Biological Resource Assessment / Environmentally Sensitive Habitat Area Survey

Bewley Property
San Mateo, San Mateo County, California

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1.0 INTRODUCTION

On June 18, 2013, WRA, Inc. (WRA) performed a Biological Resources Assessment (BRA) / Environmentally Sensitive Habitat Area (ESHA) assessment at the southern end of Audobon Avenue in Montara, San Mateo County, California (Study Area, Figure 1). The approximately 8.2-acre Study Area is situated on a coastal terrace above Montara Creek. A residential development is proposed in the eastern portion (Project Area[1], Appendix E). Downtown Montara is located approximately one-half mile to the northwest of the Study Area. The purpose of this study was to identify and map areas within the proposed residential development that are potentially jurisdictional under several federal, state, and/or local laws and policies, including "Waters of the U.S.", "Waters of the State", ESHA, and other sensitive habitats and special-status species. The proposed project involves the construction of a single-family residence on a single parcel (APN: 036-310-180) in San Mateo County. Included herein are the results of the site assessment and recommendations for all delineated sensitive biological communities and special-status species and their habitats.

After the June 18, 2013, survey, the project entered a temporary hiatus. However, the project has resumed, and because more than 2 years have elapsed since the prior survey, a follow-up, reconnaissance level survey was conducted by WRA on September 30, 2015, to assess current site conditions. This report is an update to the BRA/ESHA report submitted by WRA in 2013 and includes the results of that report as well as the findings of the 2015 survey. As a part of this updated report, a review was conducted of the revised project plans received December 12, 2017.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the BRA/ESHA survey, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act and Endangered Species Act (ESA); state regulations such as the Porter-Cologne Act, the California Department of Fish and Wildlife (CDFW[2]) Streambed Alteration Program, California Environmental Quality Act (CEQA), and California Coastal Act (CCA); or local ordinances or policies such the San Mateo Local Coastal Program (LCP).

[1] Project Area is used herein to include only the area in which development and attendant impacts will occur; Study Area is used herein to include the entire property, inclusive of the Property Area. In most instances, the assessment covers the Study Area, and the Project Area is only called out when discussing impacts therein.

[2] On January 1, 2013, the California Department of Fish and Game (CDFG) officially changed their agency name to the California Department of Fish and Wildlife (CDFW). All references to the actions, guidelines, publication, and/or laws administered or drafted prior to January 1, 2013 are herein cited to the CDFG, while all those on or after January 1, 2013 are cited to the CDFW.

Figure 1. Study Area Location

2.1.1 Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as non-wetland waters and are often characterized by an ordinary high water mark (OHWM). Non-wetland waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

2.1.2 Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

2.1.3 Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life…[including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). "Riparian" is defined as "on, or pertaining to, the banks of a stream." Riparian vegetation is defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

2.1.4 Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values, and are frequently protected under CEQA, CCA, or other state and/or local policies. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2015). Sensitive plant communities are also identified by the CDFW (CNPS 2015a). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Additionally, the CDFW recognizes starred (*) communities within *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) as sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or the U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

San Mateo County LCP Policy 7.1 defines ESHA as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes. The LCP provides that sensitive habitat areas include, but are not limited to, riparian corridors as defined on County maps, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species in this region, such as the California wild strawberry (*Fragaria vesca* [*F. californica*]).

LCP Policy 7.3 requires ESHA to be protected through (a) the prohibition of any land use or development which would have significant adverse impact on sensitive habitat areas, and (b) siting and designing development in areas adjacent to sensitive habitats to prevent impacts that could significantly degrade the sensitive habitats. In addition, this LCP policy requires all uses to be compatible with the maintenance of biologic productivity of the habitats. At the LCP regulatory development implementation stage, the County's coastal development permit application form requires the applicant to identify any creeks, streams, lakes, ponds, wetlands, beaches, sea cliffs, coastal bluffs, tree or vegetation removal, grading or other landform alteration, areas subject to flooding, and development on slopes greater than 30% that are located on the subject development parcel/s or in the immediate vicinity, and also whether the project involves lands below the mean high tide line (MHTL).

Areas of Special Biological Significance (ASBS) are designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. The Ocean Plan, adopted by the State Water Board originally in 1972 and subsequently revised, prohibits the discharge of waste to designated ASBS. Local restrictions prohibit the discharge of non-stormwater flows from properties that drain into an ASBS and regulate other potential flow of contaminants into the ASBS.

2.2 Special-status Species

2.2.1 Plant and Wildlife Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal ESA or California Endangered Species Act (CESA). These acts afford protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the CEQA. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918 (MBTA), under which the destruction of active nests, eggs, and young is illegal.

Plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Very few Rank 3 or Rank 4 plants meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CDFG Code that outlines the California Endangered Species Act. However, CNPS and the CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation relating to CEQA. This may be particularly appropriate for the type locality of a Rank 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates.

San Mateo County LCP designates the habitats of rare and endangered species as ESHA. Specifically, the LCP provides special development restrictions for the following species and their associated habitats: San Francisco garter snake (SFGS; *Thamnophis sirtalis tetrataenia*), San Francisco tree lupine moth (*Grapholita edwardsiana*), brackish water snail (*Tryonia imitator*), southern sea otter (*Enhydra lutris nereis*), and globose dune beetle (*Coelus globosus*). Additionally, habitats and populations of species considered unique under the LCP are also considered ESHA and have specific preservation requirements under the LCP. Unique species under the San Mateo County LCP include northern elephant seal (*Mirounga angustirostris*), Monterey pine (*Pinus radiata*) in natural stands[3], and California wild strawberry.

2.2.2 Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are

[3] Monterey pine trees are considered unique in native stands only; stands located near the San Mateo-Santa Cruz County line are recognized the San Mateo County LCP as native, otherwise, Monterey pine is not considered unique

currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

2.2.3 Wildlife Corridors

Wildlife movement between suitable habitat areas typically occurs via wildlife movement corridors. The primary function of wildlife corridors is to connect two larger habitat blocks, also referred to as core habitat areas (Beier 1992, Soulé and Terbough. 1999). Prior to the site visit on December 20, 2016 aerial imagery of the Study Arear and surrounding lands were examined for the potential presence of wildlife movement corridors (Google 2017).

3.0 METHODS

Prior to conducting the site visits, available reference materials were reviewed, including an online soil survey of the Study Area (CSRL 2015), the Montara Mountain U.S. Geological Survey (USGS) 7.5-minute quadrangle (USGS 2015a), USFWS National Wetlands Inventory (USFWS 2015), recent and historical aerial photographs (Google Earth 2015), as well as database and literature searches enumerated below. During the site visit conducted on June 18, 2013, the entirety of the Project Area as well as the entire northern portion of the Study Area including all areas within 100 feet of the Project Area, were traversed to document the presence of (1) wetlands, non-wetland waters, streams, lakes, and rivers, and other sensitive biological communities; (2) special-status plant species readily identifiable at the time of the survey; (3) potential habitat for special-status plant species not readily identifiable (i.e. dormant); (4) potential habitat for special-status wildlife species; and (5) any other areas potentially considered an ESHA under the San Mateo County LCP. The southern portion of the Study Area is very steep (30 to 100 percent slopes) and was therefore assessed from mid-slope positions where biologists could access views of dominant vegetation types. All areas within 100 feet of the outward boundary of the Project Area were assessed and surveyed in their entirety. On September 30, 2015, a reconnaissance-level survey was conducted to assess whether site conditions had changed since the 2013 site visit.

All plant and wildlife species encountered were recorded and are included in Appendix A. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2015), except where noted. Because of recent changes in classification for many of the taxa treated by Baldwin et al. and the Jepson Flora Project, relevant synonyms are provided in brackets. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities. Methods specific to habitat types and special-status species are detailed below.

3.1 Biological Communities

Biological communities present in the Study Area were characterized based on existing plant community descriptions described by the CDFW and CNPS (CNPS 2015a) and Holland (1986). However, in some cases it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by the CWA, CEQA, San Mateo County LCP, and other applicable federal, state, and local laws, ordinances, and policies.

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under the San Mateo County LCP, CEQA, and other applicable federal, state, or local laws, ordinances, or policies. These communities may, however, provide suitable habitat for some special-status plant and/or wildlife species. In these cases, they are not considered sensitive, but are discussed in the special-status species descriptions in Section 4.4 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under the San Mateo County LCP, CEQA, and other applicable federal, state, and local laws, ordinances, and policies. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Non-wetland Waters

The Study Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps and/or RWQCB, as well as the Coastal Commission. The Corps and RWQCB recognize a three parameter approach to wetland delineation where a feature must contain hydrophytic vegetation, hydric soils, and wetland hydrology, while the Coastal Commission generally recognizes a one parameter approach where only one of these three criteria needs to be present.

The methodology for identifying wetland indicators followed the one described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008). Plant species within potential wetlands were assigned a wetland status according to the Corps list of plant species that occur in wetlands (Lichvar et al. 2014). This wetland plant classification system is based on the expected frequency of occurrence of each species in wetlands. The classification system has the following categories, which determine the frequency with which plants occur in wetlands:

OBL	Obligate, almost always found wetlands	>99% frequency
FACW	Facultative wetland, usually found in wetlands	67-99%
FAC	Facultative, equal in wetland or non-wetlands	34-67%
FACU	Facultative upland, usually found in non-wetlands	1-33%
UPL/NL	Not found in local wetlands	<1%
NI	Wetland preference unknown	

Species with OBL, FACW, and FAC classifications are considered hydrophytic vegetation. If more than 50 percent of the dominant plant species are hydrophytic, the area meets the hydrophytic vegetation criterion.

Soils in the Study Area were examined for hydric soil indicators according to Natural Resources Conservation Service guidelines (USDA 2010). Soils formed under wetland (anaerobic) conditions generally have a low chroma matrix color, designated 0, 1, or 2, and contain mottles or other redoximorphic features. Soil profiles were characterized by depth, color, redoximorphic features, and texture. Soil color and chroma were determined using a Munsell soil color chart (Gretag Macbeth 2000) to determine if the soils in a particular area could be considered hydric.

Positive indicators of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, surface sediment deposits, oxidized root channels, and drift lines, or indirect indicators (secondary indicators) such as algal mats, shallow restrictive layers in the soil, or vegetation meeting the FAC-neutral test. Depressions, seeps, and topographic low areas were examined for these hydrological indicators.

Other Sensitive Biological Communities

The Study Area was evaluated for the presence of other sensitive biological communities, including riparian areas, sensitive plant communities recognized by the CDFW, and additional potential ESHA recognized by the San Mateo County LCP. Prior to the site visit, aerial photographs (Google Earth 2015), local soil maps (CSRL 2015), *Preliminary Description of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California Vegetation, Online Edition* (CNPS 2015a) were reviewed to assess the potential for sensitive biological communities to occur in the Study Area. These communities are described in Section 4.4 below.

3.2 Special-status Species

3.2.1 Literature Review

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Half Moon Bay, Montara Mountain, San Francisco South, and San Gregorio USGS 7.5-minute quadrangles (USGS 2015 a-d). The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- California Natural Diversity Database (CNDDB) records (CDFW 2017)
- USFWS Information for Planning and Conservation (USFWS 2017a)
- CNPS Inventory records (CNPS 2015b)
- Consortium of California Herbaria (CCH 2015)
- Calflora (2015)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFW and University of California Press publication, *California Amphibian and Reptile Species of Special Concern* (Thomson *et al.* 2016)
- California Herps: A Guide to the Amphibians and Reptiles of California (CalHerp 2017)
- eBird: a citizen-based bird observation network in the biological sciences. (Sullivan et al 2017)
- Bewley Site Pre-construction Survey (Heal 2011)
- Bewley Property Preliminary Biological Resource Assessment (Heal 2009)
- Site Plan drawing (Mannik 2015)

3.2.2 Site Assessment

Habitat conditions were assessed and used to evaluate the potential for presence of special-status species. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Study Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species. All species observed were recorded and are included in Appendix A.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats. If necessary, recognized experts in individual species biology were contacted to obtain the most up-to-date information regarding species biology and ecology. Karen Swaim performed an assessment of California red-legged frog (CRLF; *Rana draytonii*) and SFGS within the Study Area. This assessment is referenced below and attached as Appendix D.

If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 4.5 and Appendix B. 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 in Section 5.0.

3.2.3 Protocol-level Rare Plant Survey

A floristic, protocol-level rare plant survey was conducted concurrent with the site assessment. The survey corresponded to peak blooming or fruiting periods for observing and accurately identifying hundreds of plant species in San Mateo County, including all of the special-status plant species with the potential to occur in the Project Area, and those portions of the Study Area of within 100 feet of the Project Area. The field survey was conducted by two botanists familiar with the flora of ruderal areas, non-native grasslands, seasonal wetlands, and coastal scrubs of San Mateo County. Where and when possible, WRA consulted with other botanists, reviewed dates of historical documentation, or conducted reference site visits to ensure that the surveys were conducted within a period sufficient to identify the potentially occurring special-status plant species.

The surveys followed the protocol for plant surveys described by Nelson (1987), which complies with recommended resource agency guidelines (CNPS 2001, CDFG 2000, CDFG 2009, USFWS 1996). The northern portion of the Study Area, the Project Area, and all areas within 100 feet of the Project Area were traversed on foot whereupon each habitat was thoroughly searched and all plant species observed were recorded (Appendix A). All plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et al. 2012) and subsequent revisions by the Jepson Flora Project (2015), except where noted, to the taxonomic level necessary to determine whether or not they were rare, and nomenclature follows the Baldwin et al. (2012) and the Jepson Flora Project (2015).

4.0 SITE DESCRIPTION AND RESULTS

The Study Area is approximately 8.2 acres and is located on the southern edge of the town of Montara, San Mateo County California (Figure 1), and the Project Area makes up approximately 3.2 acres of the eastern portion of the Study Area (Figure 2). The east- to west-running Study Area measures approximately 688 feet long and 348 feet wide and is located on the northern border of Montara Creek and the western border of Audubon Avenue. Elevations range from approximately 70 to 200 feet NGVD. The Study Area is bounded by developed property to the north and west, horse paddocks to the east, and Montara Creek to the south. An open-wire fence runs along the northern side of the Study Area. The Study Area begins immediately to the west of the southern terminus of Audubon Avenue and continues south for approximately 348 feet where coastal scrub begins and west, approximately 688 feet towards a stand of planted Monterey pines and native coastal prairie (Figure 2). The Project Area is bounded to the north by the neighboring fence and the terminus of Audubon Avenue, to the east by neighboring horse paddocks, to the west by contiguous open grassland within the Study Area, and to the south by a steep slope containing coastal scrub habitat (Figure 2).

4.1 Land Use History

Based on direct observation and the review of aerial photographs from the last 10 years, it appears that the Study area has been subject to repeated grazing and mowing and some grading. The Study Area also contained several temporary structures, horse paddocks, and roads throughout the site. Of these features, the only items still observable are an old well, a gravel roundabout/turn out, and a slight depression where the paddocks used to be located. The areas to the north and west of the Study Area are developed residential properties, and the property to the east is contains active horse paddocks and the end of Audubon Ave.

4.2 Topography and Soils

The topography of the Study Area is a slope of approximately 5 percent that descends from northeast to southwest for approximately 250 to 300 feet, where it drops to Montara Creek with slopes estimated between 15 and 30 percent. The elevation ranges from approximately 200 feet in the north to 70 feet at Montara Creek in the south. The online soil survey of the Study Area (CSRL 2015) indicates that the Study Area is composed of one native soil type, Typic Argiustolls, loamy-Urban land association, 5 to 15 percent slopes. These soils are typically well drained with moderate to rapid permeability and rapid runoff, but may have high clay content reduce permeability in deeper soils.

4.3 Climate and Hydrology

The Study Area is located inside of the coastal fog belt of the Central Coast. Average annual precipitation for Half Moon Bay (Weather Station ID: 043714), located approximately seven miles south, is 26.98 inches, with the majority falling as rain in the winter months (November through March). Precipitation is supplemented by substantial fog drip, particularly in the summer and early fall. The mean daily low and high temperatures in degrees Fahrenheit range from 47.1 to 62.2 (WRCC 2015).

The primary hydrologic sources for the Study Area are precipitation, fog drip, and localized surface runoff from immediately adjacent lands. The Study Area is situated on sloped, well-draining soils. The northern portion of the Study Area has a slope of 2 to 5 percent. The slope into the unnamed drainage on the southern side of the Study Area is approximately 15 to 30 percent. A non-wetland swale on the eastern portion of the Study Area diverts the majority of the run off from the adjacent land to Montara Creek to the south. Due to relatively high gradient slopes and soil type, evidence of surface ponding, perched water table, and/or saturated substrates for extended periods (14 days or greater) are not present in the Study Area, except in a small localized area in the eastern portion (Section 4.4). Throughout most of the Study Area, precipitation appears to permeate or runoff relatively rapidly, flowing into Montara Creek in the south.

4.4 Biological Communities

Table 1 summarizes the area of each biological community type observed in the Study Area. Non-sensitive biological communities in the Study Area include coastal scrub, closed-cone coniferous forest, and non-native annual grassland, while the coastal prairie and wetlands are considered sensitive biological communities. Descriptions for each biological community are contained in the following sections, and are illustrated in Figure 2.

Table 1. Summary of Biological Communities in the Study Area

Biological Community	Vegetation Community (Holland 1986)	Vegetation Alliance (CNPS 2015a) – Rank*	Acreage	
			Study Area	Project Area**
Valley and foothill grassland (non-ESHA)	Non-native grassland	common velvet grass meadow (*Holcus lanatus* Semi-natural Herbaceous Stand) – No Rank	3.20	2.23
Coastal scrub (non-ESHA)	Northern coastal scrub	Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance) – G5 S5	0.49	0.31
		California coffeeberry scrub (*Frangula californica* Scrubland Alliance) – G4 S4	2.09	0.48
Closed-cone coniferous forest (non-ESHA)	Monterey pine grove	Monterey pine grove (*Pinus radiata* Forest Alliance) – G1 S1 (native stands only); No Rank	1.77	0.14
Coastal prairie (ESHA)	Coastal terrace prairie	California oat grass prairie (*Danthonia californica* Herbaceous Alliance) – G4 S3	0.04	--
Wetland (ESHA)	Seasonal wetland seep (freshwater seep)	Western rush marshes (*Juncus patens* Herbaceous Alliance) – G4? S4?	0.01	0.01
Riparian Area (ESHA)	Central Coast riparian scrub	Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) – G4 S4	0.60	--
Perennial Stream (ESHA)	--	--	--	--
TOTAL			**8.20**	**3.17**

*Rank: CNPS (2015a)
**The Study Area is inclusive of the Project Area

4.4.1 Non-sensitive Biological Communities

Non-native Grassland

Non-native annual grassland is a mixed herbaceous community dominated by non-native annual grasses with fine textured clay soils located throughout California (Holland 1986), typically dominated by one or two grass species (CNPS 2015a). Within the Study Area, this grassland is composed of one vegetation alliance, common velvet grass meadow (CNPS 2015a). This grassland is located in the northern portion of the Study Area and composes approximately 3.17 acres, of which 2.23 acres are within the Project Area. Although the substrate within this community appears to be native, the overall quality of the community is poor due to the history of moderate disturbance within the Study Area.

The dominant species within this community type is common velvet grass (*Holcus lanatus*). Subdominant species include Italian rye grass (*Festuca perennis*), slender oat (*Avena barbata*), meadow foxtail (*Alopecurus pratensis*), and ripgut brome (*Bromus diandrus*). Non-native forbs are frequent and include rough cat's-ear (*Hypochaeris radicata*), hawksbeard (*Leontodon saxatilis*), and English plantain (*Plantago lanceolata*). Native forbs and graminoids are infrequent and total less than 10 percent relative cover within the herbaceous layer.

Coastal Scrub

Coastal scrub communities are located extensively along the entire length of the California coastline. These communities are dominated by native shrubs tolerant of frequent and often high winds, salt spray, and extended cloud cover in summer months (Holland 1986). Two vegetation alliances were documented within the Study Area: coyote brush scrub and California coffeeberry scrub (CNPS 2015a).

Coyote brush scrub is a mixed community dominated by coyote brush (*Baccharis pilularis*) and other native shrubs containing scattered grassy openings located on windy, exposed sites with shallow rocky soils ranging from sandy to heavy clay in composition (CNPS 2015a). This community is located in coastal areas from southern Oregon to Point Sur, Monterey County (Holland 1986). Within the Study Area, the coyote brush scrub is a large, contiguous area in the central portion and covers approximately 0.49 acre, of which 0.31 acre is within the Project Area.

California coffeeberry scrub is composed of mixed native shrubs and an herbaceous layer with many areas of exposed soil and rock. It is dominated by California coffeeberry (*Frangula californica*). This community is usually located on concave or lower slopes along drainages and situated on sedimentary or serpentine substrates that retain moisture throughout the year (CNPS 2015a). California coffeeberry scrub is found at localized sites along the coast, between Point Conception and Point Mendocino (Holland 1986). Within the Study Area, the coffeeberry scrub is a large, contiguous area in the central to southern portion and covers approximately 2.09 acre, of which 0.48 acre is within the Project Area.

Both communities contain subdominant shrub species which include poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), sticky monkeyflower (*Mimulus aurantiacus* var. *aurantiacus*), and red elderberry (*Sambucus racemosa* var. *racemosa*), with California coffeeberry scrub containing a higher density and diversity of native shrubs. Other shrubs and herbaceous plants make up less than 10 percent of the remaining ground and canopy cover in each of these vegetation alliances.

Monterey Pine Groves

Monterey pine groves are found on well-drained, sandy soils within the limits of summer marine fog incursion. There are only three natural stands of Monterey pine in California. The largest is found on the Monterey peninsula with the others found near Ano Nuevo Point, San Mateo-Santa Cruz Counties and Cambria, San Luis Obispo County (Holland 1986). In their natural setting, Monterey pine groves forests are dominated by Monterey pines of mixed age and contain high structural heterogeneity; however, Monterey pines have been planted and have spread naturally throughout much of the coast of California, and such groves are typically even-aged and structurally homogeneous.

Figure 2. Biological Communities within the Study Area

The Study Area contains two Monterey pine groves, in the eastern and western portions, which contain a monotypic overstory of one species, Monterey pine, covering approximately 1.77 acres in the Study Area, of which 0.14 acre are within the Project Area. The understory is relatively depauperate, but includes California blackberry (*Rubus ursinus*), common bedstraw (*Galium aparine*), and orange cotoneaster (*Cotoneaster franchetii*), which account for less than 5 percent of the total cover in the understory. Monterey pine groves/forests are considered sensitive in their native range; however, the groves within the Study Area are not naturally occurring, having likely been planted as a windbreak, and are therefore not considered a sensitive biological community.

This community was initially reported to contain knobcone pine (*Pinus attenuata*), with no mention of Monterey pine (Heal 2009). However a follow-up pre-construction survey letter (Heal 2011) reported Monterey pine or possible hybrids of Monterey pine, with no mention of knobcone pine. The groves on-site were characterized by WRA as Monterey pine groves based on observations of cones from several specimens. Additionally, knobcone pine in its natural setting is closely associated with more montane areas of the Coast Ranges further from the direct coastline and are often situated on serpentine, volcanic, or other nutrient-poor soils.

4.4.2 Sensitive Biological Communities

Coastal Terrace Prairie

Coastal terrace prairies are found discontinuously from Santa Cruz County north into Oregon on marine terraces near the coast with sandy loams, usually below 700 to 1,000 feet in elevation. Plant communities are typically dominated by herbaceous species (Holland 1986). Within the Study Area, the coastal terrace prairie is composed of the California oatgrass prairie vegetation alliance (CNPS 2015a) and covers approximately 0.04 acre, entirely outside of the Project Area.

The vegetation is dominated by native grasses including California oatgrass (*Danthonia californica*), red fescue (*Festuca rubra*), and beardless wild rye (*Elymus triticoides*), but also contains non-native grasses such as common velvet grass (*Holcus lanatus*). Native forbs include Douglas iris (*Iris douglasiana*), blue-eyed grass (*Sisyrinchium bellum*), and common yarrow (*Achillea millefolium*). While coastal terrace prairie is not formally called out as an ESHA under the San Mateo County LCP, Sections 7.43 and 7.46 of the LCP discuss the designation and protection of habitats of 'unique species.' Native grasslands and coastal terrace prairie, including California oatgrass prairie, are considered sensitive communities according to several experts and the CDFW; therefore WRA treats these habitats as ESHA. In addition, the CCA also considers coastal terrace prairie to be a sensitive habitat. While no formal buffer is required in the LCP for this ESHA type, given the size, quality, and potential for this habitat to expand in the relatively natural portion of the property, WRA recommends a 100-foot buffer be established.

Seasonal Wetland Seep

Seasonal wetland seeps are known throughout California, most commonly in grassland habitats, and typically on seasonally saturated soils situated on flats, depressions, or gentle slopes. Plant communities are typically dominated by herbaceous species, including sedges, rushes, and grasses (Holland 1986). Within the Study Area, the seasonal wetland seep is dominated by common rush (*Juncus patens*) and is characteristic of the common rush vegetation alliance (CNPS 2015a). This community was mapped as a potential jurisdictional wetland during a wetland delineation conducted concurrently with this assessment, and it covers approximately 0.01 acre, entirely within the Project Area. Wetlands are identified as ESHA in

the San Mateo County LCP and typically require a 100-foot buffer unless the site is so constrained that a buffer of that size would render a property undevelopable.

The vegetation is dominated by common rush, common velvet grass, Italian rye grass, and ripgut brome. The substrate appears native, composed of relatively disturbed sandy clays with water collecting from direct precipitation and localized runoff. This feature is situated in a very slight depression, but there is no evidence of ponding; however, soils appear to be saturated in winter and/or early spring for a duration sufficient to form hydric soils. An abandoned well with an aboveground water tank is located approximately 50 feet uphill to the north and may be contributing subsurface hydrology to this wetland.

Central Coast Riparian Scrub

Central Coast riparian scrubs are known from the Bay Area south to Point Conception and are dominated by one of several willow species (*Salix* spp.) with dense thickets of subdominant riparian shrubs (Holland 1986). These scrubs are situated in tight ravines and draws, from directly on the coastline landward several miles, but are exclusively coast-side of the Coast Ranges. The substrate is typically composed of seasonally to perennially saturated soils, often with high rock and boulder content.

Within the Study Area, this scrub is located in a narrow band along Montara Creek on the southern boundary, is composed of one vegetation alliance, arroyo willow thicket (CNPS 2015a), and covers approximately 0.60 acre, entirely outside of the Project Area. The canopy is dominated by arroyo willow (*Salix lasiolepis*), with occasional red alders (*Alnus rubra*) arising above the scrub canopy. The understory is a dense thicket dominated by California blackberry. Central Coast riparian scrub is considered an ESHA under the CCA and San Mateo County LCP and would likely be considered during CEQA review because it is a starred (*) community in Holland (1986). Additionally, the outward limit of this community is jurisdictional under Section 1602 of the CFGC.

Perennial Stream

Perennial streams are common along the coast of California, particularly from the Central Coast Ranges north to the Oregon border. Montara Creek, a perennial stream, appears as an unnamed “blue-line” stream on the Montara Mountain 7.5-minute quadrangle (USGS 2015a), and flows appear to run from nine to twelve months per year. Montara Creek is considered an ESHA under the CCA and San Mateo County LCP, as well as jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC.

Area of Special Biological Significance (ASBS)

The Project Area is situated in the watershed of the James V. Fitzgerald ASBS. Since the Ocean Plan prohibits the discharge of waste to a designated ASBS, the County of San Mateo is developing the Fitzgerald ASBS Pollution Reduction Program to comply with State Water Board requirements for ASBS.

The regulations being developed, implemented by the San Mateo County Planning and Building Department regulate private stormwater discharges into the ASBS by:

- Prohibiting non-stormwater discharges (also referred to as “dry weather flows”) from private properties to the ASBS or a County storm drain.
- Prohibiting all new point source discharges to the ASBS

- Requiring BMPs for use of architectural copper.
- Prohibiting pools and spas from discharging to a storm drain or directly to the ASBS.
- Requiring erosion and sediment control plans be submitted for review and approval for projects within the ASBS watershed that involve soil disturbance and are subject to a building or grading permit.
- Requiring weekly stormwater construction inspections during the wet weather season (October 1 through April 30).
- Requiring appropriate facilities for car-washing.
- Requiring landscape irrigation to comply with the Water Efficient Landscape Ordinance (WELO), when applicable.

4.5 Special-status Species

4.5.1 Special-status Plant Species

Based upon a review of the resources databases listed in Section 3.2.1, 63 special-status plant species have been documented in the vicinity of the Study Area (Appendix B, Figure 3). The Study Area has a high potential to support one special-status plant species and a moderate potential to support nine additional special-status plant species. The remaining species documented to occur in the vicinity of the Study Area are unlikely or have no potential to occur due to:

- Hydrologic conditions (e.g. marsh habitat) necessary to support the special-status plant(s) are not present in the Study Area;
- Edaphic (soil) conditions (e.g. serpentine, volcanics, vertic clay) necessary to support the special-status plant(s) are not present in the Study Area;
- Topographic positions (e.g. north-facing slopes) necessary to support the special-status plant(s) are not present in the Study Area;
- Associated vegetation communities (e.g. chaparral, cismontane woodland) necessary to support the special-status plant(s) are not present in the Study Area;
- The Study Area is outside of the known elevation and/or localized distribution of the special-status plant(s) (e.g. interior valleys);
- The Study Area contains disturbed abiotic (e.g. altered hydrology, fill soils) and/or biotic (e.g. invasive species) conditions which preclude the special-status plant(s).

The site assessment and protocol-level rare plant surveys were conducted during a period sufficient to accurately identify all nine of the special-status plant species that were considered to have the potential to occur in the Study Area. One special-status plant species, beach strawberry, was observed within and immediately adjacent to the Project Area. All special-status species with a potential to occur within the Study Area are discussed below:

Bent-flowered fiddleneck (*Amsinckia lunaris*). Rank 1B.2. Moderate Potential (Not Observed). Bent-flowered fiddleneck is an annual forb in the forget-me-not family (Boraginaceae) that blooms from March to June. It typically occurs in open areas within cismontane woodland, valley and foothill grassland, and coastal bluff scrub habitat often underlain by clay substrate at elevations ranging from 10 to 1,625 feet (CDFW 2015, CNPS 2015b, Jepson Flora Project 2015). Observed associated species include coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), California juniper (*Juniperus californicus*), buck brush (*Ceanothus cuneatus*), poison oak, miniature lupine (*Lupinus bicolor*), foothill lotus (*Acmispon brachycarpus*), calf lotus (*A. wrangelianus*), fringe pod (*Thysanocarpus curvipes*), q-tips (*Micropus californicus*), cream cups (*Platystemon californicus*), slender tarweed (*Madia*

gracilis), common yarrow, goldenback fern (*Pentagramma triangularis*), one-sided bluegrass (*Poa secunda*), woolly sunflower (*Eriophyllum lanatum*), and slender wild oat (CDFW 2015). Bent-flowered fiddleneck has a moderate potential to occur in coastal scrub and coastal prairie habitat within the Study Area due to the presence of suitable substrate and associated species; however, this species was not observed during protocol-level surveys in June 2013 or the reconnaissance level survey in 2015. Additionally, no fiddleneck (*Amsinckia* sp.) species were observed on-site.

Coast rock cress (*Arabis blepharophylla*). Rank 4.3. Moderate Potential (Not Observed). Coast rock cress is a perennial herb in the mustard family (Brassicaceae) that blooms from February to May. It typically occurs in rocky areas within broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub habitat at elevations ranging from 10 to 3,575 feet (CNPS 2015b). Observed associated species include soap plant (*Chlorogalum pomeridianum*), Davy's clarkia (*Clarkia davyi*), silver bush lupine (*Lupinus albifrons*), leather fern (*Polypodium scouleri*), coast Indian paintbrush (*Castilleja affinis* ssp. *affinis*), and Pacific stonecrop (*Sedum spathulifolium*) (Arthur pers. comm. 2015) Coast rock cress has a moderate potential to occur in coastal scrub coastal prairie habitat within the Study Area due to the presence of suitable substrate and associated species; however, this species was not observed during protocol-level surveys in June or the reconnaissance level survey in 2015. Additionally, no rock cress species (*Arabis* spp.) were observed on-site.

Pappose tarplant (*Centromadia parryi* ssp. *parryi*). Rank 1B.2. Moderate Potential (Not Observed). Pappose tarplant is an annual herb in the sunflower family (Asteraceae) that blooms from May to November. It typically occurs in vernally mesic, often alkaline areas in coastal prairie, meadow, seep, coastal salt marsh, and valley and foothill grassland habitat at elevations ranging from 5 to 1,380 feet (CDFW 2015, CNPS 2015b). Observed associated species include bristly ox-tongue (*Helminthotheca echioides*), wild radish (*Raphanus sativus*), foxtail fescue (*Festuca myuros*), willow leaf dock (*Rumex salicifolius*), toad rush (*Juncus bufonius*), Italian rye grass, Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*), perennial pepperweed (*Lepidium latifolium*), yellow star thistle (*Centaurea solstitialis*), alkali mallow (*Malvella leprosa*), and alkali weed (*Cressa truxillensis*) (CDFW 2015).

Pappose tarplant has a moderate potential to occur in the Study Area due to the presence of wetland-upland transition habitat and the presence of associated species; however, this species is known from north of Montara. This species was not observed during protocol-level surveys in June or the reconnaissance level survey in 2015.

Figure 3. Special-status Plant Species within 5 miles of the Study Area

California bottle-brush grass (*Elymus californicus*). Rank 4.3. Moderate Potential (Not Observed). California bottle-brush grass is a perennial herb in the grass family (Poaceae) that blooms from May to November. It generally occurs in shaded areas in broadleafed upland forest, cismontane woodland, North Coast coniferous forest, and riparian woodland at elevations ranging from 50 to 1,540 feet (CNPS 2015b). Observed associated species include coast live oak, coast redwood (*Sequoia sempervirens*), California bay (*Umbellularia californica*), Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*), red elderberry, salmonberry (*Rubus spectabilis*), beaked hazelnut (*Corylus cornuta* var. *californica*), California brome (*Bromus carinatus*), and leather fern (CCH 2015). California bottle-brush has a moderate potential to occur in the Study Area in Central Coast riparian habitat. The stands of Monterey pine in the northern portion of the Study Area are relatively young and occur in areas that were historically disturbed grassland or coastal scrub, making California bottle-brush grass unlikely to have established in this habitat.

California wild strawberry (*Fragaria vesca*). No Rank; San Mateo County LCP. High Potential (Present). California wild strawberry is a perennial, stoloniferous forb in the rose family (Rosaceae) that blooms from January to July. It generally occurs in partial shade in forested habitat at elevations ranging from 50 to 6,560 feet (Jepson Flora Project 2015). The grasslands, coastal scrub, and Monterey pine grove habitats within the Study Area have a high potential to support California wild strawberry due to the presence of associated species, suitable substrate, and relative location, and previous strawberries have been documented from the site (Heal 2011). California wild strawberry is identified specifically as an ESHA in the San Mateo County LCP, although no buffer is formally required for this ESHA. In June 2013, WRA botanists identified 32 individuals within seven subpopulations within the Study Area.

In September 2015, a WRA botanist revisited all California wild strawberry occurrences and surveyed the Study Area for additional occurrences, and the results are as follows:

- At three of the seven subpopulation locations identified in 2013 (two in the southeast portion of the Study Area and one in the southwest portion), no individuals of California wild strawberry or other species of strawberry (*Fragaria* sp.) were observed; in the two southeast locations, dense Pampas grass (*Cortaderia jubata*) was present and may have outcompeted the California wild strawberry.
- Two of the 2013 subpopulations (in the eastern portion of the Study Area and the northern portion) were determined to be beach strawberry (*Fragaria chiloensis*), which is not identified as an ESHA by the San Mateo County LCP and is not otherwise considered a special-status species.
- The net number of and area covered by California wild strawberry increased in 2015 compared to 2013. Thirty plants were observed in that area in 2015 compared to 22 in 2013.
- Overall, 32 California wild strawberry individuals within five subpopulations were observed in 2015 (Figure 2).

Coast iris (*Iris longipetala*). Rank 4.2. Moderate Potential (Not Observed). Coast iris is a perennial rhizomatous herb in the iris family (Iridaceae) that blooms from March to May. It typically occurs in mesic areas in coastal prairie, lower montane coniferous forests, meadows, and seeps at elevations ranging from 0 to 1,950 feet (CNPS 2015b). Coast iris has a moderate potential to occur in the Study Area due to the presence of coastal prairie; however, this species was not observed during protocol-level surveys in June or the reconnaissance level survey in 2015. All iris species in the Study Area were Douglas iris (*Iris douglasiana*).

Perennial goldfields (*Lasthenia californica* ssp. *macrantha*). Rank 1B.2. Moderate Potential (Not Observed). Perennial goldfields is an annual or perennial herb in the sunflower family (Asteraceae) that blooms from January to November. It typically occurs in coastal bluff scrub, coastal dunes, and coastal scrub at elevations ranging from 16 to 1,690 feet (CNPS 2015b). Perennial goldfields has a moderate potential to occur in the Study Area due to the presence of coastal prairie. The grasslands and Monterey pine groves in the Study Area are unlikely to support this species due to extensive historical disturbance and a closed canopy; however, the coastal scrub areas may support this species. This species was not observed within the coastal scrub communities within one hundred feet of the coastal scrub-grassland interface.

Marsh microseris (*Microseris paludosa*). Rank 1B.2. Moderate Potential (Not Observed). Marsh microseris is a perennial herb in the sunflower family (Asteraceae) that blooms from April to June, sometimes into July. It typically occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland habitat at elevations ranging from 15 to 985 feet (CDFW 2015, CNPS 2015b). Observed associated species include coast live oak, coyote brush, English plantain, blue-eyed brass, bracken fern (*Pteridium aquilinum*), rough cat's-ear, common velvet grass, little rattlesnake grass (*Briza minor*), and Douglas iris (CDFW 2015). Marsh microseris has a moderate potential to occur in the coastal prairie and openings in the coastal scrub habitats of the Study Area; however, this species was not observed during protocol-level surveys in June or the reconnaissance level survey in 2015.

Oregon polemonium (*Polemonium carneum*). Rank 2B.2. Moderate Potential (Not Observed). Oregon polemonium is a perennial herb in the phlox family (Polemoniaceae) that blooms from April to September. It typically occurs in coastal prairie, coastal scrub, and lower montane coniferous forest habitats at elevations ranging from 0 to 6,000 feet (CDFW 2015, CNPS 2015b). Observed associated species include coyote brush, California sagebrush, blue-eyed grass, native grasses, and non-native annual grasses (CDFW 2015). Oregon polemonium has a moderate potential to occur in the Study Area due to the presence of coastal prairie, but this habitat is unlikely to support this species due to extensive historical disturbance; however, the coastal scrub areas may support this species. This species was not observed within the coastal scrub communities within one hundred feet of the coastal scrub-grassland interface during the June 2013 survey or September 2015 survey.

San Francisco campion (*Silene verecunda* ssp. *verecunda*). Rank 1B. 2 Moderate Potential (Not Observed). San Francisco campion is a perennial herb in the carnation family (Caryophyllaceae) that blooms from March to June. It occurs in sandy soils in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland at elevations ranging from 95 to 2,100 feet (CDFW 2015, CNPS 2015b). Is known from San Francisco, San Mateo, Santa Cruz, and Sutter counties. San Francisco champion has a moderate potential to occur in the Study Area due to the presence of the coastal scrub habitat that may support this species; however, this species has not been documented from coastal sites in San Mateo County. This species was not observed in the Study Area during the June 2013 survey or September 2015 survey.

4.5.2 Special-status Wildlife Species

Based upon a review of the resources databases listed in Section 3.2.1, 67 special-status wildlife species have been documented in the vicinity of the Study Area (Appendix B, Figure 4). Two special-status wildlife species have a high potential to occur and five species have a moderate potential to occur within the Study Area. The remaining species documented in the

vicinity of the Study Area are unlikely or have no potential to occur because of a lack of suitable habitat including wetland, serpentine, and stream habitats. No woodrat houses were observed within the grassland, scrub, and riparian habitats. No rare, endangered, or unique species as defined by the LCP have potential to occur within the Study Area. Non-special-status birds also have potential to nest within the Study Area and nests of most native bird species are protected under State and Federal laws.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. High Potential. White-tailed kite is resident in a variety of open habitats, including agricultural areas, grasslands, scrub and open chaparral habitats, meadows, and emergent wetlands throughout the lower elevations of California. Nests are constructed mostly of twigs and placed in small to large trees, often at habitat edges or in isolated groves (Dunk 1995). This species preys upon a variety of small mammals and other vertebrates. The Study Area provides open habitats for foraging and suitable trees for nesting.

Northern harrier (*Circus cyaneus*). CDFW Species of Special Concern. Moderate Potential. Harriers are residents of open wetlands, including marshy meadows; wet, lightly grazed pastures; old fields; and fresh and brackish marshes. They also frequent also dry uplands, including upland prairies, mesic grasslands, drained marshlands, croplands, desert shrub-steppe, and riparian woodland throughout California (MacWhirter and Bildstein 1996). Harriers typically nest on ground in open (treeless) habitats in dense, often tall, vegetation. Harrier nests are found in varied vegetative cover, even within a single area. Suitable nesting habitat is present within the grassland and prairie habitats with dense, tall grasses the Study Area.

Allen's hummingbird (*Selasphorus sasin*). USFWS Bird of Conservation Concern. High Potential. 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 Study Area contains suitable nesting habitat in the Monterey pine groves, and Allen's hummingbird has a high potential to nest within the trees in the Study Area.

Nesting birds (various spp.). MBTA, CFGC. High Potential. Despite no federal or state listing, nests of all native birds are protected either by the MBTA or the CFGC. The MBTA protects active nests of all birds including migratory species. Upland game and waterfowl birds are allowed to be taken, but strict seasons have been developed around the life cycle of these birds. Nesting bird season may vary dependent upon species, site condition, annual weather, and legal agreement (e.g., mitigation plans), but it generally runs from February 15 to August 31 in a given year.

Figure 4. Special-status Wildlife Species within 5 miles of the Study Area

Olive-sided flycatcher (*Contopus cooperi*). USFWS Bird of Conservation Concern, CDFW Species of Special Concern. Moderate Potential. The olive-sided flycatcher is a summer resident in California, wintering in Central and South America. It breeds in a variety of forested habitats, typically coniferous forests at higher elevations, but also in mixed forest and woodlands at lower elevations. Breeding habitat is often associated with forest openings and edges, both natural (e.g., meadows, canyons) and man-made (e.g., logged areas) (Altman and Sallabanks 2012). Nests are usually in conifers and placed at variable height on the outer portions of branches. This species forages for insects, usually from prominent tree snags. The Monterey pine groves within the Study Area provide suitable breeding habitat, and there are recent occurrences during the breeding season in the vicinity of Montara.

Loggerhead shrike (*Lanius ludovicianus*). USFWS Bird of Conservation Concern, CDFW Species of Special Concern. Moderate Potential. Loggerhead shrike is a resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, posts, fences, utility lines, or other perches. Nesting substrates vary from trees to brush piles; vegetation with thorns is usually preferred, and nests are typically well-concealed (Humple 2008). Although a songbird, shrikes are predatory and forage on a variety of insects and also small vertebrates. The Study Area provides both trees and large shrubs suitable for nesting as well as open foraging areas and prey species (macroinvertebrates and small vertebrates), and it is within loggerhead shrike's breeding range (Humple 2008).

Hoary bat (*Lasiurus cinereus*). WBWG Medium Priority. Moderate Potential. This species is most abundant in the prairie states, the forests of the Pacific Northwest, the forests of the eastern states, and the arid deserts of the Southwest (WBWG 2015). Foliage of both deciduous and coniferous trees provides roosting sites, and roosts are typically near edges of small open areas (WBWG 2015). This species has been found in Spanish moss, squirrel nests, woodpecker holes, and out in the open on the trunks of trees. Summer tree roosts are typically located along edge habitats close to feeding grounds. Most females rear young in deciduous trees, while males prefer to roost in conifers. Both sexes appear to prefer older trees as roosts, which they use for up to 5 weeks, and apparently provide greater safety (TPWD 2015). The Monterey pine groves provide suitable male roosting habitat and this species may forage over the Study Area.

Monarch butterfly (*Danaus plexippus*). CDFW Special-status Invertebrate. Moderate Potential. Suitable over-wintering roost habitat for monarchs is defined as that which supports long term (i.e., November to early March) hibernal clusters of butterflies. Such habitat typically consists of sheltered groves of tall trees near the coast that provide vertical density and a multi-tiered canopy to provide protection from the elements. Suitable winter roost habitat is typically composed of stands of native conifers or non-native bluegum eucalyptus (*Eucalyptus globulus*). The Monterey pine grove within the Study Area may provide suitable winter roosting habitat for this species.

Two federal listed species are documented to occur within the vicinity of the Study Area but are unlikely to occur: CRLF and SFGS based upon habitat conditions in the vicinity and distance from nearest occurrences. These species are analyzed and discussed in a separate report entitled "Site Assessment for the San Francisco Garter Snake and California Red-Legged Frog at the Bewley Parcel" (Swaim 2013; Appendix D). In summary, the nearby ponds may provide aquatic habitat for CRLF, but the Study Area is of adequate distance from aquatic habitats to reduce the potential for CRLF to occur. During rain events, CRLF may disperse across upland habitats, and there is a moderate potential CRLF to occur within the Study Area during rain

events. Based upon range and surveys in the area, SFGS is not likely to occur. An updated assessment report by Swaim Biological, Inc. is in preparation, but it had not been finalized at the time of writing. Because site conditions have not changed since the time of the most recent assessment by Swaim in June 2013, the findings of Swaim (2013) are assumed to still be valid, and the conclusions and recommendations for CRLF and SFGS are based on that report.

4.5.3 Critical Habitat

The Study Area does not contain critical habitat for any species (USFWS 2017b).

4.5.4 Wildlife Corridors

The Study Area borders a perennial stream to the south. Streams and their associated vegetation can be used by wildlife as a migratory corridor when migrating between habitat patches. In this case, the stream connects an undeveloped core habitat area to the north, but does not connect to a second core habitat patch downstream of the Study Area. The stream extends approximately 0.4 mile downstream of the Study Area, then terminates at the Pacific Ocean. Along this length, the stream is surrounded by development such as roads or homes. Because the Study Area does not connect two core habitat areas, it does not fulfill the traditional definition of a migratory corridor. However, because the stream provides a potential dispersal route, animals may still move downstream from the core habitat area, in search of new habitats. During this process, animals may stray into the Study Area. Because core habitat does not exist within the Study Area to support local species such as CRLF, animals are likely to pass through the Study Area and the adjacent corridor, but are unlikely to occupy the site. Considering these points, the Study Area borders a wildlife corridor and as a result, migrating animals could stray into the Study Area, or they may be affected by Project activities.

5.0 PROJECT IMPACTS, AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

On June 18, 2013, a WRA biologist performed an assessment for biological resources potentially considered sensitive under CEQA, the San Mateo County LCP, and other federal, state, and/or local laws, ordinances, and policies. The survey was performed during a period sufficient to identify hundreds of plant species within coastal San Mateo County, including the ten special-status plant species with the potential to occur within the Project Area and/or within one hundred feet of the Project Area. During the assessment, a routine wetland delineation following Corps guidelines was performed within the Study Area. A follow-up, reconnaissance-level survey was conducted by a WRA biologist on September 30, 2015, to determine whether site conditions had changed since the 2013 survey. Additionally, wildlife biologist Karen Swaim performed an SFGS and CRLF habitat assessment on a separate date, with the results summarized herein. Her technical memorandum is attached as Appendix D.

Four ESHA biological communities—coastal terrace prairie, seasonal wetland, Central Coast riparian scrub, and perennial stream—potentially jurisdictional under the San Mateo County LCP were observed within the Study Area. Only one of the ten special-status plant species with the potential to occur was observed within the Study Area, and that species (woodland strawberry) is also considered an ESHA. Seven wildlife species have the potential to occur, but none were observed were during the 2013 site assessment. Non-special-status birds protected under the MBTA and CFGC have potential to nest within the Study Area. Each ESHA is illustrated in Figure 5.

Because of the presence of several ESHA on site, their respective buffers, and a very high gradient slope in the southern portion of the Study Area, the developable zone within the property is extremely limited and is likely impossible without being partially located within an ESHA buffer. The following sections provide recommendations on how to best develop the site while minimizing impacts to the greatest extent possible. Each ESHA and its buffers are briefly summarized below.

5.1 General Avoidance and Minimization Measures

To reduce the potential for impacts to sensitive communities and special-status species, the following general best management practices (BMPs) shall be implemented. Implementation of these general BMPs, in combination with the species- and habitat-specific measures provided in the subsequent sections, will minimize adverse impacts:

- Appropriate perimeter erosion and sediment control measures (i.e., silt fencing, straw waddles) shall be installed around any stockpiles of soil or other materials which could be transported by rainfall or other flows in order to reduce the possibility of soil erosion and sediments flowing into natural habitats.
- All access, staging, and work areas shall be delineated with orange construction fencing, or similar, and all work activities shall be limited to these areas.
- All access, staging, and work areas shall be the minimum size necessary to conduct the work.
- All staging, maintenance, and storage of construction equipment shall be performed in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into the Study Area. No other debris, rubbish, soil, silt, sand, or other construction-related materials or wastes shall be allowed to enter into or be placed where they may be washed by rainfall or runoff into wetland areas. All such debris and waste shall be picked-up daily and shall be properly disposed of at an appropriate facility. If a spill of fluid materials occurs, the area shall be cleaned and contaminated materials disposed of properly. The affected spill area shall be restored to its natural condition.
- Disturbance or removal of vegetation shall not exceed the minimum necessary to conduct the work.
- Stockpiles of soil or other materials that can be blown by wind shall be covered when not in active use.
- All trucks hauling soil, sand, and other loose materials shall be covered.

5.2 Sensitive Biological Communities

5.2.1 Coastal Terrace Prairie

Impact Bio – 1

Approximately 0.04 acre of coastal terrace prairie composed of the California oatgrass prairie vegetation alliance in two populations is located in the less-disturbed western portion of the Study Area. The small prairies contain non-native grasses but are dominated or have substantial cover of native grasses and forbs and are therefore considered an ESHA under the San Mateo County LCP. Impacts to the Coastal Terrace Prairie would be potentially significant.

Mitigation Measure Bio – 1

Impacts to seasonal wetland seeps shall be reduced to less than significant by implementing the following mitigation measure:

1. While there is no formal buffer requirement for coastal terrace prairie in the LCP, a 100-foot buffer around this ESHA is recommended to protect this community from disturbance incurred from the residential development proposed within the Study Area. This buffer will also give the native grasses the opportunity to reproduce, expanding the overall area of native grassland in the western portion of the site.
2. A physical barrier, such as orange construction fencing, shall be established on the edge of the 100-foot buffer to ensure protection of this habitat during ground disturbance activities and all exterior construction (e.g., grading, concrete work, irrigation/drainage work, landscaping, etc.)

