Prepared for David Welch, Montara California.
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APPENDIX

NAHC/*Organization Correspondence*

NATIVE AMERICAN HERITAGE COMMISSION

1650 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
Fax (916) 373-5471



July 6, 2016

Mike Newland
ASC

Sent by Email: newland@sonoma.edu
Number of Pages: 3

RE: 3rd Ave Miramar Project, San Mateo County

Dear Mr. Newland:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: Sharaya.souza@nahc.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharaya Souza".

Sharaya Souza
Staff Services Analyst



1801 East Cotati Avenue
Rohnert Park, CA 94928-3609

ANTHROPOLOGICAL STUDIES CENTER

707.664.2381 • fax 707.664.4155
www.sonoma.edu/asc

Rosemary Cambra
Muwekma Ohlone Indian Tribe of the SF Bay Area
P.O. Box 360791
Milpitas, CA 95036

11 July 2016

Re: 3rd Ave Miramar Project, San Mateo County

Dear Chairperson Cambra,

The Anthropological Studies Center (ASC) conducted an archaeological survey of a two 0.13-acre parcels (APN 048-042-280 and 290) at 3rd Avenue, in Half Moon Bay, San Mateo County as depicted on the Half Moon Bay, California 7.5' topographic map (attached). The proposed project involves the construction of two single family residences. The archaeological study was completed as part of environmental review documentation required by the San Mateo County Planning and Building Department pursuant to the California Environmental Quality Act of 1970. The lead agency, San Mateo County, will consult directly with tribes under Assembly Bill 52.

A records search completed prior to survey indicated that no previously recorded archaeological resources are within the project area; four previously recorded prehistoric archaeological resources are within a 1.0-mile radius surrounding the project area. No resources were found in the project area during our pedestrian surface survey.

We would appreciate any information or concerns that your organization may wish to share with regard to cultural resources within the project area. If you have concerns or questions, please do not hesitate to give me a call at (707) 664-2734 or contact me via email at watsonro@sonoma.edu. We look forward to hearing from you.

Sincerely,

Robert Watson, B.A.,
Project Coordinator

Enclosures:
Project map

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Tony Cerda
Costanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

11 July 2016

Re: 3rd Ave Miramar Project, San Mateo County

Dear Chairperson Cerda,

The Anthropological Studies Center (ASC) conducted an archaeological survey of a two 0.13-acre parcels (APN 048-042-280 and 290) at 3rd Avenue, in Half Moon Bay, San Mateo County as depicted on the Half Moon Bay, California 7.5' topographic map (attached). The proposed project involves the construction of two single family residences. The archaeological study was completed as part of environmental review documentation required by the San Mateo County Planning and Building Department pursuant to the California Environmental Quality Act of 1970. The lead agency, San Mateo County, will consult directly with tribes under Assembly Bill 52.

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Andrew Galvan
Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

11 July 2016

Re: 3rd Ave Miramar Project, San Mateo County

Dear Mr. Galvan,

The Anthropological Studies Center (ASC) conducted an archaeological survey of a two 0.13-acre parcels (APN 048-042-280 and 290) at 3rd Avenue, in Half Moon Bay, San Mateo County as depicted on the Half Moon Bay, California 7.5' topographic map (attached). The proposed project involves the construction of two single family residences. The archaeological study was completed as part of environmental review documentation required by the San Mateo County Planning and Building Department pursuant to the California Environmental Quality Act of 1970. The lead agency, San Mateo County, will consult directly with tribes under Assembly Bill 52.

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Robert Watson, B.A.,
Project Coordinator

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Ann Marie Sayers
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

11 July 2016

Re: 3rd Ave Miramar Project, San Mateo County

Dear Chairperson Sayers.

The Anthropological Studies Center (ASC) conducted an archaeological survey of a two 0.13-acre parcels (APN 048-042-280 and 290) at 3rd Avenue, in Half Moon Bay, San Mateo County as depicted on the Half Moon Bay, California 7.5' topographic map (attached). The proposed project involves the construction of two single family residences. The archaeological study was completed as part of environmental review documentation required by the San Mateo County Planning and Building Department pursuant to the California Environmental Quality Act of 1970. The lead agency, San Mateo County, will consult directly with tribes under Assembly Bill 52.

