COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT
MITIGATED NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: *Brasher Development*, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2017-00017

OWNER: Ned and Debra Brasher

APPLICANT: Ned Brasher

ASSESSOR'S PARCEL NO.:

Project Site: 036-243-110 (1.77 acres) and .5-acres within the Bay View Road Right-of-Way

Potential Future: 036-243-010 (3.2 acres), 036-243-130 (.92 acre), and 036-231-090/100 (.4 acres)

LOCATION: Bay View Road, Montara

PROJECT DESCRIPTION

The applicant requests Coastal Development Permit, Resource Management Permit, Design Review, and Grading Permits for the construction of a new two-story, 3,476 sq. ft. residence, plus a 667 sq. ft. garage and two water tanks, located on a legal 1.77-acre parcel (legality confirmed via Merger, PLN 2004-00514). The construction of the residence involves 1,100 cubic yards of cut and 1,100 cubic yards of fill and the removal of eleven significant trees. This project also includes road and utility improvements that are necessary for the subject parcel and the development of three other legal parcels (APNs 036- 243-010, 036-243-130, and 036-231-090/100) on Bay View Road under common ownership, which involves an additional 370 cubic yards of cut and 170 cubic yards of fill, and the removal of eleven additional significant trees. This project is appealable to the California Coastal Commission.

For CEQA purposes, the project also discusses the future potential development of parcels 036- 243-010, 036-243-130, and 036-231-090/100 with single-family residences.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

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

1. The project will not adversely affect water or air quality or increase noise levels substantially.

2. The project will not have adverse impacts on the flora or fauna of the area.

3. The project will not degrade the aesthetic quality of the area.

4. The project will not have adverse impacts on traffic or land use.

5. In addition, the project will not:

    a. Create impacts which have the potential to degrade the quality of the environment.

    b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

    c. Create impacts for a project which are individually limited, but cumulatively considerable.

    d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

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

MITIGATION MEASURES included in the project to avoid potentially significant effects:

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit "hard card" or building permit that, at a minimum, includes the "Basic Construction Mitigation Measures" as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

i. Minimize the idling time of diesel powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure 3: To avoid impacts to nesting birds and violation of state and federal laws pertaining to birds, all construction related activities (including but not limited to mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) shall occur outside of the avian nesting season (February 1 or after August 31). If construction and construction noise occurs within the avian nesting season, all suitable habitats located within the project's area of disturbance including staging and storage areas plus a 250-foot (passerines) and 1,000-foot (raptor nests) buffer around these areas shall be thoroughly surveyed, as feasible, for the presence of active nests by a

qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented and submitted to the Current Planning Section.

Mitigation Measure 4: If pre-construction nesting bird surveys results in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), shall take plus within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with the California Department of Fish and Wildlife, until the chicks have fledged. Monitoring shall be required to ensure compliance with the Migratory Bird Treaty Act and relevant California Fish and Wildlife code requirements. Monitoring dates and findings shall be documented.

Mitigation Measure 5: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that the new road will be constructed in a manner that minimizes excavation in the root zone of the trees. Excavation into the root zone should not exceed 6-12 inches.

Mitigation Measure 6: Plans submitted for a building permit and/or encroachment permit application shall include the following note: Roots that are 1-inch in diameter and smaller that are encountered during excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter should be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 7: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of Biaxial Geo-Grid (or equivalent) to minimize the thickness of the required road base material.

Mitigation Measure 8: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of underground boring for the installation of the utilities to minimize root impacts. Hand digging can be used if underground boring is not possible. Roots that are 1-inch in diameter and smaller that are encountered during these excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter shall be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 9: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that within the fenced Critical Root Zone, the following activities are not allowed:

a. Stockpiling construction materials or demolition debris.

b. Parking vehicles or equipment.

c. Piling soil and/or mulch.

d. Trenching for utilities installation or repair, or for irrigation system installation.

e. Changing soil grade by cutting or filling.

f. Damaging roots by girdling, tearing or grubbing.

g. Compacting soil from washing out equipment and vehicle maintenance.

h. Installing impervious parking lots, driveways, and walkways.

i. Wounding or breaking tree trunks or branches through contact with vehicles and heavy equipment.

j. Wounding trunks with string weed trimmers and lawn mowers.

k. Causing injury by fire or excessive heat.

Mitigation Measure 10: Plans submitted for a building permit and/or encroachment permit application shall show the location and type of tree protection fencing in compliance with the recommendations of the Goodrum arborist report. Tree protection fencing shall be installed prior to issuance of the encroachment and building permits for the project.

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 12: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, drilled piers, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Mitigation Measure 13: At the time of building permit and encroachment permit application, the applicant shall submit for review and approval, erosion and drainage control plans that show how the transport and discharge of soil and pollutants from and within the project site will be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Mitigation Measure 14: At the Building Permit application stage, the applicant shall demonstrate adequate water supply (quantity and quality) to serve proposed, existing, and future structures.

Mitigation Measure 15: Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360). Noise levels produced by construction activities shall not exceed the 80-dBA level at any one moment.

Mitigation Measure 16: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

Mitigation Measure 17: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional

can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 18: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

RESPONSIBLE AGENCY CONSULTATION

San Mateo County Planning and Building Department

INITIAL STUDY

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

REVIEW PERIOD: March 6, 2019 to March 26, 2019

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., March 26, 2019**.

CONTACT PERSON

Ruemel Panglao
Project Planner, 650/363-4582
rpanglao@smcgov.org

Ruemel Panglao, Project Planner

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County of San Mateo
Planning and Building Department

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

1. **Project Title:** Brasher Development

2. **County File Number:** PLN 2017-00017

3. **Lead Agency Name and Address:** San Mateo County Planning and Building Department, 455 County Center, 2nd Floor, Redwood City, CA 94063

4. **Contact Person and Phone Number:** Ruemel Panglao, Project Planner, 650/363-4582

5. **Project Location:** Bay View Road, Montara

6. **Assessor's Parcel Number and Size of Parcel:**

   Project Site: 036-243-110 (1.77 acres) and .5-acres within the Bay View Road Right-of-Way

   Potential Future: 036-243-010 (3.2 acres), 036-243-130 (.92 acre), and 036-231-090/100 (.4 acres)

7. **Project Sponsor's Name and Address:** Ned Brasher, PO Box 370438, Montara, CA 94037

8. **General Plan Designation:** Very Low Density Residential (Rural)

9. **Zoning:** RM-CZ/DR/CD (Resource Management-Coastal Zone/Design Review/Coastal Development)

10. **Description of the Project:** The applicant requests Coastal Development Permit, Resource Management Permit, Design Review, and Grading Permits for the construction of a new two-story, 3,476 sq. ft. residence, plus a 667 sq. ft. garage and two water tanks, located on a legal 1.77-acre parcel (legality confirmed via Merger, PLN 2004-00514). The construction of the residence involves 1,100 cubic yards of cut and 1,100 cubic yards of fill and the removal of eleven significant trees. This project also includes road and utility improvements that are necessary for the subject parcel and the development of three other legal parcels (APNs 036-243-010, 036-243-130, and 036-231-090/100) on Bay View Road under common ownership, which involves an additional 370 cubic yards of cut and 170 cubic yards of fill, and the removal of eleven additional significant trees. This project is appealable to the California Coastal Commission.

    For CEQA purposes, the project also discusses the future potential development of parcels 036- 243-010, 036-243-130, and 036-231-090/100 with single-family residences.

11. **Surrounding Land Uses and Setting:** The areas to the north, west, and south contain single-family residential uses. Federally-owned park land which is part of the Golden Gate National Recreation Area can be found further east.

12. **Other Public Agencies Whose Approval is Required:** N/A

13. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?** No, see Section 17.a.ii. *(NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see Public Resources Code Section 21083.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality).*

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in 5. below, may be cross-referenced).

5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. **AESTHETICS.** Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
1.a. Have a significant adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	

Discussion: On September 13, 2018, the Coastside Design Review Committee (CDRC) recommended approval of the proposed residence, as proposed and conditioned, to the San Mateo County (County) Planning Commission (PC), based on the findings that included compliance with all applicable Design Review (DR) standards. Specifically, the CDRC found that the proposed residence complies with Section 6565.20(D) (Neighborhood Definition and Neighborhood Character) of the Standards for Design for One-Family and Two-Family Residential Development in the Midcoast (Midcoast DR Standards) as the design steps down and tucks into the hillside in the same direction in the existing grade while building elements extending out over the downward slope have been minimized. In addition, the CDRC found that the exterior colors and materials would be compatible with the surrounding natural features and consistent with those found in the neighborhood.

With the extension of utilities to three other vacant legal parcels 036-243-010, 036-243-130, and 036-231-090/100, it is likely that single-family residences will be proposed for these parcels in the future. Proposed houses on these parcels would also be subject to review by the CDRC for compliance with all applicable DR standards.

Although the associated parcels are not located within a designated State or County Scenic Corridor and are not visible from Highway 1 (Cabrillo Highway), they are within proximity to the federally-owned Golden Gate National Recreation Area (GGNRA) located to the east. Existing mature trees will screen the proposed residence and road from public viewing locations within the GGNRA. In addition, the project site and the San Vicente Trail within the GGNRA are visually and physically separated by an area of much higher grade in between. The proposed landscape plan for the proposed single-family residence includes the replacement of the 22 trees to be removed with 18 trees. The CDRC's conditions included that 12 additional trees should be added that are approximately 40 feet at maturity which will provide further screening of the proposed residence. Potential single-family residences on the remaining vacant parcels would likely also be required to provide similar screening.

Source: Project Plans, Project Location, County Geographic Information System (GIS) Maps, Field Observations, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018).

1.b.	Significantly damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	

Discussion: The project parcel and the remaining vacant parcels do not contain and are not located in close proximity to any rock outcroppings or any historic buildings within a state scenic highway. Twenty-two protected trees (trees with a diameter at breast height (dbh) of 17.5 inches or more in the RM-CZ zoning district) are proposed to be removed, removal of eleven of these trees is associated with the construction of the single-family residence and removal of the other eleven trees are for the construction of the road. These trees will be replaced with eighteen newly-planted trees as shown on the proposed landscape plan, along with additional replacement trees as required by the Coastside Design Review Committee. Potential single-family residences on the remaining vacant parcels would likely also be required to provide replacement trees for those removed. The implementation of these requirements will minimize visual impacts to the surrounding residential areas and parkland.

Source: Project Plans, Project Location, Field Observations, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018), County Zoning Regulations.

1.c.	Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief features, and/or development on a ridgeline?			X	

Discussion: The proposed single-family residence will require 2200 c.y. of balanced grading (1100 c.y. of excavation and 1100 c.y. of fill) to accommodate the proposed residence, landscaping, and drainage features. The proposed road will require 540 c.y. of grading (370 c.y. of excavation and 170 c.y. of fill). The proposed grading will not represent a significant change in topography, as while proposed grading would provide for a flat building pad for the residence and garage, proposed grading would blend these areas with the surrounding topography and avoid terracing. In addition, the landscape plan provides for re-landscaping of the graded areas associated with the proposed single-family residence. In its review, the CDRC, as discussed in Section 1.a. and 1.b., found that the proposed project will not significantly degrade the existing visual character or quality of the site, stating the proposed project complies with Section 6565.20(D) (Relationship to Existing Topography) of the Midcoast DR Standards in that the structure steps down and tucks into the hillside in the same direction as the existing grade.

As demonstrated by the recommendation of approval by the CDRC, the visual impact of the proposed residence and road will not be significant.

Potential single-family residences on the remaining vacant parcels would likely also require significant amounts of grading but will be similarly subject to the applicable DR regulations and determination of compliance by the Coastside Design Review Committee. Therefore, the visual impact of the potential residences would likely not be significant.

Source: Project Plans, Project Location, County GIS Maps, Field Observations, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018), County Midcoast DR Standards.

1.d.	Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?			X	

Discussion: The project plans includes five downward directed (Dark Sky compliant) light fixtures, one at each exterior entry/exit as minimally required by California Building Standards Code. Views from the west would be minimally affected by project lighting as those areas are developed. Views from the east would be minimally affected if lights are minimal and shielded and there are intervening trees and hills. In its review, the CDRC acknowledged the project's compliance with the Midcoast DR Standards regarding exterior lighting which states: "All exterior, landscape, and site lighting shall be designed and located so that light and glare are directed away from neighbors and confined to the site," "Exterior lighting should be minimized and designed with a specific activity in mind so that outdoor areas will be illuminated no more than is necessary to support the activity designed for that area," and "Minimize light and glare as viewed from scenic corridors and other public view corridors." The proposed locations and design of all such lighting will not create a new source of significant light or glare that would adversely affect day or nighttime views in the area.