With the implementation of the mitigation measure associated with Impact Bio – 1, including the general BMP's listed in Section 5.1, adverse effects to coastal terrace prairie will be minimized to less than significant.

5.2.2 Seasonal Wetland Seep

Impact Bio – 2

An approximately 0.01-acre seasonal wetland seep composed of the common rush vegetation alliance is located in the eastern portion of the Study Area. This wetland meets both the Corps parameters and Coastal Commission definition of a wetland and is therefore considered an ESHA. It is possible that the presence of an old well located immediately uphill is contributing hydrology to this feature, which is located in a very slight depression. Impacts to regulated wetlands would be potentially significant.

Mitigation Measure Bio – 2

Impacts to seasonal wetland seeps shall be reduced to less than significant by implementing the following mitigation measure:

1. Due to the relatively small size of this wetland, possible man-altered hydrologic contributions, substantial cover of non-native species, and the presence of other on-site ESHA limiting development potential, WRA recommends that the buffer be reduced from 100 feet to 50 feet. The reduced buffer is unlikely to have adverse impacts to this wetland and should sufficiently protect it from indirect impacts.
2. A physical barrier, such as orange construction fencing, shall be established on the edge of the 50-foot buffer to ensure protection of this habitat during ground disturbance activities and all exterior construction (e.g., grading, concrete work, irrigation/drainage work, landscaping, etc.)

With the implementation of the mitigation measure associated with Impact Bio – 2, including the general BMP's listed in Section 5.1, adverse effects to seasonal wetland seeps will be minimized to less than significant.

Figure 5. Biological Constraints within the Study Area and Project Area

5.2.3 Central Coast Riparian Scrub

Impact Bio – 3

An approximately 0.6-acre band of Central Coast riparian scrub composed of arroyo willow vegetation alliance is located in the southern portion of the Study Area. This scrub is jurisdictional under Section 1602 of the CFGC and is considered an ESHA by the CCA and San Mateo County LCP.

Mitigation Measure Bio – 3

Impacts to Central Coast riparian scrub (California coffeeberry scrub) shall be reduced to less than significant by implementing the following mitigation measures:

1. Maintain a 50 foot no disturbance buffer in order to protect this scrub from adverse or indirect impacts during ground-disturbing activities.
2. Riparian areas are potentially within the jurisdiction of the CDFW under Section 1602 of the CFGC. A Section 1602 Streambed Alteration Agreement would be required if project activities impacted this habitat. The current project plans do not indicate any encroachment into this habitat, but if plans change then a 1602 Agreement would be required.

With the implementation of the mitigation measures associated with Impact Bio – 3, including the general BMP's listed in Section 5.1, adverse effects to central coast riparian scrub will be mitigated to less than significant.

5.2.4 Perennial Stream

Impact Bio – 4

Montara Creek, a perennial stream, is located on the southern boundary of the Study Area. Montara Creek is likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC and is considered an ESHA under the CCA and San Mateo County LCP. While the proposed work area is not adjacent to the stream, indirect impacts due to erosion and impairment of water quality during ground disturbance would be a significant impact.

Mitigation Measure Bio – 4

Impacts to Montara Creek can be reduced to less than significant by implementing the following mitigation measures:

1. A minimum 50-foot buffer shall be maintained in order to protect this stream from adverse or indirect impacts during ground-disturbing activities.
2. BMPs (as described in Section 5.1) are required to be implemented to ensure protection of the stream during ground disturbing activities.

With the implementation of the mitigation measures associated with Impact Bio – 4, including the general BMP's listed in Section 5.1, adverse effects to perennial streams will be mitigated to less than significant.

5.2.5 Area of Special Biological Significance

Impact Bio – 5

Since the proposed development is within the watershed of the James V. Fitzgerald ASBS, special considerations must be made to prevent discharge of contaminants to receiving waters.

Impacts to the James V. Fitzgerald ASBS can be reduced to less than significant by implementing the following mitigation measures which are typically required for projects in the Fitzgerald ASBS by the County to conform with the ASBS water quality regulations:

Mitigation Measure Bio – 5

1. Discharges to receiving waters may occur only during the wet weather season (October. 1 through April 30) and must 1) be composed of only stormwater, 2) be free of pollutants, and 3) must not alter natural ocean water quality in the ASBS.
2. All new point source discharges into the ASBS shall either be retained on-site or shall be treated on-site prior to entering a County storm drain.
3. Water that comes into contact with architectural copper during installation, cleaning, treating, and washing can be a source of water pollution to the County storm drains and eventually to the ASBS. Therefore, architectural copper BMPs are required to be identified on project plans and implemented during construction and future maintenance.
4. Discharge to the Montara Water and Sanitary District's sewer system is required, in compliance with Section 3-8.800 of the Montara Water and Sanitary District Code. For properties served by private septic, pool and/or spa discharge shall be dechlorinated and slowly discharged to landscaped areas (determined adequate to support the volume).
5. Erosion and sediment control plans shall be submitted for review and approval for projects within the ASBS watershed that involve soil disturbance and are subject to a building or grading permit.
6. Pursuant to the Water Board's General Exception to the California Ocean Plan with Special Protections (Attachment B, Section A.2.c.1), weekly construction site inspections are required for all construction sites within the ASBS watershed that involve soil disturbance and are subject to a building or grading permit (considered Stormwater Regulated Construction Sites "SWRS").
7. On-site areas (new or replaced) used for car washing shall drain to adequately-sized vegetative areas or other on-site treatment facilities or occur on permeable surfaces (e.g. gravel, grass) and shall use as little detergents as necessary. Phosphate free or biodegradable soap is highly encouraged. Discharge to the sanitary sewer is prohibited (Montara Water and Sanitary Code).
8. Landscape irrigation must comply with the (WELO), when applicable. The County's adopted WELO applies to new and rehabilitated landscapes with a total landscape area equal to or greater than 2,500 square feet for public agency and private development projects or which are developer-installed in single-family and multi-family projects.

With the implementation of the mitigation measures associated with Biological Impact – 5, including the general BMP's listed in Section 5.1, adverse effects to areas of special biological significance will be mitigated to less than significant.

5.3 Special-status Plant Species

Of the 63 special-status plant species known to occur in the vicinity of the Study Area, one was determined present in the Study Area: California wild strawberry. Potential impacts to this

species and recommended avoidance, minimization, and mitigation measures are provided in the following section.

5.3.1 California Wild Strawberry

Thirty-two individuals within five subpopulations of California wild strawberry are located in grassland habitat in the eastern portion of the Study Area and at the edges of Monterey pine groves within the Study Area. Although relatively common in California, California wild strawberry is considered an ESHA per the San Mateo County LCP. The California wild strawberry individuals in the western portion of the parcel are of the highest quality as there are many individuals in each patch, the individuals appear healthy, and the patches are situated in higher quality habitat with more natives and in close proximity to the coastal terrace prairie. These subpopulations are in an area that is only partly disturbed by mowing.

Impact Bio – 6

The Project has the potential to impact California wild strawberry during vegetation removal, excavation, and general ground-disturbing activities. These activities may potentially damage or kill this species where present within the Study Area which would be a potentially significant impact.

Mitigation Measure Bio – 6

Impacts to California wild strawberry can be reduced to less than significant by implementing the following measures:

The California wild strawberry in the eastern portion of the Study Area consists of two small, isolated individuals, on the edge of non-native Monterey Pine woodland and non-native grassland in an area that experiences regular disturbance from mowing. Because of the low quality of their habitat and their small size, WRA does not recommend any avoidance buffer for the California wild strawberry in the eastern portion of the Study Area.

If development is not feasible outside of an ESHA buffer or the ESHA itself, WRA believes that impacts to the California wild strawberry ESHA are preferred over those to the coastal terrace prairie and seasonal wetland seep due to their relatively wide distribution throughout the site, a high potential for successful translocation, and the presence of other on-site ESHA that limit development potential. Furthermore, given the smaller population in the east and the fact that it is situated in lower-quality habitat, the eastern set of plants would be preferentially relocated to the western portion of the property if some impacts to strawberry were required to situate the development on the property.

1. A 50-foot avoidance buffer should be maintained around the higher quality western subpopulations.
2. A physical barrier, such as orange construction fencing, shall be established on the edge of the 50-foot buffer to ensure protection of this habitat during ground disturbance activities and all exterior construction (e.g., grading, concrete work, irrigation/drainage work, landscaping, etc.)
3. A qualified biologist shall develop a mitigation and monitoring plan to be implemented during the start of ground disturbance activities to ensure successful translocation of these plants on site if they are impacted. At a minimum, the mitigation and monitoring plan shall include:
    a. Documentation of proposed impacts to the species;

b. Proposed mitigation including some combination of transplantation or re-establishment of impacted populations and/or preservation and management of existing populations;
c. Proposed methods for transplantation, re-establishment, or restoration;
d. A 3-year monitoring program with annual reporting;
e. Performance criteria for transplants or plantings, including (a) survivorship, (b) density, and (c) cover, and performance criteria for invasive plants and other potential threats to the success of the mitigation efforts including, but not limited to, erosion and human disturbance; and
f. An adaptive management plan for addressing any failure to meet performance criteria or to address other unforeseen problems.

With the implementation of the mitigation measures associated with Impact Bio – 6, including the general BMPs listed in Section 5.1, adverse effects to special-status plant species will be mitigated to less than significant.

5.4 Special-status Wildlife Species

5.4.1 Special-status and Non-special-status Nesting Birds

Impact Bio – 7

Special-status bird species including: white-tailed kite, northern harrier, Allen's hummingbird, and olive-sided flycatcher have been determined to have potential to nest within the Study Area. In addition, common native birds such as: house finch, yellow-rumped warbler, American crow, and other similar species have been commonly observed within the surrounding area and may nest within the Study Area. Impacts to nesting birds including the removal of active nest structures, or causing disruption sufficient disturbance to cause abandonment of an active nest is both a violation of the MBTA as well as CFGC and would also be considered a significant impact under CEQA.

Mitigation Measure Bio – 7

Impacts to all nesting birds shall be reduced to less than significant by implementing the following measures:

1. Impacts to nesting birds can be avoided if potential activities are initiated outside of the nesting season (September 1 – February 14).
2. If work is to be conducted during the nesting season (February 15 - August 31), pre-construction breeding bird surveys shall be conducted no more than 14 days prior to initial ground disturbance to avoid impacting active nests, eggs, and/or young.
3. If any nests are found, they shall have a suitable buffer established for protection of the nest and young. Buffer distance will vary based on species and conditions at the site, but are typically at least 25 feet for common passerines, and may be up to 500 feet for California fully-protected species. Buffers shall be maintained until a qualified biologist determines that the nest is no lo

With the implementation of the mitigation measure associated with Impact Bio – 7, including the general BMP's listed in Section 5.1, adverse effects to nesting birds will be minimized to less than significant.

5.4.2 Roosting Bats

Impact Bio – 8

The Project Area contains mature trees that may provide cavities and foliage cover to support special-status roosting bats. Removing trees during the maternity season when young bats are unable to leave the roost and may be affected by tree removal would be considered a violation of the CFGC and would also be considered a significant impact under CEQA.

Mitigation Measure Bio – 8
Impacts to roosting bats can be reduced to less than significant by implementing the following measures:

1. Any mature trees within the Study Area that are proposed for removal shall be removed outside of the maternity roosting season. For this area of California, the maternity roosting season is typically defined as April 1 – August 31.
2. It is recommended that one week prior to the initiation of activities, a qualified biologist conduct a survey for bat roosts within the Study Area. If a roost is detected during the non-maternity roosting season (September 1 through March 31) then the biologist shall consult with the CDFW before any further activities are initiated. If Project activities are initiated during the maternity roosting season (April 1 through August 31) and a roost is detected, then a 50-foot buffer shall be implemented where no construction activities shall occur, until the biologist has determined that the young have left the roost.
3. At any time of year, if a large tree (dbh >12 inch) will be removed, it shall be left on the ground for 24 hours before being taken offsite or chipped. This period will allow any day roosting bats the opportunity to leave before the tree is either removed from the area or chipped.

With the implementation of the mitigation measure associated with Impact Bio – 8, including the general BMP's listed in Section 5.1, adverse effects to roosting bats will be minimized to less than significant.

5.4.3 Monarch Butterfly Roosting Habitat

Impact Bio – 9

The Monterey pine groves within the Study Area may provide suitable habitat for winter roosting monarch butterflies. If these trees support a monarch roost, then removing such trees during the winter roosting period would be considered a significant impact under CEQA.

Mitigation Measure Bio – 9

Impacts to winter roosting monarch butterflies can be reduced to less than significant by implementing the following measures:

1. Tree removal shall occur outside of the winter roosting period for monarch butterfly. Winter roosting is typically defined as October 1 – March 15.
2. If tree removal must occur during the winter roosting season, then a qualified biologist shall conduct a pre-construction survey for roosting monarch butterflies within 7 days of scheduled tree removal or trimming activities.
3. If monarch butterflies are detected roosting in trees to be removed or trimmed, then consultation with CDFW shall be initiated to determine how and when to proceed with

activities and if additional mitigation measures are required such as implementing an avoidance buffer.
4. If tree removal or trimming is conducted from March 16 through September 31, then no pre-construction surveys for roosting monarch butterflies are necessary.

With the implementation of the mitigation measure associated with Impact Bio – 9, including the general BMP's listed in Section 5.1, adverse effects to monarch butterfly roosting habitat will be minimized to less than significant.

5.4.4 California Red-legged Frog and San Francisco Garter Snake

Impact Bio – 10

The Study Area only has potential to be used by CRLF as upland dispersal habitat (Swaim 2013). However, use of the Study Area for dispersal is unlikely to occur unless rain events occur following the end of the breeding season allowing the species to enter the Study Area.

Mitigation Measure Bio – 10

Any potential impacts to CRLF can be reduced to less than significant by implementing the following measures:

1. Within 24 hours prior to initial ground disturbance, a preconstruction survey for CRLF shall be conducted by a qualified biologist. If the species is found, the qualified biologist shall record the location, number, and any other relevant information. The biologist shall then contact the USFWS to determine the next steps including whether or not relocation of the animal is possible.
2. If the preconstruction survey is completed and no CRLF are observed, then the work area shall be surrounded by a wildlife exclusion fence at least 2 feet tall. Escape funnels shall be installed along all sides of the fence to allow any undetected wildlife within the project footprint to escape. Escape funnels shall be placed no further then 100-feet apart.
3. Once the wildlife exclusion fence is installed, a qualified biologist shall inspect the fence on a weekly basis to identify any breaches, rips, or access points that might allow wildlife to enter the Project footprint. Weekly fence inspections shall continue until the Project is complete and the fence is scheduled to be removed.
4. Plastic monofilament netting (erosion control matting, or wrapping around wattles), or similar material in any form shall not be used on the Project in order to avoid entangling, strangling, or trapping CRLF inside or outside of the wildlife fence.
5. Construction shall be limited to the dry season (April 15 to October 31) to avoid impacting CRLF when they are most likely to use the Study Area as a migration corridor.
6. Any pipes or culverts that could provide shelter for CRLF shall be elevated off the ground or have ends covered to prevent animals from climbing into the open-ended materials.

SFGS is unlikely to be present based upon the range of the species; however, the above measures to avoid impacts to CRLF will also avoid potential impacts to SFGS if present. With the implementation of the mitigation measure associated with Impact Bio – 10, including the general BMP's listed in Section 5.1, adverse effects to CRLF and SFGS will be minimized to less than significant.

5.4.5 Wildlife Corridors

Impact Bio – 11

The Study Area occurs next to a potential wildlife corridor. Animals may travel down the riparian corridor at any time of day and may stray into the Study Area if conditions permit. Affecting such migratory individuals could be considered a significant impact under CEQA if the migratory corridor is obstructed or those individuals are a special-status species and are injured by Project activities.

Mitigation Measure Bio – 11

Any potential impacts to the wildlife corridor can be reduced to less than significant by implementing the following measures:

1. Wildlife exclusion fencing (discussed in 5.4.4) shall be installed to assure dispersing amphibians do not enter the Study Area during periods of active construction.
2. During construction, any lights required to be left on overnight shall be angled away from the riparian corridor to reduce potential interference with nocturnal movement of wildlife.

5.5 Local Policies and Ordinances and Local and Regional Conservation Plans

The Project is not located in an area that is covered by any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project does not pose any impacts on a local or regional level. No additional mitigation related to local or regional conservation plans is necessary.

In addition, with the implementation of the mitigation measures stated above, the project would not be in conflict with any local policies or ordinances related to biological resources. Therefore, no additional mitigation measures are necessary related to local policy issues.

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Appendix A

Plant Species Observed in the Study Area

Appendix A. Plant species observed in the Study Area June 18, 2013, and September 30, 2015.

Family	Scientific Name	Common Name	Life Form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Adoxaceae	*Sambucus racemosa* var. *racemosa*	red elderberry	deciduous shrub	native	--	--	FACU
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soap plant	perennial forb	native	--	--	NL
Aizoaceae	*Carpobrotus edulis*	iceplant	perennial forb	non-native	--	high	NL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Conium maculatum*	poison hemlock	perennial forb	non-native	--	moderate	FACW
Apiaceae	*Daucus carota*	wild carrot	perennial forb	non-native	--	assessed	UPL
Apiaceae	*Daucus pusillus*	American wild carrot	annual forb	native	--	--	NL
Apiaceae	*Foeniculum vulgare*	sweet fennel	perennial forb	non-native	--	high	NL
Apiaceae	*Sanicula crassicaulis*	Pacific sanicle	perennial forb	native	--	--	NL
Apiaceae	*Torilis arvensis*	tall sock-destroyer	annual forb	non-native	--	moderate	NL
Araliaceae	*Aralia californica*	elk clover	perennial forb	native	--	--	FACW
Araliaceae	*Hedera helix*	English ivy	perennial forb	non-native	--	high	FACU
Asteraceae	*Achillea millefolium*	common yarrow	perennial forb	native	--	--	FACU
Asteraceae	*Artemisia californica*	Coast sagebrush	evergreen shrub	native	--	--	NL
Asteraceae	*Artemisia douglasiana*	mugwort	perennial forb	native	--	--	FAC
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea solstitialis*	yellow star thistle	annual forb	non-native	--	high	NL
Asteraceae	*Cirsium vulgare*	bull thistle	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Deinandra corymbosa*	coastal tarweed	annual forb	native	--	--	NL
Asteraceae	*Delairea odorata*	Cape ivy	perennial forb	non-native	--	high	NL
Asteraceae	*Erigeron canadensis*	horseweed	annual forb	native	--	--	FACU
Asteraceae	*Gamochaeta ustulata*	featherweed	perennial forb	native	--	--	NL
Asteraceae	*Grindelia hirsutula*	hairy gumweed	perennial forb	native	--	--	FACW

Family	Scientific Name	Common Name	Life Form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Asteraceae	*Helenium puberulum*	rosilla	perennial forb	native	--	--	FACW
Asteraceae	*Helianthus annuus*	common sunflower	annual forb	native	--	--	FACU
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	perennial forb	non-native	--	limited	FACU
Asteraceae	*Hypochaeris radicata*	hairy catsear	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Leontodon saxatilis* ssp. *longirostris*	hawkbit	annual forb	non-native	--	--	FACU
Asteraceae	*Madia sativa*	coast tarweed	annual forb	native	--	--	NL
Asteraceae	*Pseudognaphalium luteoalbum*	Jersey cudweed	annual forb	non-native	--	--	FAC
Asteraceae	*Senecio vulgaris*	old man in the Spring	annual forb	non-native	--	--	FACU
Asteraceae	*Silybum marianum*	milk thistle	perennial forb	non-native	--	limited	NL
Asteraceae	*Sonchus asper* ssp. *asper*	prickly sow thistle	annual forb	non-native	--	assessed	FAC
Asteraceae	*Sonchus oleraceus*	common sow thistle	annual forb	non-native	--	--	UPL
Asteraceae	*Symphyotrichum subspicatum*	Douglas aster	annual forb	native	--	--	FACW
Betulaceae	*Alnus rubra*	red alder	deciduous tree	native	--	--	FACW
Boraginaceae	*Borago officinalis*	common borage	annual forb	non-native	--	--	NL
Boraginaceae	*Echium candicans*	pride of Madeira	evergreen shrub	non-native	--	limited	NL
Boraginaceae	*Myosotis latifolia*	broadleaf forget me not	perennial forb	non-native	--	limited	NL
Brassicaceae	*Brassica rapa*	field mustard	annual forb	non-native	--	limited	FACU
Brassicaceae	*Hirschfeldia incana*	short podded mustard	perennial forb	non-native	--	moderate	NL
Brassicaceae	*Lepidium didymum*	coronopus pepperweed	annual forb	non-native	--	--	NL
Brassicaceae	*Raphanus sativus*	wild radish	perennial forb	non-native	--	limited	NL
Caprifoliaceae	*Lonicera involucrata* var. *ledebourii*	twinberry	evergreen shrub	native	--	--	FAC
Chenopodiaceae	*Atriplex prostrata*	fat hen	annual forb	non-native	--	--	FACW
Convolvulaceae	*Calystegia purpurata* ssp. *purpurata*	Pacific false bindweed	perennial vine	native	--	--	NL
Crassulaceae	*Crassula ovata*	jade plant	perennial forb	non-native	--	--	NL
Cucurbitaceae	*Marah fabacea*	California manroot	perennial vine	native	--	--	NL

Family	Scientific Name	Common Name	Life Form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Cupressaceae	*Hesperocyparis macrocarpa*	Monterey cypress	evergreen tree	native	Rank 1B.2	limited	NL
Cyperaceae	*Carex brevicaulis*	short stem sedge	perennial graminoid	native	--	--	NL
Cyperaceae	*Carex harfordii*	Harford's sedge	perennial graminoid	native	--	--	OBL
Dennstaedtiaceae	*Pteridium aquilinum* var. *pubescens*	hairy brackenfern	perennial fern	native	--	--	FACU
Dryopteridaceae	*Polystichum munitum*	western swordfern	perennial fern	native	--	--	FACU
Euphorbiaceae	*Euphorbia lathyris*	moleplant	perennial forb	non-native	--	assessed	NL
Euphorbiaceae	*Euphorbia peplus*	petty spurge	annual forb	non-native	--	--	NL
Fabaceae	*Genista monspessulana*	French broom	evergreen shrub	non-native	--	high	NL
Fabaceae	*Lotus corniculatus*	bird's-foot trefoil	perennial forb	non-native	--	assessed	FAC
Fabaceae	*Medicago polymorpha*	bur medic	annual forb	non-native	--	limited	FACU
Fabaceae	*Melilotus indicus*	yellow annual sweetclover	annual forb	non-native	--	--	FACU
Fabaceae	*Trifolium campestre*	hop clover	annual forb	non-native	--	--	NL
Fabaceae	*Vicia sativa* ssp. *nigra*	garden vetch	annual forb	non-native	--	--	FACU
Fabaceae	*Vicia tetrasperma*	lentil vetch	annual forb	non-native	--	--	NL
Fabaceae	*Vicia villosa* ssp. *villosa*	winter vetch	annual forb	non-native	--	assessed	NL
Geraniaceae	*Geranium core-core*	Chilean geranium	annual forb	non-native	--	--	NL
Geraniaceae	*Geranium dissectum*	cutleaf geranium	annual forb	non-native	--	moderate	NL
Geraniaceae	*Geranium robertianum*	Robert's geranium	annual forb	non-native	--	assessed	FACU
Iridaceae	*Iris douglasiana*	Douglas' iris	perennial forb	native	--	--	NL
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	perennial forb	native	--	--	FACW
Juncaceae	*Juncus bolanderi*	Bolander's rush	perennial graminoid	native	--	--	OBL
Juncaceae	*Juncus effusus* ssp. *pacificus*	Pacific rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus patens*	common rush	perennial graminoid	native	--	--	FACW
Lamiaceae	*Clinopodium douglasii*	yerba buena	perennial forb	native	--	--	FACU
Lamiaceae	*Stachys* sp.	hedge nettle	perennial forb	native	--	--	?

Family	Scientific Name	Common Name	Life Form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Linaceae	*Linum bienne*	pale flax	annual forb	non-native	--	--	NL
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	annual forb	non-native	--	moderate	OBL
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	annual forb	non-native	--	--	NL
Oxalidaceae	*Oxalis corniculata*	yellow sorrel	perennial forb	non-native	--	assessed	FACU
Papaveraceae	*Eschscholzia californica*	California poppy	perennial forb	native	--	--	NL
Phrymaceae	*Mimulus aurantiacus* var. *aurantiacus*	sticky monkey	evergreen shrub	native	--	--	NL
Pinaceae	*Pinus radiata*	Monterey pine	evergreen tree	native	Rank 1B.1	limited	NL
Plantaginaceae	*Plantago coronopus*	buckhorn plantain	annual forb	non-native	--	assessed	FACW
Plantaginaceae	*Plantago lanceolata*	English plantain	perennial forb	non-native	--	limited	FAC
Poaceae	*Aira caryophyllea*	silver hairgrass	annual graminoid	non-native	--	assessed	FACU
Poaceae	*Alopecurus pratensis*	meadow foxtail	perennial graminoid	non-native	--	--	FACW
Poaceae	*Avena barbata*	slender oat	annual graminoid	non-native	--	moderate	NL
Poaceae	*Brachypodium distachyon*	false brome	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Briza maxima*	big quakinggrass	annual graminoid	non-native	--	limited	NL
Poaceae	*Briza minor*	little quakinggrass	annual graminoid	non-native	--	--	FAC
Poaceae	*Bromus diandrus*	ripgut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	*Bromus hordeaceus*	soft chess	annual graminoid	non-native	--	limited	FACU
Poaceae	*Cortaderia jubata*	Pampas grass	perennial graminoid	non-native	--	high	FACU
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL
Poaceae	*Dactylis glomerata*	orchard grass	perennial graminoid	non-native	--	limited	FACU
Poaceae	*Danthonia californica*	California oat grass	perennial graminoid	native	--	--	FACU
Poaceae	*Ehrharta erecta*	panic veldtgrass	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Elymus glaucus*	blue wildrye	perennial graminoid	native	--	--	FACU
Poaceae	*Elymus triticoides*	beardless wild rye	perennial graminoid	native	--	--	FAC
Poaceae	*Festuca arundinacea*	tall fescue	perennial graminoid	non-native	--	moderate	FACU

Family	Scientific Name	Common Name	Life Form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Poaceae	*Festuca bromoides*	brome fescue	perennial graminoid	non-native	--	--	FAC
Poaceae	*Festuca perennis*	Italian rye grass	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Festuca rubra*	red fescue	perennial graminoid	native	--	--	FAC
Poaceae	*Holcus lanatus*	common velvet grass	perennial graminoid	non-native	--	moderate	FAC
Poaceae	*Pennisetum clandestinum*	kikuyu grass	perennial graminoid	non-native	--	limited	FACU
Poaceae	*Rytidosperma penicillatum*	hairy oat	perennial graminoid	non-native	--	limited	NL
Poaceae	*Stipa pulchra*	purple needlegrass	perennial graminoid	native	--	--	NL
Polemoniaceae	*Navarretia squarrosa*	skunkbush	annual forb	native	--	--	FACU
Polygonaceae	*Rumex acetosella*	common sheep sorrel	perennial forb	non-native	--	moderate	FACU
Polygonaceae	*Rumex crispus*	curly dock	perennial forb	non-native	--	limited	FAC
Rhamnaceae	*Frangula californica* ssp. *californica*	California coffeeberry	evergreen shrub	native	--	--	NL
Rosaceae	*Cotoneaster franchetii*	orange cotoneaster	evergreen shrub	non-native	--	moderate	NL
Rosaceae	*Fragaria chiloensis*	beach strawberry	perennial forb	native	--	--	FACU
Rosaceae	*Fragaria vesca*	California wild strawberry	perennial forb	native	--	--	UPL
Rosaceae	*Rubus ursinus*	California blackberry	evergreen shrub	native	--	--	FAC
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU
Salicaceae	*Salix lasiolepis*	arroyo willow	deciduous shrub	native	--	--	FACW
Scrophulariaceae	*Scrophularia californica*	California figwort	perennial forb	native	--	--	FAC
Solanaceae	*Solanum nigrum*	black nightshade	annual forb	non-native	--	--	FACU
Themidaceae	*Triteleia laxa*	Ithuriel's spear	perennial forb	native	--	--	NL
Urticaceae	*Urtica dioica* ssp. *gracilis*	American stinging nettle	perennial forb	native	--	--	FAC

All species identified using the *Jepson Manual II: Vascular Plants of California* (Baldwin et al. 2012) and subsequent revisions by the Jepson Flora Project (2015); Nomenclature follows Baldwin et al. 2012 and subsequent revisions by the Jepson Flora Project (2015)

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2015b)

FE: Federal Endangered
FT: Federal Threatened
SE: State Endangered

ST: State Threatened
SR: State Rare
Rank 1A: Plants presumed extinct in California
Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
Rank 2A: Plants presumed extinct in California, but more common elsewhere
Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3: Plants about which we need more information – a review list
Rank 4: Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2015)

High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, California (Lichvar et al. 2014)

OBL: Almost always found in wetlands; >99% frequency
FACW: Usually found in wetlands; 67-99% frequency
FAC: Equally found in wetlands and uplands; 34-66% frequency
FACU: Usually not found in wetlands; 1-33% frequency
UPL: Almost never found in wetlands; >1% frequency
NL: Not listed, assumed almost never found in wetlands; >1% frequency
NI: No information; not factored during wetland delineation

Appendix B

Potential for Special-status Species to occur in the Study Area

Appendix B. Potential for Special Status Plant Species to Occur in the Study Area. List compiled from the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2015), U.S. Fish and Wildlife Service Species Lists (USFWS 2015), and California Native Plant Society Electronic Inventory (CNPS 2015b) searches of the San Francisco South, Montara Mountain, Half Moon Bay, and San Gregorio USGS 7.5' quadrangles (USGS 2015a-d).

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
PLANTS				
Allium peninsulare var. *franciscanum* Franciscan onion	Rank 1B.2	Cismontane woodland, valley and foothill grassland; on clay substrate, often derived from serpentine and volcanics. Elevation range 170 – 985 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain woodland habitat or heavy clays derived from serpentine or volcanics necessary to support this species.	No further actions are recommended for this species.
Amsinckia lunaris bent-flowered fiddleneck	Rank 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation range: 10 – 1625 feet. Blooms: March – June.	**Moderate Potential.** The Study Area contains grassland and coastal scrub habitat that may support this species. The history of disturbance within the grasslands and relatively closed canopy of the scrub reduces the potential for this species to occur.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Arabis blepharophylla coast rock cress	Rank 4.3	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub; located on rocky sites, often on coastal bluffs. Elevation range: 10 – 3575 feet. Blooms: February – May.	**Moderate Potential.** The Study Area contains coastal scrub habitat that may support this species; however, no rock outcrops were observed within the northern portion of the Study Area.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.
Arctostaphylos franciscana Franciscan manzanita	FE, Rank 1B.1	Chaparral; situated on serpentine outcrops. Elevation range: 195 – 975 feet. Blooms: February – April.	**No Potential.** The Study Area does not contain serpentine outcrops necessary to support this species.	No further actions are recommended for this species.
Arctostaphylos imbricata San Bruno Mountain manzanita	SE, Rank 1B.1	Chaparral, coastal scrub; situated on isolated sandstone outcrops in scrub / chaparral. Elevation range: 890 – 1205 feet. Blooms: February – May.	**No Potential.** The Study Area does not contain sandstone outcrops necessary to support this species. Additionally, the Study Area is 700 feet below the documented elevation range of this species.	No further actions are recommended for this species.
Arctostaphylos montana ssp. ravenii Presidio manzanita	FE, SE, Rank 1B.1	Chaparral, coastal prairie, coastal scrub; situated on open, rocky serpentine slopes. Elevation range: 81 – 699 feet. Blooms: February – March.	**No Potential.** The Study Area does not contain serpentine outcrops necessary to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Arctostaphylos montaraensis Montara manzanita	Rank 1B.2	Chaparral, coastal scrub: situated on slopes and ridges. Elevation range: 485 – 1625 feet. Blooms: January – March.	**No Potential.** The Study Area does not contain any slopes or ridges of the appropriate altitude that are necessary to support this species.	No further actions are recommended for this species.
Arctostaphylos pacifica Pacific manzanita	SE, Rank 1B.2	Coastal scrub. Elevation range: +/- 1075 feet. Blooms: February – April.	**No Potential.** This species is known only from two individuals at a single location on San Bruno Mountain. No manzanita (*Arctostaphylos* sp.) species were observed in the Study Area.	No further actions are recommended for this species.
Arctostaphylos regismontana Kings Mountain manzanita	Rank 1B.2	Broadleaved upland forest, chaparral, north coast coniferous forest; situated on granitic or sandstone outcrops. Elevation range: 990 – 2375 feet. Blooms: January – April.	**No Potential.** The Study Area does not contain granitic or sandstone outcrops necessary to support this species.	No further actions are recommended for this species.
Astragalus nuttallii var. *nuttallii* ocean bluff milk-vetch	Rank 4.2	Coastal bluff scrub, coastal dunes. Elevation range: 5 – 390 feet. Blooms: January – November.	**Unlikely**. The Study Area is unlikely to contain this species due to the impacted nature of the site and the lack of coastal dunes.	No further actions are recommended for this species.
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	Rank 1B.2	Coastal dunes, coastal scrub, coastal salt marshes; mesic sites in dunes, along streams, and marshes. Elevation range: 0 – 100 feet. Blooms: April – October.	**No Potential.** The Study Area lacks coastal dunes and marsh/stream hydrology necessary to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Astragalus tener var. *tener* alkali milk-vetch	Rank 1B.2	Playas, vernal pools, valley and foothill grassland; located in mesic grassy areas on alkaline substrate. Elevation range: 0 – 195 feet. Blooms: March – June.	**No Potential.** The Study Area lacks vernal pools and alkaline substrate necessary for this species.	No further actions are recommended for this species.
California macrophylla round-leaved filaree	Rank 1B.2	Cismontane woodland, valley and foothill grassland; located in areas underlain by clay substrate. Elevation range: 45 – 3900 feet. Blooms: March – May.	**No Potential.** The Study Area lacks heavy clay substrate and large valley settings necessary for this species.	No further actions are recommended for this species.
Carex comosa bristly sedge	Rank 2B.1	Typically on lake and pond margins in coastal prairie, marshes and swamps, valley and foothill grassland. Elevation range: 0 – 425 feet. Blooms: May – September.	**No Potential.** The Study Area lacks perennial wetland features that are necessary for this species.	No further actions are recommended for this species.
Castilleja ambigua var. *ambigua* johnny-nip	Rank 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins. Elevation range: 0 – 1430 feet . Blooms: March – August.	**Unlikely.** Coastal scrub habitat in the Study Area is dense and provides few suitable openings for this species. The grassland and coastal terrace prairie portions of the Study Area provide low quality habitat for this species due to the level of regular disturbance.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Centromadia parryi ssp. *parryi* pappose tarplant	Rank 1B.2	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland; in vernally mesic sites, often with alkali substrate. Elevation range: 5 – 1380 feet. Blooms: May – November.	**Moderate.** Both the Study Area and Project Area contain grassland habitat that may support this species. Additionally, this species is moderately tolerant of soil disturbance and non-native grasslands.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower	Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub; located on sandy substrates of terraces and slopes. Elevation range: 10 – 700 feet. Blooms: April – August.	**No Potential.** The Study Area has been impacted and lacks the loose to partially loose sand substrate necessary for this species	No further actions are recommended for this species.
Chorizanthe robusta var. *robusta* robust spineflower	FE, Rank 1B.1	Cismontane woodland, coastal dunes, coastal scrub, maritime chaparral; located on sandy terraces and bluffs or on loose sands. Elevation range: 10 – 975 feet. Blooms: April – September.	**No Potential.** The Study Area has been impacted and lacks the loose to partially loose sand substrate necessary for this species	No further actions are recommended for this species.
Cirsium andrewsii Franciscan thistle	Rank 1B.2	Coastal bluff scrub, broadleaved upland forest, coastal scrub. Sometimes situated on serpentine seeps. Elevation range: 0 – 440 feet. Blooms: March – July.	**No Potential.** The Study Area lacks serpentine seeps, coastal bluff scrub, and broadleaved upland forest habitats and serpentine substrate.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Cirsium occidentale var. *compactum* compact cobwebby thistle	Rank 1B.2	Chaparral, coastal dunes, coastal prairie, coastal scrub; situated on dunes and on clay in chaparral; also in grassland. Elevation range: 16 – 50\5feet. Blooms: April – June.	**Unlikely.** Although the Study Area contains coastal prairie and coastal scrub habitat, this species has not been documented on the San Mateo or Santa Cruz coastlines; documented occurrences from San Francisco County are greater than 75 years old. Additionally, cobweb thistles (*Cirsium occidentale*) were not observed in the Study Area.	No further actions are recommended for this species.
Collinsia multicolor San Francisco Collinsia	Rank 1B.2	Closed-cone coniferous forest, coastal scrub; located on decomposed shale mixed with humus. Elevation range: 95 – 815 feet. Blooms: March – May.	**No Potential.** Study Area lacks decomposed shale necessary for this species.	No further actions are recommended for this species.
Cypripedium fasciculatum clustered lady's-slipper	Rank 4.2	Lower montane coniferous forest, north coast coniferous forest/usually serpentine seeps and streambanks. Elevation range: 330 – 7990 feet. Blooms: March – August.	**Unlikely.** The Study Area does not contain lower montane coniferous forest or north coast coniferous forest habitats or serpentine substrate. This species was not observed on-site	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Dirca occidentalis western leatherwood	Rank 1B.2	Broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland; located on brushy, mesic slopes in woodland and forest. Elevation range: 165 – 1285 feet. Blooms: January – April.	**Unlikely**. The Study Area is south-facing and is unlikely to provide suitable forested habitat. Although the northern portion of the Study Area contains stands of Monterey pine, these stands are relatively young and occur in areas that were historically grassland or coastal scrub, making California bottle-brush grass unlikely to have established in this habitat.	No further actions are recommended for this species.
Elymus californicus California bottle-brush grass	Rank 4.3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. Elevation range: 50 – 1540 feet. Blooms: May – August (November).	**Moderate Potential.** The Central Coast riparian habitat in the Study Area has the potential to support this species. The remainder of the Study Area is unlikely to provide suitable forested habitat. Although the northern portion of the Study Area contains stands of Monterey pine, these stands are relatively young and occur in areas that were historically grassland or coastal scrub, making California bottle-brush grass unlikely to have established in this habitat.	**Not Observed.** This species was not observed during site surveys either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Equisetum palustre marsh horsetail	Rank 3	Freshwater wetlands, wetland-riparian; usually situated in wetlands, but occasionally found in non – wetland areas. Elevation range: 146 – 3250 feet. Blooms: N/A	**Unlikely.** Although the Study Area contains wetland habitat, no horsetail (*Equisetum* spp.) were observed.	No further actions are recommended for this species.
Eriophyllum latilobum San Mateo woolly sunflower	FE, SE, Rank 1B.1	Cismontane woodland; often situated on roadcuts; found on and off of serpentine. Elevation range: 145 – 490 feet. Blooms: May – June.	**No Potential.** The Study Area lacks cismontane woodland and serpentine.	No further actions are recommended for this species.
Fritillaria biflora var. *ineziana* Hillsborough chocolate lily	FE, SE, Rank 1B	Cismontane woodland, valley and foothill grassland; most likely situated on serpentine. Elevation range: 290 – 520 feet. Blooms: March – April.	**No Potential.** The Study Area lacks cismontane woodland and serpentine grassland necessary for this species.	No further actions are recommended for this species.
Fritillaria lanceolata var. *tristulis* Marin checker lily	Rank 1B.1	Coastal bluff scrub, coastal prairie, coastal scrub. Elevation range: 50 – 490 feet. Blooms: February – May.	**Unlikely.** Coastal scrub habitat in the Study Area is dense and does provides few suitable openings for this species. The grassland and coastal terrace prairie portions of the Study Area provide low quality habitat for this species due to the level of regular disturbance.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Fritillaria liliacea fragrant fritillary	Rank 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	**No Potential.** The Study Area lacks heavy serpentine or volcanic clays necessary for this species.	No further actions are recommended for this species.
Gilia capitata ssp. *chamissonis* blue coast gilia	Rank 1B.1	Coastal dunes, coastal scrub. Elevation range: 5 – 600 feet. Blooms: April – July.	**Moderate Potential.** The Study Area contains coastal scrub habitat which may support this species; however, the Project Area does not contain habitat sufficient to support this species.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.
Grindelia hirsutula var. *maritima* San Francisco gumplant	Rank 3.2	Coastal scrub, coastal bluff scrub, valley and foothill grassland; situated on sandy or serpentine slopes or sea bluffs. Elevation range: 45 – 1300 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain loose to partially loose sandy substrate, serpentine substrate, or sea bluff habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Helianthella castanea Diablo helianthella	Rank 1B.2	Broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; typically located in oak woodland/chaparral ecotone underlain by rocky, azonal substrates, often in partial shade. Elevation range: 195 – 4225 feet. Blooms: March – June.	**No Potential.** The Study Area lacks ecotonal characteristics of the habitat requirements of this species or rocky, azonal substrates.	No further actions are recommended for this species.
Hemizonia congesta ssp. congesta Hayfield tarplant	Rank 1B.2	Coastal scrub, valley and foothill grassland. Elevation range: 65 – 1840 feet. Blooms: April – October.	**Unlikely.** Although the Study Area contains grassland and scrub habitat, this species has not been reported from coastal sites in San Mateo County. Additionally, the degree of disturbance within the Study Area has likely extirpated any historical seed bank.	No further actions are recommended for this species.
Hesperevax sparsiflora var. *brevifolia* short-leaved evax	Rank 1B.2	Coastal bluff scrub, coastal dunes; on sandy bluffs and flats in direct maritime influence. Elevation range: 0 – 215 feet. Blooms: March – June.	**Unlikely.** Although the Study Area contains coastal scrub, this species is typically situated within several hundred yards of bluff faces directly on the coastline. Additionally, the density of non-native grasses and closed canopy of the scrub likely precludes this species.	No further actions are recommended for this species.
Heteranthera dubia water star-grass	Rank 2B.2	Marshes and swamps (alkaline, still or slow-moving water)/requires a ph of 7 or higher, usually in slightly eutrophic waters. Elevation range: 100 – 4900 feet. Blooms: July – October.	**No Potential.** The Study Area does not contain marsh or swamp habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Horkelia cuneata var. *sericea* Kellogg's horkelia	Rank 1B.1	Closed cone coniferous forest, coastal scrub, chaparral; located in openings on relict dunes and coastal sandhills. Elevation range: 30 – 650 feet. Blooms: April – September.	**No Potential.** The Study Area lacks relict dunes and sandhills necessary for this species. This species was not observed within Study Area.	No further actions are recommended for this species.
Horkelia marinensis Point Reyes horkelia	Rank 1B.2	Coastal dunes, coastal prairie, coastal scrub; located on sandy flats and dunes near the coast; in open grassy sites within scrub. Elevation range: 15 – 1140 feet. Blooms: May – September.	**No Potential.** The Study Area does not contain loose to partially loose sandy substrate.	No further actions are recommended for this species.
Iris longipetala coast iris	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps; located on mesic sites. Elevation range: 0 – 1950 feet. Blooms: March – May.	**Moderate Potential**. This species was not observed. All Iris' in Study Area were Douglas Iris.	No further actions are recommended for this species.
Lasthenia californica ssp. macrantha perennial goldfields	Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Elevation range: 5 – 520 feet. Blooms: January – November.	**Moderate Potential.** The coastal prairie areas of the Study Area are unlikely to support this species due to extensive historical disturbance; however, the coastal scrub areas may support this species.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Layia carnosa beach layia	FE, SE, Rank 1B.1	Coastal dunes; located in sparsely vegetated semi-stabilized dunes behind foredunes. Elevation range: 0 – 195 feet. Blooms: March – July.	**No Potential.** The Study Area does not contain sand dune habitat necessary to support this species.	No further actions are recommended for this species.
Leptosiphon croceus coast yellow leptosiphon	Rank 1B.1	Coastal bluff scrub, coastal prairie. Elevation range: 30 – 490 feet. Blooms: April – May.	**Unlikely.** Although the Study Area contains coastal prairie, the degree of disturbance precludes the presence of this species. Additionally, this species is closely associated with low-growing coastal bluff scrub dominated by fleshy herbaceous species not present in the Study Area.	No further actions are recommended for this species.
Leptosiphon rosaceus rose leptosiphon	Rank 1B.1	Coastal bluff scrub. Elevation range: 0 – 325 feet. Blooms: April – July.	**Unlikely.** This species is closely associated with low-growing coastal bluff scrub dominated by fleshy herbaceous species not present in the Study Area.	No further actions are recommended for this species.
Lessingia arachnoidea Crystal Springs lessingia	Rank 1B.2	Coastal sage scrub, valley and foothill grassland, cismontane woodland; situated on grassy, serpentine slopes; sometimes on roadsides. Elevation range: 195 – 650 feet. Blooms: July – October.	**No Potential.** The Study Area lacks serpentine necessary for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Lessingia germanorum San Francisco lessingia	FE, SE, Rank 1B.1	Coastal scrub; situated on remnant dunes with open sandy soils that are relatively free of competing plants. Elevation range: 65 – 410 feet. Blooms: June – November.	**No Potential.** The Study Area lacks remnant dunes. Site is covered in dense vegetation.	No further actions are recommended for this species.
Lessingia hololeuca woolly-headed lessingia	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentine. Elevation range: 50 – 1000 feet. Blooms June – October.	**No Potential.** The Study Area does not contain heavy clay or serpentine substrate.	No further actions are recommended for this species.
Limnanthes douglasii ssp.*ornduffii* Ornduff's meadowfoam	Rank 1B.1	Meadows and seeps/agricultural fields. Elevation range: 30 – 70 feet. Blooms November – May.	**No Potential.** This species is known only from a single agricultural field in San Mateo County. Although the Study Area experiences regular disturbance, it does not experience the level of disturbance, both from soil disruption and irrigation, that an agricultural field experiences.	No further actions are recommended for this species.
Lupinus arboreus var. *eximius* San Mateo tree lupine	Rank 3.2	Chaparral, coastal scrub. Elevation range: 300 – 1800 feet. Blooms April – July.	**Unlikely.** The Study Area contains potentially suitable coastal scrub habitat, but not species of lupine (*Lupinus* sp.) have been observed.	No further actions are recommended for this species.
Malacothamnus aboriginum Indian Valley bush-mallow	Rank 1B.2	Cismontane woodland, chaparral; situated on granitic outcrops and sandy bare soil, often in disturbed soils. Elevation range: 485 – 5525 feet. Blooms: April – October.	**No Potential.** The Study Area lacks granite outcrops, cismontane woodland / chaparral, and elevation required for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Malacothamnus arcuatus arcuate bush-mallow	Rank 1B.2	Chaparral; situated on gravelly alluvium. Elevation range: 260 – 1155 feet. Blooms: April – September.	**No Potential.** The Study Area lacks chaparral and gravely alluvium.	No further actions are recommended for this species.
Malacothamnus davidsonii Davidson's bush-mallow	Rank 1B.2	Coastal scrub, riparian woodland, chaparral; situated on sandy washes. Elevation range: 585 – 2780 feet. Blooms: June – January.	**Unlikely.** Although the Study Area contains coastal scrub, this species is closely associated with wash microhabitat not present within the Study Area. Additionally, the Study Area is below the documented elevation range of this species.	No further actions are recommended for this species.
Malacothamnus hallii Hall's bush-mallow	Rank 1B.2	Chaparral; some populations situated on serpentine. Elevation range: 30 – 1790 feet. Blooms: May – October.	**No Potential.** The Study Area lacks chaparral and serpentine substrate necessary for this species.	No further actions are recommended for this species.
Microseris paludosa marsh microseris	Rank 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation range: 15 – 975 feet. Blooms: April – July.	**Moderate Potential.** The coastal prairie areas of the Study Area are unlikely to support this species due to extensive historical disturbance; however, the coastal scrub areas may support this species.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	Rank 1B.2	Chaparral (Santa Cruz County.), coastal dunes, coastal scrub, lower montane coniferous forest (Santa Cruz County., ponderosa pine sandhills)/sandy. Elevation range: 0 – 980 feet. Blooms: April – September.	**No Potential.** The Study Area has been impacted and lacks the loose to partially loose sand substrate necessary for this species	No further actions are recommended for this species.
Monolopia gracilens woodland woollythreads	Rank 1B.2	Chaparral, valley and foothill grasslands (serpentine), cismontane woodland, broadleafed upland forests, North Coast coniferous forest; situated on grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only a weak affinity to it. Elevation range: 325 – 3900 feet. Blooms: February – July.	**No Potential.** The Study Area lacks the habitats, serpentine and fire ecology required by this species.	No further actions are recommended for this species.
Pentachaeta bellidiflora white-rayed pentachaeta	FE, SE, Rank 1B.1	Valley and foothill grassland; located on open, dry rocky slopes and grassy areas, often on substrate derived from serpentine. Elevation range: 110 – 2015 feet. Blooms: March – May.	**No Potential.** Although the Study Area contains grassland habitat, this species is strictly associated with serpentine-derived soils not present in the Study Area.	No further actions are recommended for this species.
Plagiobothrys chorisianus var. chorisianus Choris' popcorn-flower	Rank 1B.2	Chaparral, coastal scrub, coastal prairie; situated in mesic sites. Elevation range: 45 – 325 feet. Blooms: March – June.	**Unlikely**. The coastal prairie areas of the Study Area are unlikely to support this species due to extensive historical disturbance. No species in the genus *Plagiobothrys* were observed.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Polemonium carneum Oregon polemonium	Rank 2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation range: 0 – 5950 feet. Blooms: April – September.	**Moderate Potential.** The coastal prairie areas of the Study Area are unlikely to support this species due to extensive historical disturbance; however, the coastal scrub areas may support this species.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.
Potentilla hickmanii Hickman's cinquefoil	FE, SE, Rank 1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps; Situated in freshwater marshes, seeps, and small streams in open or forested areas along the coast. Elevation range: 15 – 410 feet. Blooms: April – August.	**Unlikely**. The Study Area lacks strongly seasonal to perennial wetlands; no species in the genus *Potentilla* were observed.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Silene verecunda ssp. *verecunda* San Francisco campion	Rank 1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie; often situated on mudstone or shale; one site on serpentine. Elevation range: 95- 2100 feet. Blooms: March – August.	**Moderate Potential.** The Study Area contains coastal scrub habitat that may support this species; however, this species has not been documented from coastal sites in San Mateo County.	**Not Observed.** This species was not observed during the June 2013 survey either within the Project Area, within 100 feet of the Project Area, or within the surveyed portions of the Study Area. No further actions are recommended for this species.
Trifolium amoenum showy rancheria clover	FE, Rank 1B.1	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine. Elevation range: 15 – 1365 feet. Blooms: April – June.	**No Potential.** This species has not potential to occur due to extensive historical disturbance and the lack of serpentine substrate.	No further actions are recommended for this species.
Triphysaria floribunda San Francisco owl's-clover	Rank 1B.2	Coastal prairie, valley and foothill grassland; located on serpentine and non-serpentine substrate. Elevation range: 30 – 520 feet. Blooms: April – June.	**Unlikely.** Although the Study Area contains grassland habitat, this species is closely associated with undisturbed open prairie sites; the degree of disturbance within the Study Area precludes this annual species. Additionally, this species has not been documented from coastal San Mateo County.	No further actions are recommended for this species.