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Sincerely,

Robert Watson, B.A.,
Project Coordinator

Enclosures: Project map

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Irene Zwielerlein
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

11 July 2016

Re: 3rd Ave Miramar Project, San Mateo County

Dear Chairperson Zwielerlein,

The Anthropological Studies Center (ASC) conducted an archaeological survey of a two 0.13-acre parcels (APN 048-042-280 and 290) at 3rd Avenue, in Half Moon Bay, San Mateo County as depicted on the Half Moon Bay, California 7.5' topographic map (attached). The proposed project involves the construction of two single family residences. The archaeological study was completed as part of environmental review documentation required by the San Mateo County Planning and Building Department pursuant to the California Environmental Quality Act of 1970. The lead agency, San Mateo County, will consult directly with tribes under Assembly Bill 52.

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Robert Watson, B.A.,
Project Coordinator

Enclosures:
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ATTACHMENT H

Sigma Prime Geosciences, Inc.

September 12, 2016

Ed Love
P.O. Box 3023
Moss Beach, CA 94038

Subject: Response to California Coastal Commission Comments: 3rd Avenue, Miramar.
PLN2015-00152

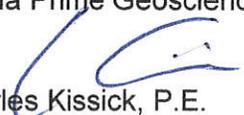
Dear Mr. Love:

This letter is in response to comments from the California Coastal Commission (CCC) in a letter dated August 31, 2016. The comments, with responses, are summarized below.

- The CCC asks that our geologic hazard recommendations be reviewed to make sure they conform to current building standards. We reviewed our soils report and our write-up on geologic hazards, and find no reason to update our recommendations. Our geologic hazard analyses were based on scientific publications that are still valid.
- The CCC says that the site is likely to be flooded because it is in a flood plain of a creek. FEMA does not designate the area as a flood plain. The site is in an area designated as "Zone X", which is an area that does not flood. The creek is seasonal, draining a watershed of about 720 acres. We constructed a typical cross section of the creek, which is incised to a depth of about 5 feet, and with tops of banks about 20 feet apart. The cross-sectional area of the creek is about 60 square feet. Upstream of the site, there are two concrete culverts under Highway 1, each 5 feet in diameter, for a total area of 39.3 square feet. We performed a hydrologic analysis of the watershed, attached, and found that the depth of water in the cross is estimated to be about 2.5 feet during a 100-year storm. Therefore, the water would not leave the incised creek bed. The house site is not likely to become flooded.
- The CCC says that the channel of the creek is likely to migrate over the lifetime of the proposed house and possibly threaten the house, which will be a little over 30 feet from the current creek bank. There is no evidence that this would be the case. The property lines were established about 110 years ago, and were defined by the centerline of the creek. The property lines are still in the centerline of the creek, suggesting that the creek has not migrated at all in 110 years.
- We made a site visit and conclude that the recommendations in our soils report are still valid.

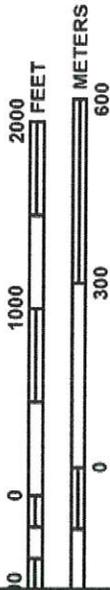
If you have any questions, please call me at (650) 728-3590. We look forward to working with you on this project.

Yours,
Sigma Prime Geosciences


Charles Kissick, P.E.



MAP SCALE 1" = 1000'



NFP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0255E

FIRM
FLOOD INSURANCE RATE MAP
SAN MATEO COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 255 OF 510

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	
COMMUNITY	NUMBER
HALF MOON BAY, CITY OF	060319
SAN MATEO COUNTY	060311
PANEL	SUFFIX
0255	E
0255	E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown below should be used on insurance applications for the subject community.