Potential single-family residences on the remaining vacant parcels would also be subject to the applicable DR regulations and determination of compliance by the Coastside Design Review Committee. Therefore, the proposed locations and design of all such lighting would likely not create

new sources of significant light or glare that would adversely affect day or nighttime views in the area. **Source:** Project Plans, Project Location, County Midcoast DR Standards.					
1.e.	Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?				X
Discussion: The project site and the remaining vacant parcels are not adjacent to a designated Scenic Highway or within a State or County Scenic Corridor. The closest County Scenic Corridor is the Cabrillo Highway (Highway 1) County Scenic Corridor which is over a half mile away. **Source:** Project Location, County GIS Maps, County General Plan Scenic Corridors Map.					
1.f.	If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?				X
Discussion: The project parcel and associated road are located within a Design Review (DR) District as it is zoned RM-CZ/DR/CD (Resource Management-Coastal Zone / Design Review / Coastal Development). As discussed in Section 1.a., the CDRC determined that the project, as proposed and conditioned, is in compliance with all applicable DR standards. The project meets all applicable General Plan and Zoning Ordinance provisions. Single-family residences are an allowed use in the RM-CZ Zoning District. The proposed residence will have conforming setbacks, building height, and building floor area. Potential single-family residences on the remaining vacant parcels would also be subject to the applicable General Plan and Zoning Ordinance Provisions. The potential residences would also have conforming setbacks, building height, and building floor area. **Source:** Project Plans, Project Location, San Mateo County Zoning Regulations.					
1.g.	Visually intrude into an area having natural scenic qualities?			X	
Discussion: The proposed project complies with all applicable zoning regulations, specifically Design Review standards. As discussed in Sections 1.a. through 1.f., the project, as proposed and conditioned, includes screening landscaping and grading which blends the project into the surrounding topography. Also, in its review, the CDRC determined the proposed residence to be in compliance with Midcoast Design Review standards. The proposed residence was revised from its original design (presented to the CDRC on September 13, 2018) with the interest of preserving the views and ensuring compatibility with the surrounding neighborhood. Based on these findings, the proposed project will have a less than significant visual impact on natural scenic qualities. As discussed in Sections 1.a. through 1.f., potential single-family residences on the remaining vacant parcels would likely include screening landscaping and grading which blends the project into the surrounding topography. They would also need to be compliant with applicable DR standards. **Source:** Project Plans, Project Location, County GIS Maps, Field Observations, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018), County Zoning Regulations, County Midcoast DR Standards.					

2.	**AGRICULTURAL AND FOREST RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
2.a.	For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
Discussion: The project site and the remaining vacant parcels are located within the Coastal Zone. The associated parcels are also not within an area that is mapped or designated as Prime or Unique Farmland or Farmland of Statewide Importance. **Source:** Project Location, County GIS Maps, California Department of Conservation Farmland Mapping and Monitoring Program.					
2.b.	Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
Discussion: The project site and the remaining vacant parcels are zoned Resource Management-Coastal Zone (RM-CZ). The zoning allows for both agriculture and residential uses. They are also not subject to an existing Open Space Easement or Williamson Act contract. **Source:** Project Location, County Zoning Regulations, County GIS Maps, County Williamson Act Contracts.					
2.c.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X
Discussion: The project site and the remaining vacant parcels are undeveloped and largely surrounded by single-family residential development. They do not contain Farmland or forestland (defined as land that can support 10% native tree cover of any species, including hardwoods, under					

natural conditions, and that allows for management of one or more forest resources including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits). Therefore, the associated parcels and road will not convert Farmland to a non-agricultural use or forestland to non-forest use.

Source: Project Location, County GIS Maps, California Department of Conservation Farmland Mapping and Monitoring Program.

2.d.	For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?				X

Discussion: Although the project site and the remaining vacant parcels are located within the Coastal Zone, they do not contain Class I or Class II Agriculture Soils, or Class III Soils rated good or very good for artichokes or Brussels sprouts.

Source: Project Location, Natural Resources Conservation Service Web Soil Survey - California Revised Storie Index.

2.e.	Result in damage to soil capability or loss of agricultural land?				X

Discussion: The project site and the remaining vacant parcels are located on soils classified with a Storie Index of Grade 4 – Poor and Grade 5 – Very Poor. The site is not being used for agricultural use. The proposed single-family residence on the subject parcel would result in the development of approximately four percent of the subject parcel to a residential use. In addition, the proposed Bay View Road would be constructed. As discussed in Section 2.b., residential and agricultural uses are allowed within the project parcel's zoning district (RM-CZ Resource Management – Coastal Zone). Once the subject parcel is developed and if the remaining vacant parcels are eventually developed, future property owners could use the remaining open land for agricultural purposes. With no current agricultural use of the sites and the potential for future agricultural use of the property, the development of the road and associated parcels would not result in the significant loss of agricultural land.

Source: Project Location, Natural Resources Conservation Service Web Soil Survey - California Revised Storie Index, County Zoning Regulations.

2.f.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				X

Discussion: The project site and remaining vacant parcels have not been identified as forestland or timberland, therefore, there is no conflict with existing zoning or cause for rezoning.

Source: Project Location, County GIS Maps, County Zoning Regulations.

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

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	

Discussion: The proposed project does not conflict with or obstruct implementation of the Bay Area 2010 Clean Air Plan (CAP), an air quality plan created to improve the Bay Area's air quality and protect public health and the climate. Once constructed, ongoing use of the single-family residence would have minimal impacts to the air quality standards set forth for the region by the Bay Area Air Quality Management District (BAAQMD). During construction of the proposed residence, construction vehicles are also required to meet California Air Resources Board (CARB) regulations to reduce air pollution (e.g., limits on idling). During construction activities, air emissions will be generated from construction equipment and construction worker vehicles. However, any such construction-related emissions would be temporary and localized.

Potential single-family residences on the remaining vacant parcels would also have minimal impacts to the air quality standards set forth for the region by BAAQMD. If constructed, construction vehicles would also be similarly subject to CARB regulations. During construction activities, air emissions would also be generated from construction equipment and construction worker vehicles. However, any such construction-related emissions would similarly be temporary and localized.

Source: Project Plans, Bay Area Air Quality Management District.

3.b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?		X		

Discussion: During project construction of the proposed residence and Bay View Road and potential construction of the remaining vacant parcels, air emissions will be generated from site grading, construction equipment, and construction worker vehicles. However, any such construction-related emissions will be temporary and localized.

The BAAQMD has established thresholds of significance for construction emissions and operational emissions. As defined in the BAAQMD's 1999 California Environmental Quality Act (CEQA) Guidelines, the BAAQMD does not require quantification of construction emissions due to the number of variables that can impact the calculation of construction emissions. Instead, the BAAQMD emphasizes implementation of all feasible control measures to minimize emissions from construction activities. The BAAQMD provides a list of construction-related control measures that, when fully implemented, would significantly reduce construction-related air emissions to a less than significant level. These control measures are included in the mitigation measure provided below.

Further, Section 2-1-113 (*Exemption, Sources, and Operations*) of the BAAQMD General Requirements exempts sources of air pollution, associated with the construction of a single-family residence, used solely for residential purposes, as well as road construction, from obtaining an Authority to Construct or Permit to Operate.

Mitigation Measure 1: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit "hard card" or building permit that, at a minimum, includes the "Basic Construction Mitigation Measures" as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

i. Minimize the idling time of diesel powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Source: Project Plans, Bay Area Air Quality Management District.

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

Discussion: As of December 2012, San Mateo County is a non-attainment area for PM-2.5. On January 9, 2013, the Environmental Protection Agency (EPA) issued a final rule to determine that the Bay Area attains the 24-hour PM-2.5 national standard. However, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM-2.5 standard until the BAAQMD

submits a "re-designation request" and a "maintenance plan" to EPA and the proposed redesignation is approved by the EPA. A temporary increase in the project area is anticipated during construction since these PM-2.5 particles are a typical vehicle emission. The temporary nature of the proposed construction and California Air Resources Board vehicle regulations reduce the potential effects to a less than significant impact. Mitigation Measure 1 in Section 3.b. will minimize increases in non-attainment criteria pollutants generated from project construction to a less than significant level.

Source: Project Plans, Bay Area Air Quality Management District.

3.d.	Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?		X		

Discussion: Any pollutant emissions generated from the proposed project will primarily be temporary in nature. The project site is in a very low density rural residential area with few sensitive receptors (i.e., single-family residences) located within the project vicinity. Additionally, the surrounding tree canopy and vegetation on the project site parcel will help to insulate the project area from nearby sensitive receptors. Mitigation Measure 1 will also help in minimizing any potentially significant exposure to nearby sensitive receptors to a less than significant level.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location.

3.e.	Create objectionable odors affecting a significant number of people?			X	

Discussion: The proposed project is to construct a single-family residence and associated road in a rural residential area of the Midcoast. Once constructed, the daily use of the residence would not create objectionable odors. The proposed project has the potential to generate odors associated with construction activities. However, any such odors will be temporary and are expected to be minimal.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans.

3.f.	Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?		X		

Discussion: Construction of the single-family residence and associated road are expected to generate a temporary increase in dust, motor vehicle and diesel particulate matter in the project area, and minimal increase from vehicles of residents and visitors. This increase is not expected to violate existing standards of on-site air quality given the required vehicle emission standards required by the State of California for vehicle operations.

The discussion above also applies if the remaining vacant parcels are developed in the future.

The following mitigation measure is provided to ensure that these pollutants during project construction will be less than significant.

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Source: Project Plans, California Department of Motor Vehicles, Bay Area Air Quality Management District.

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

Discussion: A biological resources evaluation (MIG evaluation) was prepared by MIG, dated October 2016, which, amongst the larger study area, analyzed the subject parcel (036-241-110) and the remaining vacant parcels 036-243-010, 036-243-130, and 036-231-090/100. MIG Evaluation is included as Attachment E. The immediate surrounding area around the project site includes

single-family residences and Rancho Corral de Tierra, a part of the Golden Gate National Recreation Area (GGNRA).

According to the MIG evaluation, it was determined that no special-status plant or wildlife species are expected to occur within the study area because of the lack of suitable habitat. The subject parcel and remaining vacant parcels were classified as disturbed habitat because it they are dominated by non-native vegetation and mowed on a regular basis. As noted in the MIG evaluation, Bay View Road is currently an unpaved, dirt road.

The MIG evaluation determined that the trees and dense vegetation found within the study area could support potential nesting habitat for birds and raptors. If activities associated with development or construction occur within the parcels during the avian breeding season (generally February 1 to September 15), injury to individuals or nest abandonment could occur. In addition, noise and increased activity could temporarily disturb nesting or foraging activities, potentially resulting in the abandonment of nest sites. However, with the implementation of the following mitigation measures, the impacts from the project and the construction of potential single-family residences on the remaining vacant parcels would be less than significant:

Mitigation Measure 3: To avoid impacts to nesting birds and violation of state and federal laws pertaining to birds, all construction related activities (including but not limited to mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) shall occur outside of the avian nesting season (February 1 or after August 31). If construction and construction noise occurs within the avian nesting season, all suitable habitats located within the project's area of disturbance including staging and storage areas plus a 250-foot (passerines) and 1,000-foot (raptor nests) buffer around these areas shall be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented and submitted to the Current Planning Section.

Mitigation Measure 4: If pre-construction nesting bird surveys results in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), shall take plus within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with the California Department of Fish and Wildlife, until the chicks have fledged. Monitoring shall be required to ensure compliance with the Migratory Bird Treaty Act and relevant California Fish and Wildlife code requirements. Monitoring dates and findings shall be documented.

Source: Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016).

4.b.	Have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X

Discussion: Per the MIG evaluation, there are no areas of riparian habitat or sensitive natural communities identified in local or regional plans, policies, and regulations or by the California

Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Source:** Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016).					
4.c.	Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
Discussion: The MIG evaluation found no wetlands in the entire study area, as defined either by Section 404 or in the County Local Coastal Program. As a result, the project and the construction of potential single-family residences on the remaining vacant parcels pose no impact. **Source:** Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016), County Local Coastal Program.					
4.d.	Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
Discussion: The project site and remaining vacant parcels are situated adjacent to the open space of the GGNRA. However, according to the MIG evaluation, the study area does not directly connect the open space of the GGNRA to other nearby open spaces. Additionally, the movement and migration of wildlife species within the study area is substantially limited due to habitat fragmentation caused by development or disturbance (e.g., large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas, or development of roads which result in barriers to smaller or less mobile wildlife species). For these reasons, the study area does not serve as a continuous regional connection for wildlife species. As a result, the project and the construction of potential single-family residences on the remaining vacant parcels pose no impact. **Source:** Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016).					
4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?		X		
Discussion: The project site is host to Monterey Cypresses, Monterey Pines, and Eucalyptus trees, many of which are protected (17.5" diameter at breast height (dbh) or greater) trees as defined in the Development Review Criteria (Section 6912.2(j)) that are applicable to RM-CZ (Resource Management-Coastal Zone) zoned areas per Section 6903. The submitted Tree Inventory Report (Patchett report), prepared by Ned Patchett (certified arborist WE-4597A) and dated January 17, 2017, evaluates all trees greater than 12" diameter at breast height (dbh). Patchett report is included as Attachment F. The project proposes the removal of twenty-two significant					

trees, eleven for the construction of the single-family residence and eleven for the construction of Bay View Road. of those trees, most were rated in poor to fair condition due to dead limbs in the upper crown.

Both the Patchett report and a supplemental Tree Evaluation Report, prepared by James Goodrum (Certified Arborist WE-100042A) and dated November 7, 2017 (included as Attachment G), address necessary tree protection measures to avoid unnecessary damage to the trees for construction of the residence, Bay View Road, and associated utilities.