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Triquetrella californica coastal triquetrella	Rank 1B.2	On shallow, thin soil in coastal bluff scrub, coastal scrub, and valley and foothill grassland on open gravel substrates of roads, hillsides, bluffs, and slopes. Elevation range: 30 – 325 feet.	**Unlikely.** Although the Study Area contains coastal scrub habitat, it does not contain shallow, thin substrate.	No further actions are recommended for this species.
WILDLIFE				
Mammals				
fringed myotis *Myotis thysanodes*	WBWG High Priority	Associated with a wide variety of habitats including mixed coniferous-deciduous forest and redwood/sequoia groves. Buildings, mines and large snags are important day and night roosts.	**Unlikely.** Although the Study Area contains trees, this species prefers large snags for roosting which are No Potential. Additionally, no building, caves, or mines are located within the Study Area to provide roost sites.	No further actions are recommended for this species.
pallid bat *Antrozous pallidus*	SSC, WBWG High Priority	Occupies a variety of habitats at low elevation including grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	**Unlikely.** The Study Area does not provide suitable roosting habitat. May occasionally forage over the site.	No further actions are recommended for this species.
big free-tailed bat *Nyctinomops macrotis*	SSC, WBWG Medium Priority	Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	**Unlikely.** The Study Area does not contain cliffs or rock outcrops to provide roost sites for this species. Additionally, this species is less common in Northern California.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
hoary bat *Lasiurus cinereus*	WBWG Medium Priority	Prefers open habitat or a mosaic of habitats, with access to trees for cover and open areas or habitat edges for foraging; roosts in dense foliage of medium to large trees, feeds primarily on moths.	**Moderate Potential.** Trees within the Study Area may provide roosting sites for this species.	Work windows or perform preconstruction roost surveys
San Francisco dusky-footed Woodrat *Neotoma fuscipes annectens*	SSC	Typically occurs in forest habitats of moderate canopy and moderate to dense understory. Also found in chaparral habitats. Feeds mainly on woody plants, such as coast live oak (*Quercus agrifolia*), maple (*Acer macrophyllum*), coffeeberry (*Frangula californica*), alder (*Alnus* spp.), and elderberry (*Sambucus* spp.).	**Unlikely.** This species may nest and forage in the riparian and scrub habitats within the Study Area. Evidence of this species was not observed during the June 2013 or October 2015 survey either within the Project Area, within 100 feet of the Project Area. It was also not observed within the scrub habitats surveyed in the Study Area.	Pre-construction surveys within scrub and riparian habitats within 100 feet of the Project Area to ensure colonization has not occurred from the time of this assessment and project activities.
American Badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable, uncultivated soils. Prey on burrowing rodents.	**Unlikely.** The Study Area contains grassland habitat; however, the degree of disturbance, human visitation, and no burrows were observed on site. Additionally, the nearest occurrence is from Peak Mountain in1948.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
southern sea otter *Enhydra lutris nereis*	FT, SMC LCP	Near-shore marine environments from approximately Año-Nuevo, San Mateo County to point Point Sal, Santa Barbara County. Requires canopies of giant kep and bull kelp for rafting and feeding. Prefers rocky substrate with abundant invertebrates for forage grounds.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
Pacific harbor seal *Phoca vitulina richardsi*	MMPA	Marine and coastal waters, as well as estuaries. Hauls out on coastal rocks, rock reefs, and other habitats relatively isolated from disturbance.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
Guadalupe fur seal *Arctocephalus townsendi*	FT, ST, CFP	Breed on Isla de Guadalupe off the coast of Mexico, occasionally found on San Miguel, San Nicolas, and San Clemente islands. Prefers shallow, nearshore island water with cool and sheltered rocky areas for haul-outs.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
northern fur seal *Callorhinus ursinus*	MMPA	Breeds on large offshore rocks, and along undisturbed rocky or sandy island shorelines. The Farallone Islands are the nearest known breeding site.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
northern elephant seal *Mirounga angustirostris*	MMPA, SMC LCP	Pacific Ocean and coastal waters. While on land, they prefer sandy beaches.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Steller (=northern) sea lion *Eumetopias jubatus*	FT	Breeds on Año Nuevo, San Miguel and Farallon islands, Point Saint George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
Birds				
California brown pelican *Pelecanus occidentalis californicus*	FE, SE, CFP	Nests colonially on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Does not breed north of the Channel Islands. Winter visitor and post-breeding dispersal to San Francisco Bay region.	**Unlikely.** Does not breed in the Study Area, may rarely fly-over the site.	No further actions are recommended for this species.
white-tailed kite *Elanus leucurus*	CFP	Year-round resident of coastal and valley lowlands. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.	**High Potential.** The Study Area contains suitable breeding and foraging habitat for this species. This species winters in the area.	Conduct pre-construction surveys, and/or remove vegetation outside of breeding season.
northern harrier *Circus cyaneus*	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**Moderate Potential.** The Study Area contains suitable breeding and foraging habitat for this species.	Conduct pre-construction surveys, and/or remove vegetation outside of breeding season.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
golden eagle *Aquila chrysaetos*	CFP	Year-round resident in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons.	**Unlikely.** The Study Area does not contain high quality nesting habitat, but may occasionally forage over the site	No further actions are recommended for this species.
bald eagle *Haliaeetus leucocephalus*	FD, SE, CFP	Frequents ocean shores, lake margins, and rivers for both nesting and wintering. Requires abundant fish and adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branchwork. Shows a preference for ponderosa pine (*Pinus ponderosa*). Roosts communally in winter.	**Unlikely.** Typical nesting and foraging habitat is not located in the Study Area.	No further actions are recommended for this species.
American peregrine falcon *Falco peregrinus*	FD, SD, CFP	Resident and winter visitor to region. Occurs near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	**Unlikely.** The Study Area only contains poor quality nesting habitat for this species, however, this species may forage in the Study Area.	No further actions are recommended for this species.
prairie falcon *Falco mexicanus*	BCC	Resident and winter visitor to region. Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Unlikely.** The Study Area does not contain suitable nesting habitat. May infrequently fly-over the site.	No further actions are recommended for this species.

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California Ridgway's [clapper] rail *Rallus obsoletus [longirostris] obsoletus*	FE, SE, CFP	Found in tidal salt marsh and brackish marshes supporting emergent vegetation, upland refugia, and incised tidal channels. Restricted to the San Francisco Bay estuary.	**No Potential.** The Study Area does not contain marsh habitat necessary to support this species.	No further actions are recommended for this species.
California black rail *Laterallus jamaicensis coturniculus*	ST, CFP, BCC	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays; requires water depth of one inch that does not fluctuate during the year as well as dense vegetation for nesting.	**No Potential.** The Study Area does not contain marsh habitat necessary to support this species.	No further actions are recommended for this species.
western snowy plover *Charadrius alexandrinus nivosus*	FT, SSC, BCC, RP	Federal listing applies only to the Pacific coastal population. Year-round resident on sandy beaches, salt pond levees and shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.	**No Potential.** The Study Area does not contain suitable nesting, foraging, or roosting habitat to support this species.	No further actions are recommended for this species.
Caspian tern *Sterna caspia*	BCC	Summer resident in the region. Nests in small colonies inland and along the coast, usually on small islands and sandbars.	**Unlikely.** The Study Area does not contain waters suitable for this species. This species may occasionally fly-over the site.	No further actions are recommended for this species.
California least tern *Sterna antillarum browni*	FE, SE, CFP	Summer resient in the region. Nests colonially along the coast from San Francisco bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**No Potential.** The Study Area does not contain nesting, foraging, or roosting habitat for this species.	No further actions are recommended for this species.

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black oystercatcher *Haematopus bachmani*	BCC	Resident along rocky shorelines. Nests are small bowls or depressions close to the shore.	**No Potential.** The Study Are does not contain rocky bluffs directly on the coastline.	No further actions are recommended for this species.
long-billed curlew *Numenius americanus*	BCC	Breeds in upland shortgrass prairies and wet meadows in northeastern California. Winter visitor to the region, occurring in grasslands and shores.	**Unlikely.** This species may forage in the general area of the Study Area but does not breed here.	No further actions are recommended for this species.
short-tailed albatross *Diomedea albatrus*	FE, SSC	Nests on Japanese islands. Very rare winter visitor to offshore California waters.	**No Potential.** This species occurs within the region only rarely, and is found well offshore.	No further actions are recommended for this species.
Xantu's murrelet *Synthliborampus hypoleucus*	SSC	Generally rare post-breeding dispersal to the region. Pelagic breeding on offshore islands in rock crevices or under bushes. Does not breed north of the Channel Islands.	**No Potential.** The Study Area does not contain offshore island habitat necessary for this species.	No further actions are recommended for this species.
tufted puffin *Fratercula cirrhata*	BCC	Pelagic; nests along the coast on islands, islets, or (rarely) mainland cliffs. Typically winters well offshore.	**No Potential.** The Study Area does not contain coastal bluff or coastal islands to provide roosting or nesting habitat for this species.	No further actions are recommended for this species.
burrowing owl *Athene cunicularia*	SSC, BCC	Open, dry annual or perennial grasslands, deserts and scrub lands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Unlikely.** No ground squirrel burrows are present within the Study Area, and this species is typically located further inland.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
long-eared owl *Asio otus*	SCC	Generally uncommon resident and winter visitor in the region. Found in a variety of woodland types. Requires adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Unlikely.** The Study Area does not provide any typical habitat for this species.	No further actions are recommended for this species.
short-eared owl *Asio flammeus*	SSC	Resident and mostly winter visitor to the region. Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	**Unlikely.** The Study Area does not provide any typical habitat for this species.	No further actions are recommended for this species.
Vaux's swift *Chaetura vauxi*	SSC	Summer resident. Forages high in the air over most terrain and habitats but prefers rivers/lakes. Requires large hollow trees for nesting, usually within old-growth forest.	**Unlikely.** There are no recent breeding records within the vicinity of the Study Area, and the Study Area does not contain large, old-growth trees with hollow boles necessary to support this species.	No further actions are recommended for this species.
black swift *Cypseloides niger*	SSC, BCC	Patchily-distributed summer resident in California, occurring in coastal and forested habitats. Nest sites are usually associated with waterfalls.	**Unlikely.** The Study Area does not contain waterfall habitat or cliffs necessary for nesting. May fly-over the site.	No further actions are recommended for this species.
rufous hummingbird *Selasphorus rufus*	BCC	Migrant and uncommon summer resident in California. Found in a wide variety of habitats that provide nectar-producing flowers. Typically breeds further north.	**Unlikely.** No known breeding records in San Mateo County; probably occurs within the Study Area during migration.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Allen's hummingbird *Selasphorus sasin*	BCC	Summer resident along the California coast, breeding in a variety of woodland and forest habitats, including parks and gardens with abundant nectar sources. Nest in shrubs and trees with dense vegetation.	**High Potential.** The Monterey pine trees and scrub habitats adjacent to open areas provide suitable nesting habitat.	Conduct pre-construction surveys, and/or remove vegetation outside of breeding season.
Lewis's woodpecker *Melanerpes lewis*	BCC	Uncommon winter resident occurring on open oak savannahs, broken deciduous and coniferous habitats.	**Unlikely.** The Study Area does not contain suitable nesting habitat for this species.	No further actions are recommended for this species.
olive-sided flycatcher *Contopus cooperi*	SSC, BCC	Conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain	**Moderate Potential.** The Study Area contains large Monterey pine trees that may provide habitat for this species.	Remove vegetation outside of breeding season and conduct pre-construction surveys.
little willow flycatcher *Empidonax traillii brewsteri*	SE, BCC	Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. Winter migrant.	**Unlikely.** No known occurrences in San Mateo County, may occur as a migrant.	No further actions are recommended for this species.
purple martin *Progne subis*	SSC	Inhabits woodlands, low elevation coniferous forest. Nest in snags, old woodpecker cavities and human-made structures.	**Unlikely.** The Study Area does not contain large snags necessary for nesting habitat. May occasionally forage or fly-over the site.	Conduct pre-construction surveys, and/or remove vegetation outside of breeding season.
loggerhead shrike *Lanius ludovicianus*	SSC, BCC	Prefers open habitats with scattered shrubs, trees, posts, or other perches. Eats mostly large insects.	**Moderate Potential.** The Study Area contains suitable breeding and foraging habitats.	Conduct pre-construction surveys, and/or remove vegetation outside of breeding season.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
yellow-breasted chat *Icteria virens*	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian thickets consisting of willow, blackberry.	**Unlikely.** There are no recent breeding records from San Mateo County, and the Study Area provides only sub-optimal habitat.	No further actions are recommended for this species.
yellow warbler *Setophaga [Dendroica] petechia*	SSC, BCC	Summer resident in the region. Nests in riparian stands of aspens, sycamores and alders with a dense understory of willows. Also nests in montane shrubbery in open conifer forests.	**Unlikely.** There are no recent breeding records from San Mateo County, and the Study Area provides only sub-optimal habitat.	Remove vegetation outside of breeding season and conduct pre-construction surveys.
grasshopper sparrow *Ammodramus savannarum*	SSC	Frequents dense tall, dry or well-drained grasslands, especially native grasslands with mixed grasses and forbs for foraging and nesting. Nests on ground at base of overhanging clumps of vegetation.	**Unlikely.** Although this species is documented to breed within two miles of the Study Area, the grassland habitat is fragmented and unlikely to support suitable nesting habitat for this species.	No further actions are recommended for this species.
tricolored blackbird *Agelaius tricolor*	SSC, BCC	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. Nesting area must be large enough to support about 50 pairs.	**Unlikely.** The Study Area does not contain typical breeding habitat for this species.	No further actions are recommended for this species.
Reptiles and Amphibians				
Pacific pond turtle *Actinemys marmorata*	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter.	**Unlikely.** The Study Area does not contain aquatic habitat for this species. This species is unlikely to be in Montara Creek, but may be in nearby ponds. Visitation in uplands within the Study Area is unlikely.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, SE, CFP, RP, SMC LCP	Vicinity of freshwater marshes, ponds and slow moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense vegetative cover and water depths of at least one foot. Upland areas near water are important habitat features.	**Unlikely.** The Study Area does not contain aquatic habitat or burrows for refugia, and is not known in the vicinity of Montara. However the riparian unnamed perennial creek to the south and ponds on adjacent properties provide potential aquatic foraging habitat.	No further actions are recommended for this species. Measures for CRLF described in Section 5.2.4 are sufficient to avoid impacts should a wandering SFGS occur.
California red-legged frog *Rana draytonii*	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains.	**Unlikely.** The Study Area does not contain aquatic habitat or burrows for refugia, and the Project Area is over 350 feet from aquatic habitats. However the riparian unnamed perennial creek to the south and ponds on adjacent properties provide potential aquatic breeding and non-breeding habitat. This species may disperse through the Study Area between these sites during rain events.	Pre-construction survey, exclusion fencing, monitoring, and additional measures as described in Section 5.2.4.
Fishes				
Pacific herring *Clupea pallasii*	None	Pacific herring is a coastal marine fish that uses large estuaries for spawning and early rearing habitat.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
tidewater goby *Eucyclogobius newberryi*	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species.	No further actions are recommended for this species.
steelhead - Central Valley ESU *Oncorhynchus mykiss irideus*	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Populations in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.
steelhead, Central California Coast ESU *Oncorhynchus mykiss*	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
winter-run Chinook salmon, Sacramento River *Oncorhynchus tshawytscha*	FE, SE	Occurs in the Sacramento River below Keswick Dam. Spawns in the Sacramento River but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 degrees C for spawning. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles typically migrate to the ocean soon after emergence from the gravel.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.
Central Valley spring-run Chinook salmon *Oncorhynchus tshawytscha*	FT, ST	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.
Central Valley fall- and late fall-run Chinook salmon ESU *Oncorhynchus tshawytscha*	NMFS SC, SSC	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
Coho salmon - Central CA Coast ESU *Oncorhynchus kisutch*	FE, SE	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	**No Potential.** The Study Area does contain aquatic / marine habitat necessary to support this species. Montara Creek does not support salmonids.	No further actions are recommended for this species.
Invertebrates				
white abalone *Haliotis sorenseni*	FE, SSI	White abalone is the first marine invertebrate to be listed under the ESA and are reported to be most abundant between 25-30 m (80-100 ft depth).	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
black abalone *Haliotis cracherodii*	FE, SSI, NMFS SC	Ranges from Cabo San Lucas to Mendocino County. Found in intertidal and shallow subtidal areas.	**No Potential.** The Study Area does not contain marine habitat necessary to support this species.	No further actions are recommended for this species.
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT, SSI	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**No Potential.** The Study Area does not contain serpentine habitat, wildflower fields, or associated larval and nectar resources necessary to support this species..	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
monarch butterfly *Danaus plexippus*	winter roosts monitored by CDFW, SSI	Winter roost sites located in wind-protected tree groves (Eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**Moderate Potential.** The mature Monterey pine trees in the Study Area may provide a suitable winter roost site.	Conduct winter roost survey if potential roost trees are to be removed.
Myrtle's silverspot *Speyeria zerene myrtleae*	FE, SSI	Foggy, coastal dunes and hills of the Point Reyes Peninsula.	**No Potential.** Extirpated from San Mateo County, and the Study Area does not contain coastal dune habitat.	No further surveys or mitigation measures are necessary.
callippe silverspot butterfly *Speyeria callippe callippe*	FE, SSI	Hostplant is *Viola pedunculata,* most adults found on east facing slopes, males congregate on hilltops in search of females.	**Unlikely**. The Study Area contains very small, fragmented native coastal prairie habitat that is not connected to a larger matrix of coastal prairie habitat. Additionally, no violet species (*Viola* spp.) were observed during the site visit.	No further actions are recommended for this species.
San Bruno elfin butterfly *Callophrys mossii bayensis*	FE, SSI	Colonies are located on steep, north-facing slopes in the vicinity of San Bruno mountain, San Mateo County. Larval host plant is broadleaf stonecrop (*Sedum spathulifolium*).	**Unlikely**. No known occurrences near the Study Area. Additionally broadleaf stonecrop was not observed within the Study Area.	No further actions are recommended for this species.
mission blue butterfly *Plebejus icarioides missionensis*	FE, SSI	Grasslands of the San Francisco Peninsula. Host plants are three species of lupine, of which silver bush lupine (*Lupinus albifrons*) is preferred.	**Unlikely**. No known occurrences near the Study Area. Additionally, silver bush lupine and other perennial / shrub lupines not observed within the Study Area.	No further surveys or mitigation measures are necessary.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA (inclusive of PROJECT AREA)	RESULTS AND RECOMMENDATIONS
San Francisco tree lupine moth *Grapholita edwardsiana*	SMC LCP	Occurs only on sandy northern peninsula sites. Tree lupine (*Lupinus arboreus*) host the larvae of this species. This species is addressed in the San Mateo County LCP.	**No Potential**. No tree lupine observed near the Study Area.	No further actions are recommended for this species.
California brackish water snail *Tryonia imitator*	SMC LCP	Occurs in brackish water, such as Pescadero Marsh.	**No Potential.** The Study Area does not contain suitable habitat for this species. No marsh or brackish marsh habitat is present.	No further actions are recommended for this species.
globose dune beetle *Coelus globosus*	SMC LCP	Inhabits California's coastal dune system.	**No Potential**. The Study Area and vicinity do not contain dune habitat.	No further actions are recommended for this species.

***Key to status codes:**

FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
SD	State Delisted
ST	State Threatened
SR	State Rare
SMC LCP	San Mateo County Local Coastal Program Endangered, Rare or Unique Species
Rank 1A	California Rare Plant Rank 1A: Plants presumed extinct in California
Rank 1B	California Rare Plant Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	California Rare Plant Rank 2A: Plants presumed extinct in California but more common elsewhere
Rank 2B	California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California but more common elsewhere
Rank 3	CNPS List 3: Plants about which CNPS needs more information (a review list)
Rank 4	CNPS Rank 4: Plants of limited distribution (a watch list)

Potential to Occur:

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Appendix C

Representative Photographs of the Study Area

Photograph 1. Coyote brush scrub, coffeeberry scrub, and Monterey pine groves in the southern portion of the Study Area. View facing west. Photograph taken September 30, 2015.

Photograph 2. The understory of the Monterey pine grove in the western portion of the Study Area. View facing west. Photograph taken September 30, 2015.

Photograph 3. Overview of the northern portion of the Study Area, showing non-native grassland. View facing east. Photograph taken September 30, 2015.

Photograph 4. Overview of the western portion of the Study Area, showing non-native grassland and coastal terrace prairie. View facing south. Photograph taken September 30, 2015.

Photograph 5. California wild strawberry (*Fragaria vesca* [*F. californica*]) in the western portion of the Study Area. Photograph taken September 30, 2015.

Photograph 6. Beach strawberry (*Fragaria chiloensis*) in the northern portion of the Study Area. Photograph taken September 30, 2015.

Appendix D

Site Assessment for the San Francisco Garter Snake and California Red-legged Frog at the Bewley Parcel in Montara, San Mateo County, California (Karen Swaim)

SITE ASSESSMENT FOR THE SAN FRANCISCO GARTER SNAKE & CALIFORNIA RED-LEGGED FROG AT THE BEWLEY PARCEL IN MONTARA, SAN MATEO COUNTY CALIFORNIA

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November 16, 2013

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List of Abbreviations and Acronyms

CDFW	California Department of Fish and Game
CNDDB	California Natural Diversity Database
CRLF	California Red-legged Frog
FWS	United States Fish and Wildlife Service
GGNRA	Golden Gate National Recreation Area
NPS	National Park Service
SBI	Swaim Biological, Inc.
SFGS	San Francisco Garter Snake

1.0 Introduction

Purpose and Scope of Report

This report presents the results of a focused habitat assessment for the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) and California red- legged frog (*Rana draytonii*) on the Bewely Parcel in Montara, San Mateo County, California. This report was prepared to offer analysis and further biological information for the site, specifically for these listed species. Further analysis was requested after a consultant reported the presence of the San Francisco garter snake (SFGS) on the property. The consultant reported in a memo that he had observed a San Francisco garter snake at the northwest corner of the parcel on the site, on May 6, 2011 (Heal Environmental Consulting Memo to Henri Mannik, June 29, 2011).

Project Location and Description

The proposed project is the construction of a single family residence on the parcel (APN 036-310-180). The project site is located approximately 5 miles north of the Town of Half Moon Bay, California in San Mateo County (Figure 1). The project site is a residential lot 8.2 acres in size located on the south end of Audubon Street in Montara (Figure 2). Audubon Street is a private unpaved road. The southern boundary of the lot is the centerline of Montara Creek. The site is currently undeveloped fallow pasture and open space, and land use in the surrounding area is open space, pasture, and residential development.

This single family residential project will include utilities, a driveway, paths, outbuildings, a garden, and swales and detention structures for surface water runoff. Landscaping of the site will include control of invasive plant species and the use of native vegetation as well as ornamental species.

2.0 Species Accounts

2.1 California Red-legged Frog

Status

The California red-legged frog is listed as federally threatened (USFWS 1996). Critical habitat was designated for the frog in 2006 (USFWS 2006) and was revised in 2010 (USFWS 2010). The project site is not within designated critical habitat.

Distribution and Habitat Associations

The CRLF is distributed along the coast and Coast Ranges from Mendocino to northern Baja, California and in patches along the Sierra Nevada foothills. California red-legged frogs breed in wetlands, lakes, ponds, and other still or slow-moving sources of water. During summer months CRLF may take refuge in cool, moist areas including rodent burrows and soil crevices. Although many CRF appear to remain close to aquatic habitats year-round one recent study

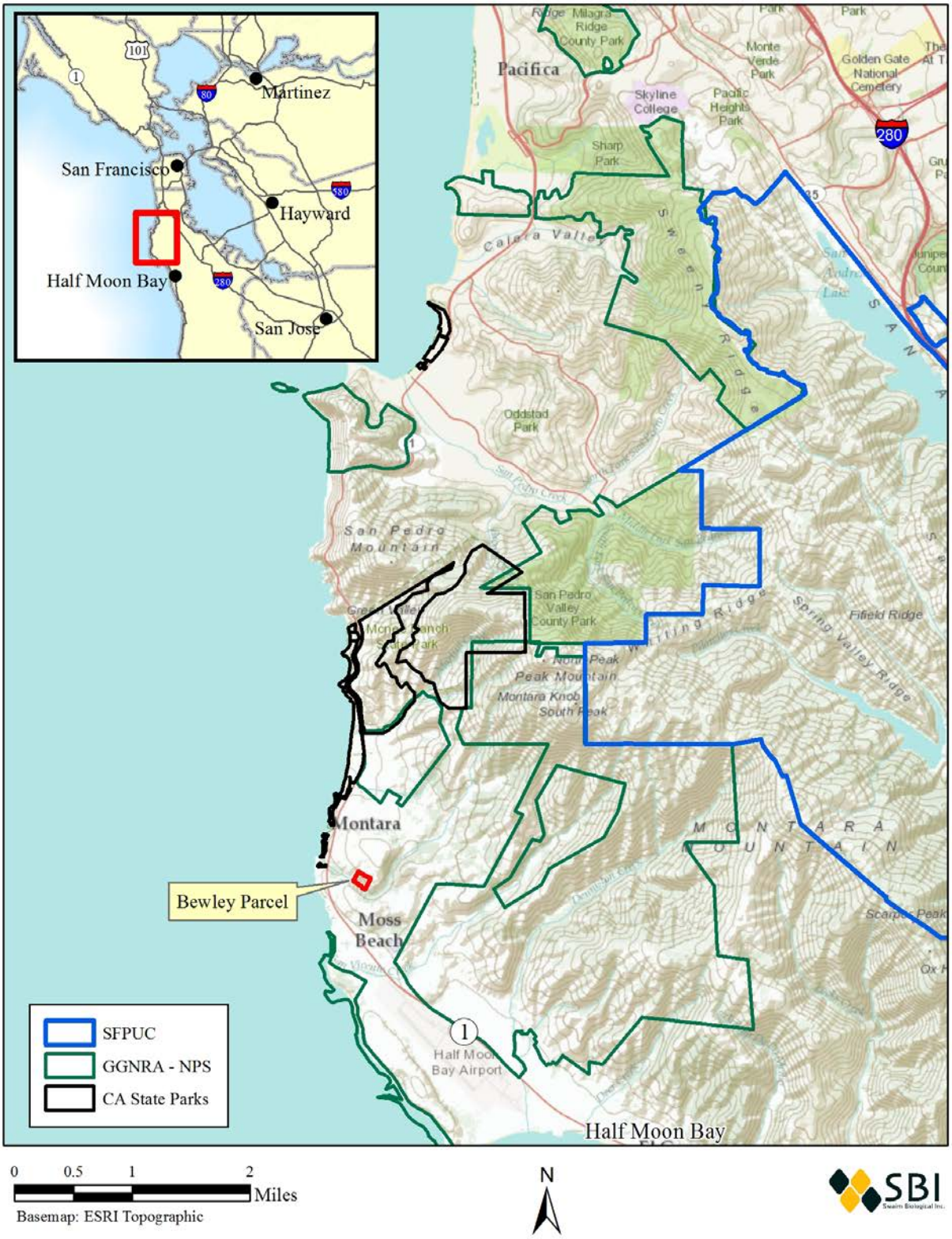

Figure 1. Regional location

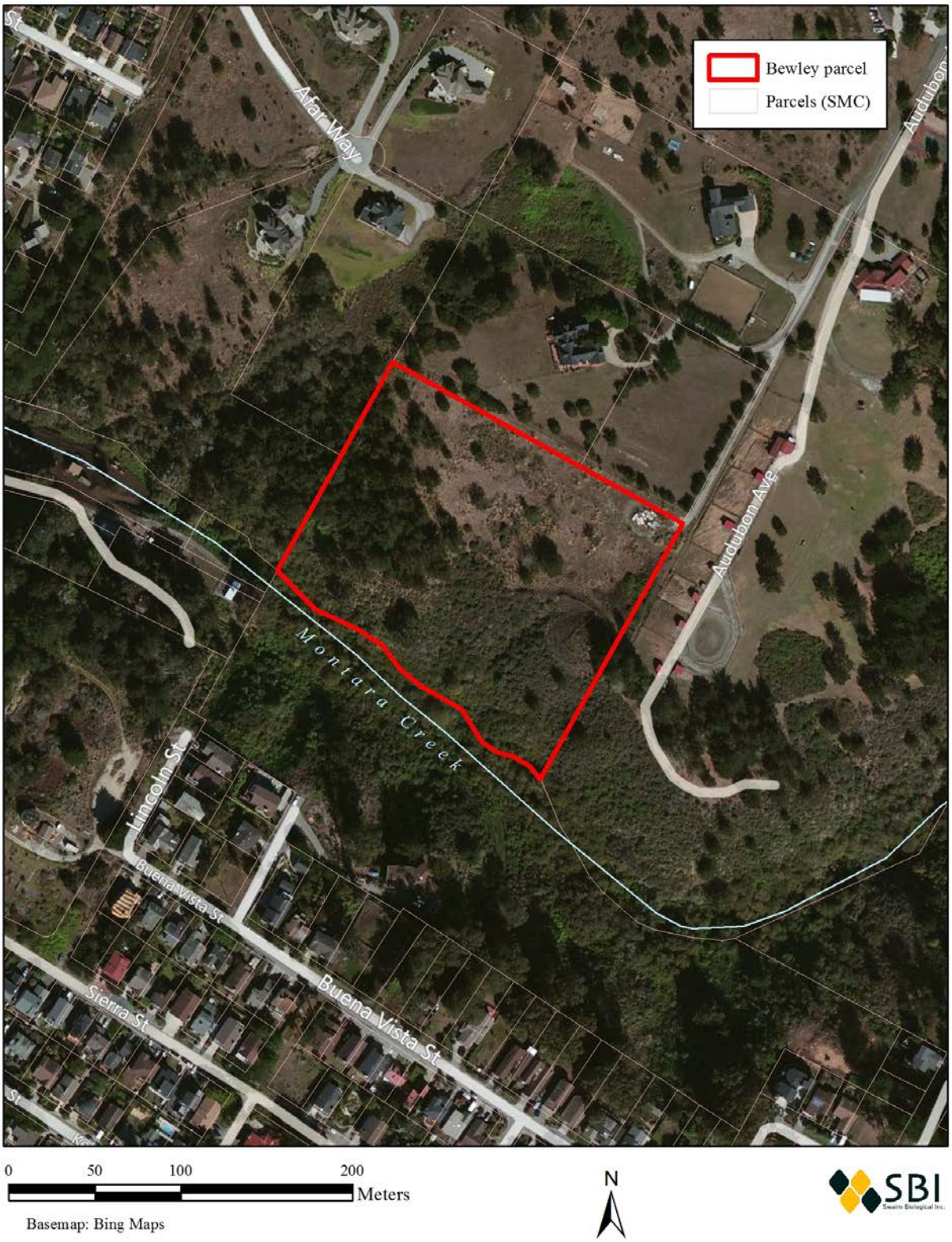

Figure 2. Bewley Parcel Boundary.

found that nearly half of all females in some areas disperse into other locations during the non-breeding season (Fellers and Kleeman 2007). Dispersal distances from breeding habitat are generally less than 0.5 miles (Fellers 2005), but some individuals have been observed to move more than 2 miles through surrounding uplands (Bulger *et al*. 2003). Dispersal typically occurs along riparian corridors, but a wide variety of habitat types may be traversed by frogs moving to non-breeding habitat areas. Bulger et al. (2003) reported CRLF in northern Santa Cruz County dispersing without apparent regard to riparian corridors or topography.

2.2 San Francisco Garter Snake

Status

The SFGS has suffered primarily from habitat loss, as sag ponds and meadows were filled and developed over the past century. Additional threats include collecting by black-market reptile hobbyists, and predation and competition from introduced species. For these reasons, the SFGS was one of the first species to be designated federally endangered in 1967, and state listed as endangered in 1971. California also lists SFGS as a "fully protected" species. There is no designated critical habitat for the SFGS.

Distribution and Habitat Associations

SFGS occupy a limited geographic range that is restricted to San Mateo County and northern Santa Cruz County, California, and enter into a zone of intergradation with the conspecific California red-sided garter snake (*Thamnophis sirtalis infernalis*) just south of Pulgas water temple (adjacent to Lower Crystal Springs Reservoir in southern San Mateo County). This zone of intergradation extends into extreme northern Santa Clara County, with pure forms of California red-sided garter snakes appearing on and south of the Stanford University campus (Barry 1994).
SFGS can be found at permanent and seasonal freshwater wetlands that provide areas of dense vegetation for cover, open space for basking and are proximate to upland areas where snakes may retreat into rodent burrows through winter (Barry 1994, Larsen 1994). The presence of preferred prey items, specifically CRLF (*Rana draytonii*), and Pacific chorus frogs (*Pseudacris regilla*) is a key component of suitable SFGS habitat.

Although SFGS populations are closely associated with permanent and near permanent aquatic habitats, they also range into uplands, make significant use of highly seasonal wetlands found within the mosaic of more permanent aquatic habitats, and move into dry uplands during winter to seek retreats (Barry 1994, McGinnis 1991, Larsen 1994) . SBI (2008a) has documented SFGS in drainages with no standing water over 250 meters from a permanent water source. Similar results were obtained in trapping studies near San Andreas Lake (SBI 2008a).

3.0 Methods

Prior to the field visits, SBI conducted a review of existing environmental documents with SFGS and CRLF distribution information that pertain to the alignment, and searched the CNDDB and museum collection data. We also reviewed multiple years of digital aerial photos to locate areas of potential wetland habitat/ponds on the site or in the vicinity that could support breeding amphibians, including the Pacific chorus frog, California red-legged frog, and/or newts (*Taricha* sp.). In addition, SBI has prepared site wide inventory and assessments of SFGS and CRLF via field surveys and habitat assessments for GGNRA and the SFPUC. SBI is very familiar with the distribution of both potential and occupied habitat for the SFGS and CRLF in the region and we were able to draw on information obtained in these previous studies.

Karen Swaim conducted field visits to the site and publically accessible areas in the vicinity on October 8, October 24 and November 14, 2011 and March 5, April 12, and May 21, 2012, and June 14, 2013. On the site a number of pieces of plywood that have been on the ground for many years provided cover objects to inspect for snakes on each visit up to May 21, 2012. At least six separate pieces ranging in size from 2 ft x 2 ft to 4ft x 6ft were lifted each time the site was visited, the boards were lifted and the ground carefully inspected for snakes and other wildlife. The entire site was visually surveyed during visits, including one survey of Montara Creek along the length of the property to determine if suitable CRLF breeding habitat was present.

4.0 Results

4.1 California Red-legged Frog

No CRLF were observed on the site during any of the site visits and no suitable breeding habitat is present on the site. There are 9 records of CRLF observations within three miles of the project site (Table 1 and Figure 3). The closest record of breeding CRLF is from a pond approximately 0.8 miles northwest of the site and constructed in the last decade on land currently owned by GGNRA (K. Swaim, Personal Observation, March 5, 2012).

A small remnant of a pond is present on an adjacent parcel just west of the northwest corner of the Bewley Parcel, but is not of sufficient size to provide breeding habitat for CRLF. In normal or wet years it may provide breeding habitat for the Pacific chorus frog, which was found in small numbers on the project site under plywood boards on the site.

A wetland/pond is also present approximately 200 feet from the northwest corner of the Bewley parcel (Figure 4). This pond/wetland is visible in 1993 aerial photos, prior to construction of the four houses on Afar Way, in Montara. This pond is on private property and was only viewed from aerials and the public road that accesses area. Based on analysis multiple years of aerial photos, the size, habitat and hydroperiod of the pond is adequate to potentially support a breeding population of CRLF.

Table 1. CRLF Observations in the vicinity of the Bewley project

Map #	CNDDB Occurrence #	Source	Date of Obs.	Age Class	Distance from Project Site	Description
1	38	CNDDB 2013	12-Jul-06	A	1.60 mi. SE	Possible breeding
2	242	CNDDB 2013	16-Apr-97	A,L	2.09 mi. N	Breeding pond
3	301	CNDDB 2013	7-May-99	A,S	2.24 mi. SE	Possible breeding
4	539	CNDDB 2013	12-Aug-02	A,S	2.54 mi. N	breeding unlikely
5	853	CNDDB 2013	18-Jun-01	A	2.79 mi. SE	Possible breeding
6	976	CNDDB 2013	12-Jun-06	A	1.24 mi. SE	Breeding pond
7	N/A	Swaim Bio, 2006	18-Jun-06	A	1.56 mi. SE	Breeding pond
8	N/A	Swaim Bio, 2006	12-Jul-06	A	1.56 mi. SE	Breeding pond
9	N/A	Swaim Bio, 2012	5-Mar-12	A	.78 Mi. N	Breeding pond
10	N/A	Kozak, Chuck-Go Native, Inc.	2007, 2013	A	?? Montara Creek	Non-breeding

Only observations within 3 miles of property included A=Adult
S=Sub-Adult L=Larva(e)

Figure 3. California Red-legged Frog Records.

Figure 4. Aquatic Habitat in the Vicinity of the Bewley Parcel.

A second pond is also present approximately 0.28 miles to the east near June Hollow Road. This pond is permanent based on review of aerial photos and provides potential breeding habitat for CRLF.

4.2 San Francisco Garter Snake

No San Francisco garter snakes were observed on the project site or any of the publicly accessible locations visited during the study period. Amphibian and reptile species observed on the property included slender salamander (*Batrachoseps attenuatus*), yellow-eyed salamander (*Ensatina eschscholtzii*), Pacific chorus frog (*Pseudacris regila*) terrestrial garter snake (*Thamnophis elegans*), racer (*Coluber constrictor*), ring-necked snake (*Diadophis punctatus*), and gopher snake (*Pituophis melanolucus*). Most of these were observed under the plywood boards and multiple terrestrial garter snakes were observed abroad on the parcel as well.

There is only a single record of SFGS within 5 miles of the site (Table 2). This record is from the Denniston Reservoir approximately 1.5 miles southwest of the Bewley Parcel. The closest records to the north and west are over five miles and Montara Mountain which lies between those records and the site is thought to be a significant topographical feature that resulted in a break in distribution of the SFGS between approximately San Pedro Point near Pacifica and Tunitas Creek just south of Half Moon Bay (Barry 1994). Only two records of SFGS in Half Moon Bay include the observations at Denniston Reservoir and a single individual at the mouth of Pilarcitos Creek in 1988 are known. The Denniston Reservoir population does not appear stable as past surveys (Barry 1994) and the most recent surveys did not detect SFGS (Swaim Biological, 2006). The last observation there was from 1994 (Barry 1994). CNDDB Record (#35 in 2004) from the Pilarcitos Creek Trail in Half Moon Bay are in error, as photos obtained for the record are of a terrestrial garter snake (Thamnophis elegans), not an SFGS.

Table 2. SFGS Observations in the vicinity of the Bewley project

CNDDB Occurrence	Source	Observed by	Date of Obs.	Distance from Project Site
7	CNDDB 2012	Barry, 1978	1978	1.6 Mi. SE
31	CNDDB 2012	Murphy, 1988	1988	5.4 Mi. SE
N/A	McGinnis, 1989	McGinnis, 1989	Apr-89	5.4 Mi. N
N/A	McGinnis, 1989	McGinnis, 1989	Apr-89	5.4 Mi. N
N/A	Swaim Bio, 2011	Swaim Bio, 2011	5-May-11	4.5 Mi. NE

5.0 Conclusions

Based on available information, the site provides potential upland habitat for the CRLF. However, the project has maintained sufficient buffer from aquatic habitats (Montara Creek and the pond on the parcel to the northwest) to avoid the potential for any significant impact if Avoidance and Minimization Measures are implemented (See Appendix A).

Based on available information, it is very unlikely the SFGS is present on the site. In my professional opinion, it is very likely the snake on the Bewley property was misidentified by the consultant, as an SFGS. Terrestrial garter snakes are commonly misidentified as SFGS, even when a photo is taken. Terrestrial garter snakes often have enough red on them and even a turquoise colored belly to be mistaken for SFGS. No photo was obtained for positive identification, but it was likely that the snake observed was a terrestrial garter snake. Even with a photo, an observer is often convinced they have seen an SFGS, but upon review it turns out to be a terrestrial garter snake.

Barry (1994) noted a break in distribution that likely included the project area. Additional evidence of the break in distribution comes from the lack of any observations of SFGS during the extensive pre-project surveys and project monitoring for the construction of the Devils Slide Tunnel. During pre-project surveys, including trapping surveys and over four years of biological monitoring, no SFGS were ever observed in the project area.

Although SFGS are very unlikely to be present on the project site, due to the sites location in San Mateo County, it is recommended that the project implement Avoidance and Minimization Measures in Appendix A.

6.0 Literature Cited

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SBI. 2008a. San Francisco Garter Snake Monitoring Report. West of Bayshore Property. San Francisco International Airport: 2007 Baseline Survey Results. Prepared for San Francisco International Airport. Bureau of Planning and Environmental Affairs. 50 pp.

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APPENDIX A: Site Photos

APPENDIX B- Avoidance and Minimization Measures

Appendix E

Project Site Plans

Bewley Residence

Audubon
Montara, CA 94037

ARCHITECTURAL ABBREVIATIONS

A		
	AB	Anchor bolt
	ABV	Above
	ADJ	Adjustable/Adjacent
	ALT	Alternate
	ALUM	Aluminum
	ARCH	Architecture
B		
	BD	Board
	BDRM	Bedroom
	BLDG	Building
	BLKG	Blocking
	BM	Beam
	BOT	Bottom
	BO	Bottom of
	BOW	Bottom of wall
C		
	CAB	Cabinet
	CAR	Cold air return
	CER	Ceramic
	CFM	Cubic Feet per Minute
	C	Center Line
	CLG	Ceiling
	CLR	Clear
	CMU	Concrete Masonry Unit
	CO	Clean Out
	CONC	Concrete
	CONSTR	Construction
	CONT	Continuous
D		
	DIA	Diameter
	DBL	Double
	DF	Douglas Fir
	DET	Detail
	DHW	Domestic Hot Water
	DINRM	Dining room
	DISP	Disposal
	DN	Down
	DR	Door
	DS	Downspout
	DWR	Drawer
	DW	Dishwasher
E		
	(E)	Existing
	EA	Each
	ELEC	Electrical
	ELEV	Elevation
	E. O.	Edge Of
	EQ	Equal
	ENCL	Enclosure
	EP	Electrical Panel
	EXT	Exterior
F		
	FA	Fire Alarm
	FD	Floor Drain
	FDN	Foundation
	FF	Finish Floor
	FHWS	Flat Head Wood Screw
	FIN	Finish
	FLR	Floor
	FLUOR	Fluorescent
	FOC	Face of Concrete
	FOF	Face of Framing
	FO CMU	Face of CMU
	FOS	Face of Stud
	FTG	Footing
	FURR	Furring
G		
	GA	gauge
	GALV	Galvanized
	GD	Garbage Disposal
	GFI	Ground Fault
	GL	Glazing
	GLB	Glue Laminated Beam
	GLULAM	Glue Laminated
	GR	Grade
	GSM	Galvanized sheet metal
	GYPBD	Gypsum Board
H		
	HB	Hose Bib
	HC	Hollow Core
	HDR	Header
	HDWD	Hardwood
	HDWR	Hardware
	HWH	Heating Hot Water
	HORIZ	Horizontal
	HT	Height
I		
	ICF	Insulated Concrete Forms
	ID	Inside Dimension
	INSUL	Insulation
	INT	Interior
J		
	JST	Joist
K		
	KIT	Kitchen
L		
	LAM	Laminate
	LAV	Lavatory
	LVL	Level
M		
	MAT	Material
	MAX	Maximum
	MB	Machine Bolt
	MC	Medicine Cabinet
	MECH	Mechanical
	MEMB	Membrane
	MFR	Manufacturer
	MIN	Minimum
	MISC	Miscellaneous
	MTD	Mounted
	MTL	Metal
	MW	Microwave
N		
	(N)	New
	NEC	Necessary
	NIC	Not in contract
	NOM	Nominal
	NTS	Not to scale
	NTV	Not true View
O		
	OA	Overall
	OC	On Center
	OD	Outside Diameter
	OPNG	Opening
	OPP	Opposite
P		
	PDL	Perforated Drain Line
	PERF	Perforated Drain Line
	P.L.	Plate or Property
	PLLAM	Plastic Laminate
	PLYWD	Plywood
	PR	Pair
	PT	Point
	PTN	Partition
	PWDRRM	Powder Room
Q		
	QT	Quarry Tile
R		
	R	Radius
	RD	Roof Drain
	REDWD	Redwood
	REF	Refrigerator
	REINF	Reinforced
	REQ	Required
	RM	Room
	RO	Rough Opening
	RWL	Rain Water Leader
S		
	SC	Solid Core
	SF	Square Foot
	SH	Shelf
	SHT	Sheet
	SHW	Solar Hot Water
	SIM	Similar
	SKYL	Skylight
	SOG	Slab on Ground/grade
	SQ	Square Foot
	STD	Standard
	STOR	Storage
	S.S.	Stainless Steel
	SCD	See Civil Drawings
	SLD	See Landscape Drawings
	SMD	See Mechanical Drawings
	SSD	See Structural Drawings
	SYM	Symmetrical
T		
	T	Tread
	TB	Towel Bar
	TDL	Tight Drain Line
	TEL	Telephone
	T&G	Tongue and Groove
	TH	Thermostat
	THRD	Threaded
	TOC	Top of Concrete
	TOW	Top of Wall
	TYP	Typical
U		
	UON	Unless Otherwise Noted
V		
	VERT	Vertical
	VGDF	Vertical Grain Doug Fir
W		
	W/	With
	WAR	Warm Air Register
	WC	Water closet
	WD	Wood
	WH	Water heater
	WIND	Window
	W/O	Without
	WP	Waterproof
	WR	Water-Resistant
	WWM	Welded Wire Mesh
@	AT	
#	Number or Pounds	
℄	Property Line or Plate	

LEGEND

Elevation — 1 / A2.0

Interior Elevation — A / D / 1 / A3.1 / B / C

Building Section — 1 / A3.2

Wall Section — 1 / A8.2

Detail Section — 1 / A8.2

Detail Callout — 1 / A8.2

Floor Elevation — T.O. FINISH EL. 0'-0"

Spot Elevation — EL.= 10'-0" / +172.0'

Key Note — 22-56 — CSI # - Note # (Category#) - (Project Note #)

Door Mark or Window Mark — D M-1
D = Door
W = Window
M-1 = Level-Unit#
e.g. = Main LVL-Window#1
M = Main Level
U = Upper Level
B = Barn
G = Garage

Finish Mark — F-01

Plumbing Mark — P-01

Appliance Mark — A-01

PROJECT DATA

SEE A1.2 FOR ZONING DATA

Project Name	Bewley Residence
Project Addresss	1455 Audubon Ave. (South end) Montara, CA 94037
Project Owner	Sirje Bewley P.O. Box 370453 Montara, CA 94037
A.P.N.	036-310-180
San Mateo County Planning Dept Permit #	P.L.N. 2010-00079
Zone	P.A.D.-C.D.: Planned Agricultural District
Type of Construction	Concrete Masonry or Cast Concrete, Light Framed Wood
Occupancy Type	R-3
Number of Stories	2 Stories with a Crawlspace
Fire Sprinklers	Yes (County Requirement)
Fire Marshal	Half Moon Bay Fire Protection District
Green Building Rating	"Build It Green" New Home GreenPoints Checklist, 2006 Edition
San Mateo County Rating Standard	__points (Pending) (Based on S.M.C. Green Building Ordinance #04411 admendment adding Chapter 14 to the County Ordinance Code.

CODES / AGENCIES

2016 California Building Code
2016 California Residential Code
2016 California Mechanical Code
2016 California Plumbing Code
2016 California Electrical Code
2016 California Energy Code
2016 California Fire Code
2016 California Green Building Code

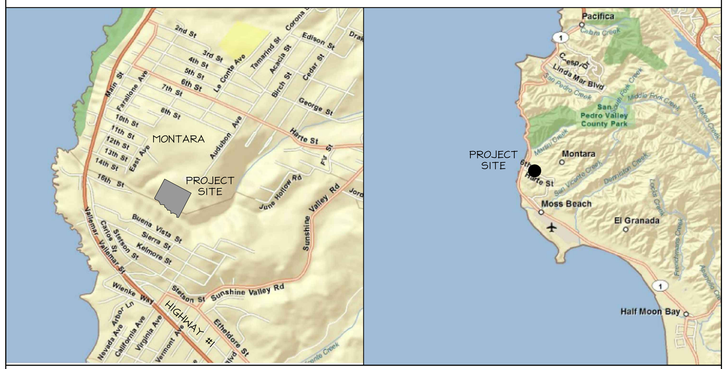
- Fitzgerald Area of Special Biological Significance.
- S.M.C. Water Efficient Landscape Ordinance.
- Municipal Regional Stormwater Permit: C.3 & C.6 (MRP)
- Coastside Fire District Ordinance 2013-03
- State's Model Water Efficient Landscape Ordinance (MWELO)

Coastal Commission.
State Water Board Special Protection.
Army Corp. of Engineering.
CA Fish and Wildlife / U.S. Fish and Wildlife.
San Mateo County Geotechnical
San Mateo County Public Works
San Mateo County Environmental Health
San Mateo County Fire Marshal
Coastside Fire Protection District
Sanitary District
Agricultural Advisory Committee
C.H.R.I.S.
Regional Water Quality Board
Bay Area Air Quality Management

And other local, State, and Federal regulations.

BUILDING IMAGE

VICINITY MAP



PROJECT DESCRIPTION

The project consists of a new single family residence located in the coastal town of Montara, California.

Development will be roughly limited to the North East quadrant of the property by the existing tree line and the existing horse stables on the adjacent property. There will be an access drive from Audubon Avenue and around an inner meadow area. The drive passes an studio/barn structure.

The site design includes water storage features and stormwater management which encourages ground water absorption. A large portion of the site will be untouched.