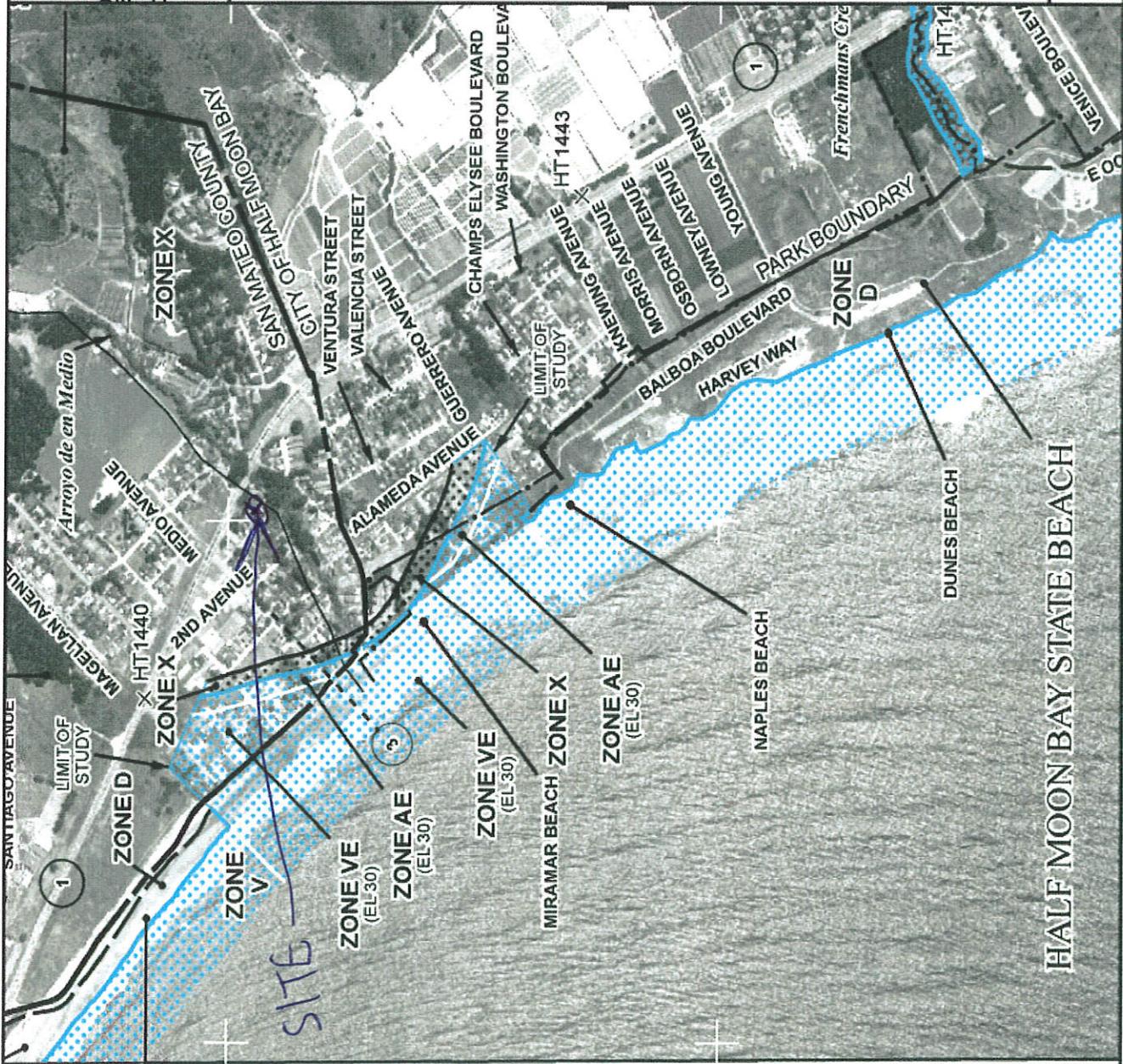


MAP NUMBER
06081C0255E

EFFECTIVE DATE
OCTOBER 16, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



HALF MOON BAY STATE BEACH



October 25, 2016

Ed Love
P.O. Box 3023
Moss Beach, CA 94038

Subject: Response to County Comments: 3rd Avenue, Miramar. PLN2015-00152

Dear Mr. Love:

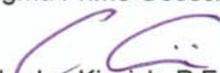
It has come to our attention that the County would like us to address one remaining issue regarding the creek at the southern property line of the subject property. We have already addressed flood levels due to a 100-year storm, as well as the probability that the creek will meander across the site into the footprint of the proposed house. These issues were discussed in a letter dated September 12, 2016, answering comments from the California Coastal Commission. The remaining issue that the County is concerned about is a small reservoir in the watershed, and what the impact of a dam break at the reservoir would have on the subject property.