Similar to the development project parcel, any development on the remaining vacant parcels would require arborist reports addressing the condition of the trees to be impacted or removed because of development and necessary tree protection measures. Mitigation Measures 6 through 10 would likely be applied to any future development projects to ensure that project impacts are less than significant.

These mitigation measures will ensure that the impact of the proposed construction of the single-family residence and Bay View Road is less than significant:

Mitigation Measure 5: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that the new road will be constructed in a manner that minimizes excavation in the root zone of the trees. Excavation into the root zone should not exceed 6-12 inches.

Mitigation Measure 6: Plans submitted for a building permit and/or encroachment permit application shall include the following note: Roots that are 1-inch in diameter and smaller that are encountered during excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter should be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 7: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of Biaxial Geo-Grid (or equivalent) to minimize the thickness of the required road base material.

Mitigation Measure 8: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of underground boring for the installation of the utilities to minimize root impacts. Hand digging can be used if underground boring is not possible. Roots that are 1-inch in diameter and smaller that are encountered during these excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter shall be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 9: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that within the fenced Critical Root Zone, the following activities are not allowed:

a. Stockpiling construction materials or demolition debris.

b. Parking vehicles or equipment.

c. Piling soil and/or mulch.

d. Trenching for utilities installation or repair, or for irrigation system installation.

e. Changing soil grade by cutting or filling.

f. Damaging roots by girdling, tearing or grubbing.

g. Compacting soil from washing out equipment and vehicle maintenance.

h. Installing impervious parking lots, driveways, and walkways.

i. Wounding or breaking tree trunks or branches through contact with vehicles and heavy equipment.

j. Wounding trunks with string weed trimmers and lawn mowers.

k. Causing injury by fire or excessive heat.

Mitigation Measure 10: Plans submitted for a building permit and/or encroachment permit application shall show the location and type of tree protection fencing in compliance with the recommendations of the Goodrum arborist report. Tree protection fencing shall be installed prior to issuance of the encroachment and building permits for the project.

Source: Project Plans, Project Location, County Significant Tree Ordinance, Patchett Arborist Report (dated January 17, 2017), Goodrum Arborist Report (dated November 7, 2017), Field Observations.

4.f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?				X

Discussion: The site and remaining vacant parcels are not located in an area with an adopted Habitat Conservation Plan or Natural Conservation Community Plan, other approved regional or State habitat conservation plan.

Source: Project Plans, Project Location, County GIS map.

4.g.	Be located inside or within 200 feet of a marine or wildlife reserve?				X

Discussion: The project site and remaining vacant parcels are not located inside or within 200 feet of a marine or wildlife reserve.

Source: Project Plans, Project Location, County GIS map, National Wildlife Refuge System Locator.

4.h.	Result in loss of oak woodlands or other non-timber woodlands?				X

Discussion: The project site and remaining vacant parcels include no oak woodlands or other timber woodlands.

Source: Project Plans, Project Location.

5.	**CULTURAL RESOURCES**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
5.a.	Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?				X

Discussion: The State of California Office of Historic Preservation has not identified any known historical resources on the project parcel or surrounding area. In a review letter dated October 10, 2018, the California Historical Resources Information System also noted no record of historical resources at the project site. The review letter also notes that Native American resources in this part of San Mateo County have been recorded in broad midslope terraces, immediately adjacent to perennial and intermittent watercourses, and in particular concentration near the coastline. The proposed project area and remaining vacant parcels contain a moderate slope and are not adjacent to a watercourse. Therefore, the project and any future development projects on the remaining vacant parcels pose no impact. To note, any future development projects on the remaining vacant parcels will be subject to a similar review.

Source: Project Location, County GIS Maps, California Register of Historical Resources, California Historical Resources Information System Review Letter (dated October 10, 2018).

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

Discussion: The project site is immediately surrounded by residential development to the north, west and south and vacant land to the east. Based on the project parcel's existing surrounding land uses, it is not likely that the project parcel and surrounding area would host any archaeological resources. The California Historical Resources Information System's Northwest Information Center at Sonoma State University, in a letter dated October 10, 2018, notes that there is no record of any previous cultural resource studies for the project area and that the project area has a low possibility of containing unrecorded archaeological sites. Native American resources in this part of San Mateo County have been recorded in broad midslope terraces, immediately adjacent to perennial and intermittent watercourses, and in particular concentration near the coastline. The proposed project area and remaining vacant parcels contain a moderate slope and are not adjacent to a watercourse. However, the following mitigation measure is provided in the event that any cultural, paleontological, or archeological resources are encountered during construction and excavation activities of the proposed residence and road and the development of future structures on the remaining vacant parcels:

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the

resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e). **Source:** Project Location, County GIS Maps, California Historical Resources Information System Review Letter (dated October 10, 2018).					
5.c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
Discussion: Based on the project parcel's existing surrounding land uses, it is not likely that the project parcel and surrounding area would host any paleontological resource or site or unique geologic feature. However, Mitigation Measure 13 in Section 5.b. is provided to ensure that the impact is less than significant if any resources are encountered. **Source:** Project Location, County GIS Maps.					
5.d.	Disturb any human remains, including those interred outside of formal cemeteries?		X		
Discussion: No known human remains are located within the project area or surrounding vicinity. In case of accidental discovery, Mitigation Measure 11 in Section 5.b. is recommended. **Source:** Project Location, County GIS Maps.					

6.	**GEOLOGY AND SOILS**. Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
6.a.	Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*		X		
Discussion: A geotechnical report was prepared by Sigma Prime Geosciences, Inc. (Sigma Prime), dated May 7, 2007, included as Attachment J. An updated geotechnical report was also					

prepared by Sigma Prime, dated April 6, 2017, included as Attachment K. Sigma Prime determined the closest mapped active fault zone to the site is the San Gregorio fault, located about 1 km to the west. Other faults most likely to produce significant seismic ground motions include the San Andreas, Hayward, Rodgers Creek, and Calaveras faults.

According to Sigma Prime, the site is not located in an active Alquist-Priolo special studies area or zone where fault rupture is considered likely. Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low. Although it is highly probable that the proposed project will experience very strong ground shaking during a moderate to large nearby earthquake, Sigma Prime states that the proposed project can be developed as planned, provided that the geotechnical recommendations from their report be implemented.

The discussion above and Mitigation Measure 12 would also likely apply if the remaining vacant parcels are developed in the future. A geotechnical report would similarly be required for development of those parcels at the time of application. Since the project location and its distance from the cited fault zone can result in strong seismic ground shaking in the event of an earthquake, the following mitigation measure is recommended to ensure that such impacts are less than significant:

Mitigation Measure 12: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, drilled piers, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

ii. Strong seismic ground shaking?		X		

Discussion: Pursuant to the discussion in Section 6.a.i., strong seismic ground shaking may occur in the event of an earthquake. However, the mitigation measure provided in Section 6.a.i. will ensure that impacts are less than significant.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

iii. Seismic-related ground failure, including liquefaction and differential settling?			X	

Discussion: According to Sigma Prime, loose, saturated silty sands were not encountered at the site, and, therefore, the likelihood of liquefaction occurring at the site is very low. In addition, although there is a dense silty sand onsite, it will either be excavated during construction or penetrated with drilled piers for the foundation. Sigma Prime notes that the likelihood of differential settling will be low. However, pursuant to the discussion in Section 6.a.i., its respective mitigation measure is provided to ensure that any impacts are less than significant.

The discussion above also likely applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

iv. Landslides?			X	

Discussion: According to Sigma Prime, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The slope is moderately steep, at about thirty percent; however, the granodiorite is shallow and stable. The upper soils are generally dense and stiff. There are no springs or seepage on the site. The likelihood of a landslide impacting the site is low. However, pursuant to the discussion in Section 6.a.i., its respective mitigation measure is provided to ensure that any impacts are less than significant.

The discussion above also likely applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).*				X

Discussion: The project site and remaining vacant parcels are located about 1.5 miles from the coastline. Therefore, there would be no impact on coastal cliff or bluff instability or erosion.

Source: Project Location.

6.b. Result in significant soil erosion or the loss of topsoil?		X		

Discussion: The construction of the residence involves 1,100 cubic yards of cut and 1,100 cubic yards of fill and Bay View Road involves 370 cubic yards of cut and 170 cubic yards of fill. Total land disturbance is 0.96-acre. The project is exempt from coverage under a State General Construction Permit. The mitigation measures in Sections 3.b. and 3.f., and the following mitigation measure are included to control erosion during both project construction activities.

The discussion above and Mitigation Measure 13 also likely apply if the remaining vacant parcels are developed in the future.

With these mitigation measures, the project impact will be less than significant.

Mitigation Measure 13: At the time of building permit and encroachment permit application, the applicant shall submit for review and approval, erosion and drainage control plans that show how the transport and discharge of soil and pollutants from and within the project site will be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017), San Mateo Countywide Stormwater Pollution Prevention Program.

6.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?		X		

Discussion: Pursuant to the discussion to Sections 6.a. and 6.b., the associated Mitigation Measures will assure that the does not result in an on-site or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse. Therefore, the mitigation measures will assure

that the project impact will be less than significant.

The discussion above also likely applies if the remaining vacant parcels are developed in the future. A geotechnical report would similarly be required for development of those parcels at the time of application.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

6.d.	Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?				X

Discussion: The project geotechnical report concludes that the project parcel is not located on expansive soils. Thus, the project poses no impact.

The discussion above also likely applies if the remaining vacant parcels are developed in the future. A geotechnical report would similarly be required for development of those parcels at the time of application.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017).

6.e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Discussion: The proposed project includes the installation of a septic system. San Mateo County Environmental Health Services, which is the agency that regulates septic systems, completed a preliminary review of the project and provided a conditional approval. The review completed by Environmental Health Services did not uncover any issue with the soils in which the septic wastewater system is to be located.

Potential residences on the remaining vacant parcels would also require the installation of a septic system and would be required to demonstrate compliance with the regulations of Environmental Health Services prior to the issuance of their conditional approval.

Source: Project Plans, Project Location.

7.	**CLIMATE CHANGE.** Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
7.a.	Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?		X		

Discussion: Greenhouse Gas Emissions (GHG) include hydrocarbon (carbon monoxide; CO2) air emissions from vehicles and machines that are fueled by gasoline. Project-related grading and construction of the proposed residence and road will result in the temporary generation of GHG emissions along travel routes and at the project site. In general, construction involves GHG emissions mainly from exhaust from vehicle trips (e.g., construction vehicles and personal vehicles of construction workers). Even assuming construction vehicles and workers are based in and traveling from urban areas, the potential project GHG emission levels from construction would be considered minimal. Although the project scope for the current and potential future projects are not likely to generate significant amounts of greenhouse gases, the mitigation measure is provided in Section 3.b. to ensure that any impacts are less than significant.

Source: Project Plans, Project Location.

7.b.	Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion: The proposed project does not conflict with the County of San Mateo Energy Efficiency Climate Action Plan (EECAP).

Potential single-family residences on the remaining vacant parcels would also be required to comply with EECAP.

Source: Project Plans, 2013 San Mateo County Energy Efficiency Climate Action Plan.

7.c.	Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X

Discussion: The project parcel and surrounding area are not considered forest land, nor do they host any such forest canopy. Therefore, the project and any future development on the remaining vacant parcels pose no impact.

Source: Project Plans, Project Location, County GIS Maps.

7.d.	Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X

Discussion: As discussed in Section 6.a.v., the project site and remaining vacant parcels are located about 1.5 miles from the coastline. Therefore, the project and any future development on the remaining vacant parcels would not be impacted by coastal cliff/bluff erosion due to rising sea levels.

Source: Project Location.

7.e.	Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
Discussion: As discussed in Section 6.a.v., the project site and remaining vacant parcels are located about 1.5 miles from the coastline. Therefore, the project and any future development on the remaining vacant parcels would not be impacted by coastal cliff/bluff erosion due to rising sea levels. **Source:** Project Location.					
7.f.	Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
Discussion: The project site and remaining vacant parcels are not located in an anticipated 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA). The project site and associated parcels are located in FEMA Flood Zone X, which is considered a minimal flood hazard (Panel No. 06081C0136E, effective October 16, 2012). FEMA Flood Zone X areas have a 0.2% annual chance of flooding, with areas with one (1) percent annual chance of flooding with average depths of less than 1-foot. Therefore, the project and any future development on the remaining vacant parcels impact would be less than significant. **Source:** Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0136E, effective October 16, 2012					
7.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: The project site and remaining vacant parcels are not located in an anticipated 100-year flood hazard area as mapped by FEMA. Pursuant to the discussion in Section 7.f., the project and any future development on the remaining vacant parcels poses no impact. **Source:** Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0136E, effective October 16, 2012.					

8.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
8.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
Discussion: The project does not involve the use, transport, or disposal of hazardous materials. **The project involves the construction and operation of a single-family residence.** The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences. **Source:** Project Plans.					
8.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Discussion: The use of hazardous materials is not proposed for this project. **The project involves the construction and operation of a single-family residence.** The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences. **Source:** Project Plans.					
8.c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Discussion: The emission of hazardous materials, substances, or waste is not proposed for this project. The project parcel is also not located within one-quarter mile of an existing or proposed school. The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences. **Source:** Project Plans, Project Location.					