The house will be a durable structure constructed of concrete/masonry with an insulated cavity and outer masonry veneer. The walls utilize insulated thermal mass to retain solar heat gain. The building shape and glazing enable interior spaces to have natural light from at least two sides.

Where possible, the building systems are accessible for repair and maintenance.

Salvaged materials will be used where possible.

The structural detailing considers the proximity to the San Gregorio fault.

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Mark Stegmaier

DRAWING INDEX

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A1.2	ZONING DATA AND NOTES	X	X	X	X	X	X						X	
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A1.6	BUILDING SITE PLAN: STUDIO AND GARAGE	X		X	X	X	X	X						
A1.7	FIRE ACCESS AND FIRE SITE DETAILS				X	X	X							
E1.4	SITE PLAN-EXTERIOR LIGHTING PLAN				X	X	X	X		X				
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C5.0	EROSION CONTROL PLAN	X			X	X	X			X				
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A2.4	ROOF PLAN	X			X	X	X					X		
A2.5	WORKROOM AND BARN PLAN					X	X							
A2.7	GARAGE PLAN	X		X	X	X	X							
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A3.2	SOUTH ELEVATION	X			X	X	X					X		
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S.	STRUCTURAL DRAWINGS													

X = INCLUDED IN SET + = REVISED AND INCLUDED IN SET

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

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Consultant

Stamp

NOT FOR CONSTRUCTION

Printing Date

Planning Permit	03.18.2010
Coordination	09.12.2011
Planning	09.13.2011
Coordination	10.05.2011
Coordination	10.11.2011
Coordination	07.19.2013
Coordination	08.08.2013
Coordination	10.07.2013
Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015
Site Drainage Rev.	04.10.2016
Foundation Rev.	05.20.2016
Contractor Set	06.29.2016
Coordination	09.13.2016
Civil Rev.	09.22.2016
Planning	10.18.2016
Title 24	11.03.2016
Coordination	12.05.2016
Planning	10.06.2017

HM,a+e Job Number
2005,01

Sheet Title
COVER

Sheet Number
A1.1

0501-A1-1.dwg Plot Date: 10.6.2017

NOTES

GOVERNING CODES:
1. These notes apply to all drawings and govern unless otherwise noted or specified.
2. All work shall conform to the 2013 California Building Code, as modified by state and local jurisdiction.
3. Nothing in the Drawings or in these Specifications is to be construed as requiring or permitting work that is contrary to these rules, regulations and codes.
4. All work and materials shall be in full accord with the latest rules and regulations of the Safety Orders of the Division of Industrial Safety, California Labor Code and all applicable federal, state and/or local health regulations.
5. Any reference to standards shall comply with requirements of latest revision.
6. Construction shall comply with all State of California Title-24 energy code requirements and mandatory measures per Compliance certification herein.

DRAWING USE:
7. These architectural drawings are copyrighted instruments of service of Henri Mannik, Architecture and Engineering (HM,a+e), for the sole use for this project. If the contract has been terminated with HM,a+e, these Construction Documents in whole or part may not be used for any construction. Use of these drawings are not transferable without a new contract. Reproductions of these drawings in part or whole are not permitted without the permission of HM,a+e.
8. The Construction Documents include these Drawings and Notes, Specifications and all revisions, additions and addenda's.
9. Unless otherwise shown or noted, all typical details shall be used where applicable. All details shall be considered typical at similar conditions. Drawings do not illustrate every detail but show only special requirements to assist contractor.
10. Do not scale drawings.
11. Specifications take precedence over drawings.
12. Any existing building or site data is based on observation and/or existing information only. Destructive testing, removal of existing finishes, equipment disassembly, and material testing was not preformed for the as-build condition, data, and code analysis.
13. The Contractor and Special Inspector shall contact the Architect regarding any questions of interpretation of these specifications and drawings.
14. The Contractor shall thoroughly examine the drawings and specifications, and existing site conditions. By entering into the work, the Contractor states that the documents are sufficient to provide a complete installation of pertinent portions of the work. Report any questions or requests for clarification to HM,a+e immediately. If, in the opinion of any contractor, any construction details shown or otherwise specified are in conflict with accepted industry standards for quality construction or might interfere with his full guarantee of the work, he/she is to notify HM,a+e immediately for clarification. No omission or lack of detailed requirements in the drawings or specifications is to be construed as allowing any materials or workmanship below industry standards.
15. Confirm with HM,a+e that these contract documents are the most recent issue before layout and construction.
16. Verify all existing conditions and proposed dimensions at the job site. Compare architectural drawings with structural, mechanical, and electrical and plumbing drawings before commencing work. Notify Architect of any discrepancies and do not proceed with affected work until they are resolved.
17. The Architect and the Architect's consultants have no responsibility for any modification, revisions, or substitutions of the work shown in the Construction Documents unless approved in writing by the Architect.
18. HM,a+e CAD files may only be used as backgrounds for shop drawings after HM,a+e receives a signed waiver from each party using the files, addressing the limitations and proper use of these CAD files.

GEOTECHNICAL REPORT
19. For geotechnical information, see the Geotechnical Investigation Report prepared by Earth Investigations Consultants (650-557-0262) and dated October 30, 2009.
20. Follow the recommendations of the report including but not limited to: site preparation, grading, compaction, trenches, foundations, slabs, driveways, drainage, and maintenance.

BIOLOGICAL MITIGATION MEASURES, PRECONSTRUCTION BIOLOGICAL SURVEY, & AREA OF DISTURBANCE

21. All work shall comply with local, City, County, State, and Federal environmental and biological regulations. The specific regulations listed are for coordination. Other regulations may apply.
22. See the Biological Report by W.R.A. Environmental Consultants of San Rafael dated ..... biological information relvant to the project and for information, protection, and procedures on sensitive environmental habitants and conditions.
23. See Site Plans and W.R.A.'s Biological Report for identified Environmentally Sensitive Habitat Areas (E.S.H.A.) protected by the CA Coastal Commission's and San Mateo County's Local Coastal Program (L.C.P.).
24. See Site Plans for the protected riparian corridor defined by San Mateo County regulations.
25. See Site Plans and W.R.A.'s Biological Report for required protection of the James V. Fitzgerald Area of Special Biological Significance (ASBS). Water Board Resolution No. 2012-0012 and San Mateo County's Fitzgerald ASBS Pollution Reduction Program.
26. The drawings and reports contain required measures and procedures to protect sensitive environmental areas. Install and maintain measures during construction.
27. Prior to the commencement of grading, excavation, vegetation removal, installation of utilities, and the construction of site improvements and structures, a biological survey is required to identify any flora, fauna, or raptor nesting listed in the Biological Report by W.R.A. Environmental Consultants. The contractor shall allow time for the Biological Survey and any potential mitigation measures identified in the report.
28. See sheet A1.3 for area to be surveyed for flora, fauna, and raptor nesting. No work, site modifications or disturbances shall occur outiside of the indicated Area of Disturbance. During construction, field stakes shall identify the Area of Disturbance. Replace damaged or missing stakes.
29. No work or site modifications temporary or permanent are permitted within the Riparian Setback shown on the site plans.
30. Any repair or maintenance of the existing well to ensure domestic capacity and quality shall be approved by the California Conservation Corp (C.C.C.).

REQUIREMENTS FOR ARCHITECTURAL COPPER
31. Copper from buildings may harm aquatic life. Water that comes into contact with architectural copper may contribute to impacts, especially during installation, cleaning, treating, or washing. Patination solutions typically contain acids. After treatment when the copper is rinsed to remove these acids, the rinse water is a source off pollutants. County prohibits discharges to the storm drain of water used in the installation, cleaning, treating and washing of architectural copper.
32. The following Best Managemnt Practices (BMPs) must be implemented to prevent prohibited discharges to storm drains.
33. During installation use the following BMPs. If possible, purchase copper materials that do not have a pre-patina or have been pre-patinated at the factory with acid removed.
34. If patination is done on-site, implement one or more of the following BMPs:
    34.1. Discharge the rinse water to landscaping. Ensure that the rinse water does not flow to the street or storm drain. Block off storm drain inlet if needed.
    34.2. Collect rinse water in a tank and pump to the sanitary sewer. Contact your local sanitary sewer agency before discharging to the sanitary sewer.
    34.3. Collect the rinse water in a tank and haul off-site for proper disposal.
35. Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff.
36. During maintenance of architectural copper implement the following BMPs during routine maintenance activities, such as power washing the roof, re-patination or re-application of impervious coating.
37. Block storm drain inlets as needed to prevent runoff from entering storm drains.
38. Discharge the wash water to landscaping or to the sanitary sewer (with permission from the local sanitary sewer agency). If this is not an option, haul the wash water off-site for proper disposal.
39. Contractor and owner are responsible for a discharge to the storm drain of non-stormwater generated by installing, cleaning, treating or washing copper architectural features. Violators of the municipal storm water ordinance may be subject to a fine.
40. See San Mateo Countywide Water Pollution Prevention Program for additional requirements or updates to standards. See County information on the James V. Fitzgerald Area of Special Biological Significance. The project is located within the protected watershed.
41. See biological report for additional measures. Stricter measures on the biological report govern.

EROSION CONTROL
42. See Civil drawings for storm water runoff control and construction erosion control.
43. Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, and petroleum products, chemicals, wash water or sediments, rinse water from architectural copper, and non-stormwater discharge to storm drains and watercourses.
44. Store,handle, and dispose of construction materials/wastes properly to prevent contact with storm water.
45. Do not clean, fuel, or maintain vehicles on-site, except in a designated area where wash water is contained and treated.
46. See sheet A1.3 for add'l info.

SITE GRADING
47. See Civil drawings for information on grading.

SITE DRAINAGE
48. See Civil drawings for information on site drainage.
49. See BUILDING DRAINAGE on A1.2 for additional information.

LANDSCAPE
50. See Landscape drawings for planting and site improvements.
51. Follow State's Model Water Efficient Landscape Ordinance (MWELO).

TREE REMOVAL
28. See Site plans for trees to be removed. Do not remove trees unless specifically noted on drawings and permitted.
29. Trees with a trunk circumference of 55 inches measured 4'-6" above the average surface of the ground have a special county status.

WELL
30. Repair and upgrade the existing well for domestic capacity and quality. 300' deep with conc lining @ surface.
31. See S.M.C Environmental Health Division's "Certification for an Individual Water System" dated Dec 18, 2015.
32. Well Testing by HR Henry Plumbing. 650-728-1131.

RADON
50. Project is in a US EPA Zone 2. Vent crawlspaces and foundation gravel beds to vent and remove Radon from the ground.

DIMENSIONS:
51. Unless specifically noted on the drawings, all wall dimensions are to face of framing or face of structure, unless otherwise shown on masonry walls. See drawings for walls, columns, and other items dimensioned to center lines. Window dimensions are to centerline of window or door unless otherwise noted. Vertical dimensions are to finish floor unless noted otherwise.
52. Contractor shall verify and be responsible for all job site measurements and levels pertinent to their work. If they differ from Contract Drawings or reviewed Submittals, discrepancies shall be brought to HM,a+e's attention immediately.
53. It is the subcontractor's responsibility to establish sub floor elevations.

FINISHES:
54. HM,a+e shall observe and advise on work in order to produce harmony of matching finishes, textures, colors, etc. throughout various components of the project.
55. All interior wall and ceiling finishes shall comply with CBC Chapter 8.
56. Stucco shall be three coat - 7/8 " min. thick exterior stucco application per CBC, unless otherwise noted on drawings. See masonry details for additional info.
57. Doors and panels of shower and bath enclosures and adjacent wall openings within 60 inches above a standing surface and drain inlet shall be fully tempered, laminated safety glass or approved plastic and shall comply with CBC.
58. Shower area walls shall be finished water resistant board to a height of not less than 70" above drain outlet. See drawings for elevations.

MATERIALS AND PRODUCTS:
59. Unless otherwise shown or noted, follow Manufacturer's recommendations for all products used on this project.
60. All materials and equipment are to be installed in strict accordance with the latest edition of manufacturer's written installation instructions and specifications. Generic materials not specified by manufacturer are to be installed in accordance with recommendations of applicable trade associations (For example, Concrete Steel Institute, Gypsum Association, etc.)
61. Substitutions may only be considered if submitted in writing. The burden of proof of the proposed substitution is on the contractor.
62. Shop drawings, design/build items and product literature shall be submitted and reviewed by the General Contractor and Architect, before fabrication. All submittals shall have a clear 3.5"x7" space reserved for shop drawing stamps by the General Contractor, Architect, and Engineer. If the submitted sheets do not have sufficient room, a cover sheet with a table of contents and sufficient space for stamps may be submitted. Each shop drawing submittal to HM,a+e shall consist of one reproducible copy on bond, to be marked and returned by the Architect and one copy for each specific reviewer to keep including the architect and each applicable consultant. Additional copies for submission will be returned unmarked. Submit shop drawings well in advance of fabrication; allow at least three weeks for the Architect to review, and additional time for review by the consults and forwarding between the Architect and General Contractor. Allow time for revisions and re-submittal, if required. Shop drawings and submittals shall be dated, and each update shall be identified with a revision number. All items on the shop drawings that vary from the Drawings, alter details, or extrapolate from similar details, shall be circled by a cloud with the note "Architect Verify". Minor re-detailing due to clarification and coordination mark-ups on the shop drawings by the Architect and Engineer shall be expected; shop drawing re-detailing up to 5% of total effort shall be included at no cost to the Owner. Added fabrication/installation costs or credits due to such re-detailing may be submitted. The following items shall be submitted:

FIRE PROTECTION:
63. See sheet A1.7 for additional info.
64. The building shall be fully protected with a modified NFPA 13D residential fire sprinkler system as required by the code.
65. Discharge sprinkler test water to sanitary sewer or to cistern. See notes in mechanical room plan, A2.1.
66. Provide draft stops and fire blocking as required by CBC.

BUILDING AND STRUCTURE DRAINAGE:
67. Unless otherwise noted, provide perimeter drains, perforated drain pipe, drain rock, and drainage blanket around entire building foundation and at building and site retaining walls. Extend drains to daylight with a slope of 1/16-1/8" per foot, unless otherwise noted on the drawings. Drain to daylight and to well-drained, gently sloped areas, or dryuells as required. Follow the recommendations and construction documents of the Geo-technical Engineer, Civil Engineer, or requirements of local jurisdiction.
68. The Contractor shall provide all temporary erosion controls during the work. See Civil drawings

EXTERIOR LIGHTING:
69. See Electric site plan and building elevations for agency approved lighting design.
70. All exterior lighting shall meet county and other agency requirements.
71. San Mateo County zoning requirements: Design reviews section 6565.20(F).4.

MOCK-UPS
72. The Contractor shall provide mock-ups where noted in the Construction Documents.
73. The Mock-ups shall consist of actual materials, colors, techniques, methods and assemblies used in the project. The level of skill in the mock-up shall match the level of skill used in actual construction.
74. The mock-up shall be an example of all similar work in the project. Do not proceed with any work represented by the mockup until the mock-up has been approved by the Architect.
75. At the start of the work, the contractor shall provide to the architect a schedule for mock-up submittals.
76. Submit actual mock-ups well in advance of fabrication; allow at least one week for initial architectural review after notification that the mock-up is complete and accessible. Provide additional time for revisions and re-submittals, if required.
77. Re-detailing due to review of the mockup shall be expected. This re-detailing up to 10% of total effort of the work represented by the mockup shall be included at no cost to the Owner. Added fabrication/installation costs or credits due to such re-detailing may be submitted.
78. Unless a specific mock-up size is noted, provide adequate size and scale to judge the nature of materials, material patterns, variations in material, relationships of parts, and the mock-up in context. The contractor shall submit the proposed size of the mock-up for approval by the Architect before fabrication of the mock-up.
79. Mock-ups shall remain accessible and protected during construction until the completion of all work which is represented by the mock-up. Provide on site a designated and identified location for mock-up storage. Do not destroy or alter mock-ups without the approval of the architect unless otherwise directed. At the completion of the work, if requested, provide the mock-up to the Architect.
80. The Following items shall be mocked up:

Item	Description
Garden Walls	Dry stack sample of stone
Paving Material	Sample of any movable paving
Tree Location	Review trees while in pots
Masonry Finish	
Stucco Finish	
Floor Finishes	
Trim Stain/Paint	

JOB SITE:
81. At all times, the Contractor shall be solely and completely responsible for the conditions of the job site. The responsibility includes the safety of people, property, and all necessary independent reviews of these conditions. The Architect's and the Architect's Consultant's job site visits are not intended to include review of the adequacy of the Contractor's safety measures. The Contractor shall take all precautions necessary to protect workers, and public from injury; protect from damage all existing utility lines, structures, and property, on and adjacent to the project site; and keep the job site and adjoining premises free from accumulations of waste and dangerous materials resulting from the Work. The Contractor shall not bury or burn rubbish on Owner's premises. Shoring and bracing of the soil, the existing structure, and the new structures shall be the responsibility of the contractor and the contractor's consulting structural engineer.
82. The Architect is not responsible for means and methods.
83. Contractors shall supervise and direct the pertinent work, inspect all work in progress and materials as they arrive for compliance with the Contract Documents, and reject defective work or materials immediately upon performance or delivery; The contractor shall deliver, store, and handle all materials and products in a manner which will prevent their damage and deterioration, and the contractor shall make all repairs or replacements necessary at no additional cost to the Owner in the event of damage.
84. Prior to commencement of any portion of work, the Contractor shall carefully inspect and verify that work is complete to the point where new work may properly commence and all areas of discrepancy have been fully resolved. In event of failure to do so, the subcontractor shall be responsible for correction of any errors at no expense to the Owner.
85. It is the Contractor's responsibility to maintain a complete and organized set of construction documents pertinent to their work at the project site at all times when work is in progress. At the end of the project, provide to the client an As-Built set of drawings showing the actual built project including any revisions, alterations, modifications, and substitutions.
86. Contractor shall survey the existing building to locate all existing floor elevations, face of framing, column centerlines, and interior and exterior face of wall, in order to locate new alignments, centerlines, face of framing, face of finishes, and clearances.
87. Remove all abandoned plumbing, electrical, and mechanical items and equipment.
88. The contractor shall protect any occupied areas against dust and fumes during construction. The site shall be left broom clean and tidy at the end of each day.
89. The contractor shall remove and dispose of any hazardous materials generated during the work. Follow standards, codes, and regulations on the safe handeling, removal, and disposal of these hazardous materials.

SUSTAINABLE MEASURES:
90. Contractor shall minimize construction waste. Salvage and recycle all construction and demolition materials.
91. Use Material with recycled content
92. Use Green Point or LEED for Homes. Follow measures and requirments specified in the Construction Documents to meet the requirements.
93. Use FSC Certified wood for framing where noted.
94. Provide cement replacement with slag or fly ash where noted.
95. Use low VOC interior paints and interior finishes.
96. Use materials with a 000 mile radius.
97. Provide __ air changes per hour. See mech drawings.

ARCHITECTURAL SUBMITTALS

WATER SYSTEM PLAN SUBMITTAL
A plan showing all components of the fire protection water system and the materials to be used submitted to the Building Inspection Section of San Mateo County or City of Half Moon Bay for review and approval by the Coastside Fire Protection District and shall include the following:
1. Size, location and type of all water supply tanks showing vent and outlet locations and sizes.
2. A complete description and diagram showing the water piping layout. Include water source (e.g., supply lines, wells, springs, community water system tap.)
3. Size, type, location and depth of cover for all piping including domestic/fire sprinkler supply and hydrant supply.
4. Size, type and location of all control valves, fittings, required pumps (with specifications), electrical service, and all structures.
5. Size, type, location and capability of fire hydrants.
6. Elevation of water tank, hydrant and sprinklered buildings.
5. REFERENCE: NFPA 1142, CFC Section 508, & Appendix B, BB. CA Code of Regulations, Title 14 Section 1275.00-1275.20. CFPD Ordinance 2004-01. Coastside Fire Protection District document "FPE-005, 9/11/09 Rev."

INSPECTIONS

1. Provide tests and inspections for all items as required by the 2013 California Building Code and all applicable local ordinances.
2. The Owner shall retain an independent testing lab to perform all required testing and inspection.
3. The Contractor is responsible for coordinating with the testing lab to schedule all required tests and inspections.

4. The following items shall be inspected
    4.1. HYDRANT PRESSURE TEST & FLUSH. The installing contractor shall pressure test and flush the underground fire hydrant supply pipe as required. The flush and pressure test require verification by County Fire Marshal.
    4.2. FIRE SPRINKLER PRESSURE TEST AND FLUSH. Prior to connecting the underground fire sprinkler supply pipe to the fire sprinkler riser, the pipe shall be pressure tested and flushed by the installing contractor, as required. If the underground piping is not to be connected to the riser immediately, the pipe shall be capped to prevent contamination.

5. See consultant drawings for observations not listed.
6. Architect does not provide inspection services.

ARCHITECTURAL OBSERVATIONS

1. The following completed items will be observed by the Architect on site. For all layouts, allow time and labor for reasonable modifications at no expense to owner. Observation is for review of intent and not a detailed inspection or observation of all items. The following is not a list of separate site visits. Multiple items will be observed per visit, and the contractor shall allow time in the construction schedule for the Architect to see multiple items per trip when reasonably possible. The Contractor shall notify the Architect at least five working days prior to concealing any architectural items. The Architect will then determine if a site visit is appropriate. Notification shall include the following items:

    1. Items marked for removal
    2. Items marked for demolition
    3. Items marked for reuse.
    4. Demolition

    5. Site layout
    6. Grading
    7. Roadwork
    8. Site utility location and layout
    9. Septic layout and installation
    10. Site drainage
    11. Site underground drainage cleanouts
    12. Site equipment and electrical
    13. Site fire protection systems
    14. Site walls, fences, and structures
    15. Site finishes

    16. Foundation layout
    17. Foundation waterproofing
    18. Foundation drainage and any concealed drainage
    19. Foundation insulation
    20. Concrete formwork

    21. Wall layout
    22. Partitions
    23. Furring
    24. Blocking and supports within walls
    25. Wall, floor, ceiling, and roof penetrations
    26. Chases, soffits, and raceways

    24. Stair layout
    25. All Guardrail and handrail layout

    26. Doors
    27. Windows and skylights

    25. Weather barriers
    26. Building wraps
    27. Rain screens
    28. Flashing and seals
    29. Deck waterproofing
    30. Roofing
    31. Siding and stucco
    32. Veneers

    33. Rainwater leader location
    34. Gutters

    35. Insulation
    22. Plumbing sound attenuation

    23. Cabinet layout
    24. Equipment layout
    25. Electric outlet, switch, and lighting layout
    26. Lighting units prior to installation
    27. Smoke and CO2 Alarms
    28. Sprinklers
    29. Plumbing fixture locations
    23. Plumbing clean-outs
    24. Grab bars
    25. HVAC and ducts/piping

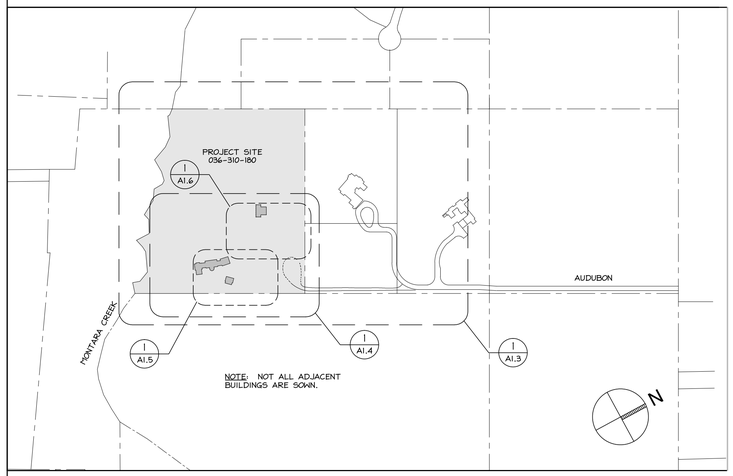
    26. Gypsum Wall Board and GWB Finish
    27. Fire Rated Wall Board
    28. 1-Hour Fire Assemblies
    29. Fire blocking and barriers
    30. Substrate installation

    31. Finishes
    32. Paneling
    33. Tiling
    34. Flooring pattern and joint layout
    35. Flooring
    36. Trim
    37. Painting
    38. Stains and sealers

    39. Furnishings
    40. Final Cleaning

2. See consultant drawings for observations not listed.

PROJECT KEY



ZONING DATA

GENERAL NOTES ON ZONING DATA

1. SEE A1.3 FOR ADD'L INFO

HOUSE FLOOR AREA

UPPER LEVEL	1,580. S.F.
MAIN LEVEL	2,920. S.F.
TOTAL OF HABITABLE AREA	4,500. S.F.
HOUSE FOOTPRINT	2,920. S.F.

BARN FLOOR AREA

STUDIO/BARN FLOOR AREA/FOOTPRINT	1,146. S.F.
GARAGE FLOOR AREA	554. S.F.
TOTAL FLOOR AREA	6,200. S.F.

PLANNING ITEM SEE A1.3 FOR ADD'L INFO	REQUIRED	PROPOSED
LOT SIZE		357,148 S.F. 8.199 ACRES
LOT WIDTH		910 Ft.
FRONT YARD	50 Ft.	254 Ft.
REAR YARD	Varies. Riparian	200 Ft.
RIGHT SIDE (WEST)	20 Ft.	566 Ft.
LEFT SIDE (EAST)	20 Ft.	62 Ft.
COMBINED SIDE YARD	40 Ft.	628 Ft.
	MAXIMUM	PROPOSED
BUILDING HEIGHT (SEE A3.7 FOR DETAILED INFO) (HEIGHT DETERMINED PER SAN MATEO COUNTY DOCUMENT, " Maximum Building Heights in Unincorporated San Mateo County", Dated 12/5/01)	28 Ft. 2-STORIES	28'-0" 2-Levels
LOT COVERAGE		1.29 %
F.A.R. HOUSE HOUSE, GARAGE, STUDIO, & BARN		1.26 % 1.74 %
COVERED PARKING SPACES		3

IMPERVIOUS SURFACES: HOUSE, STUDIO, GARAGE

HOUSE	ROOF AREA	3,788 S.F.
BARN	ROOF AREA	1,553 S.F.
GARAGE	ROOF AREA	772 S.F.
HOUSE	SIDEWALKS, PATIOS, PATH	678 S.F.
BARN	SIDEWALKS, PATIOS, PATH	1,387 S.F.
DRIVEWAY		10,855 S.F.
TOTAL		19,033 S.F.

IMPERVIOUS PAVED AREA AS % OF LOT 5.33 %

GRADING. SEE C3.0 (CU.YD.)

	SITE(CIVIL) +	BLDG =	TOTAL
CUT	-2250 +	-416 =	-2,666 CUT
FILL	(+)2000 +	(+)590 =	(+)2,590 FILL
TOTAL	-250 +	(+)174 =	(-)76 CUT
	SITE	BLDG	TOTAL
	CUT	FILL	(CU.YD.)

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

HM,a+e

Henri Mannik,
Architecture and Engineering

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510 652 1511 p

Consultant

Stamp

NOT FOR CONSTRUCTION

Printing Date

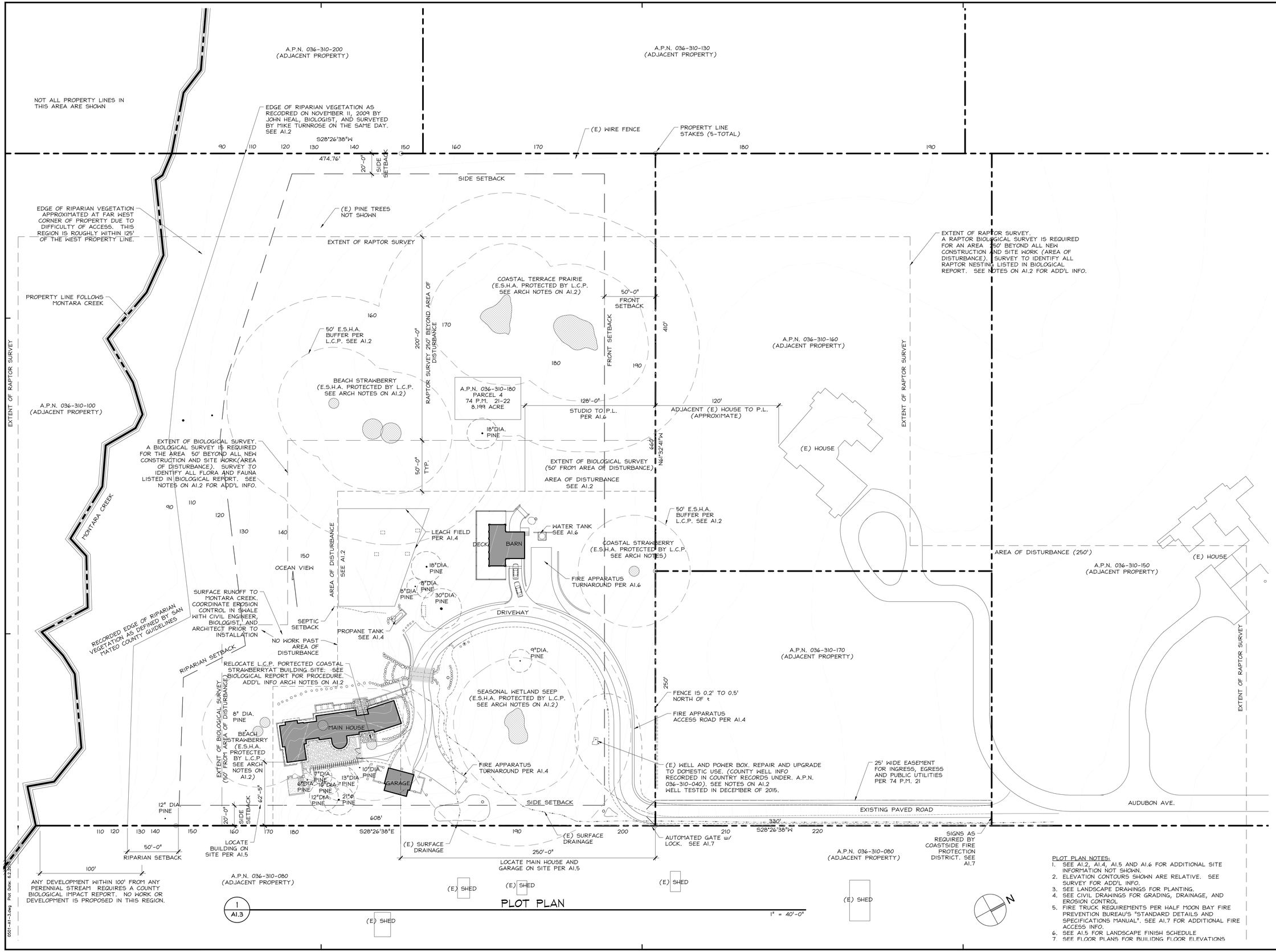
Planning Permit	03.18.2010
Coordination	09.12.2011
Planning	09.13.2011
Coordination	10.05.2011
Coordination	10.11.2011
Coordination	07.19.2013
Coordination	08.08.2013
Coordination	10.07.2013
Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015
Site Drainage Rev.	04.10.2016
Foundation Rev.	05.20.2016
Contractor Set	06.29.2016
Coordination	09.13.2016
Civil Rev.	09.22.2016
Planning	10.18.2016
Title 24	11.03.2016
Coordination	12.05.2016
Planning	10.06.2017

HM,a+e Job Number
2005,01

Sheet Title
PROJECT DATA

Sheet Number
A1.2

0501-A1-2.dwg Plot Date: 10.6.2017



PLOT PLAN NOTES:

1. SEE A1.2, A1.4, A1.5 AND A1.6 FOR ADDITIONAL SITE INFORMATION NOT SHOWN.
2. ELEVATION CONTOURS SHOWN ARE RELATIVE. SEE SURVEY FOR ADD'L INFO.
3. SEE LANDSCAPE DRAWINGS FOR PLANTING.
4. SEE CIVIL DRAWINGS FOR GRADING, DRAINAGE, AND EROSION CONTROL
5. FIRE TRUCK REQUIREMENTS PER HALF MOON BAY FIRE PREVENTION BUREAU'S "STANDARD DETAILS AND SPECIFICATIONS MANUAL". SEE A1.7 FOR ADDITIONAL FIRE ACCESS INFO.
6. SEE A1.5 FOR LANDSCAPE FINISH SCHEDULE
7. SEE FLOOR PLANS FOR BUILDING FLOOR ELEVATIONS

Project

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D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015
Site Drainage Rev	04.10.2016

HM,a+e Job Number
2005,01

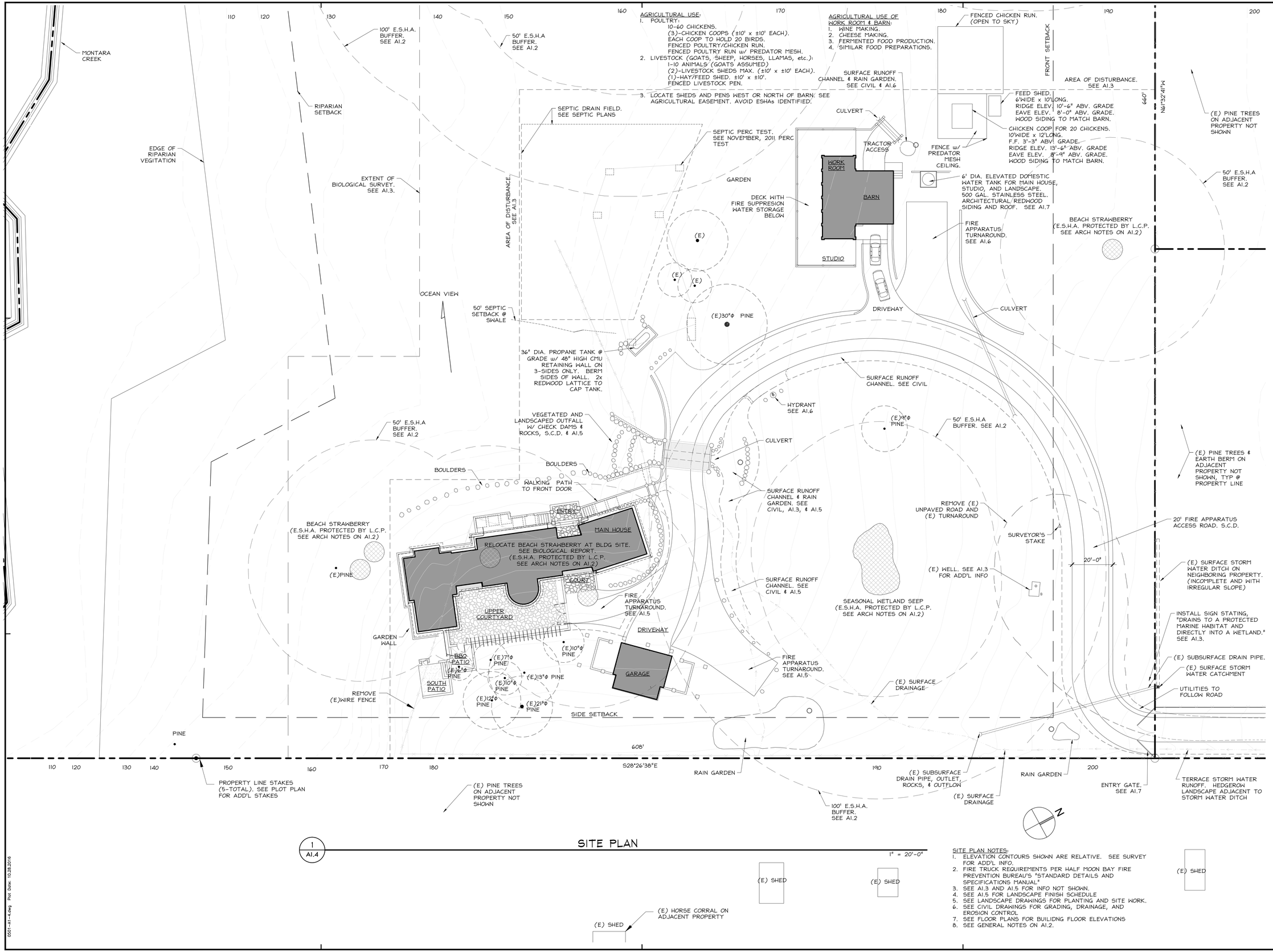
Sheet Title
PLOT PLAN

Sheet Number
A1.3

Oct. 18, 2016 Rev. Planning Set

S.M.C. Planning PLN 2010-00079

0501-A1-3.dwg Plot Date: 6.2.2016



1 A1.4

SITE PLAN

1" = 20'-0"

SITE PLAN NOTES:
1. ELEVATION CONTOURS SHOWN ARE RELATIVE. SEE SURVEY FOR ADD'L INFO.
2. FIRE TRUCK REQUIREMENTS PER HALF MOON BAY FIRE PREVENTION BUREAU'S "STANDARD DETAILS AND SPECIFICATIONS MANUAL"
3. SEE A1.3 AND A1.5 FOR INFO NOT SHOWN.
4. SEE A1.5 FOR LANDSCAPE FINISH SCHEDULE
5. SEE LANDSCAPE DRAWINGS FOR PLANTING AND SITE WORK.
6. SEE CIVIL DRAWINGS FOR GRADING, DRAINAGE, AND EROSION CONTROL
7. SEE FLOOR PLANS FOR BUILIDNG FLOOR ELEVATIONS
8. SEE GENERAL NOTES ON A1.2.

0501-A1-4.dwg Plot Date: 10.28.2016

S.M.C. Planning PLN 2010-00079

Project

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Coordination	08.08.2013
Coordination	10.07.2013
Coordination	10.21.2013
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Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015
Site Drainage Rev.	04.10.2016
Foundation Rev.	05.20.2016
Contractor Set	06.29.2016
Coordination	09.13.2016
Civil Rev.	09.22.2016
Planning	10.18.2016

HM,a+e Job Number

2005,01

Sheet Title

SITE PLAN

Sheet Number

A1.4

Oct. 18, 2016 Rev. Planning Set

MARK	DESCRIPTION	
F-01	CONCRETE DRIVEWAY, SCD	IMPERMIABLE
F-02	ASPHALT DRIVEWAY, SCD	IMPERMIABLE
F-03	STONE PAVING IN MORTAR, SCD	IMPERMIABLE
F-04	PAVING STONES WITH PLANTING BETWEEN PAVING ELEMENTS, SCD	PERMIABLE
F-05	GRAVEL, SCD	PERMIABLE
F-06	LIVING DRIVEWAY, SLD	PERMIABLE
F-07	COBBLE STONES SET IN SAND, SLD	PERMIABLE
F-08	COMPACTED GRAVEL w/ PENETATION COAT OF LIQUID ASPHATL, SCD	IMPERMIABLE
F-09	POROUS FLEXIBLE PAVING. PAVEMENT GRID STRUCTURE PROTECTS GRASS ROOT SYSTEMS AND MEETS CALTRANS H20-44 ROAD/BRIDGE SPECIFICATIONS. (75,000 LBS FIRE APPARATUS WEIGHT)	PERMIABLE
F-10	RESIN PAVEMENT. (FLEXIBLE PAVEMENT NATURAL PAVE XL RESIGN/PAVEMENT.)	IMPERMIABLE

RETAINING WALL & GUARDRAIL
T.O.W. +18" ABV. ENTRY DRIVE
+169'
VEGETATED AND LANDSCAPED OUTFALL W/ CHECK DAMS. ARRANGE BOULDERS AND PLANTING TO BLEND w/ NATIVE LANDSCAPE. SPILLWAY TO HAVE A "NATURAL" APPEARANCE.
50' E.S.H.A BUFFER. SEE A1.2.
SPILLWAY
SPILLWAY
VEGETATED BOULDERS OR BOULDERS OVER C.I.P. CONC. RETAINING WALLS AS NEEDED PER STRUCTURAL
AREA OF DISTURBANCE. SEE A1.3
BOULDERS
SPILLWAY
APPROX EDGE OF FILL
T.O.W. +42" ABV. WALKWAY
RAINWATER CISTERNS UNDER WALKWAY
T.O.W. +42" ABV. WALKWAY
+169'
+177'
+171.5'
T.O.W. +2'-0" ABV. WALKWAY
REMOVE (E)WIRE FENCE
+174'
+176'
INSTALL SUBSURFACE DRAINAGE PIPE AND REQ'D DRAINAGE ASSEMBLIES AT: 1. THE EXTERIOR BASE OF ALL BLDG FOUNDATIONS. 2. THE SOIL SIDE OF RETAINING WALLS
ROOF RAINWATER COLLECTION
SEE A3.7 FOR T.O. GRADE ELEV, TYP @ EDGE OF BLDG.
+179.0'
+168.75'
BUILDING CORNER LOCATION FROM PROPERTY LINES: 250.0' TO NORTH P.L. 100.0' TO EAST P.L. 8° NW ROTATION FROM EAST P.L.
MAIN HOUSE
RELOCATE BEACH STRAWBERRY (E.S.H.A. PROTECTED BY L.C.P. SEE ARCH NOTES ON A1.2)
22'-3"
10'-11" RAINWATER COLLECTION
T.O.W. +4'-6" ABV. FRONT COURTYARD
+179.0'
T.O.W. +2'-0" ABV. ENTRY COURT
+176.5'
COURT
PLANTING BED, S.L.D.
MASONRY WALL
RELOCATE BEACH STRAWBERRY (E.S.H.A. PROTECTED BY L.C.P. SEE ARCH NOTES ON A1.2)
FRONT COURTYARD
ENTRY GATE
+178'
END OF FIRE APPARATUS ACCESS LANE
ROOF RAINWATER COLLECTION
RETAINING WALL
+172.0'
MASONRY WALL w/ WOOD TRELLIS ABOVE
T.O.W. +7'-0" ABV. FRONT COURTYARD
(E)10"DIA. PINE
PLANTING BED, S.L.D.
T.O.W. +3'-6" ABV. COURTYARD
BBQ PATIO
REMOVE (E) 7" DIA PINE
+175.0'
+175.0'
UP
+176.0'
SOUTH PATIO
REMOVE (E) 6" DIA PINE
(E)13"DIA. PINE
(E)10"DIA. PINE
T.O.W. +2'-0" ABV. PATIO
(E)12"DIA. PINE
(E)21"DIA. PINE
PATIO
T.O.W. +30" ABV. PATIO
RETAINING WALL
GARAGE
BUILDING CORNER LOCATION FROM PROPERTY LINES: 237.0' TO NORTH P.L. 50.0' TO EAST P.L. 15° NE ROTATION FROM EAST P.L.
INSTALL SUBSURFACE DRAINAGE PIPE AND REQ'D DRAINAGE ASSEMBLIES AT RETAINING WALLS
(E)TREE REMOVED. (DIED FROM DROUGHT)
50' E.S.H.A BUFFER. SEE A1.2.
SIDE SETBACK
100' E.S.H.A BUFFER. SEE A1.2.
608'
S28°26'38"E
EAST PROPERTY LINE
PATIO
T.O.W. +30" ABV. PATIO
RETAINING WALL
TRELLIS POST
(E)SURFACE STORM WATER.
END OF FIRE APPARATUS TURNAROUND
RAIN GARDEN. SEE CIVIL
DRY WELL. ADD AS NEEDED BY STRUCTURAL TO LIMIT WATER PONDING & SURCHARGE LOADING ON RETAINING WALLS.
SEASONAL WETLAND SEEP (E.S.H.A. PROTECTED BY L.C.P. SEE ARCH NOTES ON A1.2)
VEGETATED SURFACE STORM WATER RUNOFF. TEMPORARY SURFACE PONDING OK.
+172.0'
+174.0'
+176.0'
+178'
SURFACE WATER RUNOFF. SEE CIVIL FOR DETAILS NOT SHOWN.
50' HYDRANT CLEARANCE. SEE A1.7
PAVING STONE
+171.5'
DRIVE AND FIRE ACCESS ROAD. SEE A1.7
VEGETATED STONE RETAINING WALL. SEE CIVIL
RAIN GARDEN/ VEGETATED SWALE
SURFACE STORM WATER RUNOFF. TEMPORARY SURFACE PONDING OK.
DRY WELL. ADD AS NEEDED BY STRUCTURAL TO LIMIT WATER PONDING & SURCHARGE LOADING ON RETAINING WALLS.
CULVERT. SEE A1.7
T.O.W. +42" ABV. ENTRY DRIVE
+169.0'
PAVING STONE
T.O.W. +42" ABV. ENTRY DRIVE
C.I.P. CONC POST @ CULVERT. 48" HIGH. STUCCO FINISH
50' E.S.H.A BUFFER. SEE A1.2.
CULVERT UNDER WALKWAY
+175'
+176'
F-01 F-02 F-03 F-04 F-05 F-08 F-09 F-10

SITE PLAN NOTES:
1. ELEVATION CONTOURS SHOWN ARE RELATIVE. SEE SURVEY FOR ADD'L INFO.
2. FIRE TRUCK REQUIREMENTS PER HALF MOON BAY FIRE PREVENTION BUREAU'S "STANDARD DETAILS AND SPECIFICATIONS MANUAL". SEE A1.7 FOR ADDITIONAL FIRE ACCESS INFO.
3. SEE A1.3,1.4, AND A1.5 FOR INFO NOT SHOWN.
4. SEE A1.5 FOR LANDSCAPE FINISH SCHEDULE
5. SEE LANDSCAPE DRAWINGS FOR PLANTING AND SITE WORK.
6. SEE CIVIL DRAWINGS FOR GRADING, DRAINAGE, AND EROSION CONTROL
7. SEE FLOOR PLANS FOR BUILIDNG FLOOR ELEVATIONS
8. SEE GENERAL NOTES ON A1.2.

1 A1.5 MAIN BUILDING SITE PLAN 1/8" = 1'-0"

0501-A1-5.dwg Plot Date: 6.2.2016

S.M.C. Planning PLN 2010-00079

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Stamp

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Story Pole	10.23.2015
Site Drainage Rev	04.10.2016

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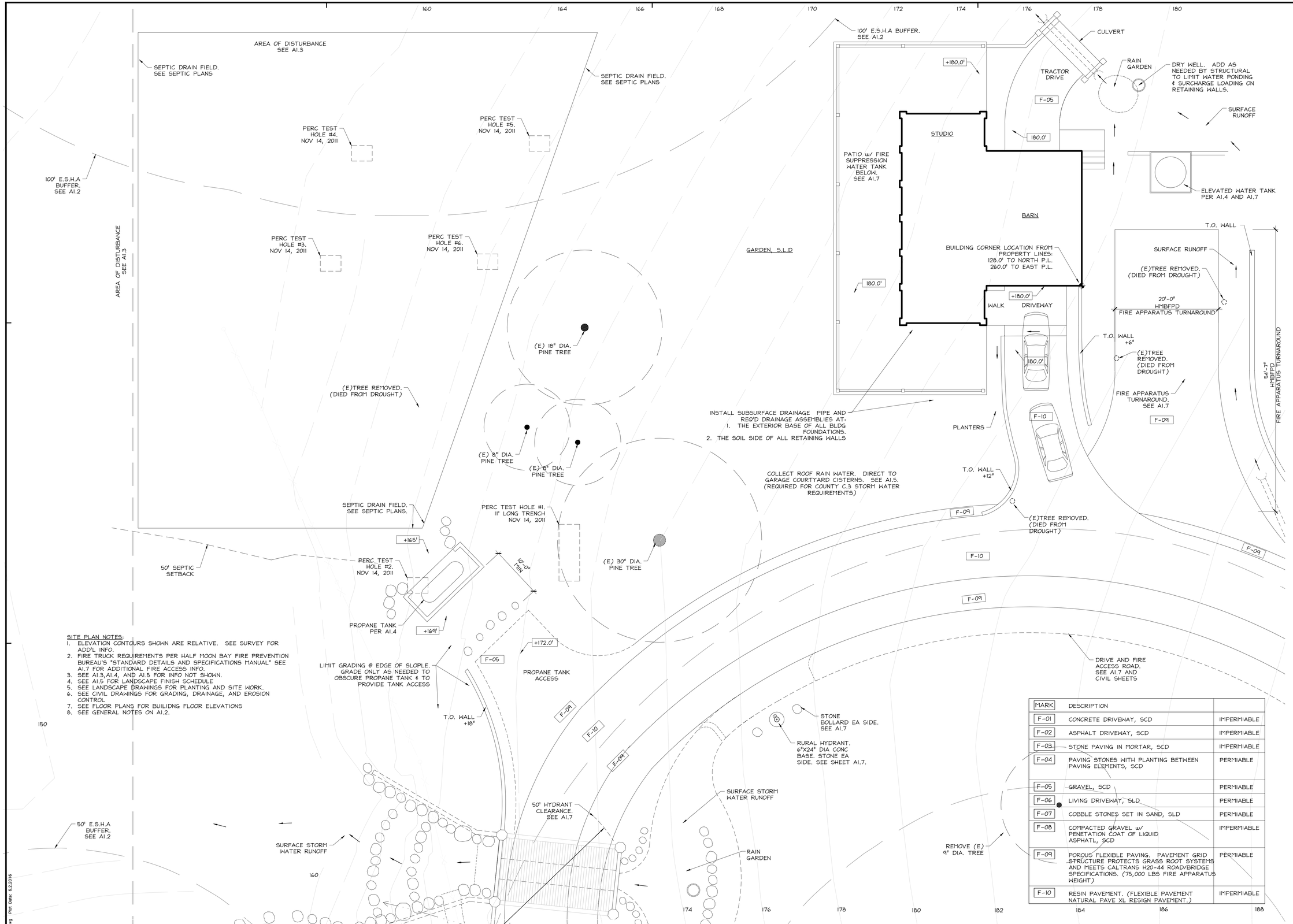
2005,01

Sheet Title
BUILDING SITE PLAN

Sheet Number
A1.5

Oct. 18, 2016 Rev. Planning Set



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6. SEE CIVIL DRAWINGS FOR GRADING, DRAINAGE, AND EROSION CONTROL.
7. SEE FLOOR PLANS FOR BUILIDNG FLOOR ELEVATIONS
8. SEE GENERAL NOTES ON A1.2.