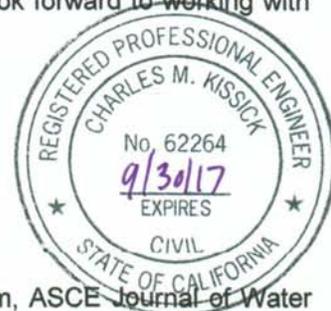
The reservoir is located about 7,500 feet upstream of the subject property. It covers an area of about 30,000 square feet. An aerial photograph of the reservoir when it was nearly dry shows a maximum depth of about 5 to 7 feet. Based on an average depth of the entire reservoir of 5 feet, the volume of the reservoir is about 3.4 acre-feet. The watershed area is about 720 acres.

Based on the method of Froehlich (1995), we estimate that the volume of flow at the subject site due to a dam break would be 212 cubic feet per second (cfs). The attached spread sheet outlines the procedure with the equation. The estimate is based on a very conservative reservoir volume, and the assumption that the entire dam would be removed instantly. In reality, the dam would breach over a period of time, and the breach is unlikely to be as wide as the whole dam. We had already estimated a peak flow during a 100-year storm of 119 cfs. In the somewhat unlikely event that the two peak flows coincided, a total flow volume of 331 cfs would result. Our earlier estimate of flow heights within the creek channel yields an estimated peak elevation within the creek bed of about 48.5 feet. The ground elevation of the property where the lower portion of the house is to be located ranges from 49.7 feet to 51.0 feet. Therefore, the house would not be flooded.

If you have any questions, please call me at (650) 728-3590. We look forward to working with you on this project.

Yours,
Sigma Prime Geosciences


Charles Kissick, P.E.



Ref:
Froehlich, David C., Peak Outflow from Breached Embankment Dam, ASCE Journal of Water Resources Planning and Management, vol. 121 no.1, p. 90-97, 1995.

Dam Break Inundation Estimate

Job: 3rd Avenue _____
No.: 10-114 _____
Date: 10/25/2016 _____
by: CMK _____

Dam Break Peak Discharge Equation:

Ref: <https://fortress.wa.gov/ecy/publications/documents/9255e.pdf>
(Froelich, 1995, Equation 6)

$$Q_p = 40.1 V_w^{0.295} H_w^{1.24}$$

Where: Q_p = dam break peak discharge (cfs)
 V_w = Discharge Volume (acre-feet)
 H_w = Height of water above breach elevation (ft)

V_w : acre-feet

H_w : feet

Q_p : cfs

Attenuation of Discharge at distance of 1.4 miles = 50%

Attenuated Q_p : cfs



ATTACHMENT I

100-Year Flood Level in Natural Stream

Job: 3rd Avenue
 No.: 10-114
 Date: 9/12/2016
 by: CMK

Rational Method to Estimate Storm Runoff (page 20-13)

$Q_p = CIA_d$ Reference: Civil Engineering Reference Manual

Area, A_d (acres): 720
 C (Appendix 20.A): 0.5
 I (rainfall intensity): from SM County Map
 Storm Frequency: 100 years
 Time of Concentration, t_c $t_c = L_o / vel$
 L_o : 10300 feet, longest flow distance in watershed
 Elev. Change: 800 feet
 Slope: 7.8 %
 vel.: 2.5 ft/sec (from Fig 20.4, page 20-4)
 t_c : 4120.0 minutes
68.7 hours
 Intensity, from NOAA Atlas 14 0.33 (for 24 hours)

$Q_p =$ 118.80 ft^3/sec = 53182.01 gal/min

Flow Quantities

$Q = vA = (1.49/n)AR^{2/3}(S)^{5/4}$ Eq. 19.13b, page 19-4

n: 0.06 Manning roughness coefficient, from Appendix 19.A
 Elev., water surface: 45 from cross section on site plan, iterate until flows equate
 A: 41.51 SF
 P: 19.07 wetted perimeter for area above
 R: 2.18 Hydraulic Radius, A/P
 S: 0.02 Slope of stream

$Q =$ 244.85 ft^3/sec

Table Data:

Elev.	Area	P	Q
45	5.62	10.17	13
46	14.40	11.54	59
47	26.36	15.30	133
48	41.51	19.07	245
49	59.59	22.79	397





San Mateo County Planning Commission Meeting

Owner/Applicant:

Vella/Sempervivo/Love

Attachment: **G**

File Numbers:

PLN2015-00152



San Mateo County Planning Commission Meeting

Owner/Applicant: **Vella/Sempervivo/Love**

Attachment: **G**

File Numbers: **PLN2015-00152**





San Mateo County Planning Commission Meeting

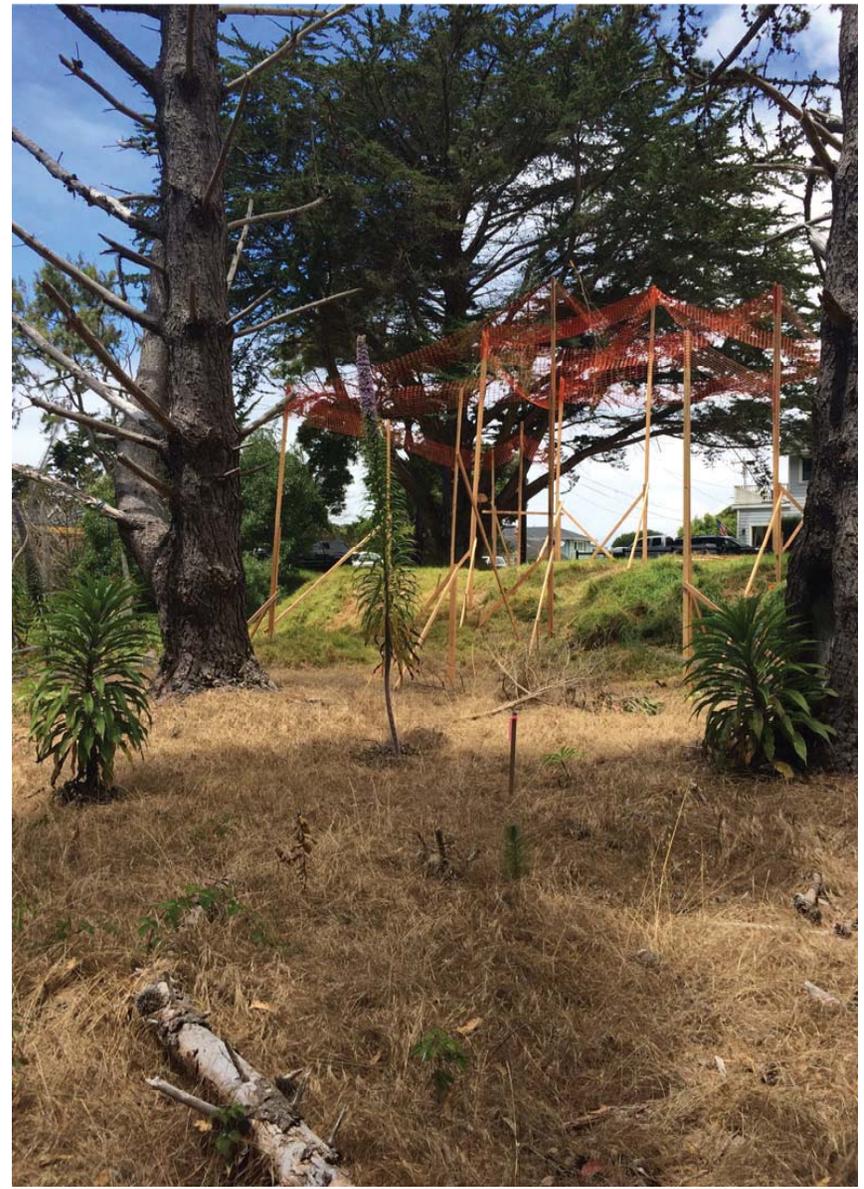
Owner/Applicant: _____

Vella/Semprevivo/Love

Attachment: **G**

File Numbers: _____

PLN2015-00152



San Mateo County Planning Commission Meeting

Owner/Applicant:

Vella/Semprevivo/Love

Attachment:

G

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San Mateo County Planning Commission Meeting

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Attachment:

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