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

Discussion: The project site and the remaining vacant parcels are not included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and therefore would not result in the creation of a significant hazard to the public or the environment.

Source: Project Location, California Department of Toxic Substances Control.

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

Discussion: The project site is located approximately 1.3 miles northeast of the northerly boundary of the Half Moon Bay Airport, a public airport operated by the County Department of Public Works. Development within certain proximities of the airport are regulated by applicable policies and requirements of the Final Half Moon Bay Airport Land Use Compatibility Plan (ALUCP), as adopted by the City/County Association of Governments (C/CAG) on October 9, 2014. The overall objective of the ALUCP safety compatibility guidelines is to minimize the risks associated with potential aircraft accidents for people and property on the ground in the event of an aircraft accident near an airport and to enhance the chances of survival of the occupants of an aircraft involved in an accident that occurs beyond the runway environment. The ALUCP has safety zone land use compatibility standards that restrict land use development that could pose particular hazards to the public or to vulnerable populations in case of an aircraft accident.

The project site is located in the Airport Influence Area (Runway Safety Zone 7), where accident risk level is considered to be low. The AIA Zone does not prohibit residential land uses.

Based on the discussion above, staff has determined that the proposed project complies with the safety compatibility criteria and poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, 2014 Final Half Moon Bay Airport Land Use Compatibility Plan.

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

Discussion: The project site and the remaining vacant parcels are not within the vicinity of a private airstrip.

Source: Project Plans, Project Location.

8.g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X

Discussion: The proposed single-family residence will be located on a privately-owned parcel and involves the construction of a new public road that will serve the subject parcel and the adjacent parcels to the west and east. The proposed residence will have direct access to the road. The proposed road has been reviewed and preliminarily approved with conditions by the Department of Public Works and Coastside Fire Protection District (CFPD). The proposed project would not impede, change, or close any roadways that could be used for emergency purposes. All existing roads would remain unchanged. Therefore, the project poses no impact.

Potential single-family residences on the remaining vacant parcels would also be served by Bay View Road and would all have direct access to the road. The proposed project would not impede, change, or close any roadways that could be used for emergency purposes. All existing roads would remain unchanged. Therefore, the potential future single-family residential projects on the remaining vacant parcels pose no impact.

Source: Project Plans, Project Location, County GIS Maps.

8.h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Discussion: The project site is located within the high Fire Hazard Severity Zone (State Responsibility Area). However, the project was reviewed by CFPD and received conditional approval subject to compliance with the California Building Code for a fuel break, fire hydrant, hard wired smoke detectors, an automatic fire sprinkler system, and ignition resistant construction and materials, among other fire prevention requirements. No further mitigation, beyond compliance with the standards and requirements of the CFPD, is necessary.

Among the remaining vacant parcels, parcels 036-243-130 and 036-231-090/100 are both located within the high Fire Hazard Severity Zone (State Responsibility Area). Parcel 036-243-010 is located within the very high Fire Hazard Severity Zone (State Responsibility Area). Similar to the proposed single-family residence, compliance with the standards and requirements of the CFPD would also be necessary for any new development on the three remaining vacant parcels.

Source: Project Location, California State Fire Severity Zones Maps, Coastside Fire Protection District.

8.i.	Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X

Discussion: The project site and remaining vacant parcels are not located in such an area.

Source: Project Plans, Project Location, County GIS Maps, Federal Emergency Management

Agency Flood Insurance Rate Map 06081C0136E, effective October 16, 2012.					
8.j.	Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: As discussed in Section 7.f., the project site and remaining vacant parcels are located in Flood Zone X, an area of minimal flood hazard. The project and any future projects on the remaining vacant parcels would not place structures within a 100-year flood hazard area as the project site and remaining parcels are not located within a flood hazard zone that will be inundated by a 100-year flood. **Source:** Project Plans, Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0136E, effective October 16, 2012.					
8.k.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
Discussion: In addition to the discussion Section 8.j., no dam or levee is located in close proximity to the project site or remaining vacant parcels, therefore there is no risk of flooding due to failure of a dam or levee. **Source:** Project Plans, Project Location, County GIS Maps, San Mateo County Hazards Maps.					
8.l.	Inundation by seiche, tsunami, or mudflow?				X
Discussion: The project site and remaining vacant parcels are not located within a San Mateo County General Plan tsunami and seiche inundation area. **Source:** Project Plans, Project Location, County GIS Maps, San Mateo County Hazards Maps.					

9.	**HYDROLOGY AND WATER QUALITY.** Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
9.a.	Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?			X	
Discussion: The proposed project has the potential to generate polluted stormwater runoff during					

site grading and construction-related activities. The project will be required to comply with the County's Drainage Policy requiring post-construction stormwater flows to be at, or below, pre-construction flow rates. Drainage analysis for the single-family residence and Bay View Road were prepared by Sigma Prime, both dated December 28, 2016, detailing the proposed drainage system. The drainage reports state that the proposed detention system is designed such that post-development runoff will be less than pre-development runoff, and no runoff is diverted from one drainage area to another. The reports state that there will be no appreciable downstream impacts and that current drainage patterns indicate minimal runoff from adjacent impervious surfaces onto the subject property.

The proposed project, including the discussed drainage report and plans, were reviewed and approved by the Department of Public Works. Based on these findings, the project impact will be less than significant.

If the remaining vacant parcels are developed in the future, verification of compliance with the County's Drainage Policy will similarly be required.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Meadow Property Drainage Analysis (dated December 28, 2016), Sigma Prime Geosciences, Inc. Bay View Road Drainage Analysis (dated December 28, 2016).

9.b.	Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		X		

Discussion: In order to evaluate the geotechnical engineering characteristics of the soil layers underlying the project site, the Sigma Prime report (discussed in Section 6.a.i.) discussed the three borings drilled on the project parcel. According to the report, groundwater was not encountered. A geotechnical report will also be prepared for the three remaining vacant parcels that will evaluate the presence of groundwater.

The project parcel is served by an existing domestic well approved under previous permits. The existing well has met the County's Environmental Health Division's standards regarding quality and flow. The well is proposed to serve the subject parcel and the three remaining vacant parcels. The following mitigation measure is included to ensure that adequate water supply is available to serve the proposed residence and future residences. With this mitigation measure, the project impact and the impact of the potential future development of the vacant parcels will be less than significant.

Mitigation Measure 14: At the Building Permit application stage, the applicant shall demonstrate adequate water supply (quantity and quality) to serve proposed, existing, and future structures.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017), County Environmental Health Services.

9.c.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on-site or off-site?		X		

Discussion: The proposed project does not involve the alteration of the course of a stream or river. The project involves the construction of 21,355 sq. ft. of impervious surface associated with house and road construction. The proposed development on the project parcel will include drainage features that have been approved by the Department of Public Works. With Mitigation Measures 1, 2, and 15 to address potential impacts during construction activities, the project will have a less than significant impact.

The potential development of the three remaining vacant parcels would also not involve the alteration of the course of a stream or river and would require a drainage and grading plan subject to the approval of the Drainage Section which has taken over drainage review for the Department of Public Works.

Source: Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016), Department of Public Works.

9.d.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?			X	

Discussion: Pursuant to the discussion in Sections 9.a. and 9.c., the proposed project and any potential futures projects on the remaining vacant parcels will have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, MIG Biological Resources Evaluation (dated October 2016), Department of Public Works.

9.e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?			X	

Discussion: Pursuant to the discussion in Section 9.a., the proposed project and any potential futures projects on the remaining vacant parcels will have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Meadow Property Drainage Analysis (dated December 28, 2016), Sigma Prime Geosciences, Inc. Bay View Road Drainage Analysis (dated December 28, 2016).

9.f.	Significantly degrade surface or ground-water water quality?			X	

Discussion: As discussed in Section 9.b., the implementation of the associated mitigation

measure, would minimize degradation of surface or groundwater water quality. Thus, the project and any potential future projects on the remaining vacant parcels will pose a less than significant impact.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 7, 2007), Sigma Prime Geotechnical Study (dated April 6, 2017), County Environmental Health.

9.g. Result in increased impervious surfaces and associated increased runoff?		X		

Discussion: Pursuant to the discussion in Section 9.c. and the cited mitigation measures, the proposed project and any potential future projects on the remaining vacant parcels will have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Meadow Property Drainage Analysis (dated December 28, 2016), Sigma Prime Geosciences, Inc. Bay View Road Drainage Analysis (dated December 28, 2016).

10. LAND USE AND PLANNING. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
10.a. Physically divide an established community?				X

Discussion: The proposed road and single-family residence will allow for the continued development of a rural area within Montara surrounded by existing single-family residential uses to the north, west, and south and park land to the east. The project parcel is the second of five parcels to be developed on Bay View Road. The project does not and the potential development of single-family residences on the remaining three parcels will not include a proposal to divide lands or include development that would result in the division of an established community.

Source: Project Plans, Project Location.

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

Discussion: The project has been reviewed for conformance, and found to not conflict with applicable policies of the County's Local Coastal Program (LCP) and applicable RM-CZ zoning regulations as discussed in Section 1.f. The project site's RM-CZ zoning includes the Design Review (DR) District. Based on the discussion provided to Sections 1.a., c. and d., the project is in compliance with all applicable Design Review standards. Additionally, the RM-CZ Zoning District

requires that development comply with the County's Zoning Regulations, Chapter 20A.2. (Development Review Criteria). The project has been reviewed against and found to comply with the most applicable those criteria. Therefore, the project impact will be less than significant.

Potential single-family residences on the remaining vacant parcels would also be subject to compliance with the applicable regulations as noted above. Therefore, the impacts of any future single-family residential project on the remaining vacant parcels would be less than significant.

Source: San Mateo County LCP; County Zoning Regulations, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018).

10.c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion: The project site and surrounding area are not located in an area with a habitat conservation or natural community conservation plan as discussed in Section 4.f. and therefore will have no impact.

Source: Project Plans, Project Location.

10.d.	Result in the congregating of more than 50 people on a regular basis?				X

Discussion: As the project involves the construction of one single-family residence and a rural public road, it is not expected that their occupancy capacity would result in the congregating of over 50 people on a regular basis. Therefore, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans, Project Location.

10.e.	Result in the introduction of activities not currently found within the community?				X

Discussion: The proposed residence will not result in the introduction of activities not already found within the community. The project site is surrounded by similar single-family residential development to the north, west, and south. Therefore, the project poses no such impact.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans, Project Location, County Zoning Regulations, County Midcoast DR Standards, Coastside Design Review Committee Recommendation Letter (dated November 13, 2018).

10.f.	Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?			X	

Discussion: The project scope includes the construction of Bay View Road and the installation of utilities. This road will serve the proposed single-family residence on the subject parcel but is also intended to serve the three remaining vacant parcels along Bay View Road once they are developed. Therefore, the construction of the road and utilities would serve to encourage additional off-site development. However, the development of the three other vacant parcels would not result in a significant increase in the intensity of this undeveloped area. It is unlikely that the new road would be extended in the future to allow additional development as the end of the road abuts lands owned by GGNRA.

Source: Project Plans, Project Location, County GIS Maps.

10.g. Create a significant new demand for housing?				X

Discussion: The project involves the construction of a residence and proposed improvements to support this use. The project would provide one additional unit of housing and would not increase the demand for housing in any other areas.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans, Project Location.

11. MINERAL RESOURCES. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
11.a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X

Discussion: The proposed project neither involves nor results in any extraction or loss of mineral resources. Therefore, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans.

11.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion: There are no known mineral resources on the project parcel; therefore, the proposed project will not result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans.

12. NOISE. Would the project result in:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
12.a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		

Discussion: The proposed project and any future single-family residential projects on the remaining vacant parcels would not produce any long-term significant noise source. However, the project and any future potential projects on the remaining vacant parcels will generate short-term noise associated with grading and construction activities. The short-term noise during grading and construction activities will be temporary, where volume and hours are regulated by Section 4.88.360 (Exemptions) of the San Mateo County Ordinance Code for Noise Control. The following mitigation measure is recommended to limit any potential impacts related to grading and construction to a less than significant level:

Mitigation Measure 15: Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360). Noise levels produced by construction activities shall not exceed the 80-dBA level at any one moment.

Source: Project Plans, Project Location, San Mateo County Ordinance.

12.b.	Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?		X		

Discussion: Exposure of persons to or generation of excessive ground-borne vibration or noise levels is expected during construction activities. Drilled piers would be used for the foundation which would be quieter overall in construction. Mitigation Measure 15 in Section 12.a. is provided to ensure that the impact is less than significant.

If the remaining vacant parcels are developed in the future, the exposure of persons to or generation of excessive ground-borne vibration or noise levels would also be expected during construction activities and the cited mitigation measure would also ensure that the impact is less than significant.

Source: Project Plans, Project Location, San Mateo County Ordinance.

12.c.	A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

Discussion: A temporary increase in ambient noise levels during construction activities is expected. Otherwise, increased permanent ambient noise levels will be minimal as it would be limited to the typical noise generated from a single-family residence. Therefore, the project poses a less than significant impact.

The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences.