MARK	DESCRIPTION	
F-01	CONCRETE DRIVEWAY, SCD	IMPERMIABLE
F-02	ASPHALT DRIVEWAY, SCD	IMPERMIABLE
F-03	STONE PAVING IN MORTAR, SCD	IMPERMIABLE
F-04	PAVING STONES WITH PLANTING BETWEEN PAVING ELEMENTS, SCD	PERMIABLE
F-05	GRAVEL, SCD	PERMIABLE
F-06	LIVING DRIVEWAY, SLD	PERMIABLE
F-07	COBBLE STONES SET IN SAND, SLD	PERMIABLE
F-08	COMPACTED GRAVEL w/ PENETATION COAT OF LIQUID ASPHATL, SCD	IMPERMIABLE
F-09	POROUS FLEXIBLE PAVING. PAVEMENT GRID STRUCTURE PROTECTS GRASS ROOT SYSTEMS AND MEETS CALTRANS H20-44 ROAD/BRIDGE SPECIFICATIONS. (75,000 LBS FIRE APPARATUS WEIGHT)	PERMIABLE
F-10	RESIN PAVEMENT. (FLEXIBLE PAVEMENT NATURAL PAVE XL RESIGN PAVEMENT.)	IMPERMIABLE

1 A1.6

WORK ROOM & GARAGE BUILDING SITE PLAN

1/8" = 1'-0"

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Sheet Title

BUILDING SITE PLAN

Sheet Number

A1.6

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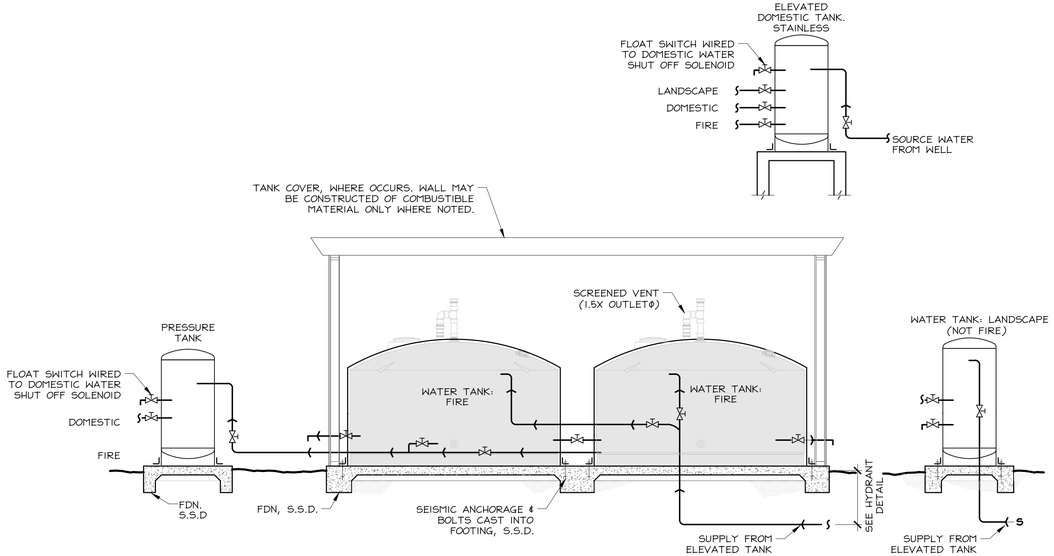
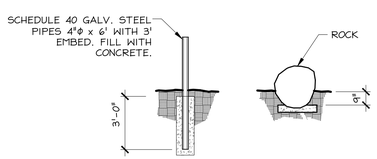
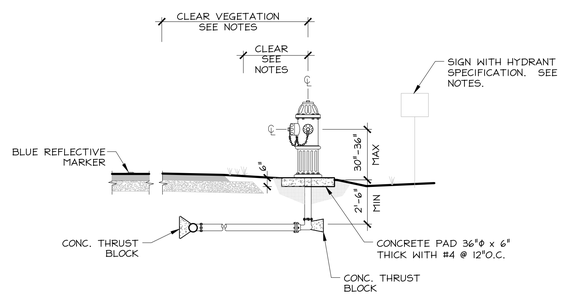


3 / A1.7 WATER TANKS SCHEMATIC 1/4" = 1'-0"



2 / A1.7 GUARD POSTS 1/4" = 1'-0"



1 / A1.7 FIRE HYDRANT 1/4" = 1'-0"

WATER TANKS:

SEE A2.5, A1.4

NOTES:
1. A SCREENED VENT 1.5 TIMES THE THE DIAMETER OF THE OUTLET IS REQUIRED. (e.g. 4" OUTLET=6" VENT).
2. WATER TANK(S) SUPPLYING HYDRANTS SHALL BE LOCATED AT AN ELEVATION WHICH PROVIDES ADEQUATE POSITIVE PRESSURE.
3. WATER TANKS SHALL BE INTERCONNECTED BY USING A MINIMUM PIPE SIZE OF 4 INCH, INTERCONNECTION PIPING AND VALVES MUST BE OF A MATERIAL NOT DAMAGED BY UV EXPOSURE. THE CROSS CONNECTION SHALL ALSO HAVE AN APPROPRIATELY SIZED CONTROL VALVE LOCATED AT EACH TANK.
4. LANDSCAPING WATER SUPPLY SHALL NOT BE STORED IN TANKS PROVIDING WATER FOR FIRE HYDRANTS. THE LANDSCAPING WATER IS IN ADDITION TO THAT REQUIRED FOR FIRE PROTECTION AND A AUTOMATIC ACTIVATED SOLENOID VALVE SHALL BE REQUIRED TO AVOID PRESSURE LOSS IN FIRE PROTECTION WATER SUPPLY DUE TO LARGE DEMAND FROM THE SAME WATER SUPPLY (LANDSCAPING OR AGRICULTURAL IRRIGATION).
5. WATER TANKS USED FOR FIRE PROTECTION SHALL REMAIN FULL AT ALL TIMES, AND SHALL BE FILLED AUTOMATICALLY FROM A RELIABLE WATER SOURCE (e.g. WELL, YEAR ROUND SPRING OR CREEK).
6. WHERE WATER TANKS PROVIDE BOTH DOMESTIC AND FIRE PROTECTION SUPPLY, THE WATER TANK SHALL BE FITTED WITH A FLOAT SWITCH WIRED TO THE DOMESTIC WATER SHUT OFF SOLENOID.
7. CONTROL VALVES SHALL BE PROVIDED FOR ALL HYDRANT INSTALLATIONS AND BE LOCATED AT THE TANK OR IN A LOCATION APPROVED BY THE FIRE MARSHALL.
8. ALL ABOVE GROUND FIRE SPRINKLER OR FIRE HYDRANT WATER PIPING SHALL BE METALLIC.
9. LABEL ALL TANKS, PIPES, & VALVES FOR FUNCTION: "FIRE", "DOMESTIC", OR "LANDSCAPE."
10. SEE WATER SYSTEM PLAN FOR DETAILED DESIGN OF FIRE PROTECTION SYSTEM. THE DETAIL SHOWN IS A SCHEMATIC DRAWING FOR PLANNING APPROVAL. IF THESE DETAILS CONFLICT WITH THE WATER SYSTEM PLAN, THE WATER SYSTEM PLAN SHALL GOVERN.
11. DOMESTIC & FIRE WATER SUPPLY SHALL NOT BE IN SEPARATE TANKS.
12. WATER SUPPLY SHALL BE IN MINIMUM TWO TANKS. ALL FITTINGS SHALL OPERATE IN A MANNER ALLOWING ONE TANK TO REMAIN OPERATING WHILE THE OTHER TANK IS REPAIRED.
13. WATER TANKS SHALL BE CONSTRUCTED OF NON-COMBUSTABLE MATERIALS.
14. DOMESTIC WATER SHALL BE STORED IN STAINLESS STEEL.

RURAL HYDRANTS:

SEE A1.5

NOTES:
1. HYDRANTS SHALL BE LOCATED NO CLOSER THAN 50' TO ANY BUILDING, NO FURTHER AWAY THAN 150' OF THE PROTECTED STRUCTURE, AND BE LOCATED ON THE FIRE DEPARTMENT ACCESS SIDE OF THE BUILDING.
2. HYDRANT SUPPLY PIPE SHALL BE LISTED AND APPROVED FOR FIRE PROTECTION SERVICE FOR UNDERGROUND PIPE, SUCH AS AWWA C900.
3. PIPES SUPPLYING RURAL HYDRANTS SHALL HAVE A MINIMUM DIAMETER OF NO LESS THAN 4" STANDARD.
4. RURAL HYDRANTS SHALL HAVE AT LEAST ONE 4½" OUTLET WITH "NATIONAL HOSE" THREAD STANDARD AND SHALL HAVE A REMOVABLE METALLIC CAP.
5. THE HYDRANT RISER AND ELBOW SHALL BE STEEL. ALL ABOVE GROUND PIPING USED FOR FIRE HYDRANT WATER SUPPLY SHALL BE METALLIC.
6. HYDRANTS SHALL HAVE A CONCRETE PAD. SEE DETAIL.
7. ALL HYDRANTS SHALL BE POSITIVE PRESSURE AND MEET THE REQUIRED FIRE FLOW ON DEMAND. (HYDRANTS REQUIRING PRIMING, SHALL NOT BE CONSIDERED AS A PRIMARY WATER SOURCE.
8. CONCRETE THRUST BLOCKS (WHEN REQUIRED) SHALL BE SIZED IN ACCORDANCE WITH NATIONAL STANDARDS AND SHALL BE PROVIDED AT ALL CHANGES IN PIPE DIRECTION. SEE DETAIL
9. ALL HYDRANTS SHALL HAVE A 3' DIAMETER MINIMUM PHYSICAL CLEARANCE FROM RETAINING WALLS GUARDPOSTS, ROCKS etc..
10. FLAMMABLE VEGETATION SHALL BE CLEARED FOR A MINIMUM 8' RADIUS AROUND ALL HYDRANTS REGARDLESS OF TYPE.
11. PERMANENT GUARD POSTS OR BOLLARDS SHALL BE INSTALLED TO PROTECT EXPOSED FIRE HYDRANTS FROM VEHICULAR DAMAGE.
12. HYDRANTS SHALL NOT BE OBSTRUCTED BY PARKING OR IN ANY OTHER MANNER. "NO PARKING" SIGNS MAY BE REQUIRED.
13. HYDRANT LOCATION SHALL BE IDENTIFIED BY THE INSTALLATION OF BLUE REFLECTIVE MARKERS.
14. RURAL HYDRANTS SHALL HAVE A PERMANENT SIGN AFFIXED, RED IN COLOR WITH WHITE 1 INCH LETTERS STATING "WET DRAFT HYDRANT___GALLONS",WITH THE GALLONS OF WATER AVAILABLE TO THE HYDRANT PROVIDED.SHALL BE PAINTED RED AND HAVE A MINIMUM 2" BLUE REFLECTIVE BAND AROUND THE TOP OF THE PIPE JUST BELOW THE VALVE.

CULVERT:

SEE GARAGE COURTYARD ON A1.5

NOTES:
1. WHEN A CULVERT IS USED AS A PART OF EMERGENCY ACCESS, IT SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH AASHTO HB-17. THE CULVERT SHALL BE DESIGNED FOR A LIVE LOAD SUFFICIENT TO CARRY THE IMPOSED LOADS OF FIRE APPARATUS AS STATED HEREIN:
2. WEIGHT: EVERY PRIVATE CULVERT (BRIDGE) HEREAFTER CONSTRUCTED OR RE-CONSTRUCTED DUE TO DAMAGE, DETERIORATION, OR OBSOLESCENCE SHALL BE DESIGNED TO SUPPORT AN IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 lbs. VEHICLE LOADS SHALL BE POSTED AND DATED AT BOTH ENTRANCES TO BRIDGES. (HS20-44 HIGHWAY LOADING)
3. WIDTH: ALL CULVERTS (BRIDGES) MUST BE A MINIMUM OF 20 FEET CLEAR WIDTH. ONE-WAY CULVERTS (BRIDGES), AND CULVERTS (BRIDGES) WITH LESS THAN 20' OF CLEAR WIDTH, REQUIRE A TURNOUT AT BOTH ENDS TO THE BRIDGE.

GATES:

SEE A1.3

NOTES:
1. GATES SHALL BE A MINIMUM OF 2 FEET WIDER THAN THE ROADWAY THEY SERVE.
2. OVERHEAD GATE STRUCTURES SHALL HAVE A MINIMUM OF 13½ FEET OF VERTICAL CLEARANCE.
3. LOCKED GATES SHALL BE PROVIDED WITH A KNOX BOX OR KNOX PADLOCK FOR THE FIRE DEPARTMENT ACCESS.
4. ELECTRIC GATES SHALL BE PROVIDED WITH A KNOX GATE SWITCH AND AUTOMATICALLY OPEN DURING POWER FAILURES UNLESS EQUIPPED WITH MANUAL OVERRIDE CAPABILITY (WHEN AUTHORIZED BY COASTSIDE FIRE DIST.).
5. GATES PROVIDING FIRE ACCESS TO A DRIVEWAY OR OTHER ROADWAY SHALL BE LOCATED AT LEAST 35 FEET FROM THE PRIMARY ROAD OR STREET AND SHALL OPEN TO ALLOW A VEHICLE TO STOP WITHOUT OBSTRUCTING TRAFFIC ON THE ADJOINING ROADWAY.
6. CONTACT COASTSIDE FIRE DISTRICT FOR KNOX BOX APPLICATION.

EMERGENCY ACESS ROADS

SEE A1.4, A1.6, AND CIVIL DRAWINGS

NOTES:
1. EMERGENCY ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED MINIMUM WIDTH OF 20'-0".
2. WHERE HYDRANTS ARE LOCATED, THE ROAD SHALL BE A MINIMUM OF 26 FEET WIDE FOR A LENGTH OF 20 FEET ON EACH SIDE OF THE HYDRANT (40 FEET TOTAL LENGTH).
3. EMERGENCY ACCESS ROADS SHALL HAVE 13'-6" FEET OF VERTICAL CLEARANCE.
4. EMERGENCY ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOAD OF A FIRE APPARATUS WEIGHING AT LEAST 75,000 lbs AND SHALL HAVE A MINIMUM OF 2" ASPHALT SURFACE PROVIDING ALL-WEATHR DRIVING CAPABILITIES. SEE CIVIL DETAILS.
5. GRADES OF LESS THAN 15% SHALL BE SURFACED WITH A MINIMUM CLASS 2 AGGREGATE BASE WITH 95% COMPACTION AND AN ASPHALT SURFACE. U.O.N.
6. GRADES OF 15% TO 20% SHALL REQUIRE A NON-SKID ASPHALT OR CONCRETE SURFACE, OR EQUIVALENT. U.O.N.
7. GRADES 15% TO 20% SHALL BE LIMITED TO 150 FT. IN LENGTH.
8. THE CENTERLINE TURNING RADIUS FOR EMERGENCY APPARATUS ACCESS ROADS SHALL BE 35 FEET.
9. DEAD-END EMERGENCY ACCESS EXCEEDING 150 FT SHALL BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS MEETING CALIFORNIA FIRE CODE APPENDIX D.
10. TURNAROUNDS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE NO GREATER THAN EIGHT PERCENT (8%). THE LONGITUDINAL SLOPE IS DEFINED AS THE SLOPE CORRESPONDING TO THE LONG AXIS OF A VEHICLE AS IT TRAVELS INTO, OUT OF, AND THROUGH A TURNAROUND. THIS SLOPE SHALL BE MAINTAINED BEGINNING AT AND ENDING AT THE POINT OF TANGENCY OF THE EDGE OF THE PAVEMENT CURVES FOR THE TURNAROUND.
11. THE CROSS SLOPE PERPENDICULAR TO THE LONGITUDINAL SLOPE SHALL NOT EXCEED FIVE PERCENT (5%).
12. ROAD GRADES SHALL NOT EXCEED 20%.
13. GRADES 15% TO 20% SHALL BE LIMITED TO 150 FT. IN LENGTH.
14. 20-26 FEET ROAD WIDTH-NO PARKING ON EITHER SIDE OF THE ROADWAY.
15. 26-35 FEET ROAD WITH-PARKING IS ALLOWED ON ONLY ONE SIDE OF ROADWAY.
16. 36 FEET ROAD WITH-PARKING IS NOT RESTRICTED.
17. POLES, FENCES, STONES, OR VISIBLE MARKERS SHALL INDICATE THE EDGE OF FIRE LANES.
18. PROVIDE ALLOWANCE FOR ALL SIGNS AND MARKERS.

BRIDGE:

NO BRIDGES USED. CULVERTS ONLY USED.

NOTES:
1. BRIDGES SHALL MEET ALL CULVERT REQUIREMENTS.
2. CERTIFICATION: EVERY PRIVATE BRIDGE PROVIDING FIRE APPARATUS ACCESS HEREINAFTER CONSTRUCTED OR RE-CONSTRUCTED SHALL BE ENGINEERED BY A LICENSED CIVIL OR STRUCTURAL ENGINEER AND APPROVED BY THE FIRE MARSHAL. CERTIFICATION THAT THE BRIDGE COMPLIES WITH STRUCTURAL DESIGN STANDARDS MUST BE PROVIDED TO THE FIRE CHIEF.
3. RE-CERTIFICATION: EVERY PRIVATE BRIDGE SHALL BE RE-CERTIFIED EVERY TEN (10) YEARS OR WHENEVER DEEMED NECESSARY BY THE FIRE MARSHALL.

BUILDING FIRE PROTECTION:

SEE PLANS AND DETAILS

NOTES:
1. THE BUILDING SHALL BE FULLY PROTECTED WITH A MODIFIED NFPA 13D RESIDENTIAL FIRE SPRINKLER SYSTEM AS REQUIRED BY THE CODE.
2. PROVIDE DRAFT STOPS AND FIRE BLOCKING AS REQUIRED BY CBC.
3. SMOKE AND CARBON MONOXIDE ALARMS SHOWN ARE CONNECTED TO THE BUILDING'S ELECTRICAL SYSTEM. ALARMS SHALL HAVE BATTERY BACKUP.
4. PROVIDE SMOKE ALARMS IN EACH BEDROOM. NOTIFY ARCH IF ANY BEDROOMS DO NOT HAVE AN ALARM.
5. INTERCONNECT SMOKE ALARMS IN NEW CONSTRUCTION AND IN REMODELS. WITH REMODELS, INTERCONNECTION TO EXISTING BEDROOM ALARMS IS NOT REQUIRED IF FINISHES NEED TO BE REMOVED. U.O.N.
6. FIRE BLOCKS SHALL BE 2X NOMINAL LUMBER, ¾" PLYWOOD, 5/8 GYPSUM WALL BOARD. BATT INSULATION OR MINERAL WOOL INSULATION MAY BE USED AS NOTED
7. FIRE BLOCK ALL STUD BAYS AND VERTICAL WALL CAVITIES WITHIN STRUCTURAL WALLS, PARTITION WALLS, STAIR STRINGERS, AND FURRED WALLS. PROVIDE BLOCKING AT THE FLOOR AND CEILING.
8. FIRE BLOCK IF WALLS EXCEED 10' IN HEIGHT, ADD BLOCKING AT 10'O.C. VERTICAL. BLOCK AT 10'O.C. HORIZONTAL.
9. FIRE BLOCK AT ALL INTERSECTIONS BETWEEN VERTICAL AND HORIZONTAL CAVITIES SUCH AS, CRAWL SPACE TO WALL, WALL TO CEILING, SOFFITS AND DROPPED CEILINGS.
10. FIRE BLOCK AT VENT, PIPE, DUCT, CHIMNEY, AND FIREPLACE OPENINGS.
11. FIRE BLOCK AT CONCEALED OPENINGS BETWEEN FLOORS.
12. PROVIDE DRAFTSTOPS AT ALL OPEN CONCEALLED SPACES OR CAVITIES BETWEEN USABLE STACKED HABITABLE SPACES. IN THESE AREAS SUCH AS, OPEN WEB FLOOR JOIST OR TRUSSES, INSTALL DRAFTSTOPS AT THE FOLLOWING CONDITIONS:
    a. AREAS GREATER THAN 1000 SQUARE FEET
    b. AT EACH JOIST 30'O.C., AT EDGES OF KITCHEN
    c. AT GARAGE WALLS
    d. AT UTILITY ROOMS WITH EQUIPMENT USING COMBUSTIBLE FUELS.
    e. PROVIDE DRAFTSTOPS IN SOFFIT AREAS GREATER THAN 500 SQUARE FEET.
13. DRAFTSTOPS SHALL BE 2X LUMBER, SHEET METAL, ¾" PLYWOOD, OR 5/8"GYPSUM WALL BOARD.

WATER TANK CAPACITIES:

SEE A2.5 FOR LOCATION.
SEE A3.11, A3.12, A3.13.
SEE A1.4

NOTES:
10,000 GALLONS FOR FIRE SUPPRESSION.
4 - 2,500 GALLON TANKS.
PLASTIC, ABV GRADE, "TUNA CAN".
LOCATED UNDER STUDIO DECK. GRID 1-4/ LINES-B,D,F,H

2,000 GALLONS FOR SPRINKLER
2 - 1,000 GALLON TANKS.
PLASTIC, ABV GRADE, "TUNA CAN".
LOCATED UNDER STUDIO DECK. GRID LINE-L, APPROX

500 GALLONS FOR DOMESTIC AND LANDSCAPE.
1-ELEVATED TANK NORTH OF BARN, GRID LINE-D
STAINLESS STEEL
(300 GALLONS FOR DOMESTIC PER DAY PER PLANING PERMIT)

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FIRE ACCESS & SITE DETAILS

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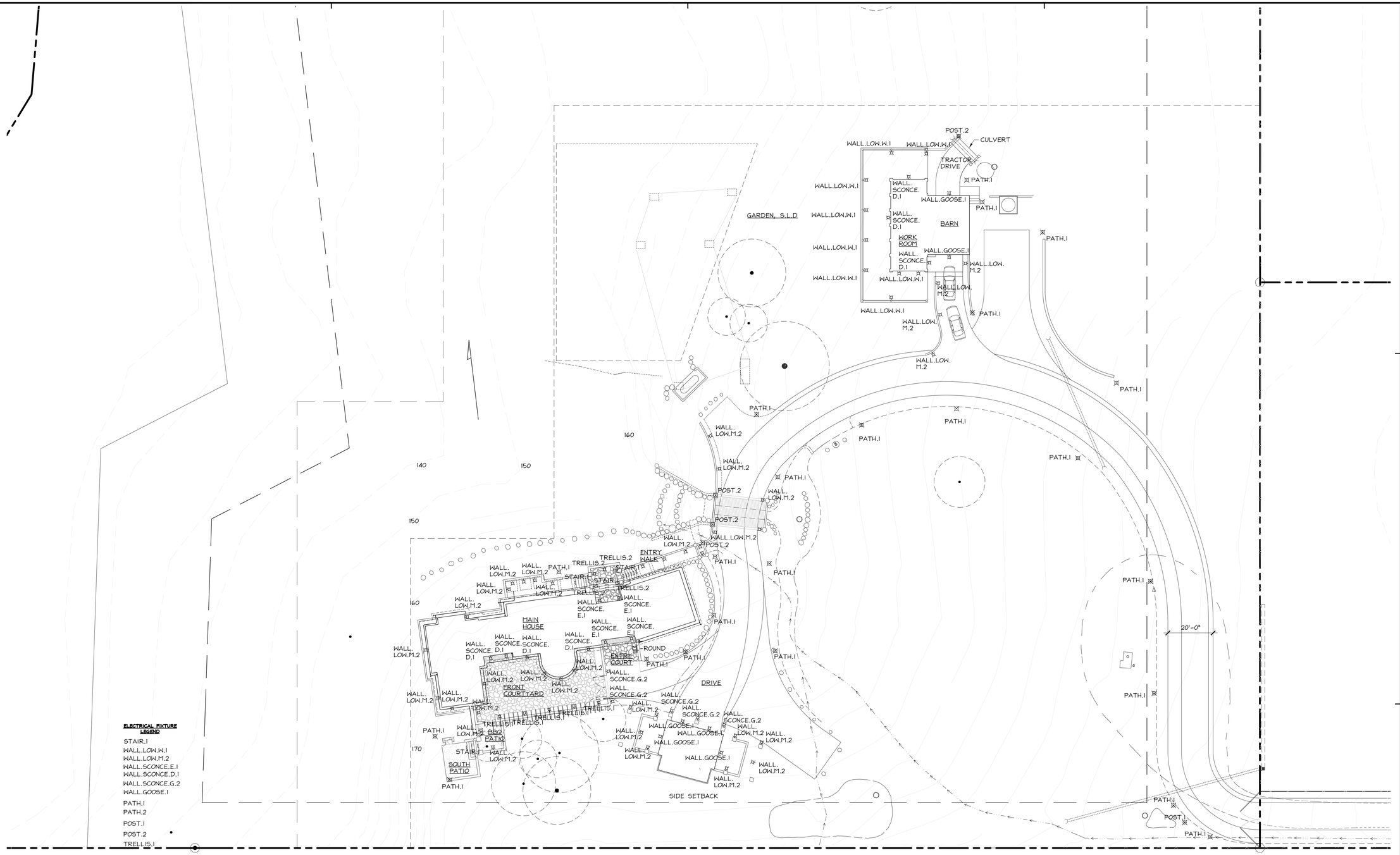
A1.7

0501-A1-7.dwg Plot Date: 7.20.2015



ELECTRICAL FIXTURE LEGEND

STAIR.1
WALL.LOW.W.1
WALL.LOW.M.2
WALL.SCONCE.E.1
WALL.SCONCE.D.1
WALL.SCONCE.G.2
WALL.GOOSE.1
PATH.1
PATH.2
POST.1
POST.2
TRELLIS.1

NOTES:
1. SEE COUNTY DESIGN REVIEW SUBMITTAL FOR LIGHTING SCHEDULE AND DETAILS ON SELECTED EXTERIOR LIGHT FIXTURES.

ELECTRICAL LEGEND

- LANDSCAPE LIGHT FIXTURE
- WALL SCONE
- STEP LIGHT

1 / E1.4 SITE LANDSCAPE LIGHTING PLAN
DARKSKY COMPLIANCE

1" = 20'-0"

SITE PLAN NOTES:
1. SEE A1.3, A1.4, A1.5, AND A1.6 FOR INFO NOT SHOWN.
2. SEE PROJECT MANUAL FOR LIGHTING FIXTURE SCHEDULE.
3. EXTERIOR LIGHTING SHALL BE DARK SKY COMPLIANT.
4. SEE BUILDING ELEVATIONS IN A3 SERIES FOR ADDITIONAL LIGHT FIXTURES ATTACHED TO THE BUILDING THAT ARE NOT SHOWN ON ELECTRICAL SITE PLAN.
5. SEE SHEET A1.2 AND NOTE SECTION, "BIOLOGICAL MITIGATION" FOR REQUIREMENTS ON ARCHITECTURAL COPPER AND BMPs REGARDING COPPER FINISHES.
6. NO FACTORY PATINA OR ON SITE PATINA ON COPPER. (SEE A1.2 FOR INFO. ON ACID WASH AND REG'D BMPs) ALLOW COPPER TO PATINA NATURALLY.
7. SEE S.M. COUNTY ZONING REGULATIONS FOR LIGHTING REQUIREMENTS. SECTION: 6565.20(F).4

0501-E1-4.dwg Plot Date: 6.2.2016

S.M.C. Planning PLN 2010-00079

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Sheet Title
LIGHTING SITE PLAN

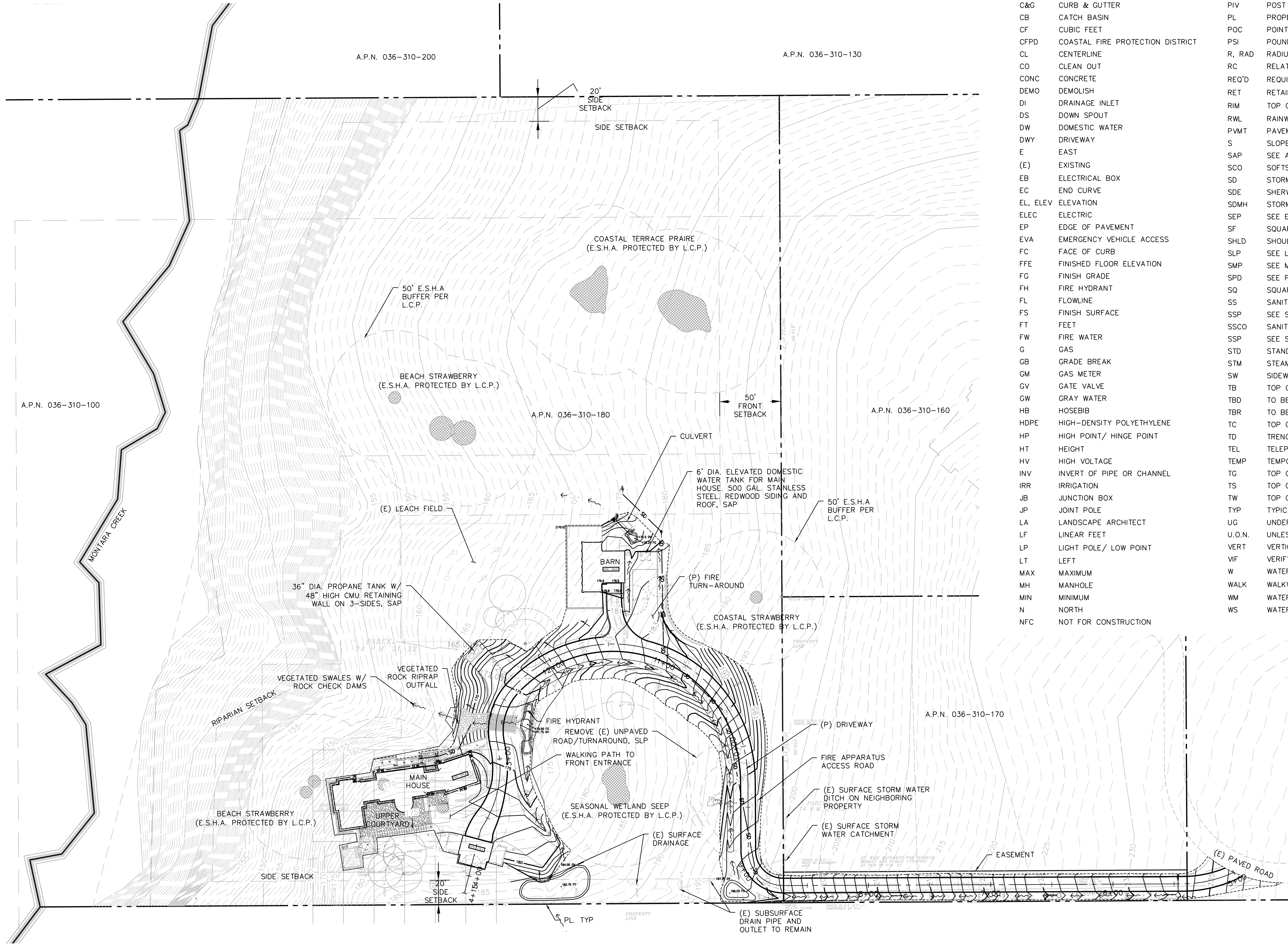
Sheet Number
E1.4

Oct. 18, 2016 Rev. Planning Set

SHEET INDEX

ABBREVIATIONS

AB	AGGREGATE BASE	NIC	NOT IN CONTRACT
ABD	ABANDONED	NTS	NOT TO SCALE
AC	ASPHALT CONCRETE	OC	ON CENTER
AD	AREA DRAIN	(P)	PROPOSED
ADA	AMERICANS WITH DISABILITIES ACT	PA	PLANTED AREA
BS	BOTTOM OF STEP	PED	PEDESTRIAN
BW	BOTTOM OF WALL / BACK OF WALK	PG&E	PACIFIC GAS & ELECTRIC
C&G	CURB & GUTTER	PIV	POST INDICATOR VALVE
CB	CATCH BASIN	PL	PROPERTY LINE
CF	CUBIC FEET	POC	POINT OF CONNECTION
CFPD	COASTAL FIRE PROTECTION DISTRICT	PSI	POUNDS PER SQUARE INCH
CL	CENTERLINE	R, RAD	RADIUS
CO	CLEAN OUT	RC	RELATIVE COMPACTION
CONC	CONCRETE	REQ'D	REQUIRED
DEMO	DEMOLISH	RET	RETAINING
DI	DRAINAGE INLET	RIM	TOP OF STRUCTURE GRATE/ COVER
DS	DOWN SPOUT	RWL	RAINWATER LEADER
DW	DOMESTIC WATER	PVMT	PAVEMENT
DWY	DRIVEWAY	S	SLOPE
E	EAST	SAP	SEE ARCHITECTURAL PLANS
(E)	EXISTING	SCO	SOFTSCAPE CLEANOUT
EB	ELECTRICAL BOX	SD	STORM DRAIN
EC	END CURVE	SDE	SHERWOOD DESIGN ENGINEERS
EL, ELEV	ELEVATION	SDMH	STORM DRAIN MANHOLE
ELEC	ELECTRIC	SEP	SEE ELECTRICAL PLANS
EP	EDGE OF PAVEMENT	SF	SQUARE FEET
EVA	EMERGENCY VEHICLE ACCESS	SHLD	SHOULDER
FC	FACE OF CURB	SLP	SEE LANDSCAPE PLANS
FFE	FINISHED FLOOR ELEVATION	SMP	SEE MECHANICAL PLANS
FG	FINISH GRADE	SPD	SEE PLUMBING DRAWINGS
FH	FIRE HYDRANT	SQ	SQUARE
FL	FLOWLINE	SS	SANITARY SEWER
FS	FINISH SURFACE	SSP	SEE STRUCTURAL PLANS
FT	FEET	SSCO	SANITARY SEWER CLEAN OUT
FW	FIRE WATER	SSP	SEE STRUCTURAL PLANS
G	GAS	STD	STANDARD
GB	GRADE BREAK	STM	STEAM
GM	GAS METER	SW	SIDEWALK
GV	GATE VALVE	TB	TOP OF BANK
GW	GRAY WATER	TBD	TO BE DETERMINED
HB	HOSEBIB	TBR	TO BE REMOVED
HDPE	HIGH-DENSITY POLYETHYLENE	TC	TOP OF CURB
HP	HIGH POINT/ HINGE POINT	TD	TRENCH DRAIN
HT	HEIGHT	TEL	TELEPHONE
HV	HIGH VOLTAGE	TEMP	TEMPORARY
INV	INVERT OF PIPE OR CHANNEL	TG	TOP OF GRATE
IRR	IRRIGATION	TS	TOP OF STEP
JB	JUNCTION BOX	TW	TOP OF WALL
JP	JOINT POLE	TYP	TYPICAL
LA	LANDSCAPE ARCHITECT	UG	UNDERGROUND
LF	LINEAR FEET	U.O.N.	UNLESS OTHERWISE NOTED
LP	LIGHT POLE/ LOW POINT	VERT	VERTICAL
LT	LEFT	VIF	VERIFY IN FIELD
MAX	MAXIMUM	W	WATER
MH	MANHOLE	WALK	WALKWAY/SIDEWALK
MIN	MINIMUM	WM	WATER METER
N	NORTH	WS	WATER SURFACE
NFC	NOT FOR CONSTRUCTION		



PLAN VIEW
Scale: 1"=40'

0 20' 40' 80'

North

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Sheet Title

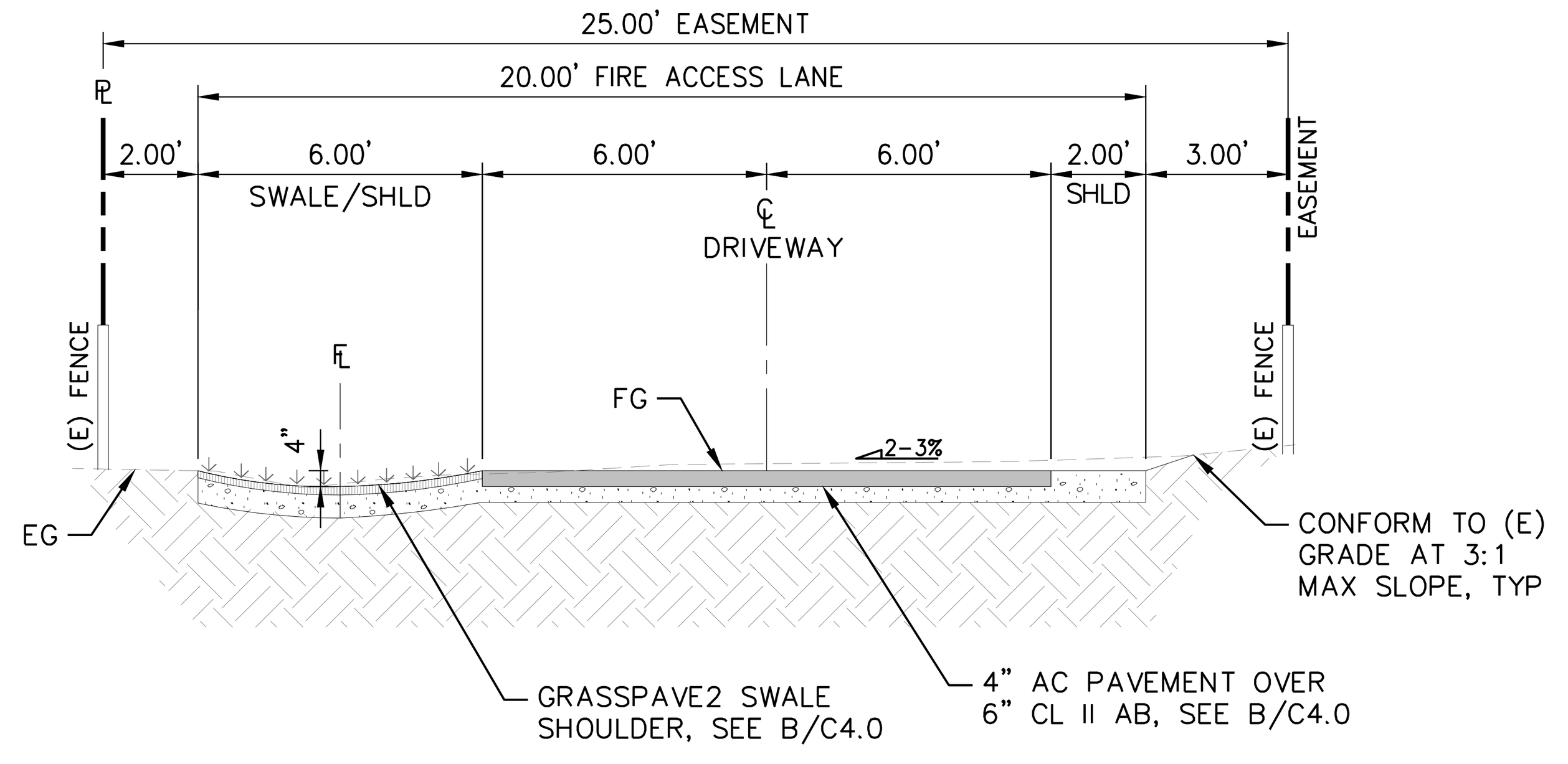
OVERALL LAYOUT SHEET

Sheet Number

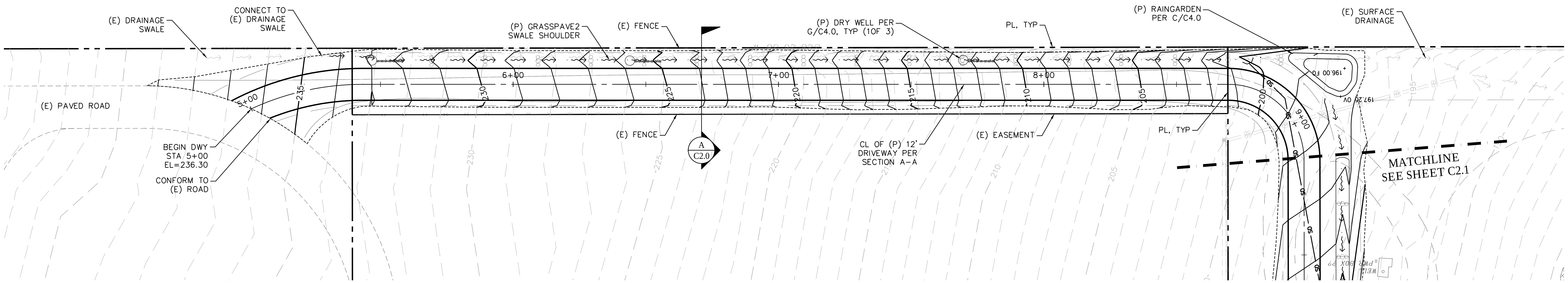
C0.0

LEGEND

	EXISTING	PROPOSED
PROPOSED CURB AND GUTTER		
EDGE OF PAVEMENT ONSITE		
PROPOSED FLOW LINE		
RIGHT OF WAY		



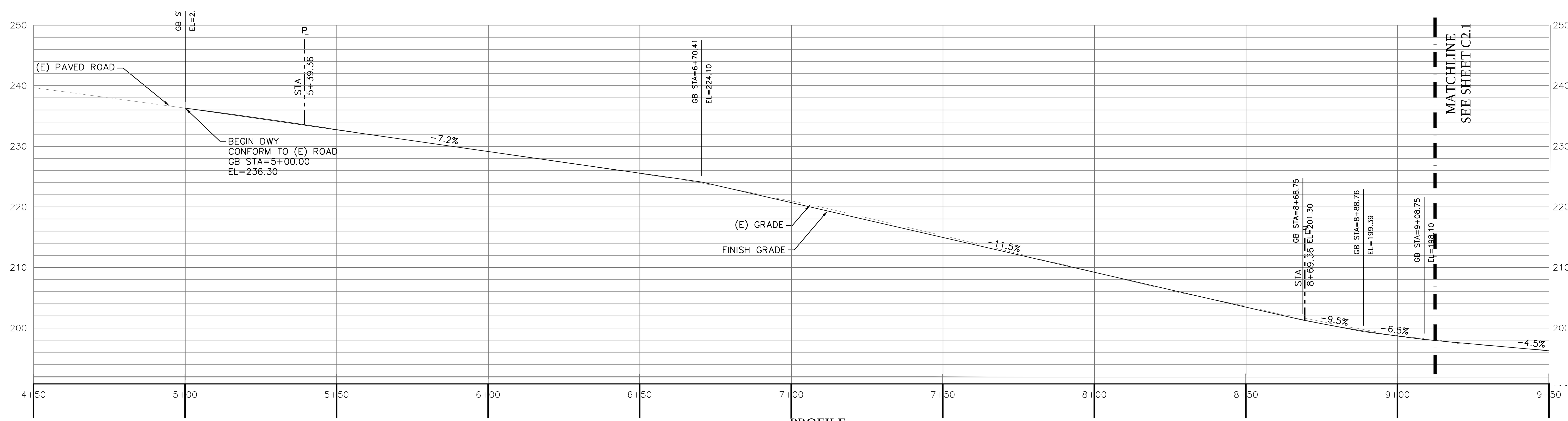
A
C2.0
SECTION A-A
SCALE: NTS



PLAN VIEW
Scale: 1"=20'

0 10' 20' 40'

North



PROFILE
HORIZ: 1"=20'
VERT:1"=20'

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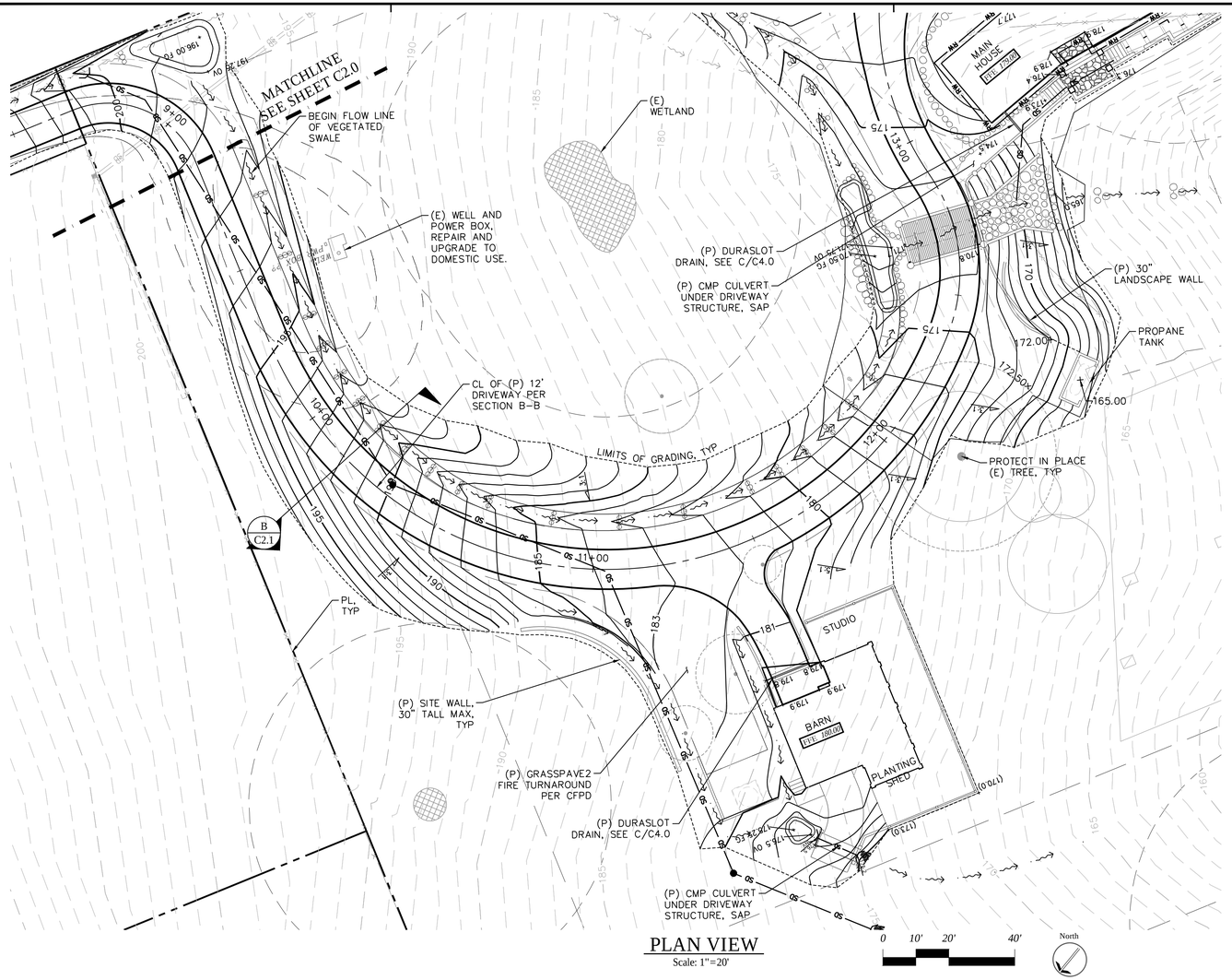
Sheet Title

ACCESS ROAD
PLAN & PROFILE

Sheet Number

C2.0

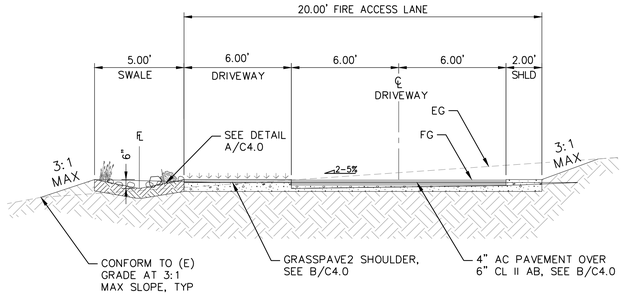


PLAN VIEW

Scale: 1"=20'

LEGEND

	EXISTING	PROPOSED
PROPOSED CURB AND GUTTER		
EDGE OF PAVEMENT ONSITE		
PROPOSED FLOW LINE		
RIGHT OF WAY		



B C2.1 SECTION B-B

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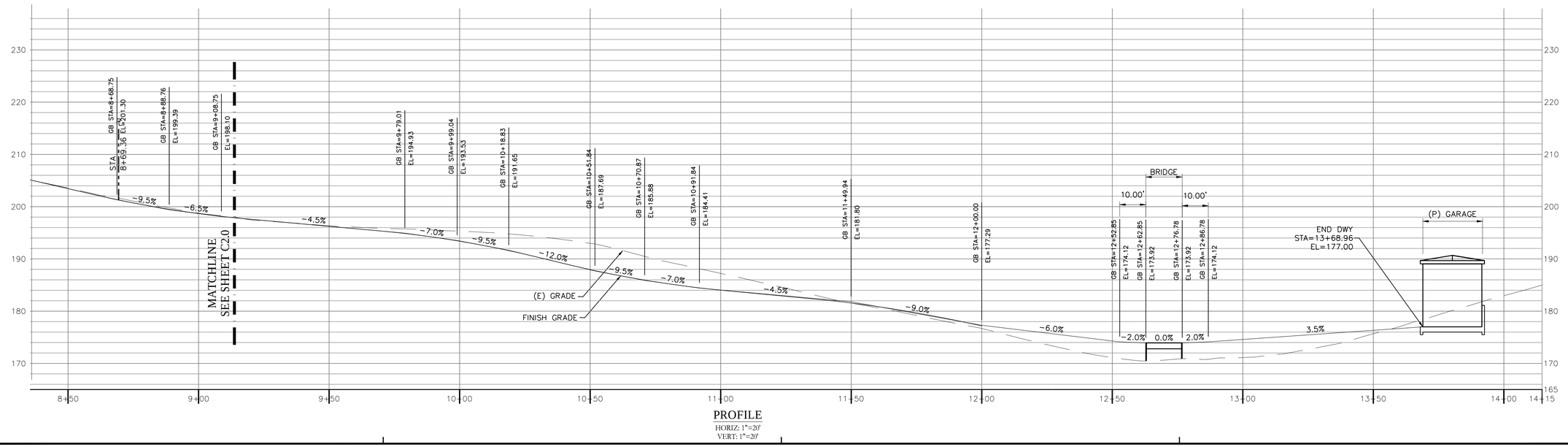

PROFILE

HORIZ: 1"=20'
VERT: 1"=20'

PRELIMINARY - NFC

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Sheet Title

DRIVEWAY PLAN & PROFILE

Sheet Number

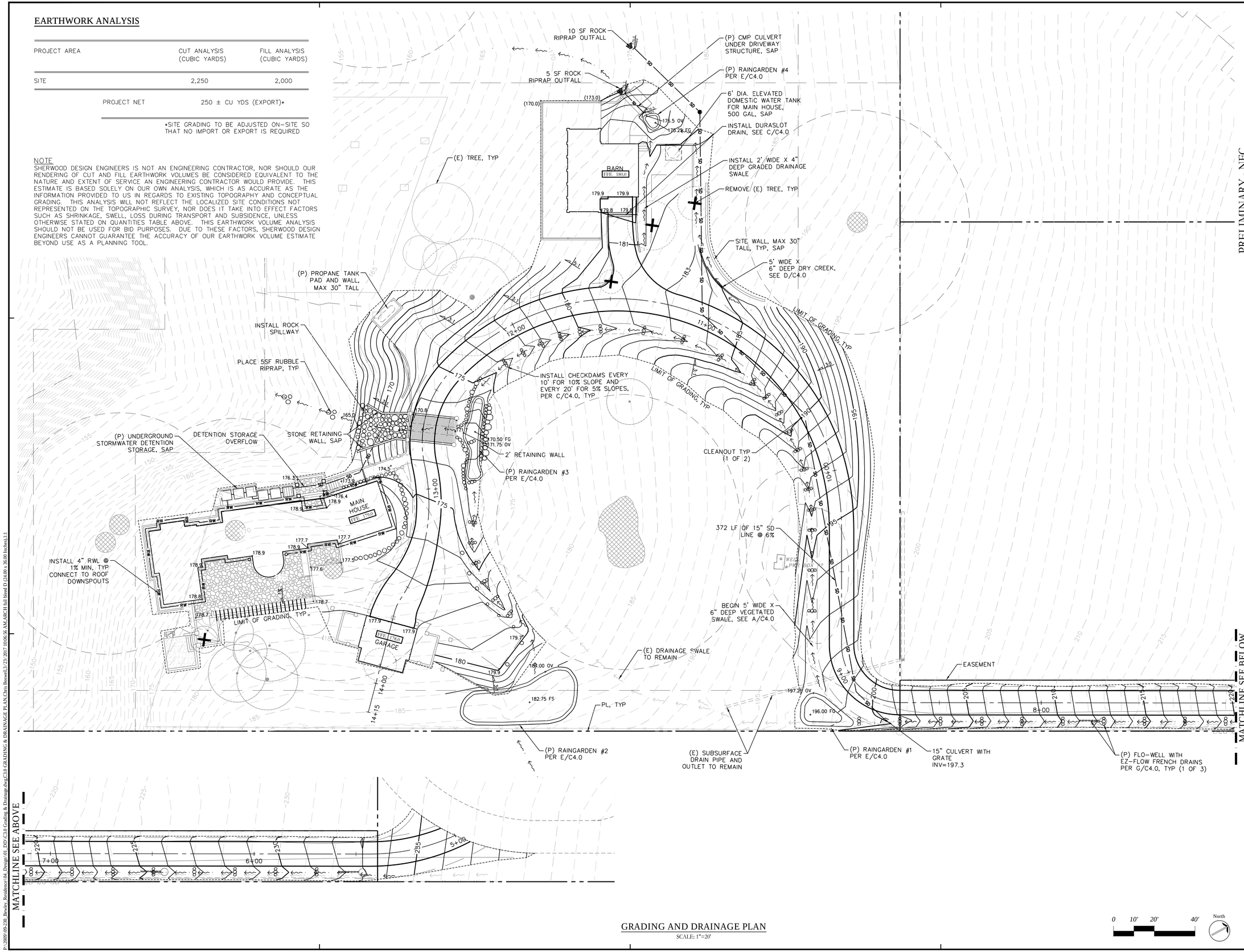
C2.1

EARTHWORK ANALYSIS

PROJECT AREA	CUT ANALYSIS (CUBIC YARDS)	FILL ANALYSIS (CUBIC YARDS)
SITE	2,250	2,000
PROJECT NET	250 ± CU YDS (EXPORT)*	

*SITE GRADING TO BE ADJUSTED ON-SITE SO THAT NO IMPORT OR EXPORT IS REQUIRED

NOTE
SHERWOOD DESIGN ENGINEERS IS NOT AN ENGINEERING CONTRACTOR, NOR SHOULD OUR RENDERING OF CUT AND FILL EARTHWORK VOLUMES BE CONSIDERED EQUIVALENT TO THE NATURE AND EXTENT OF SERVICE AN ENGINEERING CONTRACTOR WOULD PROVIDE. THIS ESTIMATE IS BASED SOLELY ON OUR OWN ANALYSIS, WHICH IS AS ACCURATE AS THE INFORMATION PROVIDED TO US IN REGARDS TO EXISTING TOPOGRAPHY AND CONCEPTUAL GRADING. THIS ANALYSIS WILL NOT REFLECT THE LOCALIZED SITE CONDITIONS NOT REPRESENTED ON THE TOPOGRAPHIC SURVEY, NOR DOES IT TAKE INTO EFFECT FACTORS SUCH AS SHRINKAGE, SWELL, LOSS DURING TRANSPORT AND SUBSIDENCE, UNLESS OTHERWISE STATED ON QUANTITIES TABLE ABOVE. THIS EARTHWORK VOLUME ANALYSIS SHOULD NOT BE USED FOR BID PURPOSES. DUE TO THESE FACTORS, SHERWOOD DESIGN ENGINEERS CANNOT GUARANTEE THE ACCURACY OF OUR EARTHWORK VOLUME ESTIMATE BEYOND USE AS A PLANNING TOOL.