Source: Project Plans, Project Location.

12.d.	A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

Discussion: Pursuant to the discussion in Section 12.c. the project and potential future development of the remaining vacant parcels pose a less than significant impact.

Source: Project Plans, Project Location.

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

Discussion: The project site is located approximately 1.3 miles northeast of the northerly boundary of the Half Moon Bay Airport, a public airport operated by the County Department of Public Works. The project site is not located within the airport's noise exposure contours. Thus, people residing or working in the project area will not be exposed to excessive noise levels. Therefore, the project poses a less than significant impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, 2014 Final Half Moon Bay Airport Land Use Compatibility Plan.

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

Discussion: As discussed in Sections 8.e. and 12.e, the project site is located within the vicinity of the Half Moon Bay Airport, a public-operated airport. In addition, there are no known privately owned or operated airstrips within close proximity to the project site.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, 2014 Final Half Moon Bay Airport Land Use Compatibility Plan.

13. POPULATION AND HOUSING. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
13.a.	Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X

Discussion: As discussed in response to Section 10.f, all improvements associated with the proposed project are only sufficient to serve the proposed single-family residence and the three remaining adjacent vacant parcels in the future. The additional population created by those living in the proposed residence and potential future residences is not significant, nor would the development induce any significant population growth. Therefore, the project poses no impact.

Source: Project Plans, Project Location.

13.b.	Displace existing housing (including low- or moderate-income housing), in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X

Discussion: The proposed residence will be located on an undeveloped parcel; therefore, no existing housing will be displaced. Therefore, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location.

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

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
14.a.	Fire protection?				X
14.b.	Police protection?				X

14.c.	Schools?				X
14.d.	Parks?				X
14.e.	Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?				X

Discussion: The proposed project is to construct a single-family residence in an area which adjoins other single-family residential uses. The proposed project does not involve and is not associated with the provision of new or physically altered government facilities, nor will it generate a need for an increase in any such facilities. Per the review of the Coastside Fire Protection District, the project will not disrupt acceptable service ratios, response times or performance objectives of fire, police, schools, parks, or any other public facilities or energy supply systems. Therefore, the project poses no impact.

If the remaining vacant parcels are developed in the future with single-family residences, they would also not involve and would not be associated with the provision of new or physically altered government facilities, nor would they generate a need for an increase in any such facilities. The potential projects would also be subject to the review of the Coastside Fire Protection District to ensure that they will not disrupt acceptable service ratios, response times or performance objectives of fire, police, schools, parks, or any other public facilities or energy supply systems. Therefore, the potential future development of the remaining vacant parcels poses no impact.

Source: Project Plans, Project Location, Coastside Fire Protection District.

15. RECREATION. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
15.a.	Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?				X

Discussion: The project (future occupants of and visitors to the new residence) would not significantly increase the use of existing parks or other recreational facilities. The current accessibility to and use of the Golden Gate National Recreation Area (located just beyond the project site's easterly boundary) will not be affected by the project. Potential project impact on the use of neighborhood or regional parks or other recreational facilities would be less than significant and significant physical deterioration of any such facilities as related to the project is not expected to occur or be accelerated. Therefore, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

It should be noted that the project did not include the creation of any new parcels, which would require the provision of park facilities and/or payment of in-lieu park fees. The subject parcel was created legally in November 16, 2004 via a merger.

Source: Project Plans, Project Location.				
15.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
Discussion: The project does not include or require the construction or expansion of recreational facilities. The discussion above also applies if the remaining vacant parcels are developed in the future. **Source:** Project Plans.				

16. TRANSPORTATION/TRAFFIC. Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
Discussion: The proposed development would provide compliant standard and emergency access to the project parcel and future development on the adjacent vacant parcels. The County LCP (Policy 2.52) exempts the development of singular single-family dwellings from the development and implementation of a traffic impact analysis and mitigation plan. The traffic trips (comprised of both owners of and guests/visitors to) generated by the new residence and potential future residences on the remaining vacant parcels will not introduce any significant increase in vehicles on Hermosa Road, and thus will pose no significant safety impact to other vehicles, pedestrians or bicycles. The adequacy of access, along Bay View Road, to and from the site has been reviewed by both the County's Department of Public Works and the Coastside Fire Protection District, who have concluded that such access complies with their respective policies and requirements. A similar review would be conducted if the remaining vacant parcels were to be developed, therefore, the project and the potential future residences on the remaining vacant parcels pose a less than significant impact. **Source:** Project Plans, Project Location, Department of Public Works, Coastside Fire Protection District, County Local Coastal Program.				
16.b. Conflict with an applicable congestion			X	

	management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?				
Discussion: Pursuant to the discussion in Section 16.a, the project and potential development on the remaining vacant parcels pose a less than significant impact. **Source:** Project Plans, Project Location, County Local Coastal Program.					
16.c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
Discussion: The project and potential development on the remaining vacant parcels do not include any element which would result in changes to air traffic patterns. **Source:** Project Plans, Project Location.					
16.d.	Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Discussion: The proposed project does not include any incompatible uses or impacts related to a design feature. Bay View Road would be constructed according to County standards and provide vehicular access to the proposed residence. If the remaining vacant parcels are developed in the future with single-family residences, they would also not include any incompatible uses or impacts related to a design feature. Bay View Road would provide vehicular access to any of the potential residences. **Source:** Project Plans, Project Location.					
16.e.	Result in inadequate emergency access?				X
Discussion: Upon review of the proposed project, the Coastside Fire Protection District has conditionally approved the proposed road and access to the residence including adequate emergency access. Thus, the project poses no impact. If any development were to occur on the remaining vacant parcels, the Coastside Fire Protection District's review would also ensure adequate emergency access. Therefore, any future potential projects on those parcels would pose no impact. **Source:** Project Plans, Coastside Fire Protection District.					

16.f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
Discussion: Pursuant to the discussion in Section 16.a, the project and potential future residences on the remaining vacant parcels pose a less than significant impact. **Source:** Project Plans, Project Location, County Local Coastal Program.					
16.g.	Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?			X	
Discussion: The project will not cause a significant increase in pedestrian traffic, as it involves the construction of a road (no sidewalk) and a single-family residence. Nor would the project generally change pedestrian patterns around the project site. Therefore, the project poses a less than significant impact. The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences. **Source:** Project Plans, Project Location.					
16.h.	Result in inadequate parking capacity?				X
Discussion: Pursuant to Section 6119 (Parking Spaces Required) of the County Zoning Regulations, two covered parking spaces are required for dwelling units having two or more bedrooms. The proposed residence would include an attached two-car garage. The proposed project has compliant parking and thus poses no impact. The discussion above also applies if the remaining vacant parcels are developed in the future with single-family residences. **Source:** Project Plans, County Zoning Regulations.					

17.	**TRIBAL CULTURAL RESOURCES.** Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
17.a.	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and				

that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)				X
Discussion: Pursuant to discussion in Sections 5.a. and 5.b. and that the project is not listed in a local register of historical resources, pursuant to any local ordinance or resolution as defined in Public Resources Code Section 5020.1(k), the project poses no impact. The discussion above also applies if the remaining vacant parcels are developed in the future. **Source:** Project Location, California Register of Historical Resources, California Historical Resources Information System Review Letter (dated October 10, 2018), County General Plan.				
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. (In applying the criteria set forth in Subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)		X		
Discussion: A Sacred Lands File and Native American Contacts List Request was sent to the Native American Heritage Commission on October 5, 2018. A record search of the Native American Heritage Commission Sacred Lands File was completed and the results were negative. Although the project is not subject to Assembly Bill 52 (Tribal Consultation), as the County has no records of written requests for formal notification of proposed projects within the County from any traditionally or culturally affiliated California Native American tribes, the County seeks to satisfy the Native American Heritage Commission's best practices to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project to avoid inadvertent impacts on tribal cultural resources. On September 20, 2018, a letter was mailed via certified mail to the tribes identified by the Native American Heritage Commission. To date, no request for consultation was received. Therefore, while the project and potential future residences on the remaining vacant parcels are not expected to cause a substantial adverse change to any potential tribal cultural resources pursuant to discussion in Sections 5.a. and 5.b., the following mitigation measures are recommended to minimize any potential significant impacts to unknown tribal cultural resources: **Mitigation Measure 16:** Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project. **Mitigation Measure 17:** In the event that tribal cultural resources are inadvertently discovered				

during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 18: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Source: Project Plans, Project Location, Native American Heritage Commission, State Assembly Bill 52, California Historical Resources Information System Review Letter (dated October 10, 2018).

18. UTILITIES AND SERVICE SYSTEMS. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
18.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X

Discussion: The proposed residence would rely on septic systems because sewer service is not available from the Montara Water and Sanitary District. The proposed project does not involve or require any water or wastewater treatment facilitates that would exceed any requirements of the Regional Water Quality Control Board. Therefore, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location.

18.b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X

Discussion: Pursuant to the discussion in Section 18.a, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location.

18.c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		

Discussion: As discussed in Section 9.a., the proposed project has the potential to generate polluted stormwater runoff during site grading and construction-related activities, and the permanent project would be required to comply with the County's Drainage Policy requiring post-construction

stormwater flows to be at, or below, pre-construction flow rates. The proposed drainage system design, reviewed and approved by the Department of Public Works, will accommodate the proposed road, residence, driveway, and hardscape features, and ensure pre-construction runoff levels are maintained. Based on these findings and with the implementation of Mitigation Measures 1, 2, and 13, the project impact is expected to be less than significant.

If the remaining vacant parcels are developed in the future, the projects would also be required to comply with the County's Drainage Policy and the proposed drainage system would require the approval of the Drainage Section, now responsible for drainage review instead of the Department of Public Works. Based on these findings and with the implementation of Mitigation Measures 1, 2, and 13, the impact of these potential projects would be expected to be less than significant.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Meadow Property Drainage Analysis (dated December 28, 2016), Sigma Prime Geosciences, Inc. Bay View Road Drainage Analysis (dated December 28, 2016), Department of Public Works.

18.d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		X		

Discussion: Pursuant to the discussion in Section 9.b. with Mitigation Measure 14, the project impact is expected to be less than significant.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location, County Environmental Health Services.

18.e.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X

Discussion: Pursuant to the discussion in Section 18.a, the project poses no impact.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: Project Plans, Project Location.

18.f.	Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	

Discussion: The construction of the project would generate some solid waste, both during construction and after completion (on an ongoing basis typical for that generated by residential uses). Similar to all other properties in the Midcoast area, the residence would receive municipal trash and recycling pick-up service by Recology. The County's local landfill facility is the Corinda Los Trancos (Ox Mountain) Landfill, located at 12310 San Mateo Road (State Highway 92), a few miles east of Half Moon Bay. This landfill facility has permitted capacity/service life until 2034. Therefore, the project impact is less than significant.

The discussion above also applies if the remaining vacant parcels are developed in the future.

Source: San Mateo County Environmental Health Services.				
18.g. Comply with Federal, State, and local statutes and regulations related to solid waste?			X	
Discussion: Solid waste generated by a new single-family residence is expected to be minimal. The project site will receive solid waste service by Recology. The landfill cited in Section 18.f. is licensed and operates pursuant to all Federal, State and local statutes and regulations as overseen by the San Mateo County Health System's Environmental Health Services. Therefore, the project impact will be less than significant. The discussion above also applies if the remaining vacant parcels are developed in the future. **Source:** County Environmental Health Services.				
18.h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?			X	
Discussion: The proposed residence is cited in such a fashion such that the driveway would provide vehicle access directly onto Bay View Road, and could accommodate solar energy components into the design. Additionally, the residence would be required to comply with all currently adopted building (where all building materials must meet minimum insulation and energy conserving requirements), electrical, plumbing (where water conservation fixtures shall be implemented), and mechanical codes. Therefore, the project impact will be less than significant. If the remaining vacant parcels are developed in the future, the projects would also similarly be required to comply with all currently adopted building (where all building materials must meet minimum insulation and energy conserving requirements), electrical, plumbing (where water conservation fixtures shall be implemented), and mechanical codes. Therefore, the impact of these potential projects would be anticipated to be less than significant. **Source:** Project Plans.				
18.i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?				X
Discussion: Pursuant to the discussions throughout Section 18, the proposed project will not cause a public facility or utility to reach or exceed its capacity. Therefore, the project poses no impact. The discussion above also applies if the remaining vacant parcels are developed in the future. **Source:** Project Plans, Project Location, San Mateo County Environmental Health Services.				

19. MANDATORY FINDINGS OF SIGNIFICANCE.				
	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
19.a. Does the project have the potential to degrade the quality of the environment, significantly reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
Discussion: The project as proposed with all the recommended mitigation measures discussed in the previous sections will ensure that potential impacts are less than significant. **Source:** All Applicable Sources Previously Cited In This Document.				
19.b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
Discussion: As discussed in response to Section 10.f, the project scope includes the construction of Bay View Road and the installation of utilities. This road will serve the proposed single-family residence on the subject parcel but is also intended to serve the three remaining vacant parcels along Bay View Road once they are developed. It is unlikely that the new road would be extended in the future to allow additional development as the end of the road abuts lands owned by GGNRA. Therefore, the construction of the road and utilities would serve to encourage additional off-site development which has been addressed throughout this document. However, while the development of the three remaining vacant parcels would not result in a significant increase in the intensity of this undeveloped area, the applicant does not propose development of the three other vacant parcels at this time. To the extent possible, the impacts of development of the three other vacant parcels have been studied and assessed and would be further examined if and when an application is submitted. **Source:** All Applicable Sources Previously Cited In This Document.				

19.c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?		X		

Discussion: As discussed in the previous sections, the proposed project is to construct a new single-family residence and road while assessing the potential development of three other vacant parcels. Based on the discussions in the previous sections where project impacts were determined to be less than significant or mitigation measures were required to result in an overall less than significant impact, the proposed project would not cause significant adverse effects on human beings, either directly or indirectly.

Source: All Applicable Sources Previously Cited In This Document.

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

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)		X	
State Water Resources Control Board		X	
Regional Water Quality Control Board		X	
State Department of Public Health		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
U.S. Environmental Protection Agency (EPA)		X	
County Airport Land Use Commission (ALUC)		X	
Caltrans		X	
Bay Area Air Quality Management District		X	
U.S. Fish and Wildlife Service		X	
Coastal Commission		X	
City (Half Moon Bay)		X	
Sewer/Water District:		X	
Other: None			

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.		X

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit "hard card" or building permit that, at a minimum, includes the "Basic Construction Mitigation Measures" as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

i. Minimize the idling time of diesel powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and

construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure 3: To avoid impacts to nesting birds and violation of state and federal laws pertaining to birds, all construction related activities (including but not limited to mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) shall occur outside of the avian nesting season (February 1 or after August 31). If construction and construction noise occurs within the avian nesting season, all suitable habitats located within the project's area of disturbance including staging and storage areas plus a 250-foot (passerines) and 1,000-foot (raptor nests) buffer around these areas shall be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented and submitted to the Current Planning Section.

Mitigation Measure 4: If pre-construction nesting bird surveys results in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), shall take plus within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with the California Department of Fish and Wildlife, until the chicks have fledged. Monitoring shall be required to ensure compliance with the Migratory Bird Treaty Act and relevant California Fish and Wildlife code requirements. Monitoring dates and findings shall be documented.

Mitigation Measure 5: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that the new road will be constructed in a manner that minimizes excavation in the root zone of the trees. Excavation into the root zone should not exceed 6-12 inches.

Mitigation Measure 6: Plans submitted for a building permit and/or encroachment permit

application shall include the following note: Roots that are 1-inch in diameter and smaller that are encountered during excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter should be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 7: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of Biaxial Geo-Grid (or equivalent) to minimize the thickness of the required road base material.

Mitigation Measure 8: Plans submitted for a building permit and/or encroachment permit application shall demonstrate the use of underground boring for the installation of the utilities to minimize root impacts. Hand digging can be used if underground boring is not possible. Roots that are 1-inch in diameter and smaller that are encountered during these excavation activities can be clean cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter shall be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Mitigation Measure 9: Plans submitted for a building permit and/or encroachment permit application shall demonstrate that within the fenced Critical Root Zone, the following activities are not allowed:

a. Stockpiling construction materials or demolition debris.

b. Parking vehicles or equipment.

c. Piling soil and/or mulch.

d. Trenching for utilities installation or repair, or for irrigation system installation.

e. Changing soil grade by cutting or filling.

f. Damaging roots by girdling, tearing or grubbing.

g. Compacting soil from washing out equipment and vehicle maintenance.

h. Installing impervious parking lots, driveways, and walkways.

i. Wounding or breaking tree trunks or branches through contact with vehicles and heavy equipment.

j. Wounding trunks with string weed trimmers and lawn mowers.

k. Causing injury by fire or excessive heat.

Mitigation Measure 10: Plans submitted for a building permit and/or encroachment permit application shall show the location and type of tree protection fencing in compliance with the recommendations of the Goodrum arborist report. Tree protection fencing shall be installed prior to issuance of the encroachment and building permits for the project.

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with

CEQA Guidelines Section 15064.5(e).

Mitigation Measure 12: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, drilled piers, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Mitigation Measure 13: At the time of building permit and encroachment permit application, the applicant shall submit for review and approval, erosion and drainage control plans that show how the transport and discharge of soil and pollutants from and within the project site will be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the

condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Mitigation Measure 14: At the Building Permit application stage, the applicant shall demonstrate adequate water supply (quantity and quality) to serve proposed, existing, and future structures.

Mitigation Measure 15: Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360). Noise levels produced by construction activities shall not exceed the 80-dBA level at any one moment.

Mitigation Measure 16: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

Mitigation Measure 17: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 18: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

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

X I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitigation measures in the discussion have been included as part of the proposed project. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

(Signature)

3/6/2019 — Date

Project Planner — (Title)

ATTACHMENTS

A. Location Map
B. Project Plans
C. Coastside Design Review Committee Recommendation Letter (dated November 13, 2018)
D. Natural Resources Conservation Service Web Soil Survey- California Revised Storie Index
E. MIG Biological Resources Evaluation (dated October 2016)
F. Patchett Arborist Report (dated January 17, 2017)
G. Goodrum Arborist Report (dated November 7, 2017)
H. California Historical Resources Information System Review Letter (dated October 10, 2018)
I. San Mateo County General Plan Natural Hazards Map
J. Sigma Prime Geotechnical Study (dated May 7, 2007)
K. Sigma Prime Geotechnical Study (dated April 6, 2017)
L. Federal Emergency Management Agency Flood Insurance Rate Map 06081C0136E (effective October 16, 2012)
M. Sigma Prime Geosciences, Inc. Meadow Property Drainage Analysis (dated December 28, 2016)
N. Sigma Prime Geosciences, Inc. Bay View Road Drainage Analysis (dated December 28, 2016)

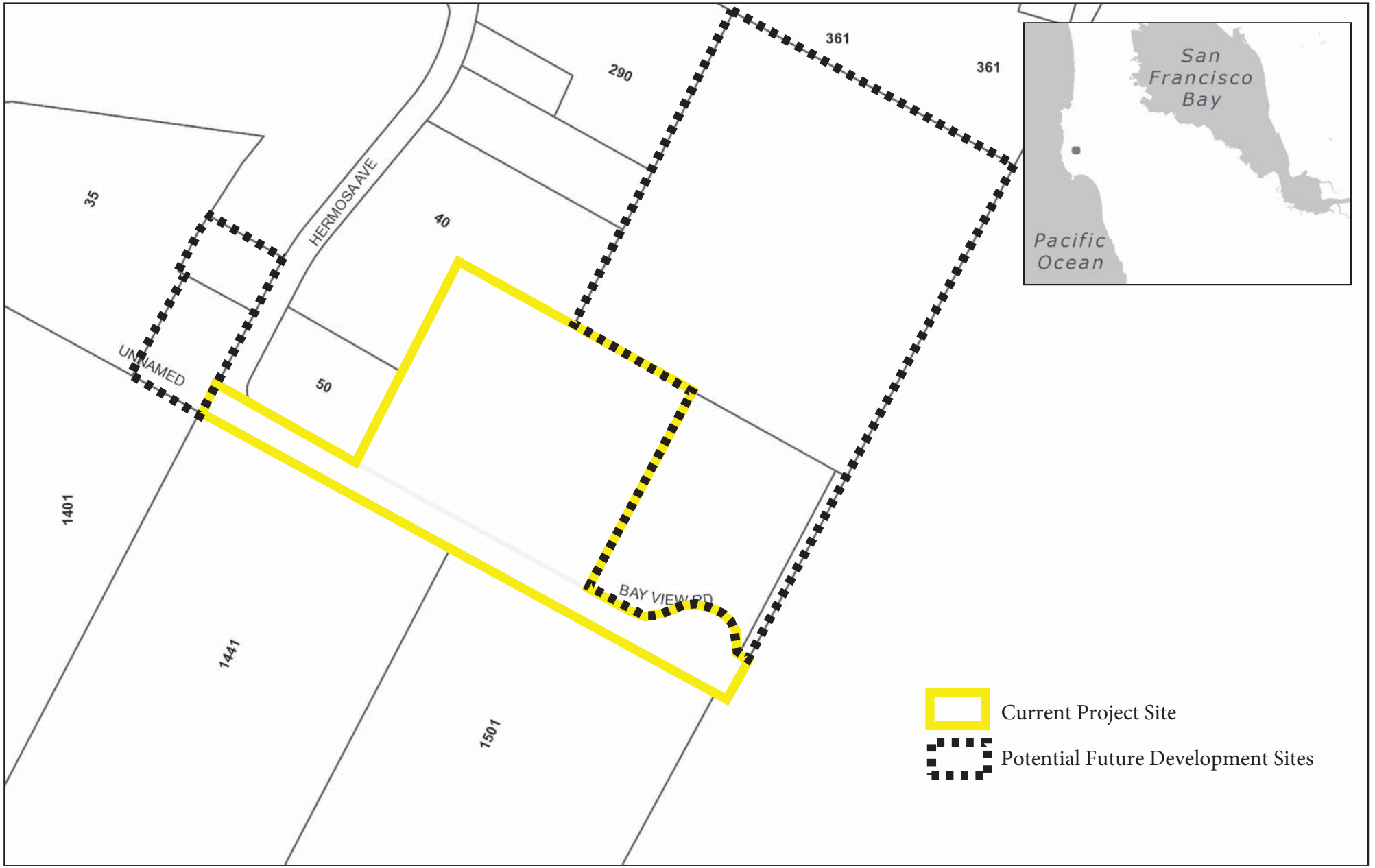
CML:RSP:ann – RSPDD0066_WNH.DOCX

County of San Mateo - Planning and Building Department

ATTACHMENT A

San Mateo County

PLN 2017-00017 (APN: 036-243-110) / Brasher



0.07 0 0.04 0.07 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 2,256

County of San Mateo - Planning and Building Department

ATTACHMENT B

490.94
N61°36'00"W

OVER 50% SLOPE AREA

LESS DETAIL AREA (SEE NOTE)

LOT 35 | LOT 36 | LOT 37 | LOT 38

BLOCK 10

SEE SHEET 2

MATCH LINE SHEET 1 SHEET 2

353.21
S61°36'00"E

PROPERTY LINE

230.00
S27°55'57"W

L=120.85
R=47.13
146°55'13"

L=63.00
R=55.00
65°37'48"

WATER STORAGE POOL

POSS WELL SITE

TOP OF BANK

TOE OF SLOPE

APPROX. TRAVELWAY

35'

ROW OF TREES ALONG HERE NOT SHOWN

BAY VIEW ROAD

B-50
588.71

625.41
B-41 NEW

187-90
B-42

SCALE: 1"=16'

NOTES:

1) ELEVATIONS SHOWN WERE TAKEN FROM A HUB WITH SPIKE AND SHINER SHOWN AS "B-4" WITH AN ASSUMED ELEVATION OF 564.71 FEET.

2) TOPOGRAPHIC FEATURES SHOWN WERE LOCATED BY THE "E.D.M." METHOD. ALTHOUGH THIS METHOD PROVIDES AN ACCURACY OF LESS THAN "TWO FEET IN VERTICAL AND TWO FEET IN HORIZONTAL" ERROR, IN MOST CASES, ANY PROPOSED DEVELOPMENT THAT IS DESIGNED ON (1) SPECIFIC HEIGHT REQUIREMENTS AND/OR (2) A CLOSENESS TO SAID FEATURES MUST BE CONFIRMED ON THE SITE.

3) CONTOUR INTERVAL = 2'; SCALE: 1" = 16'.

4) NOT ALL TREES WERE LOCATED BY THIS SURVEY.

5) THE LOCATION OF MULTIPLE TREES ARE SHOWN TO REFLECT THE NUMBER OF TRUNKS IN A GROUP AND NOT NECESSARILY THEIR TRUE RELATIVE POSITION TO EACH OTHER. SOME TREE SPECIES COULD NOT BE IDENTIFIED.

6) THE EASEMENT SHOWN WAS TAKEN FROM A TITLE INSURANCE POLICY PREPARED BY TITLE INSURANCE COMPANY OF MINNESOTA DATED JUNE 9, 1986 WITH ORDER NUMBER 101622. THERE ARE NO EASEMENTS OF RECORD ENCUMBERING ON THE LARGER PARCEL AS PER A PRELIMINARY REPORT PREPARED BY OLD REPUBLIC TITLE DATED APRIL 22, 1999 WITH ORDER NUMBER 273452.

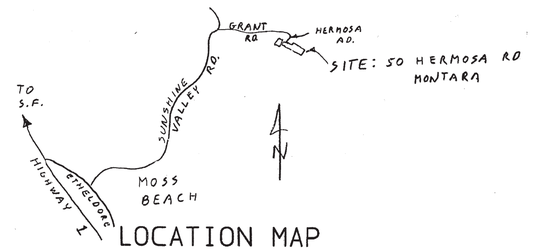
7) THE PROPERTY LINES SHOWN WERE DETERMINED FROM A BOUNDARY SURVEY CONDUCTED IN AUGUST & SEPTEMBER OF 2001. A RECORD OF SURVEY MAP HAS BEEN SUBMITTED TO THE COUNTY AND IS PENDING RESUBMITTAL.