GRADING AND DRAINAGE PLAN
SCALE: 1"=20'

0 10' 20' 40' North

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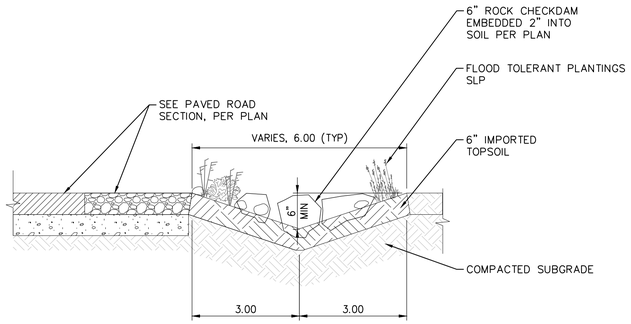
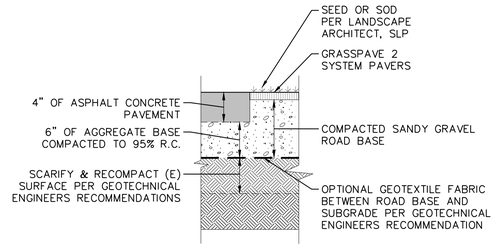
Sheet Title
GRADING & DRAINAGE PLAN

Sheet Number
C3.0



A C4.0 SWALE

SCALE: NTS

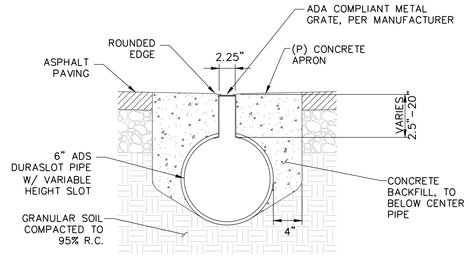


NOTE:

1. RIP AND RECOMPACT 6" OF SUBGRADE
2. AS NECESSARY, PLACE LAYER OF MIRAFI HP270 GEOTEXTILE FABRIC PER GEOTECHNICAL RECOMMENDATIONS

B C4.0 PAVEMENT SECTION

SCALE: NTS



C C4.0 DURASLOT DRAIN DETAIL

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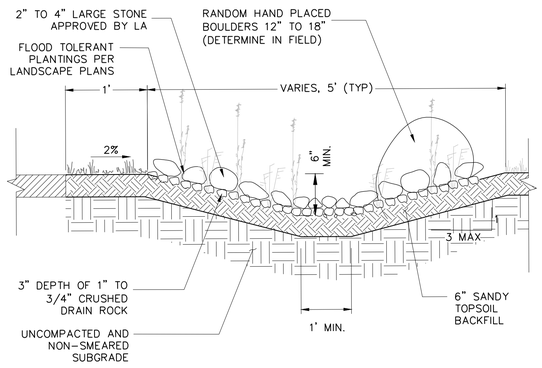
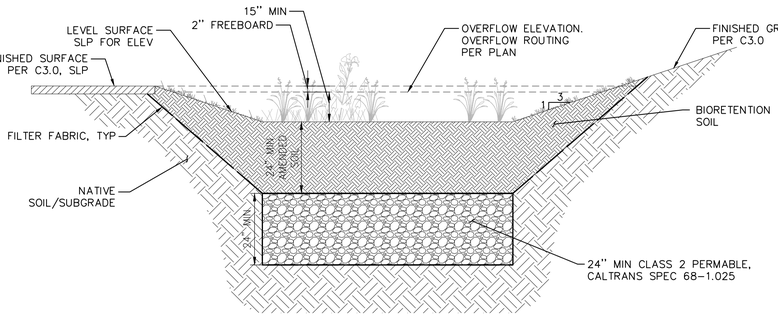


D C4.0 DRY CREEK

SCALE: NTS

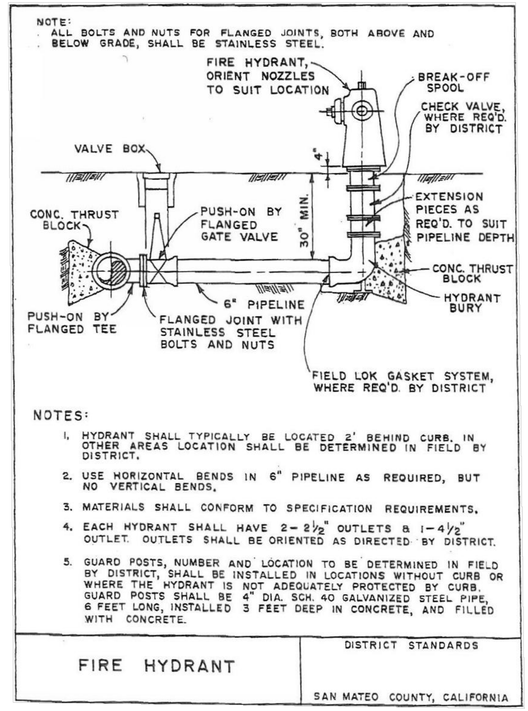


E C4.0 RAIN GARDEN

SCALE: NTS

G C4.0 FLOW WELL AND EZ FLOW EXTENSION

SCALE: NTS



F C4.0 FIRE HYDRANT

SCALE: NTS

PRELIMINARY - NFC

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Sheet Title

DETAILS

Sheet Number

C4.0

SAN MATEO COUNTY, FITZGERALD AREA of SPECIAL BIOLOGICAL SIGNIFICANCE (A.S.B.S.)

1. SAN MATEO COUNTY PLANNING AND BUILDING DEPARTMENT AND THE STATE WATER BOARD PROHIBIT NON-STROMWATER DISCHARGES OR "DRY WEATHER FLOWS" FROM PRIVATE PROPERTIES TO THE FITZGERALD A.S.B.S.

2. STORMWATER DISCHARGES MAY OCCUR ONLY DURING THE WET WEATHER SEASON (OCT 1 TO APRIL 30). DISCHARCH MAY ONLY BE STORMWATER FREE OF POLLUTANTS. DISCHARGE MUST NOT ALTER NATURAL OCEAN WATER QUALITY IN THE A.S.B.S.

3. RETAIN DISCHARGE ON-SITE OR TREAT ON-SITE.

4. SEE SHEET A1.2 FOR INFO ON ARCHITECTURAL COPPER.

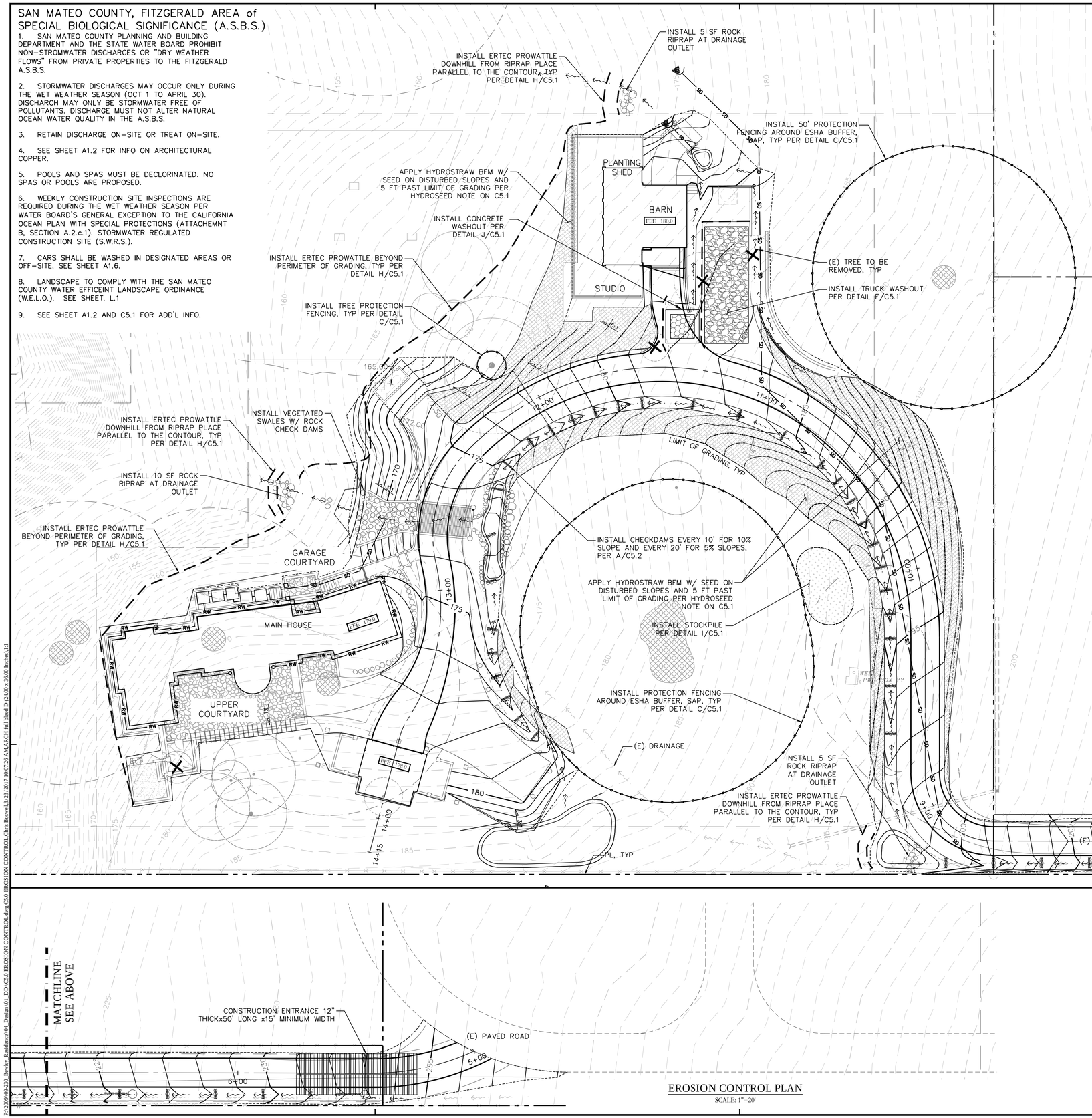
5. POOLS AND SPAS MUST BE DECLORINATED. NO SPAS OR POOLS ARE PROPOSED.

6. WEEKLY CONSTRUCTION SITE INSPECTIONS ARE REQUIRED DURING THE WET WEATHER SEASON PER WATER BOARD'S GENERAL EXCEPTION TO THE CALIFORNIA OCEAN PLAN WITH SPECIAL PROTECTIONS (ATTACHEMNT B, SECTION A.2.c.1). STORMWATER REGULATED CONSTRUCTION SITE (S.W.R.S.).

7. CARS SHALL BE WASHED IN DESIGNATED AREAS OR OFF-SITE. SEE SHEET A1.6.

8. LANDSCAPE TO COMPLY WITH THE SAN MATEO COUNTY WATER EFFICEINT LANDSCAPE ORDINANCE (W.E.L.O.). SEE SHEET. L.1

9. SEE SHEET A1.2 AND C5.1 FOR ADD'L INFO.



EROSION CONTROL PLAN
SCALE: 1"=20'

0 10' 20' 40' North

DRAINAGE NOTES

1. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, HARMFUL CHEMICALS, WASH WATER OR SEDIMENTS, RINSE WATER FROM ARCHITECTURAL COPPER, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES. SEE C5.1.

2. STORE , HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS/WASTES PROPERLY TO PREVENT CONTACT WITH STORM WATER. SEE C5.1

3. DO NOT CLEAN, FUEL, OR MAINTAIN VEHICLES ON-STE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED. C5.1

4. TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEEES/SUBCONTRACTORS REGARDING CONSTRUCTION BEST MANAGEMENT PRACTICES(B.M.P.).

5. PROTECT ALL STORM DRAIN INLETS IN VICINITY OF SITE USING SEDIMENT CONTROLS SUCH AS BERMS, FIBER ROLLS, OR FILERS. SEE C5.1

6. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS. SEE C5.1

7. SEE THE SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAMS CONSTRUCTION BMP PLAN SHEET. CONTRACTOR TO IMPLEMENT THE APPLICABLE B.M.P.s

8. USE TEMPORARY EROSION CONTROLS TO STABILIZE ALL DENUDED AREAS UNTIL PERMANENT EROSION CONTROLS ARE ESTABLISHED. SEE C5.1

9. DELINEATE WITH FIELD MARKERS CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, ENVIRONMENTALLY SENSITIVE HABITAT AREAS, BUFFER ZONES, TRESS, WETLANDS, AND DRAINAGE COURSES.

10. SEE C5.1 FOR CONSTRUCTION OPERATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS.

11. SEE C5.1 FOR METHODS AND SCHEDULE FOR GRADING, EXCAVATION, FILLING, CLEARING OF VEGETATION, AND STORAGE AND DISPOSAL OF EXCAVATED OR CLEARED MATERIAL.

12. SEE C5.1 FOR SPECIFICATION OF VEGETATIVE COVER AND MULCH.

13. SEE L.1 FOR IRRIGATION.

14. PERFORM CLEARING AND EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER. SEE C5.1.

15. USE SEDIMENT CONTROLS FOR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING AND OBTAIN ALL NECESSARY PERMITS.

16. TRAP SEDIMENT ON-SITE USING B.M.P.s SUCH AS, SEDIMENT BASINS OR TRAPS, EARTHEN DIKES OR BERMS, SILT FENCES, CHECK DAMS, SOIL BLANKETS OR MATS, COVERS FOR SOIL STOCK PILES, ETC. SEE C5.1

17. DIVERT-ON-SITE RUNOFF AROUND EXPOSED ARES WITH SWALES AND DIKES.

18. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, MULCHING, OTHER MEASURES AS APPROPRIATE. SEE C5.1

19. MARK ON-SITE INLETS WITH A SIGN STATING, "FLOWS TO PROTECTED MARINE HABITAT."

20. PLUMB INTERIOR FLOOR DRAINS TO THE SEPTIC SYSTEM.

21. PLUMB AND DRAIN MECHANICAL SYSTEM TO SEPTIC SYSTEM.

22. EXTERIOR REFUSE BINS SHALL HAVE A ROOF TO PROTECT AGAINST RAIN WATER.

23. SEE CIVIL PLANS FOR ADD'L INFO. AND REQUIREMENTS TO BE IMPLEMENTED.

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Sheet Title
EROSION CONTROL PLAN

Sheet Number
C5.0

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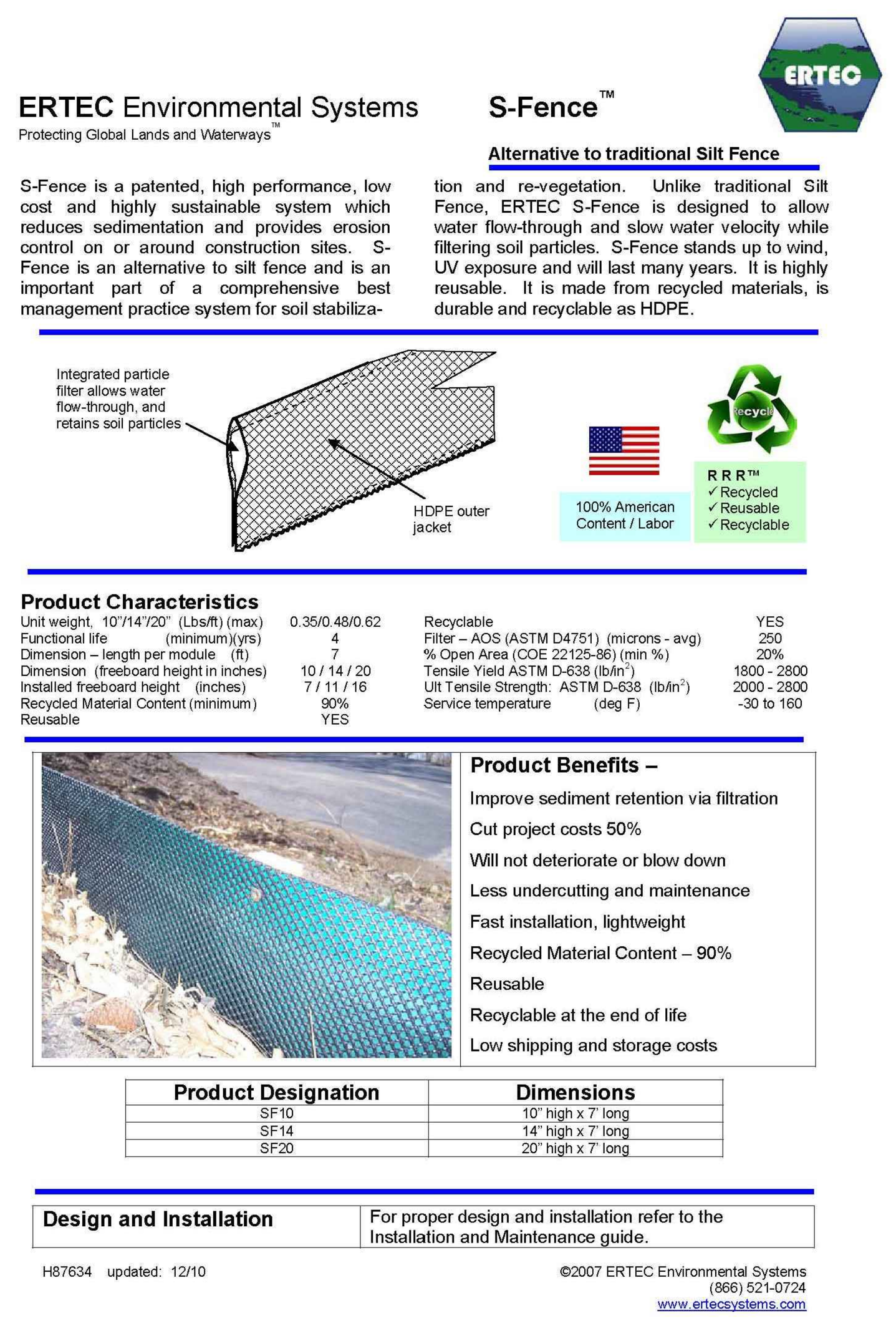
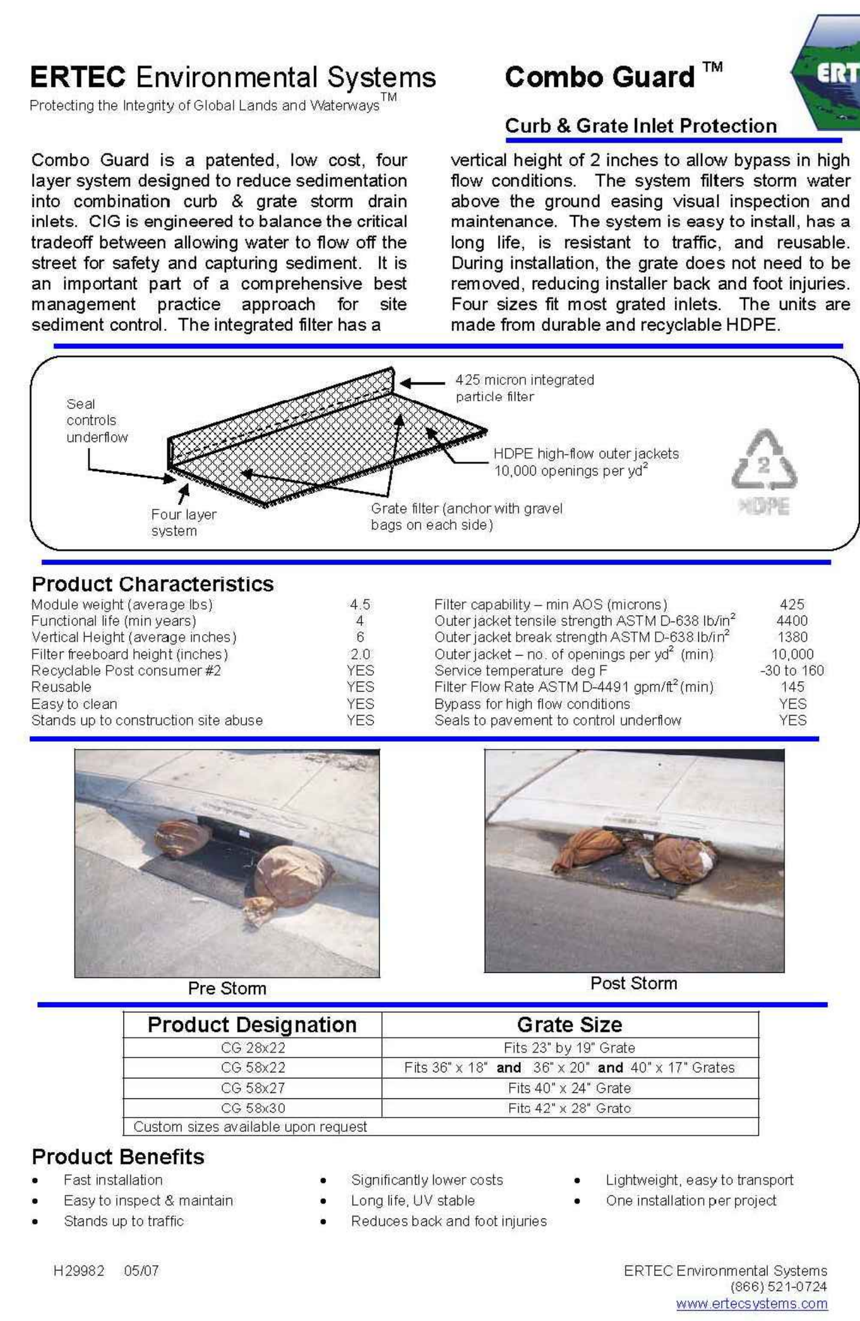


A / C5.1 ERTEC S-FENCE
SCALE: NTS



B / C5.1 ERTEC COMBO GUARD
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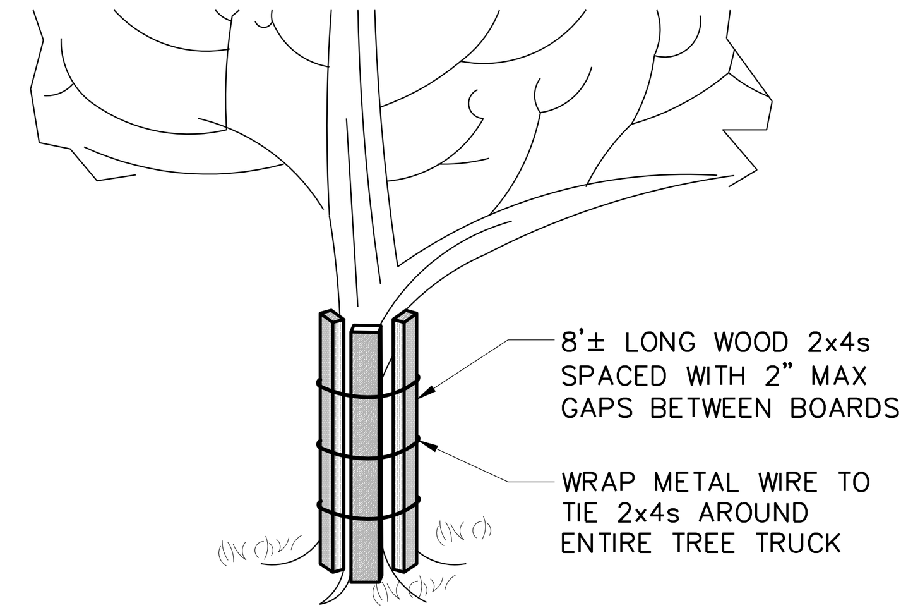
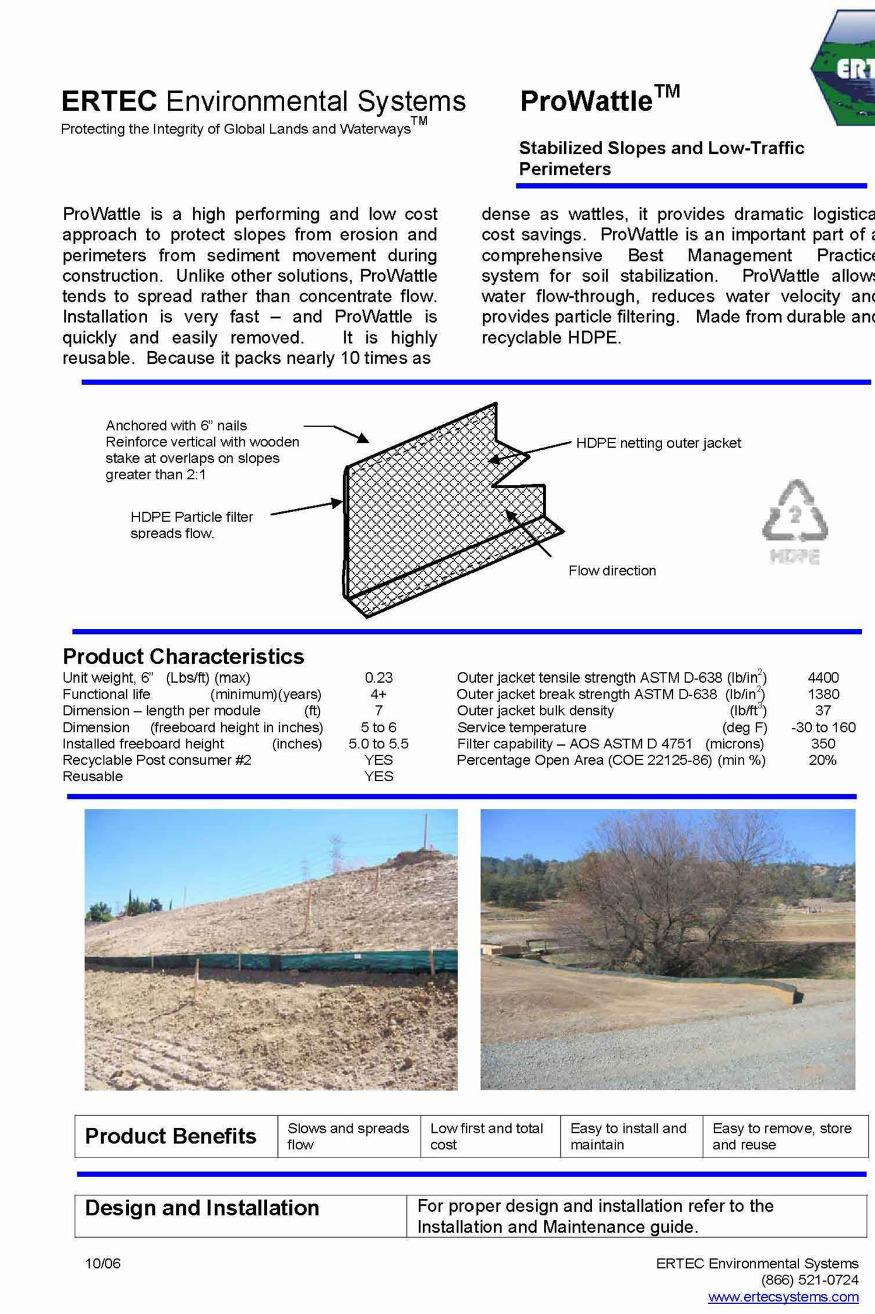


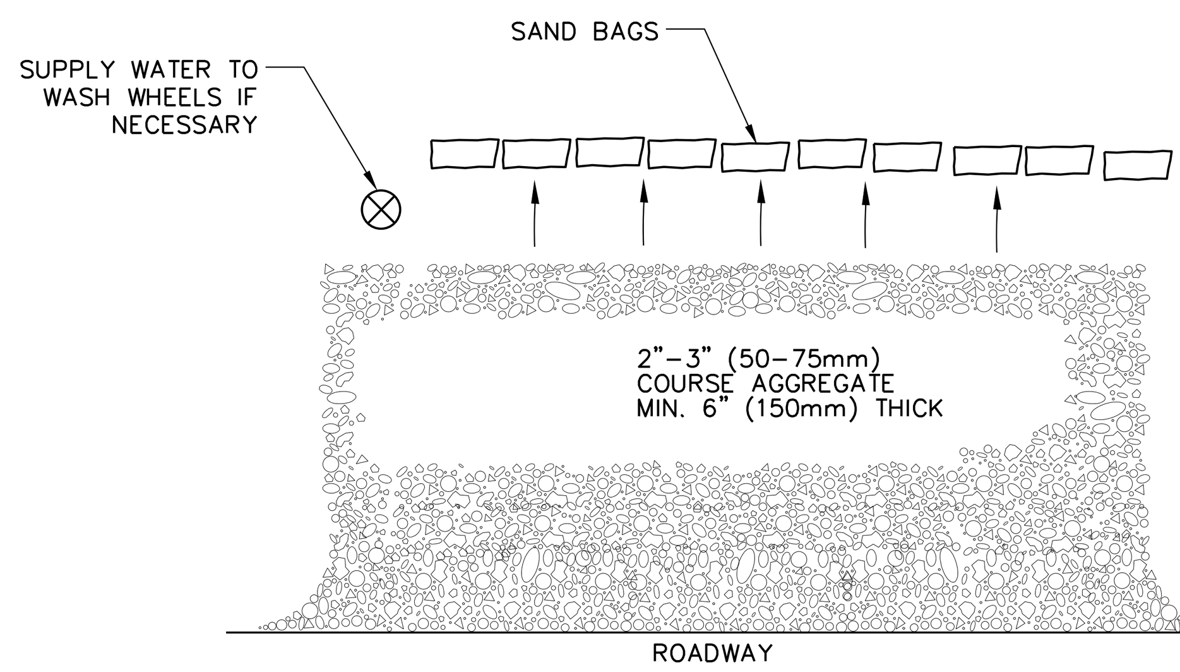
C / C5.1 TREE PROTECTION FENCING
SCALE: NTS

D / C5.1 SNAKE BAG
SCALE: NTS



H / C5.1 ERTEC PROWATTLE
SCALE: NTS

E / C5.1 ERTEC HARD GUARD
SCALE: NTS



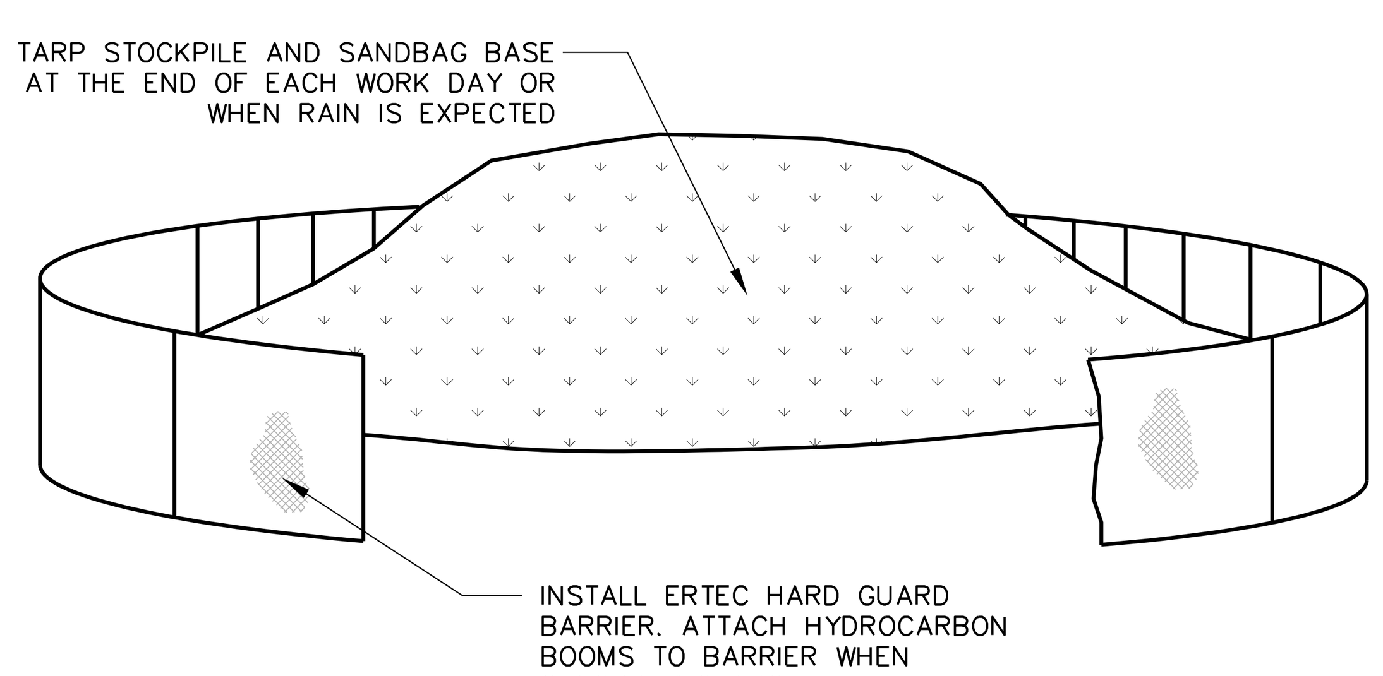
PLAN

NOTES

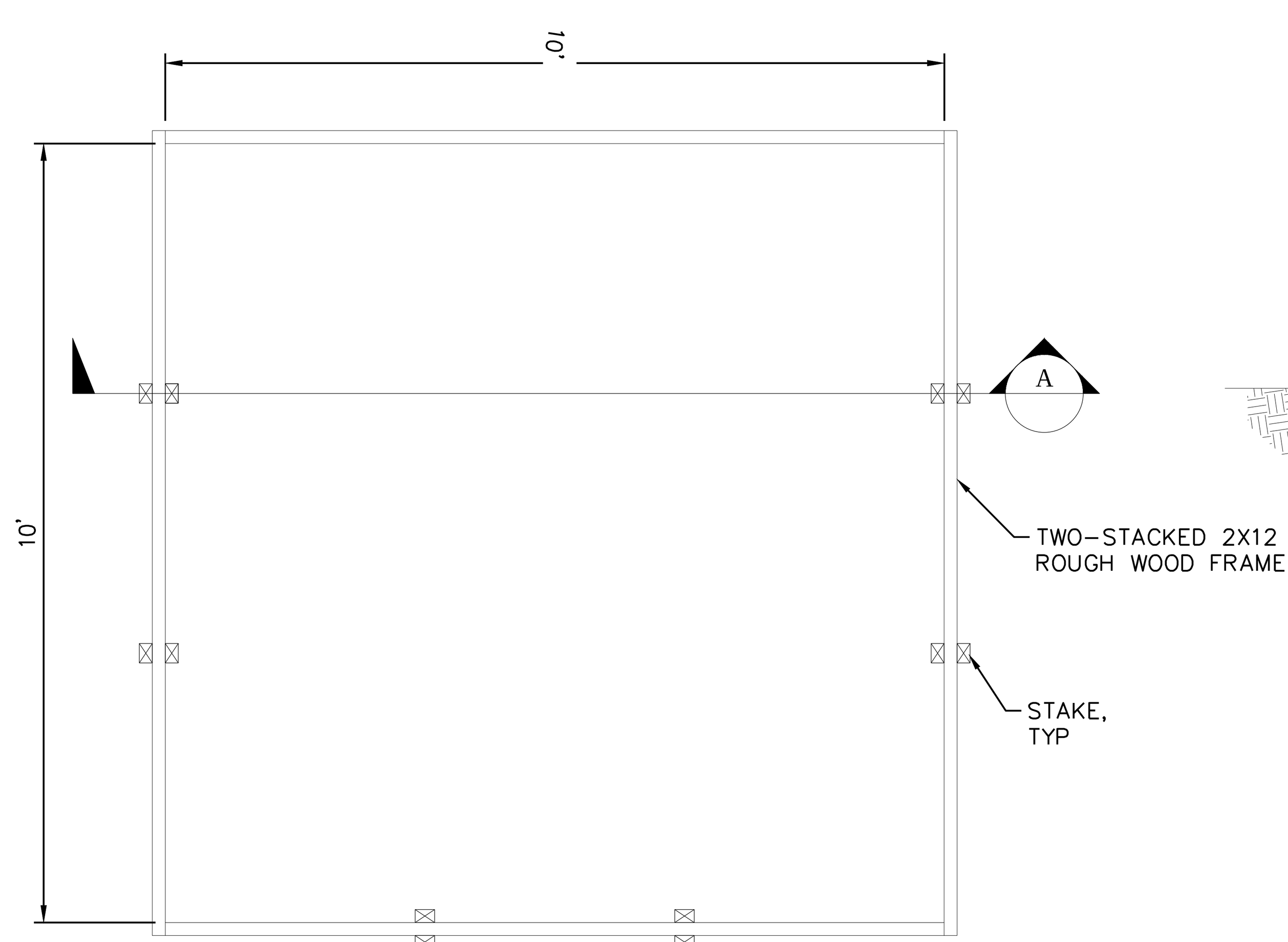
1. TRUCK WASHING STATION SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. RECOMMENDED TO BE PLACED NEAR A RELIABLE WATER SOURCE.
5. SPRAY TIRES ON TRUCKS AND BROOM OFF TOPS OF TRUCKS BEFORE LEAVING SITE.

F / C5.1 TRUCK WASHOUT
SCALE: NTS

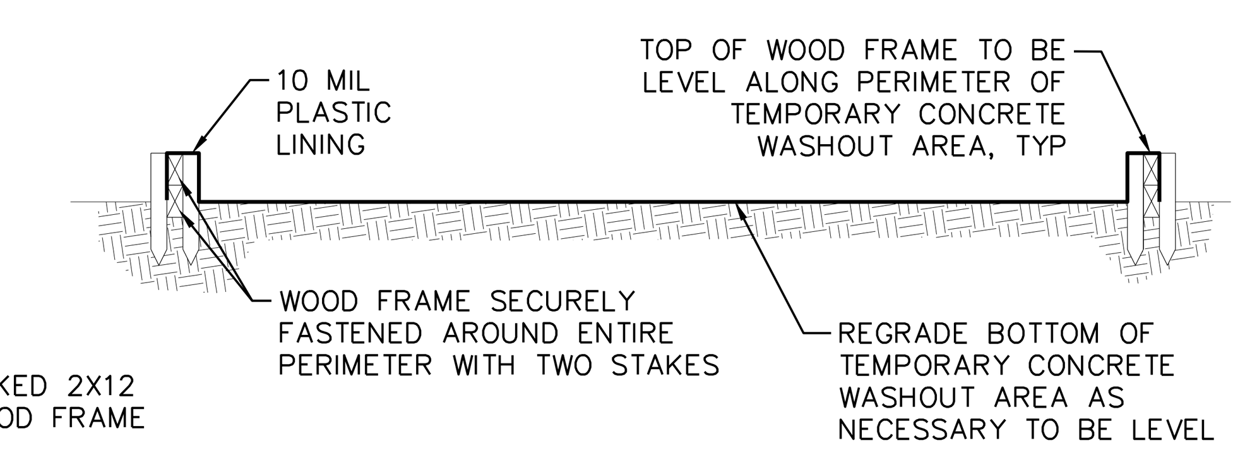
G / C5.1 NOT USED
SCALE: NTS



I / C5.1 STOCKPILE
SCALE: NTS



PLAN VIEW



SECTION A-A

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY

J / C5.1 CONCRETE WASHOUT
SCALE: NTS

EROSION CONTROL NOTES

1. ALL FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT
2. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT STORM RUNOFF AND NON-STORM RUNOFF FROM LEAVING THE SITE. PROTECTIVE DEVICES, PROVIDED ON THESE PLANS SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OPERABLE YEAR AROUND OR UNTIL VEGETATION IS ESTABLISHED ON SLOPED SURFACES.
3. EROSION CONTROL FACILITIES SHALL BE INSPECTED AND MAINTAINED DAILY AS WELL AS WHENEVER RAIN IS FORECAST. BREACHES IN DIKES AND SWALES TO BE REPAIRED AT THE CLOSE OF EACH DAY. THE NAME OF THE PERSON RESPONSIBLE FOR THE DAILY MAINTENANCE OF THESE FACILITIES SHALL BE ON RECORD WITH THE CITY ALONG WITH A PHONE NUMBER WHERE THEY CAN BE REACHED 24 HOURS A DAY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER AND NON-STORM WATER DISCHARGE INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES AND PRE-EXISTING DRAINAGE PATTERNS. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE CIVIL ENGINEER. (OCTOBER 1 TO APRIL 15)
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE CONSTRUCTION GENERAL PERMIT 2009-0009-DWQ. CONTROL MEASURES ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OF THE GOVERNING JURISDICTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, AND / OR A PROJECT STOP ORDER.
6. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
7. THE CONTRACTOR SHALL INSTALL CONTROLLED ACCESS AND EGRESS AS DEFINED IN THESE PLANS. LOCATION TO BE APPROVED BY THE ENGINEER IN THE FIELD. CONSTRUCTION EGRESS WILL BE EQUIPPED WITH A TIRE WASH STATION, AS NEEDED. ALL DISCHARGE FROM THE TIRE WASH STATION WILL BE DIRECTED TO APPROPRIATE COLLECTION AREAS, AND NOT ALLOWED TO LEAVE THE SITE. ANY MUD OR SEDIMENT THAT IS TRACKED OFF-SITE ONTO PAVED AREAS WILL BE REMOVED AS NEEDED. POWER WASHING OF STREETS IS NOT PERMITTED. STREET CLEANING EQUIPMENT WILL HAVE SWEEPERS AND VACUUM CAPABILITY.
8. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM OR ADJACENT LANDSCAPE.
9. DURING PERIODS WHEN STORMS ARE FORECAST -
   - 9.a. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
   - 9.b. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
   - 9.c. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN AND SURROUND THE STOCKPILED MATERIAL WITH SEDIMENT ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE, OR OTHER RUNOFF CONTROLS.
   - 9.d. USE INLET CONTROLS AS NEEDED (E.G. ERTEC DRAIN INLET PROTECTION) FOR STORM DRAIN ADJACENT TO THE PROJECT SITE OR STOCKPILED SOIL.
10. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
11. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
12. AS A PART OF THE EROSION CONTROL MEASURES, DRAINAGE INLET PROTECTION (SEDIMENT BARRIERS) SHALL BE INSTALLED ON INLETS TO REMAIN DURING THIS PHASE.
13. IT IS RECOMMENDED THAT ERTEC S-FENCE OR COMPARABLE PRODUCTS BE USED IN PLACE OF TRADITIONAL STRAW OR SEDIMENT ROLLS AND SILT FENCES. THESE PRODUCTS CAN BE REUSED AFTER THE COMPLETION OF THIS PROJECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
14. ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, STREETS, PARKING AREAS, AND BUILDING PADS SHALL BE STABILIZED WITH HYDRAULICALLY APPLIED MATERIAL OR SOIL STABILIZER PER THIS PLAN.
15. FOR GRADED BANKS WITH SLOPES BETWEEN 50:1 AND 3:1, EXPOSED EARTH SHALL BE STABILIZED WITH ATLAS SOIL-LOK PRODUCT, HYDRO STRAW GUARD PLUS OR HYDRO STRAW BFM AND SEED, LANDSCAPED, OR SEALED. IF THE PERMANENT STORM DRAIN SYSTEM IS NOT INSTALLED BY OCTOBER 1, TEMPORARY DITCHES SHALL BE CONSTRUCTED TO CONTAIN THE STORM WATER AND DIRECT IT, IN A MANNER THAT AVOIDS EROSION OF THE BANKS, TO THE EROSION AND SEDIMENT CONTROL FACILITIES. FOLLOW THE DESIGN OF THESE FACILITIES IN THIS PLAN.
16. FOR SLOPES OF 2:1 OR STEEPER, SEE HYDROSEED NOTES BELOW.
17. ALL CUT AND FILL SLOPES ARE TO BE PROTECTED TO PREVENT OVERBANK FLOW USING ERTEC S-FENCE, OR EQUAL, AS SPECIFIED ON THESE PLANS.
18. APPLY ATLAS DUST LOCK (OR EQUAL) TO ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, STREETS, PARKING AREAS, AND BUILDING PADS THAT DO NOT HAVE FINAL PAVEMENT OR PERMANENT STABILIZATION.
19. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES PER PLAN TO THE SATISFACTION OF THE CITY ENGINEER.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES. CONTRACTOR SHALL ENSURE THAT PONDING/FLOODING IN STREETS DOES NOT INTERFERE WITH TRAFFIC LANES AT ANY TIME.
21. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITES WITH EXPOSED SOILS AS NEEDED ESPECIALLY IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING, OR REVEGETATION. REFER TO EROSION CONTROL AND SEDIMENT CONTROL FIELD MANUAL, 3RD EDITION, PREPARED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION.
22. ALL TREES ALLOCATED TO REMAIN SHALL BE PROTECTED PER THIS PLAN AND ARBORIST'S RECOMMENDATIONS.
23. WHEN POSSIBLE WORK SHOULD BE CONDUCTED DURING PERIODS OF NO FLOW OR LOW-FLOW.
24. PRO-WATTLE (OR EQUAL) MAY BE USED IN PLACE OF S-FENCE (OR EQUAL) EXCEPT FOR PERIMETER PROTECTION AND TOP OF BANK PROTECTION AT SEDIMENT BASIN OUTLETS.
25. HYDRO STRAW GUARD PLUS OR HYDRO STRAW BFM TO BE APPLIED PER MANUFACTURER'S RECOMMENDATION AND PER THE DIRECTION OF THE CIVIL ENGINEER TO DISTURBED AREAS NOT TO RECEIVE STRUCTURAL FILL OR VEHICULAR TRAFFIC.

HYDROSEED NOTES

THE FOLLOWING HYDROSEED NOTES ARE APPLICABLE TO GRADED BANKS STEEPER THAN 2:1. FOR GRADED BANK SLOPED AT 3:1 OR LESS, SEE NOTE 15 ABOVE.

1. HYDROSEED SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS IN THE FOLLOWING STEPS:
   - A. APPLY HYDRAULIC GROWTH MEDIUM (HGM, SEE NOTE 2 BELOW) AT A RATE OF 3,500 LB/ACRE
   - B. APPLY WOOD BONDED FIBER MATRIX (BFM) BY PROFILE OR EQUIVALENT AT A RATE OF 4,000/ACRE
2. FOR HGM, MIX 150 LBS/ACRE "HOLD FAST NATIVE BLEND" SEED MIX WITH 3,500 LBS/ACRE "VERDYOL BLACK" AND 80 LBS/ACRE ORGANIC BINDER (PLANTAGO, GUAR, OR A COMBINATION OF BOTH) SUFFICIENT TO COVER THE AREA 1.5" DEEP. ALL PROCESSES TO BE APPROVED BY CIVIL ENGINEER.

PRELIMINARY - NFC

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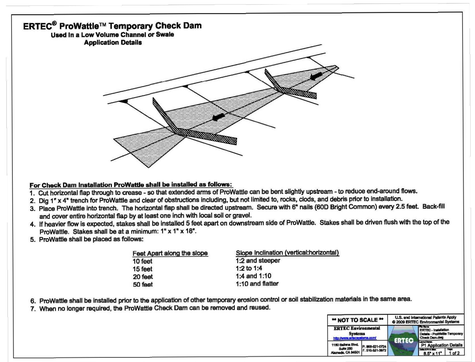
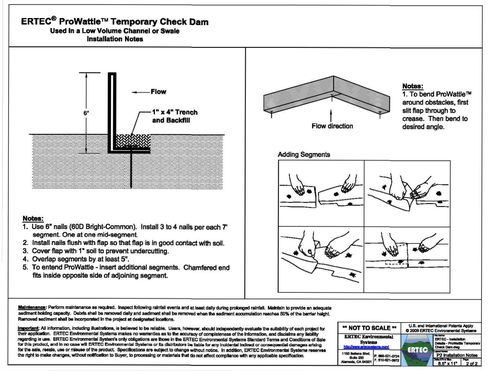
Planning Resubmit	3.22.2017

HM,a+e Job Number
2005,01

Sheet Title
EROSION CONTROL DETAILS

Sheet Number
C5.1





A C5.2 ERTEC PROWATTLE TEMPORARY CHECK DAM & INSTALLATION
SCALE: NTS

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management

Non-Hazardous Materials
- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials
- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management
- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter
- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

Maintenance and Parking
- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control
- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils
- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal
- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application

- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

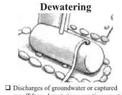
Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal

Painting Cleanup and Removal
- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

A C5.2 CONSTRUCTION BMP PLAN SHEET
SCALE: NTS

NOTES

1. CONTRACTOR REQUIRED TO IMPLEMENT ALL APPLICABLE BMPS ON THIS PLAN SHEET.

PRELIMINARY - NFC

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HM,a+e Job Number
2005,01

Sheet Title
EROSION CONTROL DETAILS

Sheet Number
C5.2

PLANT LIST

TREES:

Key	Qty.	Size	Name	Common Name	Growth Rate	Ave. Size.	Decid./Evrgrn	Calif.Native	Coast
T1	8	15 Gal.	Cupressus macrocarpa	Monterey Cypress	Fast	40' ht. X 40'	Evergreen	X	X
T2	4	15 Gal.	Cupressus macrocarpa 'citriodora'	Lemon Yellow Cypress	Slow	20' ht. x8'	Evergreen	X	X
T3	5	15 Gal.	Quercus agrifolia	Coast Live Oak	Moderate	50' ht. X 50'	Evergreen	X	X

SHRUBS:

No.	Qty.	Size	Name	Common Name	Growth Rate	Ave. Size.	Decid./Evrgrn	Calif.Native	Coast
S1	36	1 Gal.	Artemesia californica 'Montara'	California Sagebrush var. Montara	Moderate	3' ht. x 3'	Evergreen	X	X
S2	20	1 Gal.	Baccharis pilularis 'Pidgeon Point'	Dwarf Coyote Brush Pidgen Point	Moderate	1' ht.x 6'	Evergreen	X	X
S3	12	5 Gal.	Carpenteria californica 'Elizabeth'	Bush Anemone	Moderate	5' ht.x5'	Evergreen	X	X
S4	13	1 Gal.	Ceanothus 'Concha'	Ceanothus	Moderate	6' ht. x6'	Evergreen	X	X
S5	12	1 Gal.	Erigeron glaucus	Beach Aster / Seaside Daisy	Moderate	1' ht.x 3'	Evergreen	X	X
S6	37	1 Gal.	Mimulus aurantiacus	Monkey Flower	Moderate	4'ht x 4 ft.	Deciduous	X	
S7	16	5 Gal.	Myrica californica	Pacific Wax Myrtle	Moderate	20'ht x 10 ft.	Evergreen	X	X
S8	21	5 Gal.	Rhamnus californica 'Mound San Bruno"	Coffeeberry	Moderate	5'ht x 5 ft.	Evergreen	X	X
S9	33	1 Gal.	Rhamnus californica 'Sea View'	Coffeeberry	Moderate	1'ht x 6 ft.	Evergreen	X	X
S10	18	1 Gal.	Zauschneria (Epilobium) californica 'Mexican	California Fuchsia	Moderate	2'ht x 2 ft.	Evergreen	X	X

PERENNIALS:

No.	Qty.	Size	Name	Common Name	Growth Rate	Ave. Size.	Decid./Evrgrn	Calif.Native	Coast
P1	40	1 Gal.	Achillea millifolium californica	Common Western	Moderate	2' ht. X 2'	Evrgrn/Decid	X	X
P2	40	1 Gal.	Iris douglasiana	Douglas Iris	Fast	18" ht.x 2'	Evergreen	X	X
P3	40	1 Gal.	Sisyrinchium bellum 'Californian Skies'	Blue-Eyed Grass	Moderate	1'ht x 1 ft.	Perennial	X	X
P4	40	1 Gal.	Sisyrinchium californicum	Yellow-Eyed grass	Moderate	1'ht x 1 ft.	Perennial	X	X

GRASSES: Hydroseed

No.	Qty.	Size	Name	Common Name	Growth Rate	Ave. Size.	Decid./Evrgrn	CA Native	Coast
G1	11,000	SF	Danthonia californica	California Oatgrass	Moderate	2' ht.x 3'	Evergreen	X	X
G2 G3 = 50/50 Mix = 12,000 SF									
G2	6,000	SF	Festuca californica	California Fescue	Moderate	2' ht.x 3'	Evergreen	X	X
G3	6,000	SF	Stipa (Nasssella) pulcchra	Purple Needle Grass	Moderate	2' ht.x 3'	Evergreen/Per.	X	X

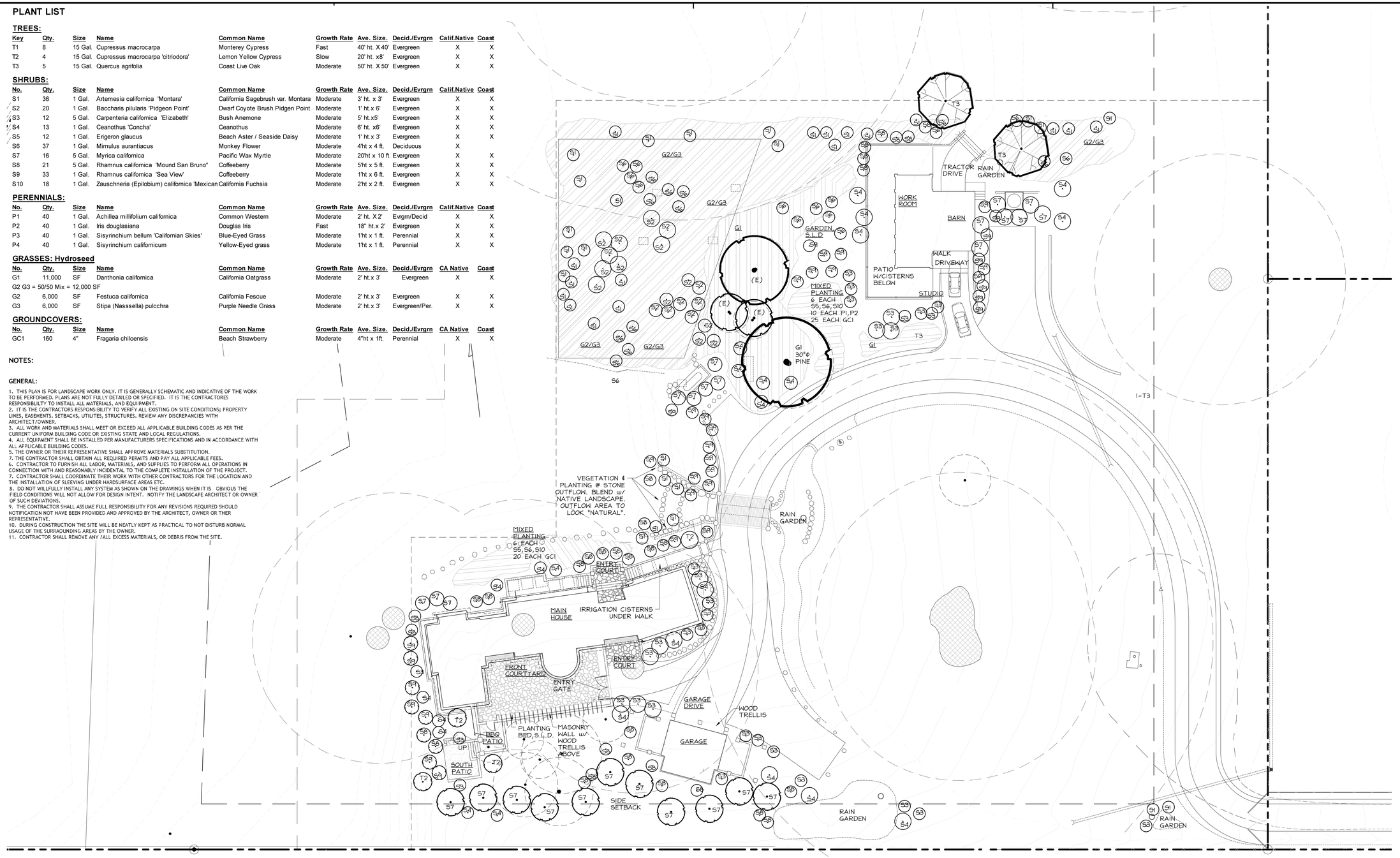
GROUNDCOVERS:

No.	Qty.	Size	Name	Common Name	Growth Rate	Ave. Size.	Decid./Evrgrn	CA Native	Coast
GC1	160	4"	Fragaria chiloensis	Beach Strawberry	Moderate	4"ht x 1ft.	Perennial	X	X

NOTES:

GENERAL:

1. THIS PLAN IS FOR LANDSCAPE WORK ONLY. IT IS GENERALLY SCHEMATIC AND INDICATIVE OF THE WORK TO BE PERFORMED. PLANS ARE NOT FULLY DETAILED OR SPECIFIED. IT IS THE CONTRACTORES RESPONSIBILITY TO INSTALL ALL MATERIALS, AND EQUIPMENT.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING ON SITE CONDITIONS; PROPERTY LINES, EASEMENTS, SETBACKS, UTILITES, STRUCTURES. REVIEW ANY DISCREPANCIES WITH ARCHITECT/OWNER.
3. ALL WORK AND MATERIALS SHALL MEET OR EXCEED ALL APPLICABLE BUILDING CODES AS PER THE CURRENT UNIFORM BUILDING CODE OR EXISTING STATE AND LOCAL REGULATIONS.
4. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES.
5. THE OWNER OR THEIR REPRESENTATIVE SHALL APPROVE MATERIALS SUBSTITUTION.
7. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND PAY ALL APPLICABLE FEES.
6. CONTRACTOR TO FURNISH ALL LABOR, MATERIALS, AND SUPPLIES TO PERFORM ALL OPERATIONS IN CONNECTION WITH AND REASONABLY INCIDENTAL TO THE COMPLETE INSTALLATION OF THE PROJECT.
7. CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF SLEEVING UNDER HARDSURFACE AREAS ETC.
8. DO NOT WILLFULLY INSTALL ANY SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS THE FIELD CONDITIONS WILL NOT ALLOW FOR DESIGN INTENT. NOTIFY THE LANDSCAPE ARCHITECT OR OWNER OF SUCH DEVIATIONS.
9. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS REQUIRED SHOULD NOTIFICATION NOT HAVE BEEN PROVIDED AND APPROVED BY THE ARCHITECT, OWNER OR THER REPRESENTATIVE.
10. DURING CONSTRUCTION THE SITE WILL BE NEATLY KEPT AS PRACTICAL TO NOT DISTURB NORMAL USAGE OF THE SURRAOUNDING AREAS BY THE OWNER.
11. CONTRACTOR SHALL REMOVE ANY /ALL EXCESS MATERIALS, OR DEBRIS FROM THE SITE.



NOTES:
1. PLANTING AREA 28,000 SQ.FT.
2. IRRIGATE WITH RAINWATER.
3. IRRIGATE WITH GRAY WATER.

N

1 / L1 LANDSCAPE PLAN

1" = 20'-0"

0501-L1.dwg Plot Date: 6.2.2016

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

HM,a+e

Henri Mannik,
Architecture and Engineering

5429 Telegraph Ave.
Oakland, CA 94609
510 652 1511 p
510 601 7196 f

Consultant

Blue Sky DESIGNS, INC.

CUSTOM LANDSCAPE ENVIRONMENTS
Landscape Contractor's License #C27-436094
General Contractor's License #B-436094
Landscape Architect's License #LA-4205
495 Purisima Way, Half Moon Bay, CA 94019
(650) 726-5990 FAX (650) 726-2353

Stamp

Printing Date

Planning Permit	03.18.2010
Coordination	09.12.2011
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Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015
Site Drainage Rev	04.10.2016

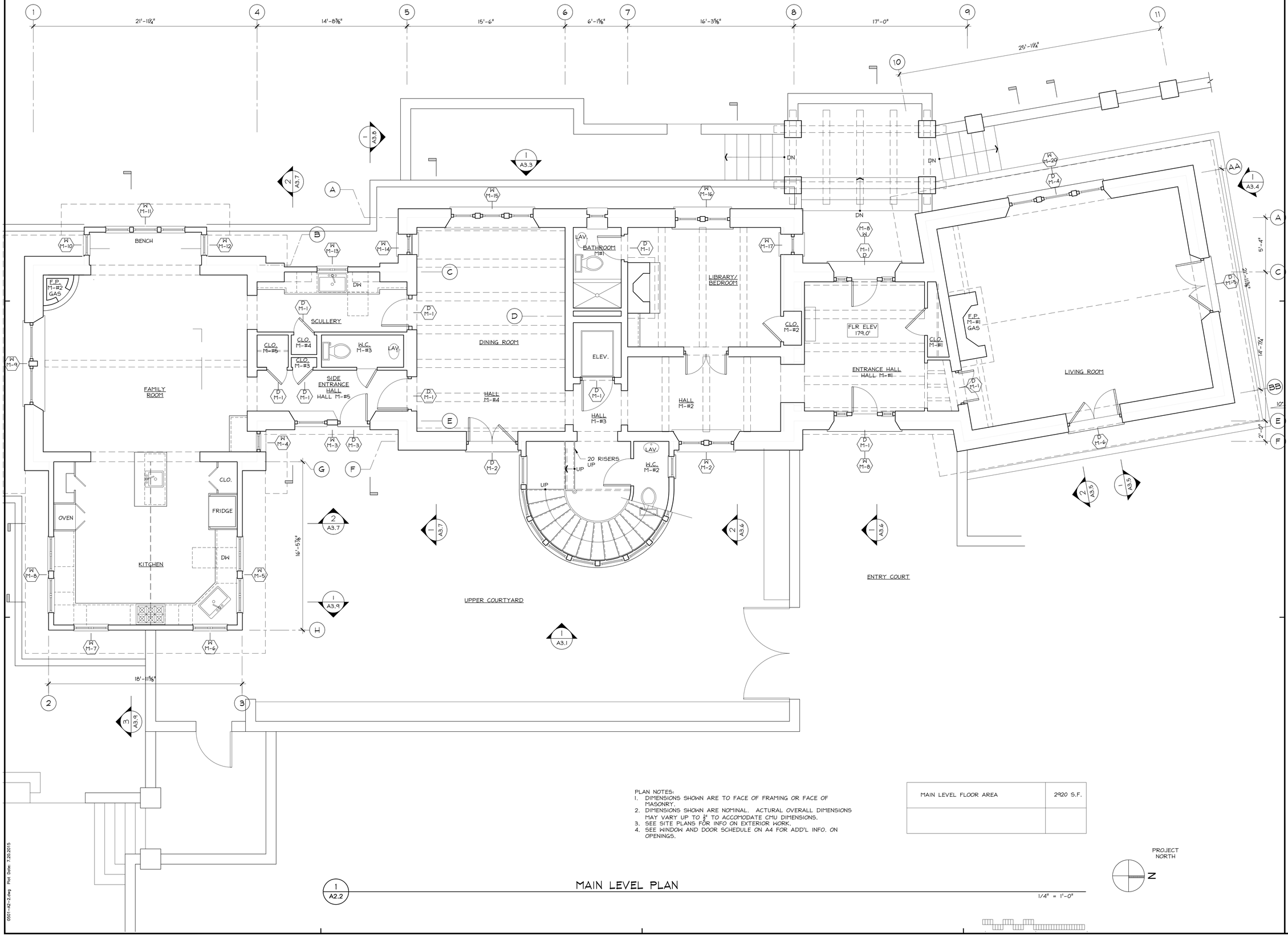
HM,a+e Job Number
2005,01

Sheet Title
LANDSCAPE PLAN

Sheet Number
L1

Oct. 18, 2016 Rev. Planning Set

S.M.C. Planning PLN 2010-00079



PLAN NOTES:
1. DIMENSIONS SHOWN ARE TO FACE OF FRAMING OR FACE OF MASONRY.
2. DIMENSIONS SHOWN ARE NOMINAL. ACTURAL OVERALL DIMENSIONS MAY VARY UP TO ½" TO ACCOMODATE CMU DIMENSIONS.
3. SEE SITE PLANS FOR INFO ON EXTERIOR WORK.
4. SEE WINDOW AND DOOR SCHEDULE ON A4 FOR ADD'L INFO. ON OPENINGS.

MAIN LEVEL FLOOR AREA	2920 S.F.

PROJECT NORTH

1 A2.2 MAIN LEVEL PLAN

1/4" = 1'-0"

0501-A2-2.dwg Plot Date: 7.20.2015

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

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Consultant

Stamp

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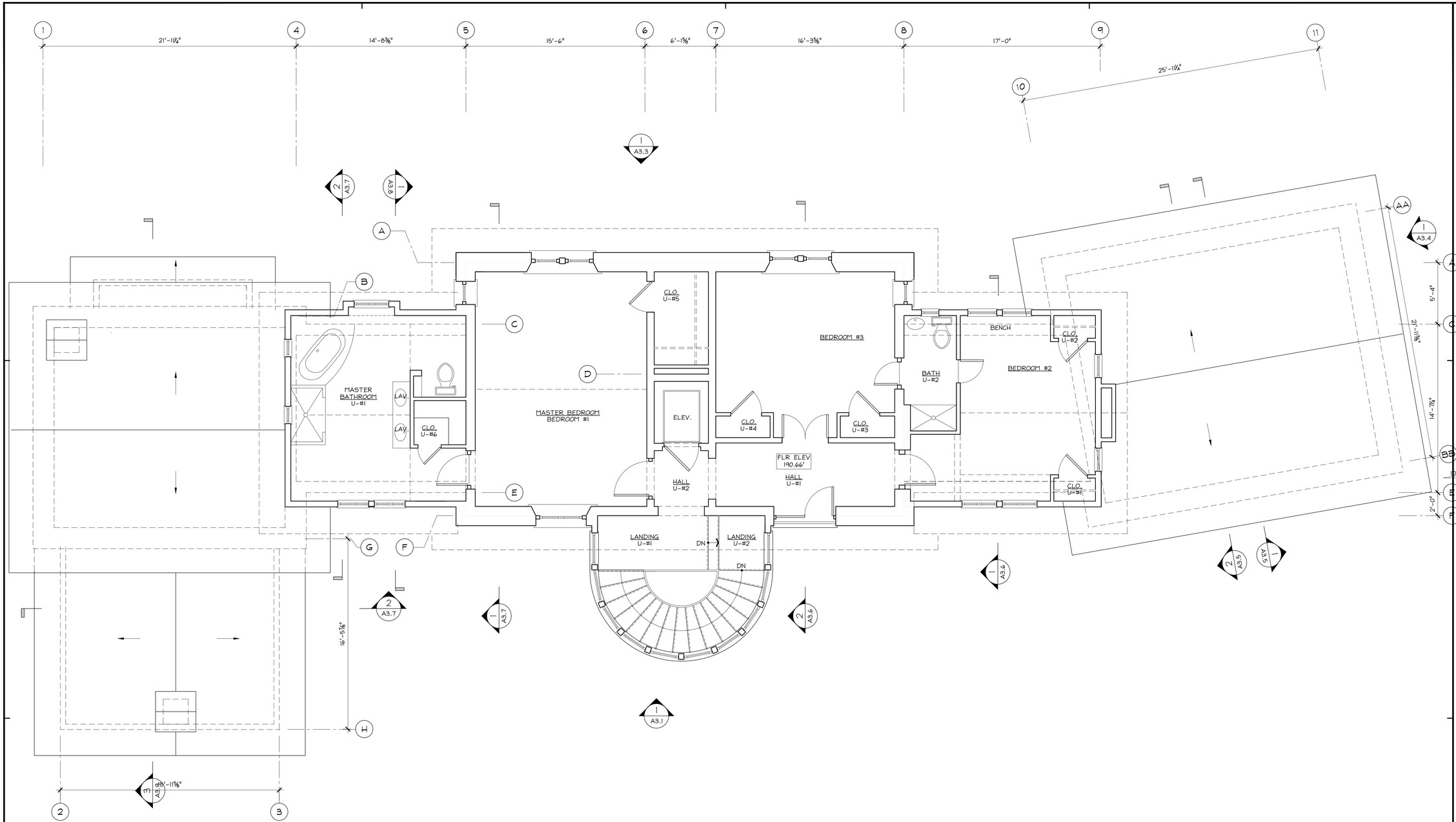
Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
MAIN LEVEL PLAN

Sheet Number
A2.2

Oct. 18, 2016 Rev. Planning Set



PLAN NOTES:
1. DIMENSIONS SHOWN ARE TO FACE OF FRAMING OR FACE OF MASONRY.
2. DIMENSIONS SHOWN ARE NOMINAL. ACTURAL OVERALL DIMENSIONS MAY VARY UP TO ¼" TO ACCOMODATE CMU DIMENSIONS.
3. SEE SITE PLANS FOR INFO ON EXTERIOR WORK.
4. SEE WINDOW AND DOOR SCHEDULE ON A4 FOR ADD'L INFO. ON OPENINGS.

UPPER FLOOR AREA	1580 S.F.

PROJECT NORTH

N

1 A2.3

UPPER LEVEL PLAN

1/4" = 1'-0"

0' 5' 10'

Project

BEWLEY RESIDENCE

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Montara, CA 94037
A.P.N. 036-310-180

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Consultant

Stamp

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Design Review	07.10.2015

HM,a+e Job Number
2005,01

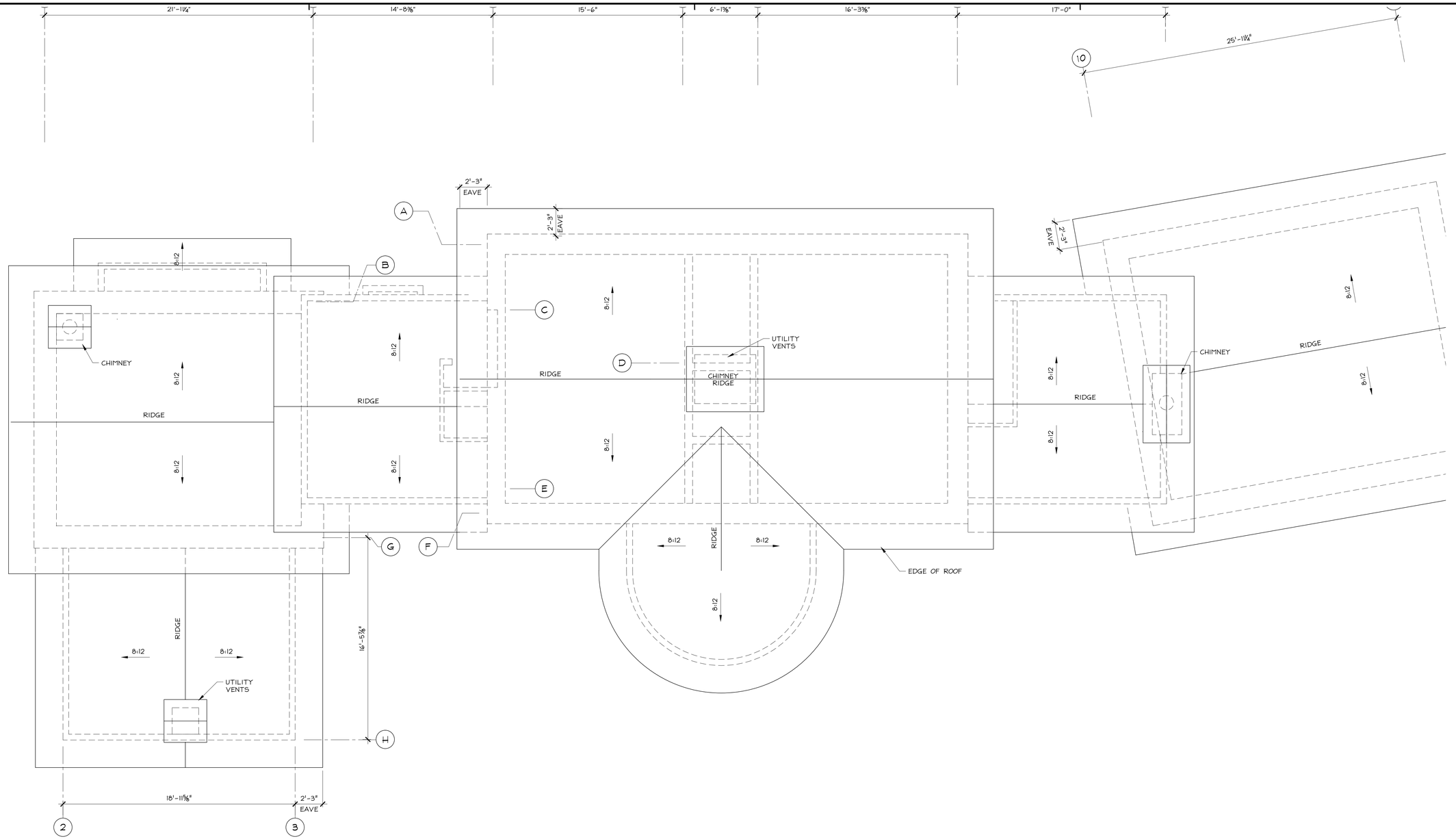
Sheet Title
UPPER LEVEL PLAN

Sheet Number
A2.3

0501-A2-3.dwg Plot Date: 7.20.2015

Oct. 18, 2016 Rev. Planning Set

S.M.C. Planning PLN 2010-00079



ROOF PLAN

1/4" = 1'-0"

PROJECT NORTH

N

0' 5' 10'

Project

BEWLEY RESIDENCE

Audubon Ave.
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Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
ROOF PLAN

Sheet Number
A2.4

0501-A2-4.dwg Plot Date: 7.20.2015

PLAN NOTES:
1. DIMENSIONS SHOWN ARE TO FACE OF FRAMING OR FACE OF MASONRY.
2. DIMENSIONS SHOWN ARE NOMINAL. ACTURAL OVERALL DIMENSIONS MAY VARY UP TO ½" TO ACCOMODATE CMU DIMENSIONS.
3. SEE SITE PLANS FOR INFO ON EXTERIOR WORK.
4. SEE WINDOW AND DOOR SCHEDULE ON A4 FOR ADD'L INFO. ON OPENINGS.

SEE A1.6 FOR RAIN WATER HARVESTING INFO.

BARN & WORK ROOM FLOOR AREA	1146 S.F.

0' 5' 10'

1/A2.5 WORK ROOM AND BARN PLAN

1/4" = 1'-0"

Project

BEWLEY RESIDENCE

Audubon Ave.
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Design Review	07.10.2015

HM,a+e Job Number
2005,01

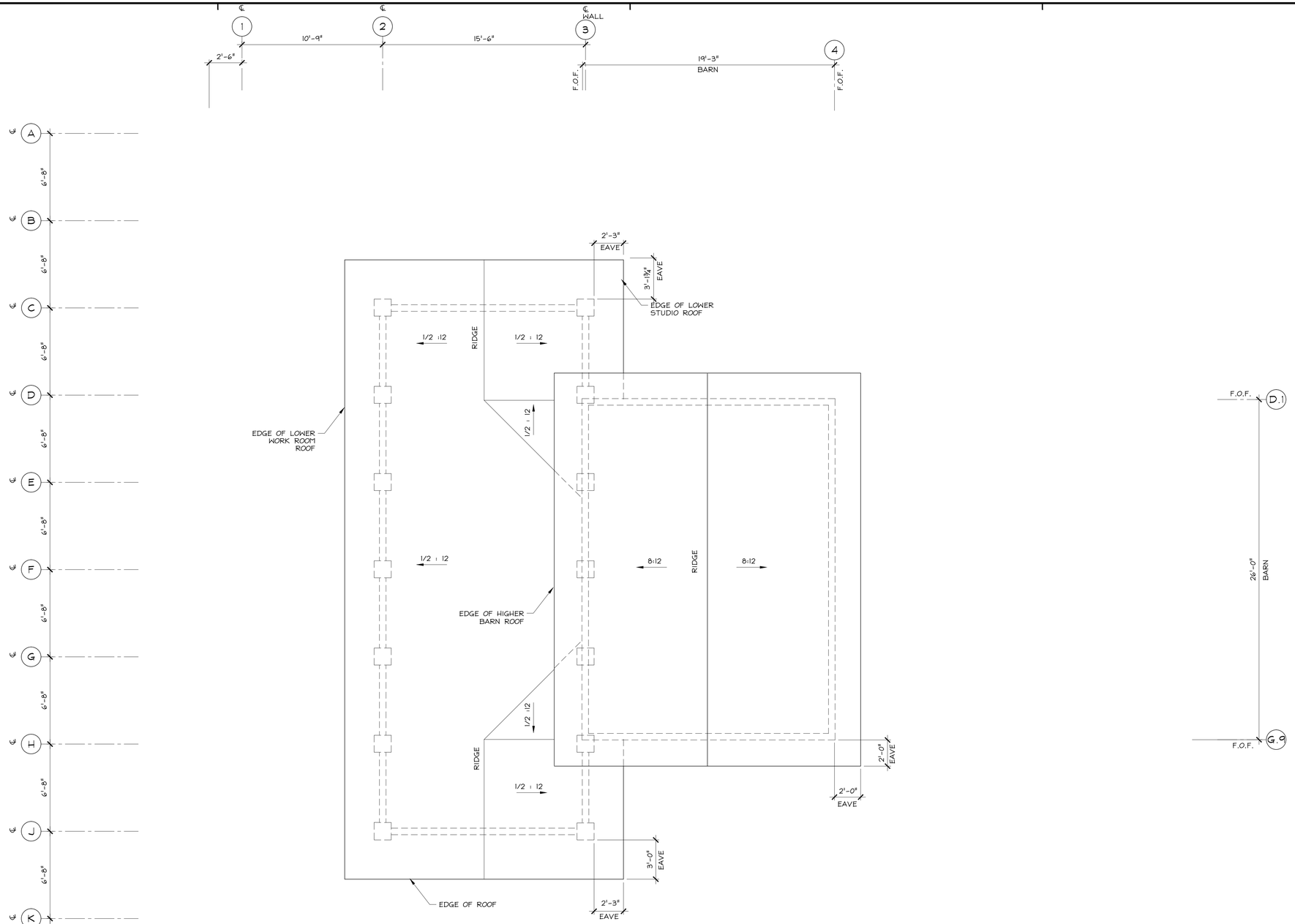
Sheet Title
BARN PLAN

Sheet Number
A2.5

Oct. 18, 2016 Rev. Planning Set

S.M.C. Planning PLN 2010-00079

0501-A2-5.dwg Plot Date: 7.20.2015



1 / A2.6 ROOF PLAN - BARN

1/4" = 1'-0"

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Architecture and Engineering

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510 601 7196 f

Consultant

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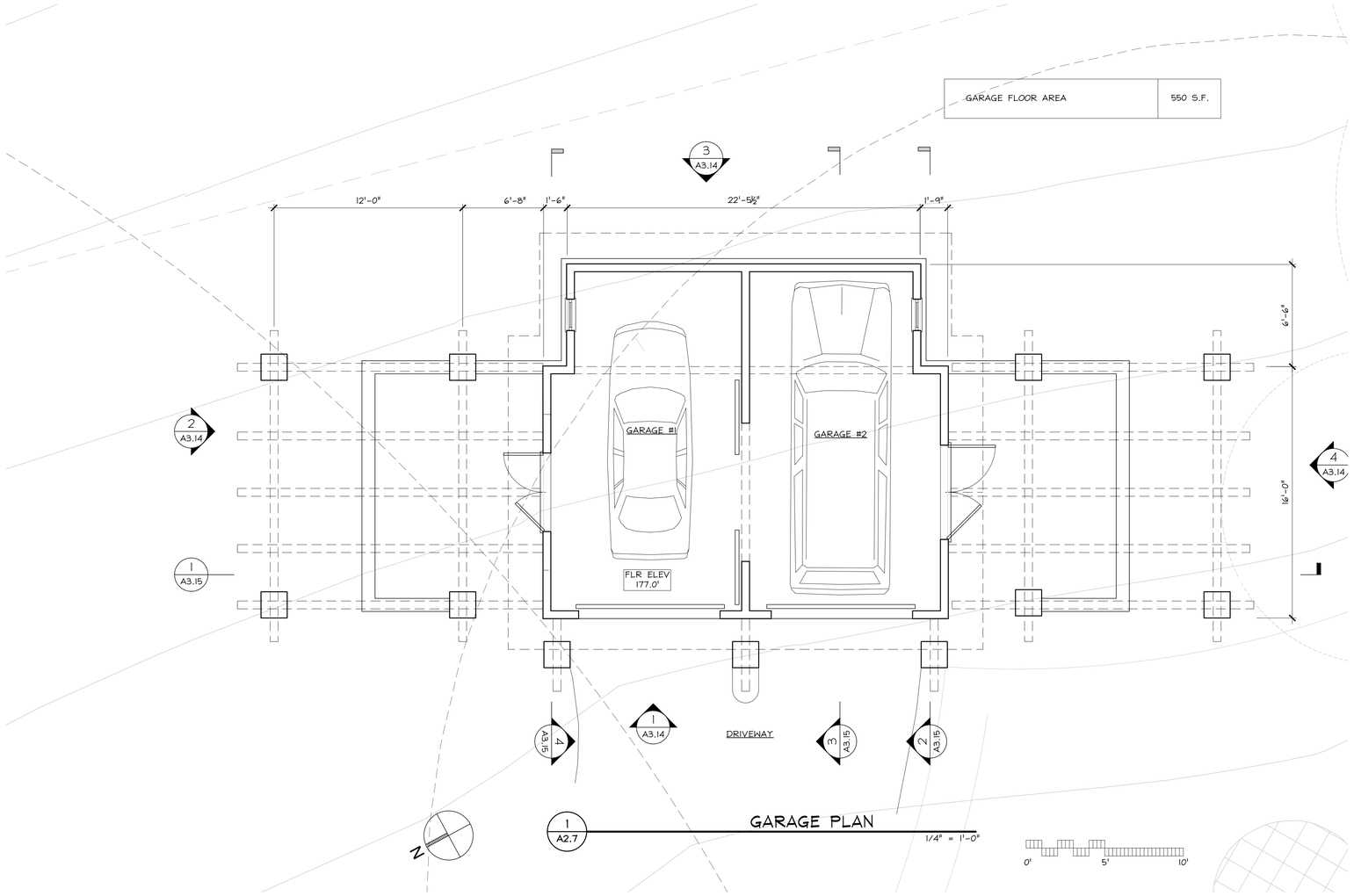
HM,a+e Job Number
2005,01

Sheet Title
ROOF PLAN
BARN

Sheet Number
A2.6

Oct. 18, 2016 Rev. Planning Set

GARAGE FLOOR AREA	550 S.F.



Project

BEWLEY
RESIDENCE

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Montara, CA 94037
A.P.N. 036-310-180

Architect

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Henri Mannik,
Architecture and Engineering

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510 601 7196 f

Consultant

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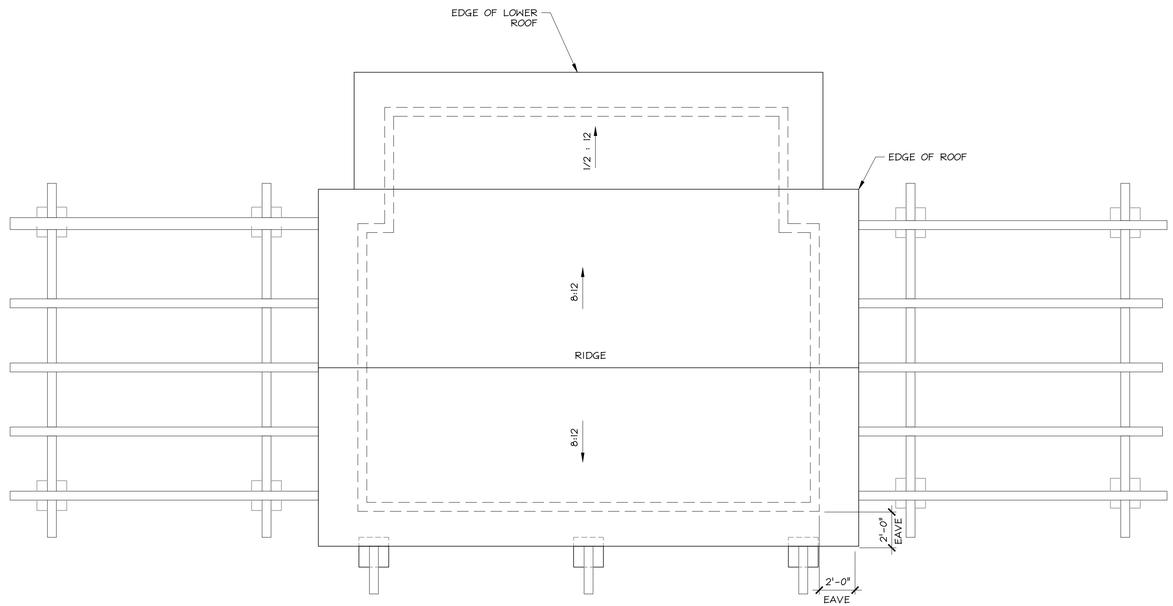
HM,a+e Job Number
2005,01

Sheet Title
GARAGE PLAN

Sheet Number
A2.7

0501-A2-7.dwg Plot Date: 7.20.2015



N

1 / A2.8 GARAGE ROOF PLAN

1/4" = 1'-0"

0' 5' 10'

Project

BEWLEY
RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
GARAGE
ROOF PLAN

Sheet Number
A2.8

0501-A2-8.dwg Plot Date: 7.20.2015

Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall or Concrete wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood or Cement Board
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
08-01	Wood or fiberglass windows
09. FINISHES.	
09-01	Stone veneer
09-02	Dark brown wood stain
09-03	Paint. Ocean blue
09-04	Dark bronze paint
09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels

KEY (C.S.I.#-ITEM#)	DESCRIPTION
26. LIGHTING	
26-01	Wall Sconce. Hooded down light
26-02	Wall Fixture. Opaque reflector. down light
26-03	Wall Sconce. Solid metal. Down light Low wattage
26-04	Solid metal. Down light Low wattage. Path light
26-05	Down light Low wattage. Fixture hidden in trellis framing
32. EXTERIOR IMPROVEMENTS	
32-01	Exterior paving. See A1.5
32-02	Landscaping boulder

GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.1 EAST ELEVATION
ENTRY

1/4" = 1'-0"

0501-A3-1.dwg Plot Date: 7.20.2015

S.M.C. Planning PLN 2010-00079

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Henri Mannik,
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Consultant

Stamp

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HM,a+e Job Number
2005,01

Sheet Title
EAST ELEVATION

Sheet Number
A3.1

Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall or Concrete wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood or Cement Board
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
08-01	Wood or fiberglass windows
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09-01	Stone veneer
09-02	Dark brown wood stain
09-03	Paint. Ocean blue
09-04	Dark bronze paint
09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels

KEY (C.S.I.#-ITEM#)	DESCRIPTION
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26-01	Wall Sconce. Hooded down light
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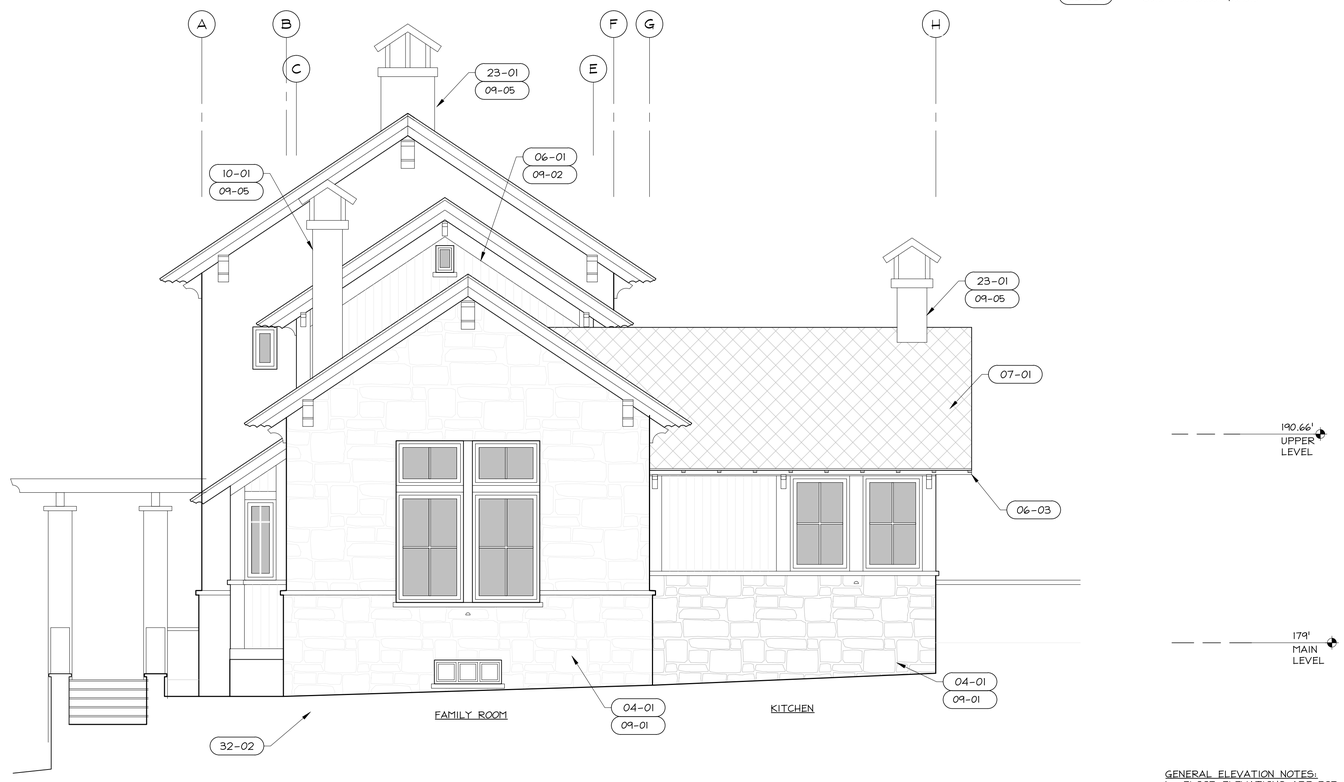
32-01	Exterior paving. See A1.5
32-02	Landscaping boulder



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.2

SOUTH ELEVATION
FAMILY ROOM AND KITCHEN

1/4" = 1'-0"

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Consultant

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Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
SOUTH ELEVATION

Sheet Number
A3.2

Oct. 18, 2016 Rev. Planning Set

0501-A3-2.dwg Plot Date: 7.20.2015

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall or Concrete wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood or Cement Board
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
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09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels

KEY (C.S.I.#-ITEM#)	DESCRIPTION
26. LIGHTING	
26-01	Wall Sconce. Hooded down light
26-02	Wall Fixture. Opaque reflector. down light
26-03	Wall Sconce. Solid metal. Down light Low wattage
26-04	Solid metal. Down light Low wattage. Path light
26-05	Down light Low wattage. Fixture hidden in trellis framing
32. EXTERIOR IMPROVEMENTS	
32-01	Exterior paving. See A1.5
32-02	Landscaping boulder

NOTES:
1. ELEVATION DOES NOT SHOW BUILDING SKEWED.

GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.3 WEST ELEVATION
SIDE OF BUILDING

1/4" = 1'-0"

0501-A3-3.dwg Plot Date: 7.20.2015

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

HM,a+e

Henri Mannik,
Architecture and Engineering

5429 Telegraph Ave.
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510 652 1511 p
510 601 7196 f

Consultant

Stamp

Printing Date

Planning Permit	03.18.2010
Coordination	09.12.2011
Planning	09.13.2011
Coordination	10.05.2011
Coordination	10.11.2011
Coordination	07.19.2013
Coordination	08.08.2013
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Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
WEST ELEVATION

Sheet Number
A3.3

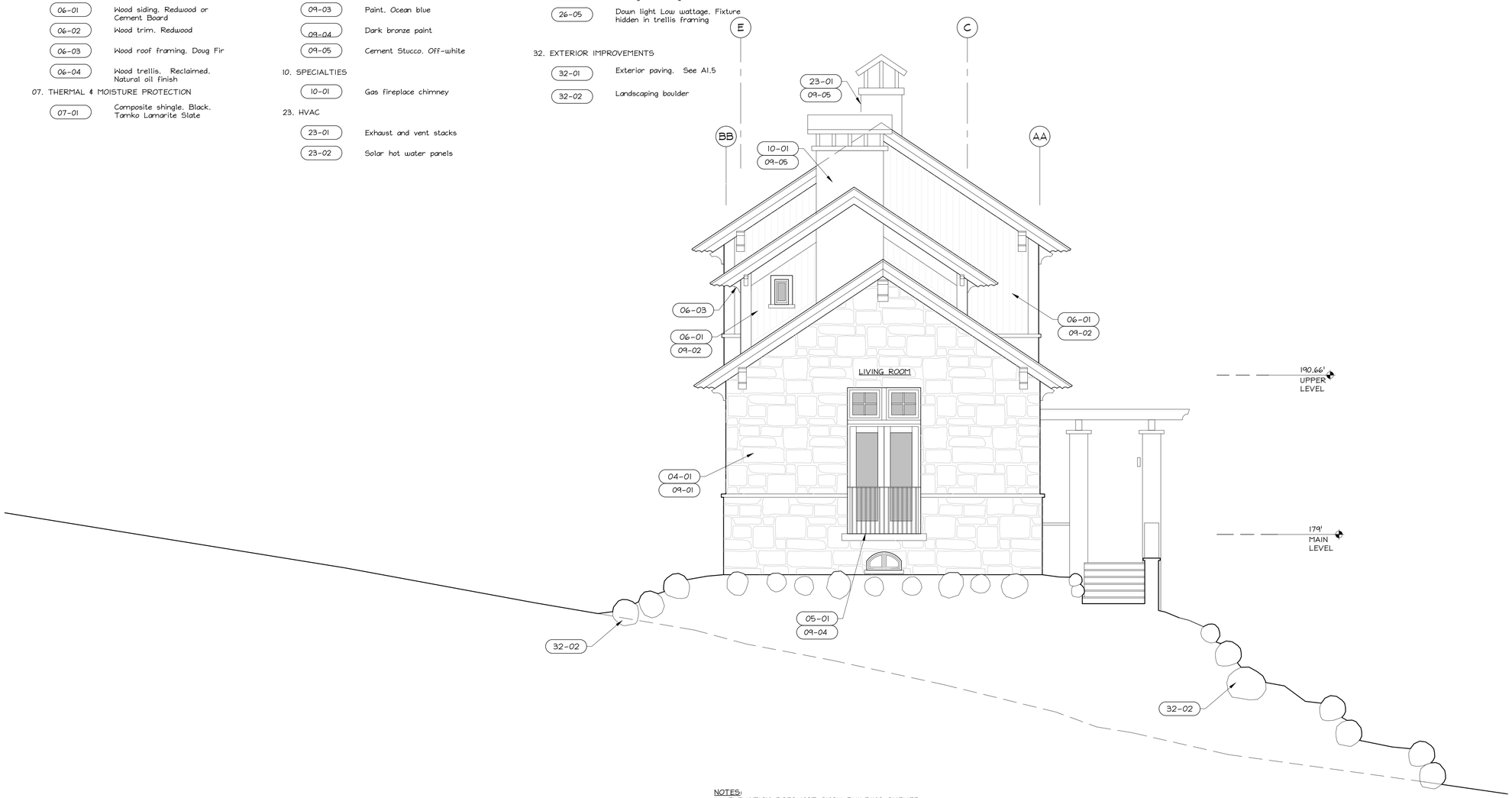
Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall or Concrete wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood or Cement Board
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
08-01	Wood or Fiberglass windows
09. FINISHES.	
09-01	Stone veneer
09-02	Dark brown wood stain
09-03	Paint. Ocean blue
09-04	Dark bronze paint
09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels

KEY (C.S.I.#-ITEM#)	DESCRIPTION
26. LIGHTING	
26-01	Wall Sconce. Hooded down light
26-02	Wall Fixture. Opaque reflector. down light
26-03	Wall Sconce. Solid metal. Down light Low wattage
26-04	Solid metal. Down light Low wattage. Path light
26-05	Down light Low wattage. Fixture hidden in trellis framing
32. EXTERIOR IMPROVEMENTS	
32-01	Exterior paving. See A1.5
32-02	Landscaping boulder



NOTES:
1. ELEVATION DOES NOT SHOW BUILDING SKEWED.

GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.4 NORTH ELEVATION
LIVING ROOM

1/4" = 1'-0"

0501-A3-4.dwg Plot Date: 7.20.2015

Project

BEWLEY RESIDENCE

Audubon Ave.
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Consultant

Stamp

Printing Date

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Coordination	10.21.2013
Coordination	11.05.2013
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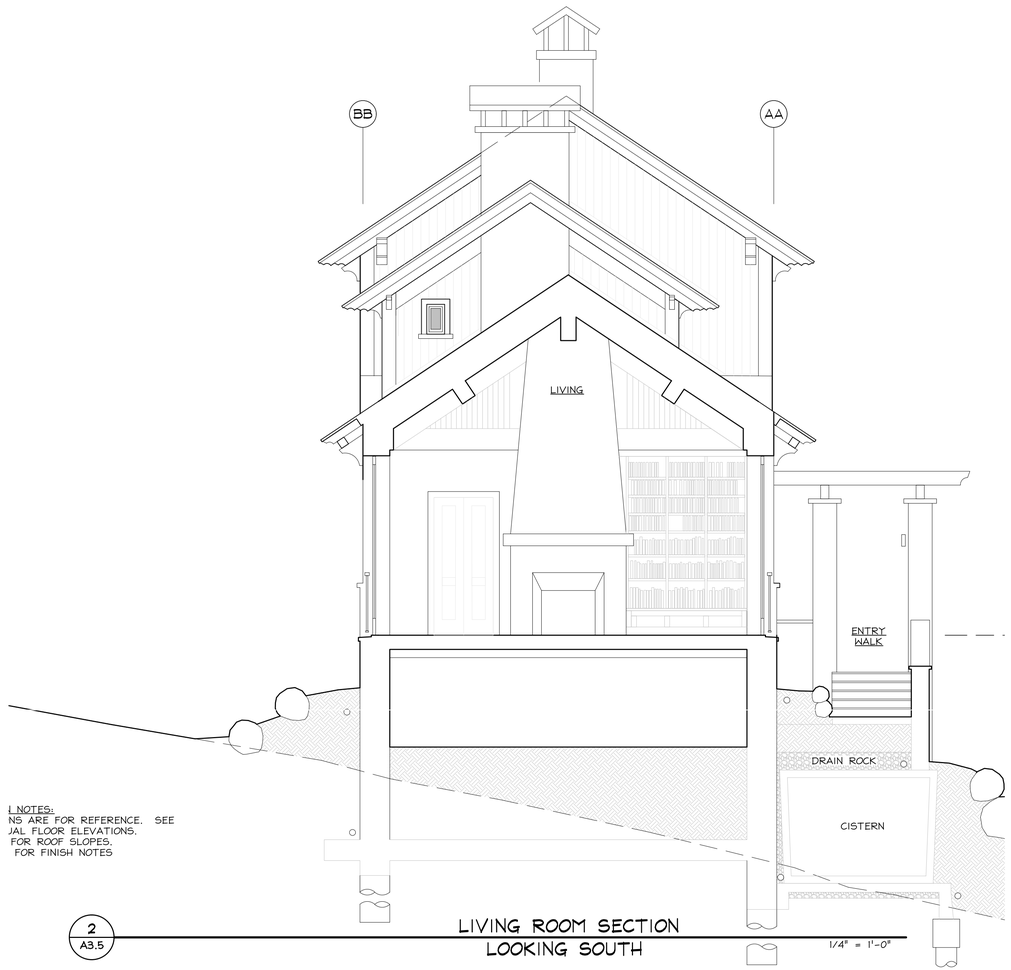
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015

HM,a+e Job Number
2005,01

Sheet Title
NORTH ELEVATION

Sheet Number
A3.4

Oct. 18, 2016 Rev. Planning Set

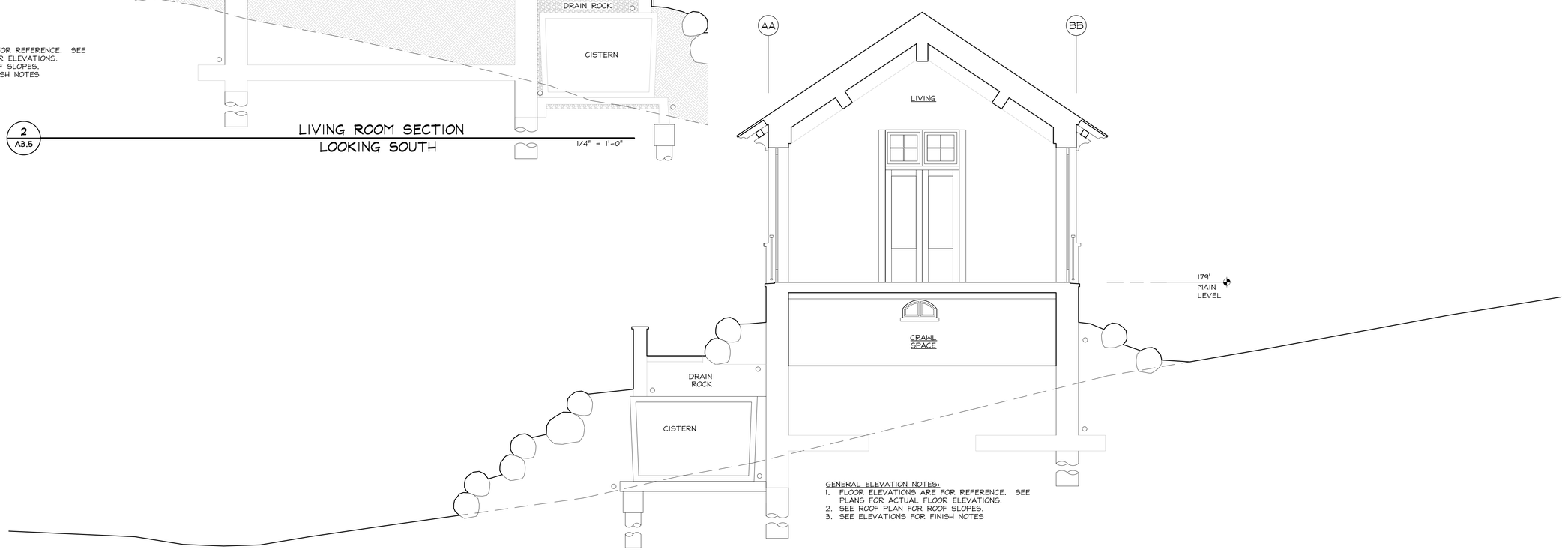


I NOTES:
NS ARE FOR REFERENCE. SEE
JAL FLOOR ELEVATIONS.
FOR ROOF SLOPES.
FOR FINISH NOTES

2
A3.5

LIVING ROOM SECTION
LOOKING SOUTH

1/4" = 1'-0"



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1
A3.5

LIVING ROOM SECTION
LOOKING NORTH

1/4" = 1'-0"

0501-A3-5.dwg Plot Date: 5.20.2016

Project

BEWLEY
RESIDENCE

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Consultant

Stamp

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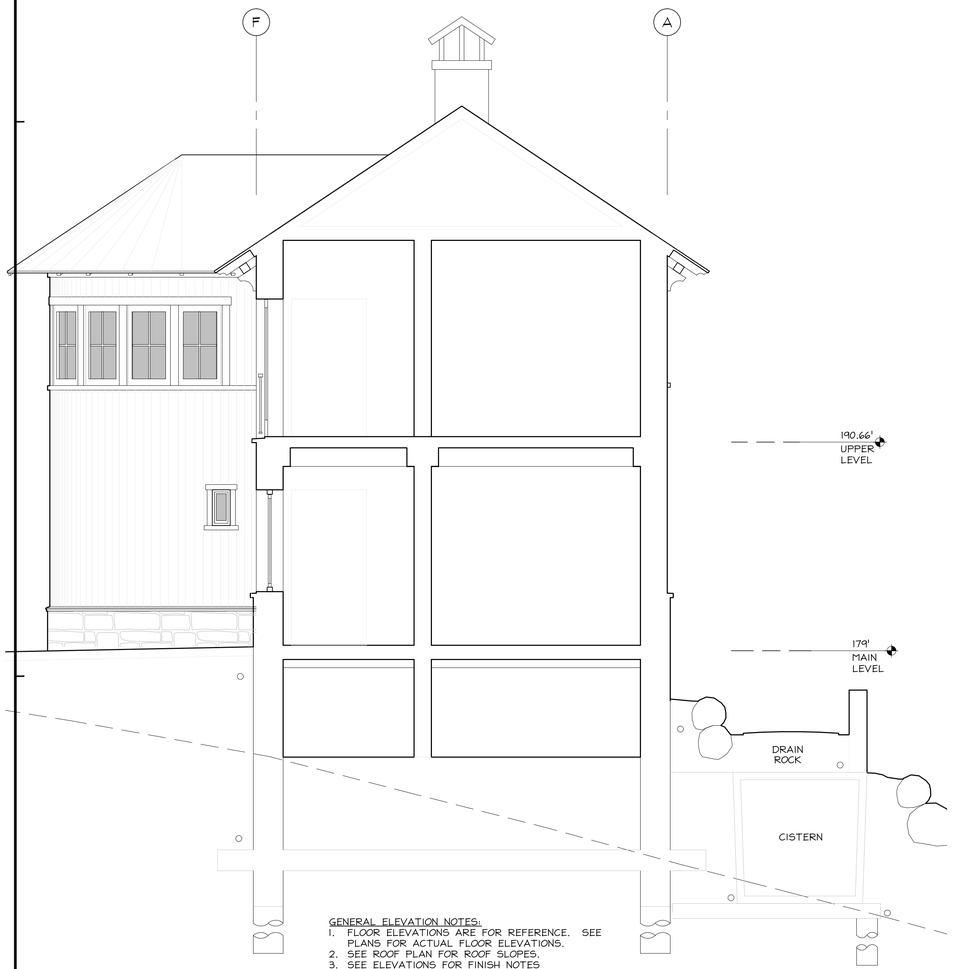
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title
LIVING ROOM
SECTION

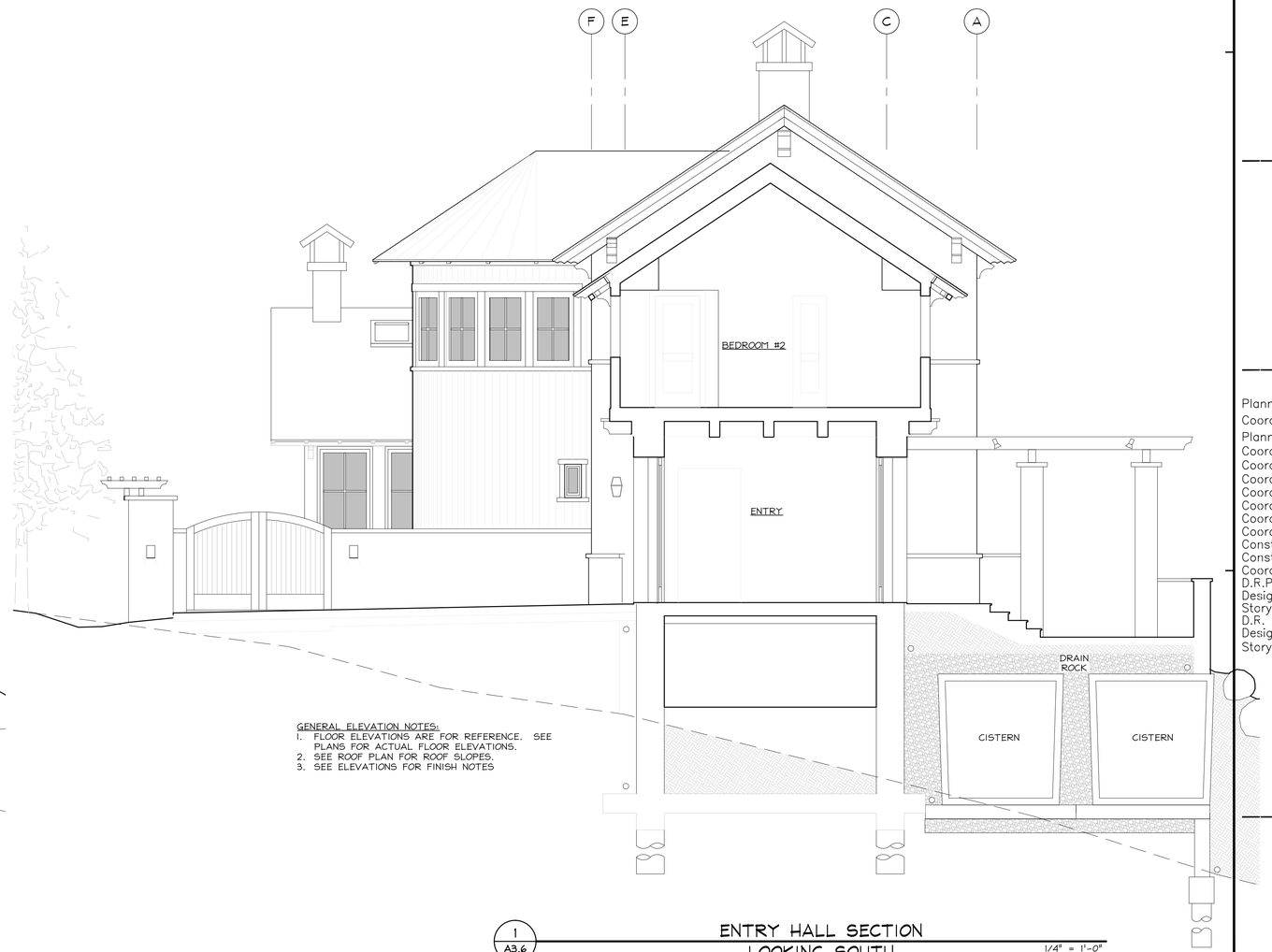
Sheet Number
A3.5

Oct. 18, 2016 Rev. Planning Set



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

2 / A3.6 BEDROOM SECTION
LOOKING SOUTH 1/4" = 1'-0"



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.6 ENTRY HALL SECTION
LOOKING SOUTH 1/4" = 1'-0"

Project

BEWLEY
RESIDENCE

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Architect

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Consultant

Stamp

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Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

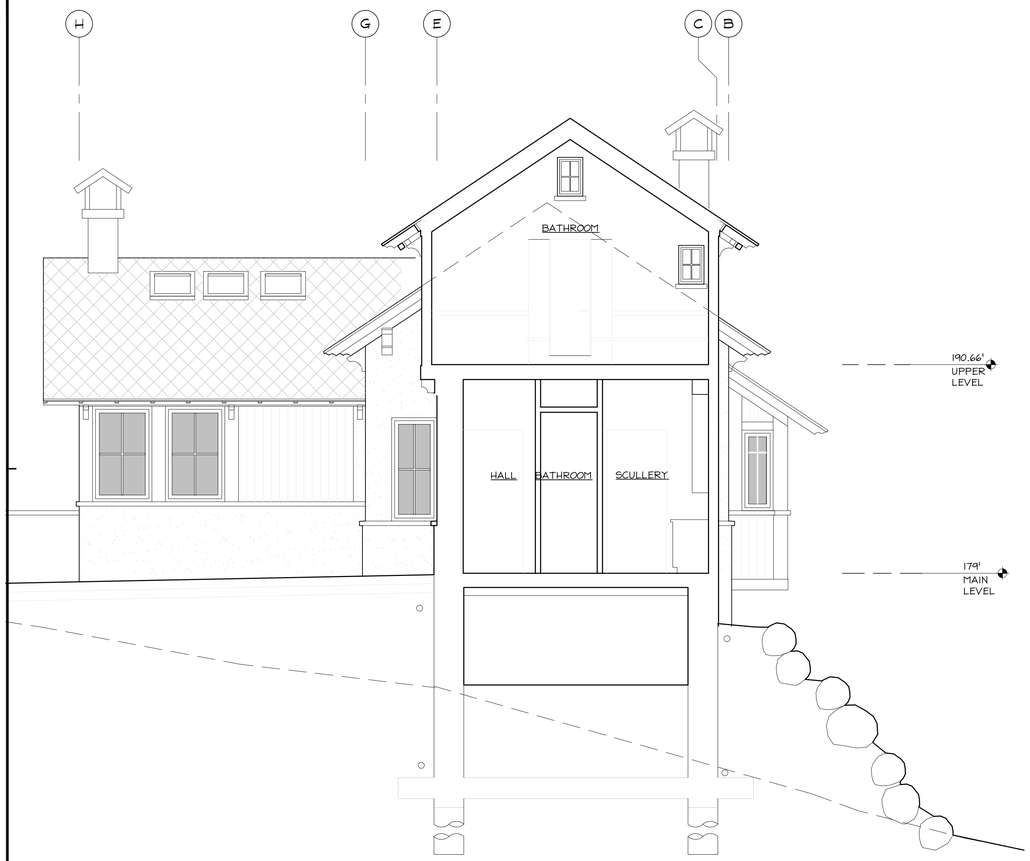
HM,a+e Job Number
2005,01

Sheet Title
STAIR
SECTIONS

Sheet Number
A3.6

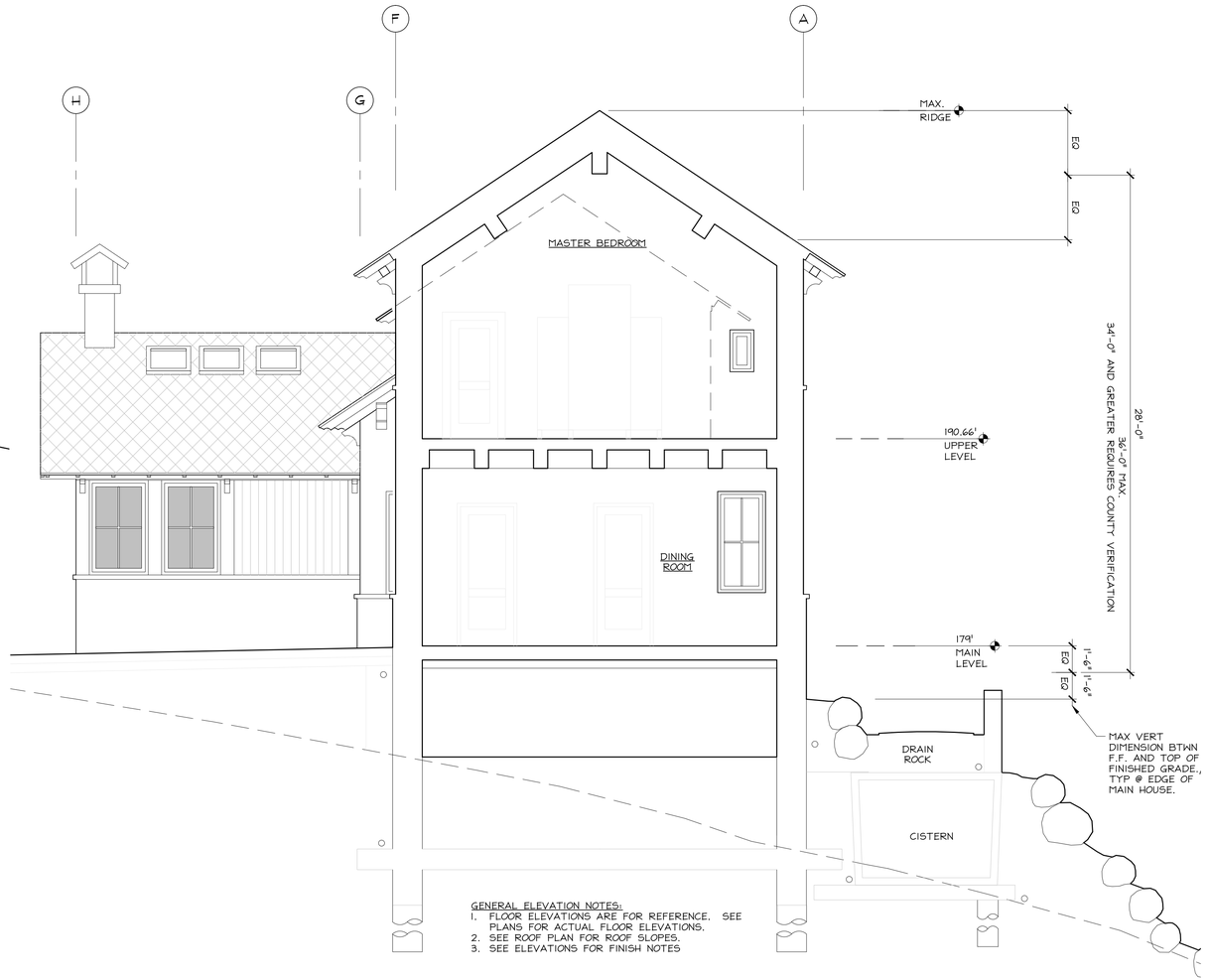
0501-A3-6.dwg Plot Date: 5.20.2016

Oct. 18, 2016 Rev. Planning Set



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

2 / A3.7 MASTER BEDROOM SECTION
LOOKING SOUTH
1/4" = 1'-0"



GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.7 DINING ROOM SECTION
LOOKING SOUTH
1/4" = 1'-0"

0501-A3-7.dwg Plot Date: 5.20.2016

Project

BEWLEY
RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Consultant

Stamp

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Planning Permit	03.18.2010
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D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title
DINING ROOM &
MASTER BEDROOM
SECTIONS

Sheet Number
A3.7

Oct. 18, 2016 Rev. Planning Set

GENERAL ELEVATION NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE ELEVATIONS FOR FINISH NOTES

1 / A3.8

MASTER BATHROOM SECTION
LOOKING NORTH

1/4" = 1'-0"

Project

BEWLEY
RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Architecture and Engineering

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Consultant

Stamp

Printing Date

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Coordination	08.08.2013
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Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
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D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

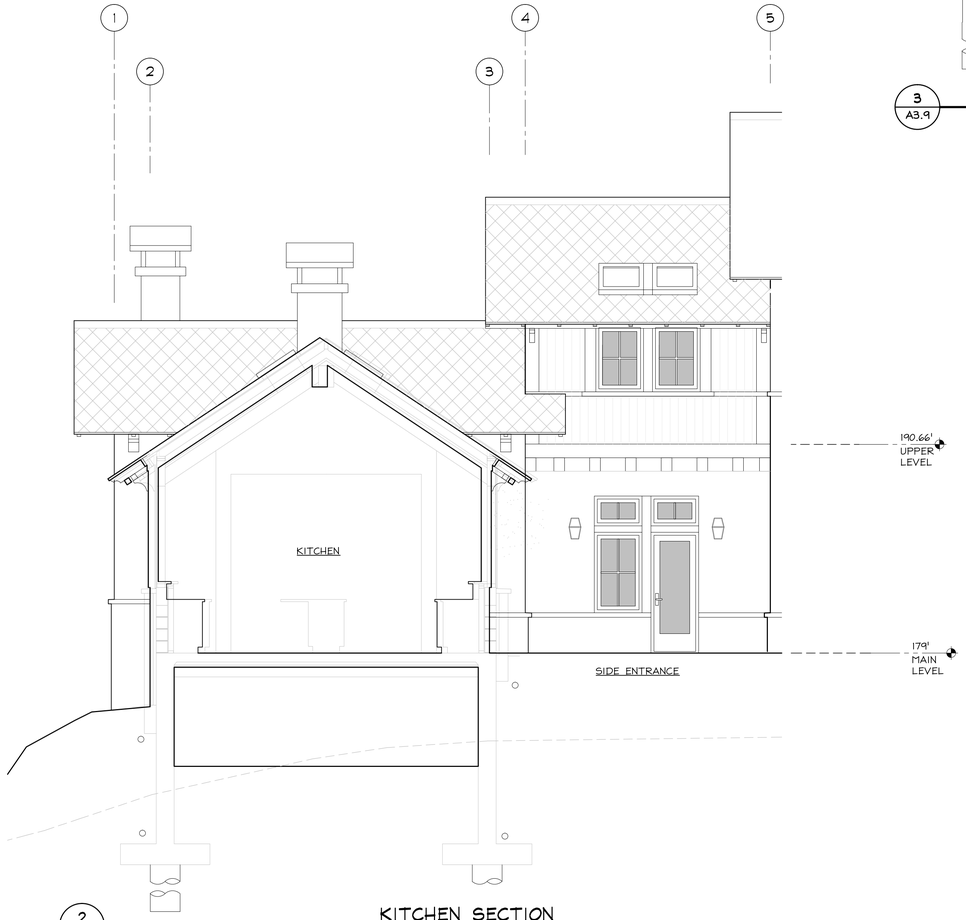
Sheet Title
MASTER
BEDROOM
SECTION

Sheet Number
A3.8

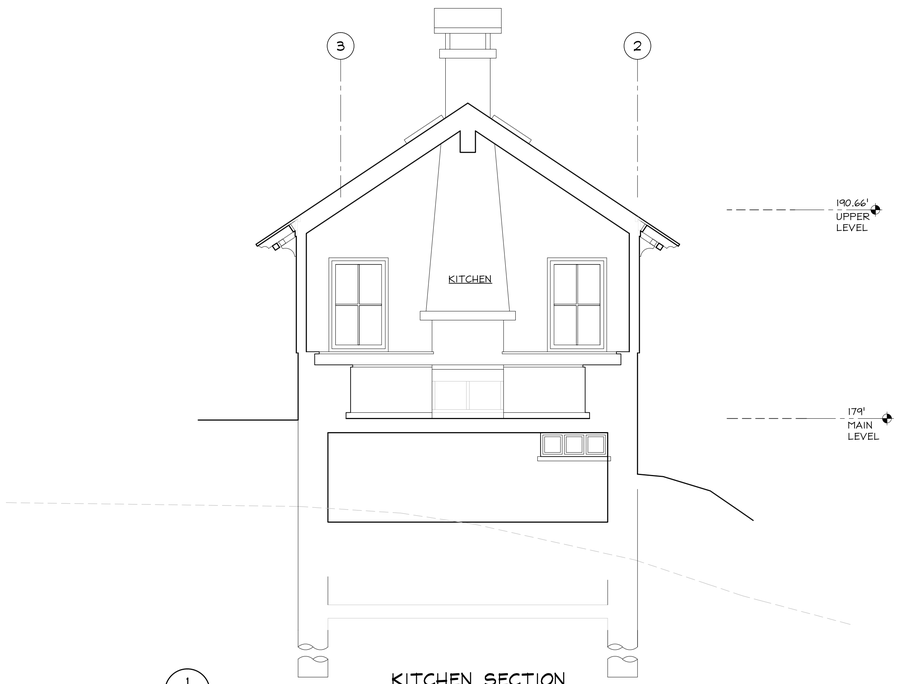
0501-A3-8.dwg Plot Date: 5.20.2016

Oct. 18, 2016 Rev. Planning Set

3 / A3.9 KITCHEN AND FAMILY ROOM SECTION
LOOKING SOUTH
1/4" = 1'-0"



2 / A3.9 KITCHEN SECTION
LOOKING WEST
1/4" = 1'-0"



1 / A3.9 KITCHEN SECTION
LOOKING EAST
1/4" = 1'-0"

Project

BEWLEY
RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Architecture and Engineering

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Oakland, CA 94609
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510 601 7196 f

Consultant

Stamp

Printing Date

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Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title
SECTION

Sheet Number
A3.9

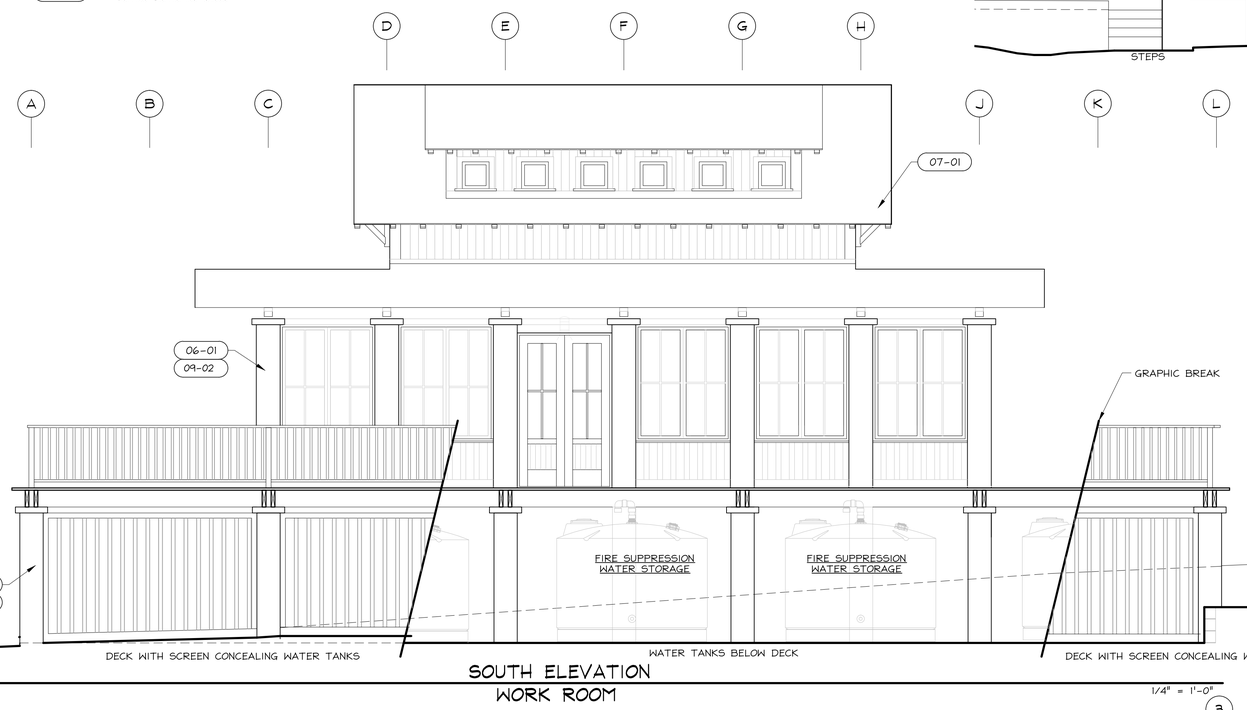
0501-A3-9.dwg Plot Date: 5.20.2016

Oct. 18, 2016 Rev. Planning Set

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
08-01	Wood or fiberglass windows
09. FINISHES.	
09-01	Plaster over concrete masonry. Lime. Off-white
09-02	Dark brown wood stain
09-03	Paint. Ocean blue
09-04	Dark bronze paint
09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney

KEY (C.S.I.#-ITEM#)	DESCRIPTION
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels
26. LIGHTING	
26-01	Wall Sconce. Hooded down light
26-02	Wall Fixture. Opaque reflector. down light
32. EXTERIOR IMPROVEMENTS	
32-01	Exterior paving. See A1.5



2 A3.11 SOUTH ELEVATION WORK ROOM 1/4" = 1'-0"

3 A3.11 WEST ELEVATION WORK ROOM & BARN 1/4" = 1'-0"

1 A3.11 BARN ELEVATION 1/4" = 1'-0"

NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Architecture and Engineering

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510 652 1511 p
510 601 7196 f

Consultant

Stamp

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Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title

BARN ELEVATIONS

Sheet Number

A3.11

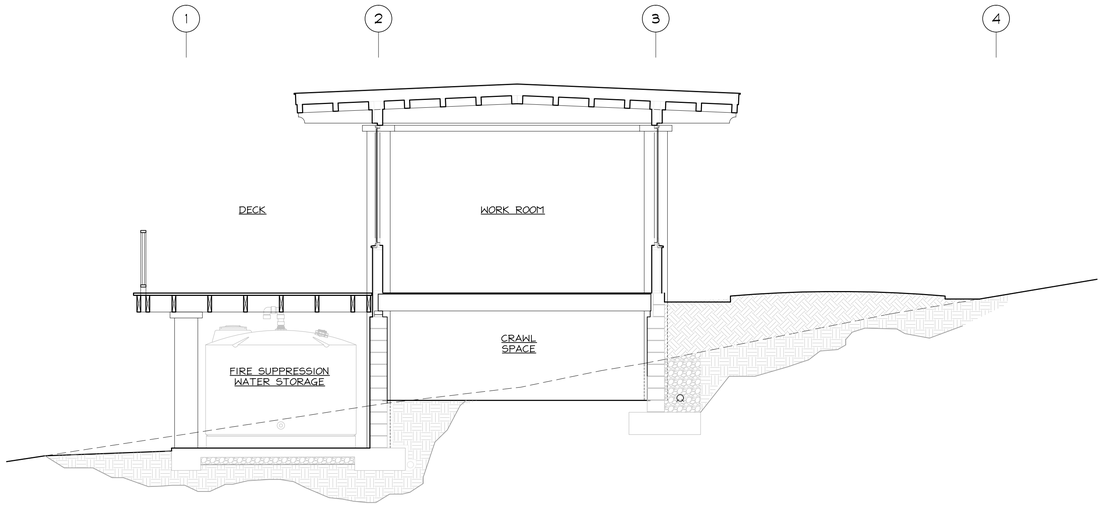
0501-A3-11.dwg Plot Date: 5.20.2016

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
04-01	CMU wall
05. METALS	
05-01	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
06-01	Wood siding. Redwood
06-02	Wood trim. Redwood
06-03	Wood roof framing. Doug Fir
06-04	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
07-01	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
08-01	Wood or fiberglass windows
09. FINISHES.	
09-01	Plaster over concrete masonry. Lime. Off-white
09-02	Dark brown wood stain
09-03	Paint. Ocean blue
09-04	Dark bronze paint
09-05	Cement Stucco. Off-white
10. SPECIALTIES	
10-01	Gas fireplace chimney

KEY (C.S.I.#-ITEM#)	DESCRIPTION
23. HVAC	
23-01	Exhaust and vent stacks
23-02	Solar hot water panels
26. LIGHTING	
26-01	Wall Sconce. Hooded down light
26-02	Wall Fixture. Opaque reflector. down light
32. EXTERIOR IMPROVEMENTS	
32-01	Exterior paving. See A1.5



3 / A3.12 — WORK ROOM SECTION

1/4" = 1'-0"

1 / A3.12 — NORTH ELEVATION

1/4" = 1'-0"

Project

BEWLEY RESIDENCE

Audubon Ave.
Montara, CA 94037
A.P.N. 036-310-180

Architect

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Architecture and Engineering

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510 652 1511 p
510 601 7196 f

Consultant

Stamp

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Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title
STUDIO ELEVATIONS

Sheet Number
A3.12

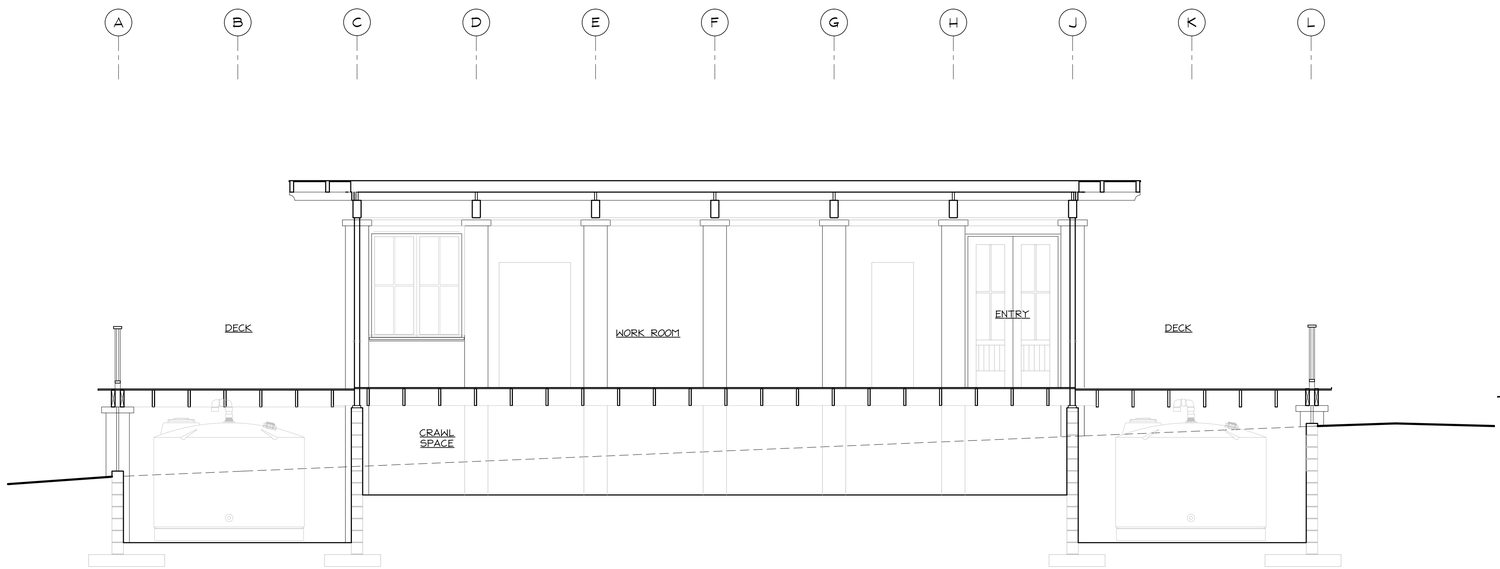
Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
	CMU wall
05. METALS	
	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
	Wood siding. Redwood
	Wood trim. Redwood
	Wood roof framing. Doug Fir
	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
	Wood or fiberglass windows
09. FINISHES.	
	Plaster over concrete masonry. Lime. Off-white
	Dark brown wood stain
	Paint. Ocean blue
	Dark bronze paint
	Cement Stucco. Off-white
10. SPECIALTIES	
	Gas fireplace chimney

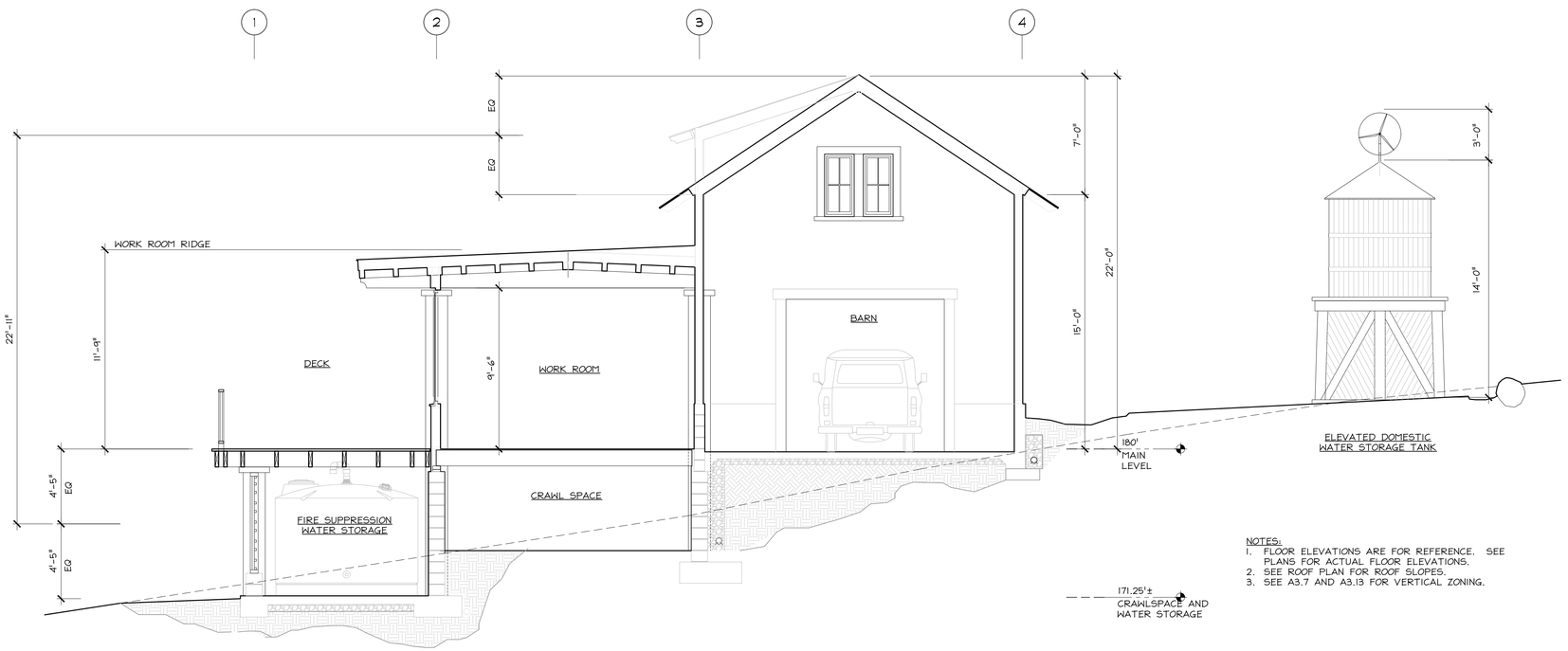
KEY (C.S.I.#-ITEM#)	DESCRIPTION
23. HVAC	
	Exhaust and vent stacks
	Solar hot water panels
26. LIGHTING	
	Wall Sconce. Hooded down light
	Wall Fixture. Opaque reflector. down light
32. EXTERIOR IMPROVEMENTS	
	Exterior paving. See A1.5



2 / A3.13

TRANSVERSE SECTION

1/4" = 1'-0"



NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

1 / A3.13

WORK ROOM AND BARN SECTION

1/4" = 1'-0"

0501-A3-13.dwg Plot Date: 5.20.2016

Project

BEWLEY RESIDENCE

Audubon Ave.
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A.P.N. 036-310-180

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Consultant

Stamp

Printing Date

Planning Permit	03.18.2010
Coordination	09.12.2011
Planning	09.13.2011
Coordination	10.05.2011
Coordination	10.11.2011
Coordination	07.19.2013
Coordination	08.08.2013
Coordination	10.07.2013
Coordination	10.21.2013
Coordination	11.05.2013
Constraints Map	11.07.2013
Constraints Map	11.25.2013
Coordination	03.19.2014
D.R.Pre-app conf.	03.26.2014
Design Review	08.12.2014
Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number

2005,01

Sheet Title

BARN ELEVATIONS

Sheet Number

A3.13

Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

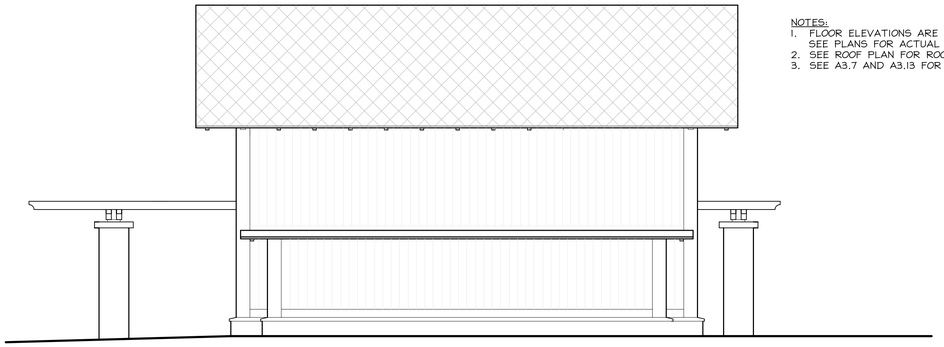
KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
	CMU wall
05. METALS	
	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
	Wood siding. Redwood
	Wood trim. Redwood
	Wood roof framing. Doug Fir
	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
	Wood or fiberglass windows
09. FINISHES.	
	Plaster over concrete masonry. Lime. Off-white
	Dark brown wood stain
	Paint. Ocean blue
	Dark bronze paint
	Cement Stucco. Off-white
10. SPECIALTIES	
	Gas fireplace chimney

KEY (C.S.I.#-ITEM#)	DESCRIPTION
23. HVAC	
	Exhaust and vent stacks
	Solar hot water panels
26. LIGHTING	
	Wall Sconce. Hooded down light
	Wall Fixture. Opaque reflector. down light
32. EXTERIOR IMPROVEMENTS	
	Exterior paving. See A1.5

NOTES:
1. FLOOR ELEVATIONS ARE FOR REFERENCE. SEE PLANS FOR ACTUAL FLOOR ELEVATIONS.
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

4 / A3.14 — SOUTH ELEVATION GARAGE — 1/4" = 1'-0"



NOTES:
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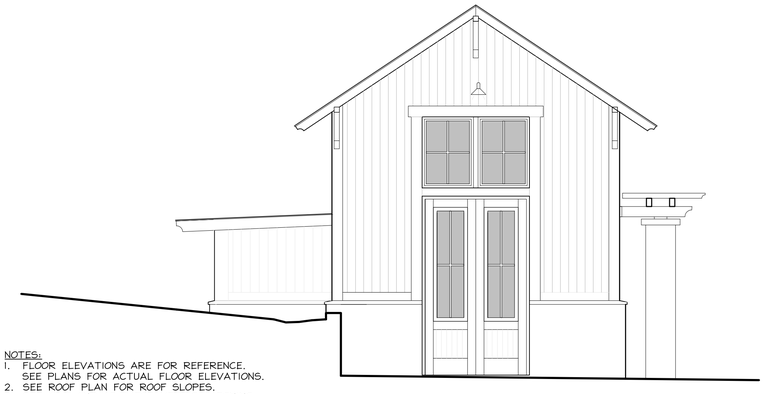
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

3 / A3.14 — EAST ELEVATION GARAGE — 1/4" = 1'-0"



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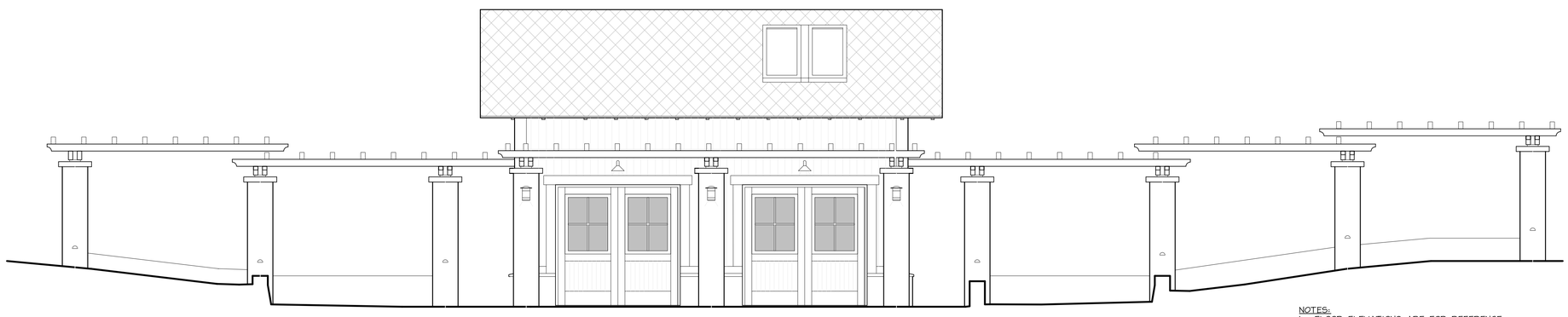
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

2 / A3.14 — NORTH ELEVATION GARAGE — 1/4" = 1'-0"



NOTES:
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3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

1 / A3.14 — WEST ELEVATION GARAGE — 1/4" = 1'-0"

0501-A3-14.dwg Plot Date: 5.20.2016

Project

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Story Pole	11.14.2014
D.R. coord	06.08.2015
Design Review	07.10.2015
Story Pole	10.23.2015

HM,a+e Job Number
2005,01

Sheet Title
GARAGE ELEVATIONS

Sheet Number
A3.14

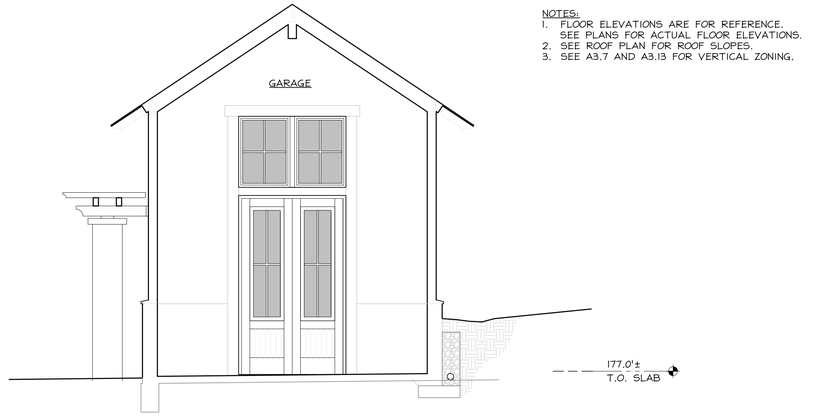
Oct. 18, 2016 Rev. Planning Set

ELEVATION NOTES

KEY (C.S.I.#-ITEM#)	DESCRIPTION
04. MASONRY	
	CMU wall
05. METALS	
	Steel guardrail
06. WOOD, PLASTICS, COMPOSITES	
	Wood siding. Redwood
	Wood trim. Redwood
	Wood roof framing. Doug Fir
	Wood trellis. Reclaimed. Natural oil finish
07. THERMAL & MOISTURE PROTECTION	
	Composite shingle. Black. Tamko Lamarite Slate

KEY (C.S.I.#-ITEM#)	DESCRIPTION
08. OPENINGS	
	Wood or fiberglass windows
09. FINISHES.	
	Plaster over concrete masonry. Lime. Off-white
	Dark brown wood stain
	Paint. Ocean blue
	Dark bronze paint
	Cement Stucco. Off-white
10. SPECIALTIES	
	Gas fireplace chimney

KEY (C.S.I.#-ITEM#)	DESCRIPTION
23. HVAC	
	Exhaust and vent stacks
	Solar hot water panels
26. LIGHTING	
	Wall Sconce. Hooded down light
	Wall Fixture. Opaque reflector. down light
32. EXTERIOR IMPROVEMENTS	
	Exterior paving. See A1.5



NOTES:
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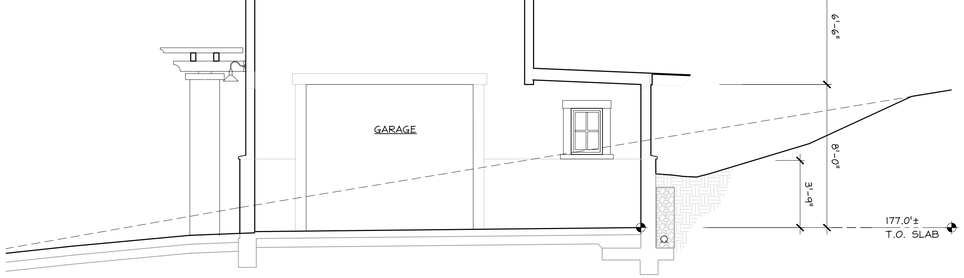
4 / A3.15 — SECTION GARAGE — 1/4" = 1'-0"



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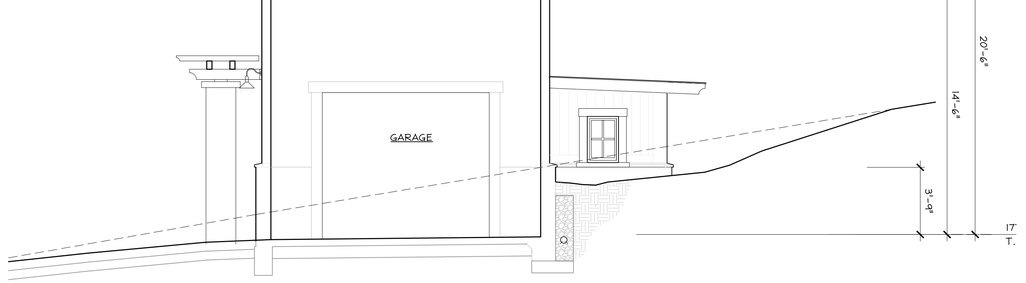
2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

3 / A3.15 — SECTION GARAGE — 1/4" = 1'-0"



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2. SEE ROOF PLAN FOR ROOF SLOPES.
3. SEE A3.7 AND A3.13 FOR VERTICAL ZONING.

2 / A3.15 — SECTION GARAGE — 1/4" = 1'-0"

1 / A3.14 — NOT USED — 1/4" = 1'-0"

Project

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HM,a+e Job Number
2005,01

Sheet Title
GARAGE ELEVATIONS

Sheet Number
A3.15

Oct. 18, 2016 Rev. Planning Set

0501-A3-15.dwg Plot Date: 5.20.2016

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