8) GENERALLY, AT THE TIME OF THIS SURVEY, LOWER PORTIONS OF THE PROPERTY HAD BEEN CLEARED OF UNDERBRUSH.

9) THE AREA TO THE EAST OF THE BOLD DASHED LINE IS LESS ACCURATE WITH LESS DETAIL AND ONLY SOME TREES ARE SHOWN.

O INDICATES SET 3/4" IRON PIPE TAGGED L.S. 7454 IN SEPTEMBER 2001 UNLESS NOTED.

10) TOPOGRAPHIC FEATURES SHOWN AS THEY WERE IN OCTOBER & NOVEMBER, 2002.



LOCATION MAP

LICENSED LAND SURVEYOR MICHAEL T. TURNROSE L.S. 7454 STATE OF CALIFORNIA
L.I.C. EXP. 12-31-06

9/10/04

Michael T. Turnrose

RECEIVED
MAR 30 2017
Planning Department

REVISED 9/10/04

TOPOGRAPHIC MAP

OF THE LANDS OF BRASHER AS DESCRIBED IN DOCUMENT NUMBERS 95-099361 & 1999-165801 OF OFFICIAL RECORDS, BEING MORE COMMONLY KNOWN AS ASSESSOR'S PARCEL NUMBERS 36-231-090 & -100 & 36-243-020, SAN MATEO COUNTY RECORDS, CALIFORNIA.

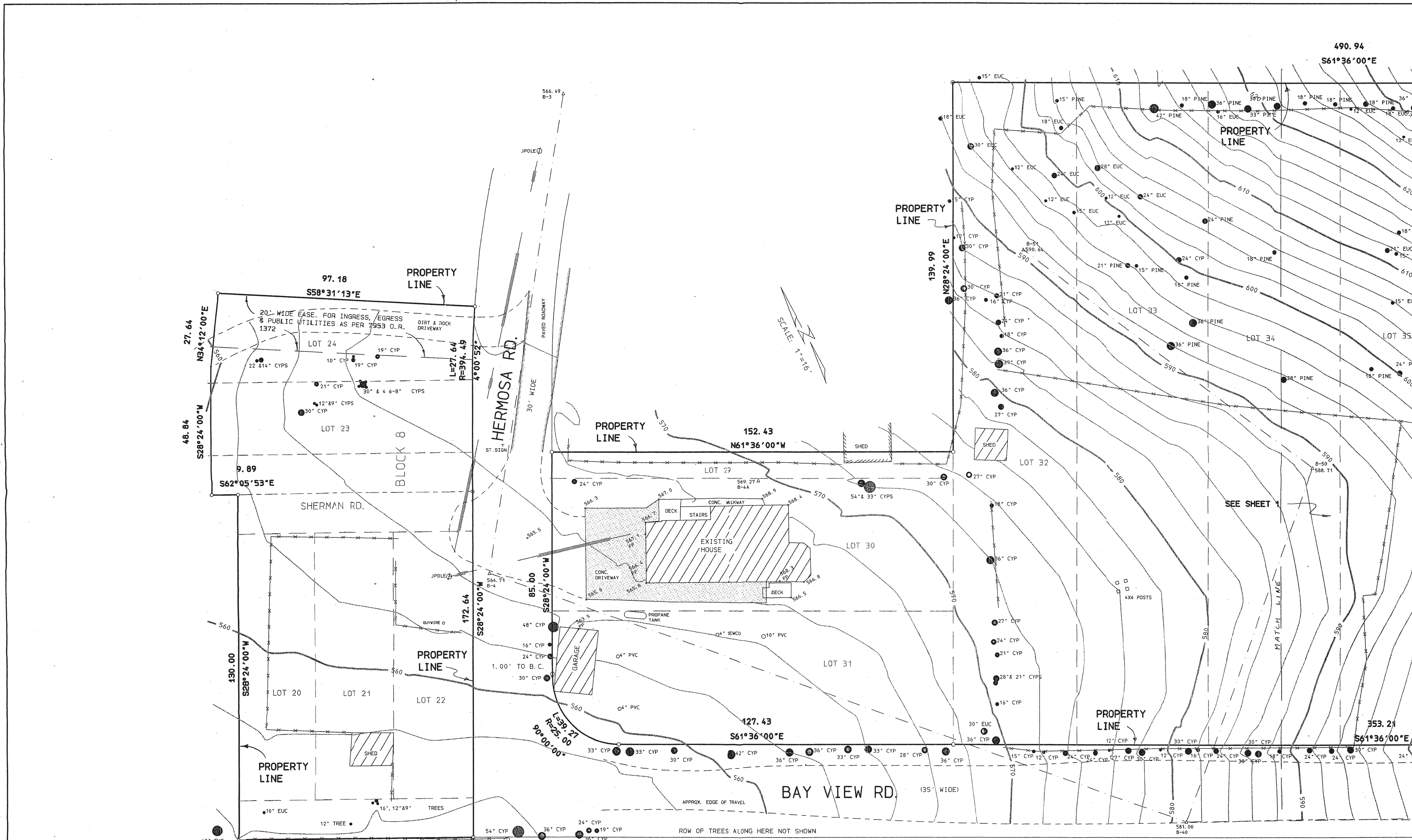
--FOR--
NED BRASHER
P.O. BOX 370438
MONTARA, CA. 94037
(650) 728-5199

SAN MATEO COUNTY — CALIFORNIA
SCALE: 1"= 16' — NOV. 2002

TURNROSE LAND SURVEYING
P.O. BOX 5648, REDWOOD CITY, CA. 94063
(650)-324-3316
FAX (209) 599-5119

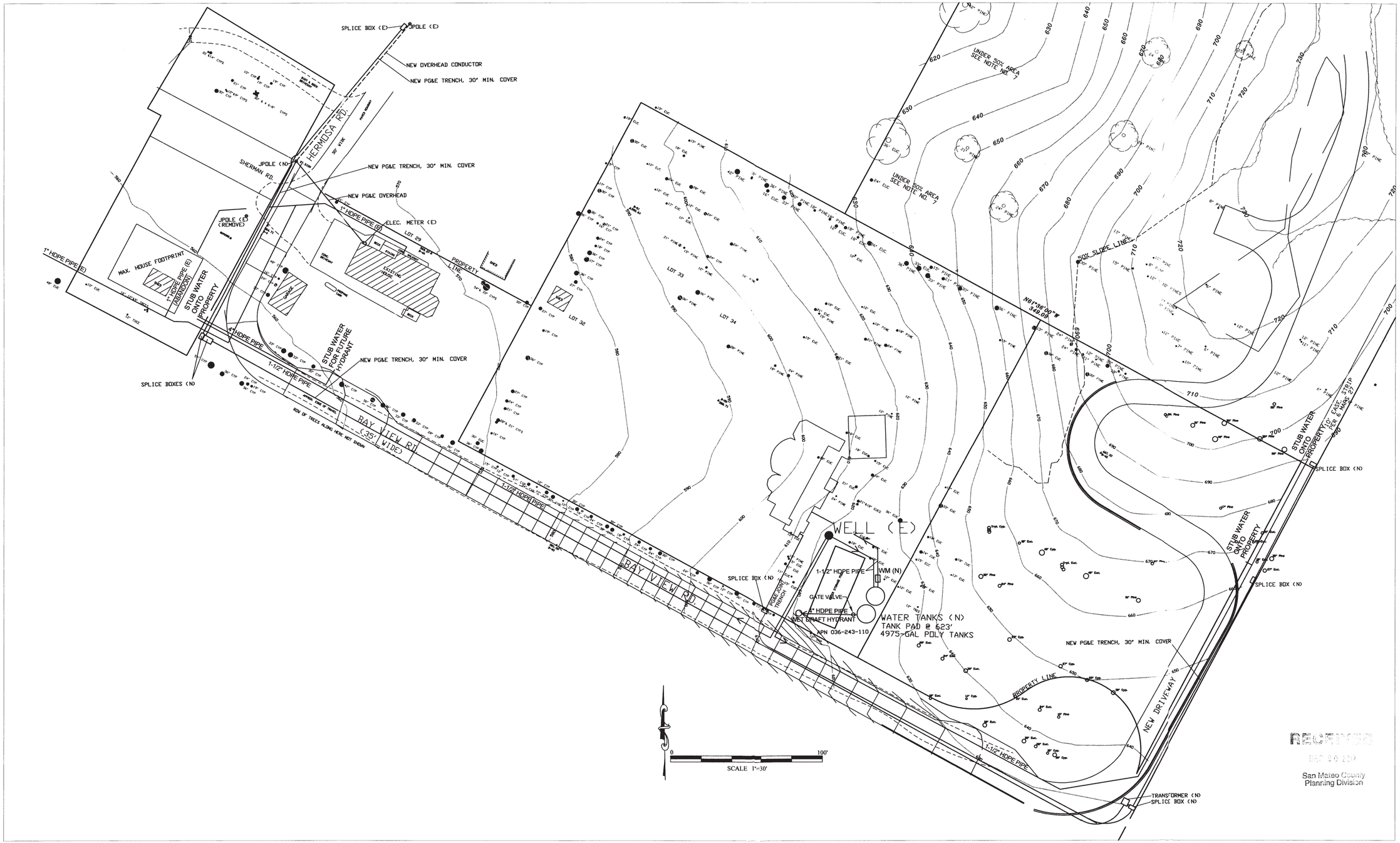
JOB NO. 01-26

SHEET 1 OF 2



HERMOSA RD.
30' WIDE
PAVED ROADWAY
BAY VIEW RD.
(35' WIDE)
SHERMAN RD.
BLOCK 8
PROPERTY LINE
EXISTING HOUSE
GARAGE
DECK
STAIRS
CONC. WALKWAY
CONC. DRIVEWAY
PROPANE TANK
SHED
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 27
LOT 30
LOT 31
LOT 32
LOT 33
LOT 34
LOT 35
SCALE: 1"=16'
SEE SHEET 1
MATCH LINE
20' WIDE EASE. FOR INGRESS, EGRESS & PUBLIC UTILITIES AS PER 7953 O.R. 1372
DIRT & ROCK DRIVEWAY
97.18
S58°31'13"E
27.64
N34°12'00"E
48.84
S28°24'00"W
9.89
S62°05'53"E
130.00
S28°24'00"W
88.98
L=27.64
R=394.49
4°00'52"
172.64
S28°24'00"W
85.00
S28°24'00"W
152.43
N61°36'00"W
139.99
N28°24'00"E
490.94
S61°36'00"E
127.43
S61°36'00"E
353.21
S61°36'00"E
L=39.27
R=25.00
90°00'00"
1.00' TO B.C.
APPROX. EDGE OF TRAVEL
ROW OF TREES ALONG HERE NOT SHOWN
4X4 POSTS
ST.SIGN
JPOLE
GUYWIRE

PLN2017-00



REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9-30-19
EXPIRES
CIVIL
STATE OF CALIFORNIA

RECEIVED
DEC 20 2017
San Mateo County
Planning Division

Sigma Prime Geosciences, Inc.

SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019
(650) 728-3590
FAX: 728-3593

DATE: 12-20-17	CHECKED BY: AZG
DRAWN BY: CMK	REV. DATE:

UTILITY PLAN

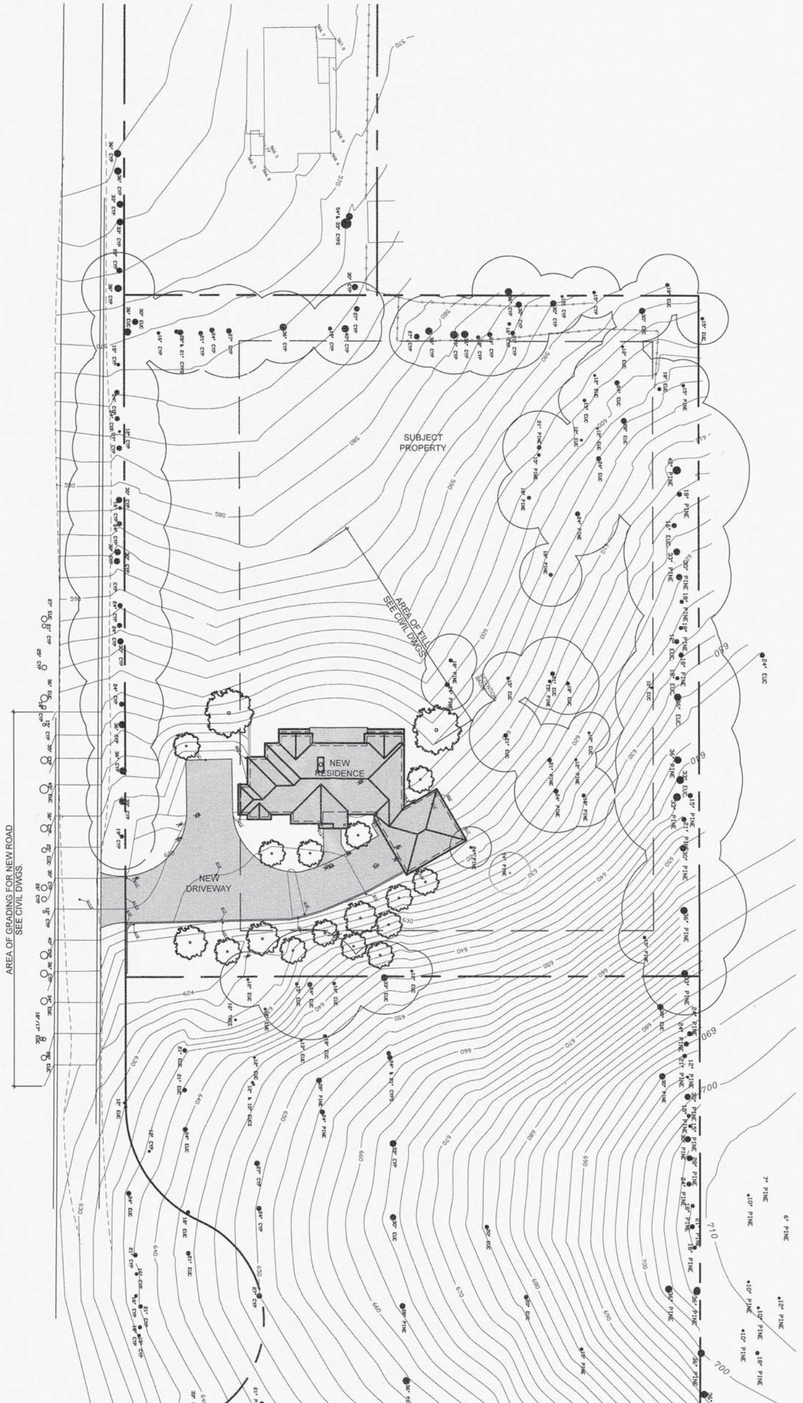
GENERAL NOTES

LEGEND

UTILITY NOTES

1. WATER WELL SHALL SUPPLY FOUR PROPERTIES VIA A 1-1/2" HDPE PIPELINES TO WATER METER AT

OTHER PROPERTIES
MONTARA, CA



GENERAL NOTES

CODES
THE WORK SHALL CONFORM TO THE CALIFORNIA TITLE 24:
PART 2 2016 CALIFORNIA BUILDING CODE
PART 2.5 2016 CALIFORNIA RESIDENTIAL CODE
PART 3 2016 CALIFORNIA ELECTRICAL CODE
PART 4 2016 CALIFORNIA MECHANICAL CODE
PART 5 2016 CALIFORNIA PLUMBING CODE
PART 6 2016 CALIFORNIA ENERGY CODE
PART 9 2016 CALIFORNIA FIRE CODE
PART 11 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
AND THE SAN MATEO COUNTY MUNICIPAL CODE

DRAWINGS
1. GENERAL CONDITIONS. THE STANDARD A.I.A. GENERAL CONDITIONS ARE HEREBY MADE A PART OF THESE DRAWINGS.
2. DIMENSIONS. WRITTEN DIMENSTIONS SHALL GOVERN. DO NOT SCALE THE DRAWINGS.
3. DIMENSIONS. ALL DIMENSIONS ARE TO THE FACE OF FINISH, OR TO THE CENTERLINE OF GRIDS, COLUMNS, WINDOWS, DOORS, AND FIXTURES, UNLESS OTHERWISE NOTED.
4. DIMENSIONS. 'CLR' DENOTES MEASUREMENT FROM FINISH SURFACES, TYP.
5. COMPLETION. THESE DRAWINGS INCLUDE THE GENERAL EXTENT OF NEW CONSTRUCTION NECESSARY FOR THE WORK, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE.

GENERAL CONTRACTOR'S RESPONSIBILITIES
6. PLANS ON SITE. THE GENERAL CONTRACTOR (HEREAFTER G.C.) SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION FOR USE BY ALL TRADES AND SHALL PROVIDE ALL SUBCONTRACTORS WITH CURRENT CONSTRUCTION DRAWINGS.
7. DISCREPANCIES. THE G.C. IS RESPONSIBLE FOR THOROUGH REVIEW OF THESE DOCUMENTS AND EXISTING FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT IN WRITING FOR CLARIFICATION.
8. SUBSTITUTIONS. THE G.C. IS REQUIRED TO NOTIFY ARCHITECT IN WRITING OF ANY SUBSTITUTION, REVISION OR PROPOSED ALTERNATE AT LEAST TWO WEEKS PRIOR TO THE ORDER OR INSTALLATION OF SAID ALTERNATE IN ORDER TO ALLOW FOR NECESSARY COORDINATION AND APPROVALS.
9. INSPECTIONS. THE G.C. IS RESPONSIBLE FOR THOROUGH REVIEW OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS, GEOTECHNICAL REPORT, AND THE ENERGY AND GREEN COMPLIANCE MANDATORY MEASURES AND IS RESPONSIBLE FOR SCHEDULING AND BEING PRESENT FOR ANY INSPECTIONS OR OBSERVATIONS REQUIRED. (MIN. 48 HOURS NOTICE FOR SITE VISITS)
10. SAFETY. THE G.C. SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON THE JOB SITE AND ADHERE TO ALL FEDERAL, STATE, LOCAL AND OSHA SAFETY REGULATIONS.
11. DEFERRED SUBMITTALS. DEFERRED SUBMITTAL DOCUMENTATION SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE PROJECT. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
12. WORKMANSHIP. ALL WORKMANSHIP IN ALL TRADES SHALL BE OF THE HIGHEST QUALITY, BY PERSONS ESPECIALLY SKILLED AT ASSIGNED TASKS, AND SHALL RESULT IN A NEAT AND CLEAN INSTALLATION. ALL WORK SHALL BE INSTALLED TRUE, PLUMB, LEVEL, SQUARE, AND IN PROPER ALIGNMENT. NOTIFY ARCHITECT AND OWNER OF EXISTING CONDITIONS WHICH DO NOT MEET THESE EXPECTATIONS.
13. MANUFACTURER'S REQUIREMENTS. THE G.C. SHALL INSTALL ALL MATERIALS, EQUIPMENT, AND FIXTURES IN CONFORMANCE WITH THE REQUIREMENTS OF THE MANUFACTURER.
14. BRACING AND SHORING. DESIGN AND INSTALLATION OF ALL TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE G.C.

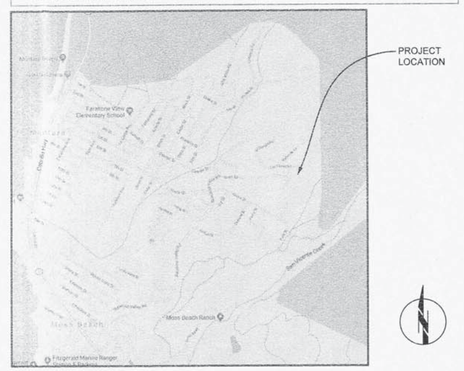
GENERAL NOTES
15. CAL GREEN. SEE SHEET GB.1 FOR CAL GREEN MANDATORY REQUIREMENTS
16. WILDLAND URBAN INTERFACE (WUI). SEE SHEETS A6.1, A8.1, A8.2 FOR ALL DETAILS AND NOTES REGARDING REQUIRED FIRE PROTECTION MEASURES OF BUILDING EXTERIOR PER CRC R337 AND CBC CHAPTER 7A

SITE PLAN NOTES:
1. GENERAL NOTES. SEE SHEETS A0.1, TOPOGRAPHIC SURVEY, GRADING AND DRAINAGE PLAN C-1, LANDSCAPE PLAN LP-1, AND FLOOR PLANS FOR ADDITIONAL INFO.
2. BOUNDARY VERIFICATION. THE G.C. SHALL VERIFY THE LOCATIONS OF ALL PROPERTY BOUNDARIES, SETBACKS, AND EASEMENT LOCATIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE FURTHER COMMENCEMENT OF WORK.
3. ENCROACHMENT. THE G.C. IS RESPONSIBLE FOR OBTAINING APPROVAL / PERMIT PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
4. UTILITIES. THE G.C. SHALL LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATION, GRADING, OR TRENCHING.
5. UTILITIES. SEE ELECTRICAL PLAN SHEET E2.1 FOR EXACT LOCATIONS OF MAIN ELECTRIC METER AND GAS METER. COORDINATE FINAL LOCATION AND ROUTING WITH G.C. AND UTILITY SERVICE PROVIDER.
6. UTILITIES. THE G.C. SHALL COORDINATE THE LOCATION OF IRRIGATION VALVE BOXES WITH OWNER.
7. TREE PROTECTION. THE G.C. SHALL PROTECT EXISTING TREES FROM DAMAGE DURING CONSTRUCTION AND PROVIDE TREE PROTECTION PER LOCAL JURISDICTION REQUIREMENTS. LARGE ROOTS OR LARGE MASSES OF ROOTS TO BE CUT SHOULD BE INSPECTED BY A CERTIFIED ARBORIST PRIOR TO CUTTING. ANY ROOTS TO BE CUT SHALL BE MONITORED AND DOCUMENTED. ROOTS TO BE CUT SHOULD BE SEVERED CLEANLY WITH A SAW OR TOPPERS.
8. SLOPED GRADE. FINISH GRADE AROUND BUILDING TO HAVE A MIN. 2% SLOPE AWAY FROM BUILDING AT PAVED SURFACES, AND 5% SLOPE AT LANDSCAPE SURFACES FOR A MIN. OF 5' AROUND BUILDING.
9. ADDRESS. STREET ADDRESS NUMERALS TO BE AT LEAST 4" HIGH WITH A MINIMUM 1/2" STROKE, MOUNTED ON A CONTRASTING BACKGROUND CLEARLY VISIBLE FROM THE STREET. ADDRESS NUMBERS SHALL BE AT LEAST SIX FEET ABOVE THE FINISHED SURFACE OF THE DRIVEWAY. CRC R319.1
10. CHIMNEYS. THE INSTALLATION OF AN APPROVED SPARK ARRESTOR IS REQUIRED ON ALL CHIMNEYS, EXISTING AND NEW. SPARK ARRESTORS SHALL BE CONSTRUCTED OF WOVEN OR WELDED WIRE SCREENING OF 12 GAUGE USA STANDARD WIRE HAVING OPENINGS NOT EXCEEDING 1/2".

ABBREVIATIONS

A.D.	AREA DRAIN	GSM	GALVANIZED SHEET METAL
ADJ	ADJUSTABLE	GYP. BD.	GYPSUM BOARD
A.F.F.	ABOVE FINISH FLOOR	HT	HEIGHT
ALT	ALTERNATE	INCAN	INCANDESCENT
ALUM	ALUMINUM	LT	LIGHT
ANOD	ANODIZED	MAX	MAXIMUM
ARCH	ARCHITECT/TURAL	MECH	MECHANICAL
BD	BOARD	MFR	MANUFACTURER
BLD'G	BUILDING	MIN	MINIMUM
BLK'G	BLOCKING	MTL	METAL
BM	BEAM	(N)	NEW
B.O.	BOTTOM OF	O.C.	ON CENTER
CAB	CABINET	O/	OVER
C.J.	CEILING JOIST	PLYWD	PLYWOOD
CLG	CEILING	PTD	PAINTED
CLR	CLEAR	PT. GR.	PAINT GRADE
C.O.	CLEAN OUT	P.T.	PRESSURE TREATED
CONC	CONCRETE	RDWD	REDWOOD
DIA	DIAMETER	REFR	REFRIGERATOR
DN	DOWN	REQ'D	REQUIRED
DS	DOWNSPOUT	RM	ROOM
DW	DISHWASHER	R.O.	ROUGH OPENING
DWG	DRAWING	SCHED	SCHEDULE
(E)	EXISTING	SHT	SHEET

VICINITY MAP



PROJECT DIRECTORY

ARCHITECT:
MORRIS ARCHITECTURE
12 COZZOLINO CT.
MILLBRAE, CA 94030
T. 650.995.1360
RYAN@MORRIS-ARCH.COM

LANDSCAPE ARCHITECT:
JOHN DALRYMPLE L.A.
301 SEAPORT CT. SUITE 103
REDWOOD CITY, CA 94063
T. 650.549.8707

CIVIL ENGINEER:
SIGMA PRIME GEOSCIENCES
332 PRINCETON AVE.
HALF MOON BAY, CA 94019
T. 650.728.3590

SURVEYOR:
TURNROSE LAND SURVEYING
P.O. BOX 5648
REDWOOD CITY, CA 94063
T. 650.324.3316

PROJECT DESCRIPTION

1. NEW TWO STORY SINGLE FAMILY RESIDENCE WITH ATTACHED GARAGE.
2. SITE WORK INCLUDES 1,100 CUBIC YARDS OF CUT AND FILL, REMOVAL OF 14 SIGNIFICANT TREES, AND ASSOCIATED ROAD AND UTILITY IMPROVEMENTS

DEFERRED SUBMITTALS

1. FIRE SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13D AND STATE AND LOCAL REQUIREMENTS. SHOP DRAWINGS SHALL BE APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. PROVIDE MIN. 1" WATER METER BACKFLOW PREVENTION DEVICE/DOUBLE CHECK VALVE ASSEMBLY, AND ALL SPRINKLER DRAINAGE SHALL BE PLACED INTO LANDSCAPE AREAS.

PROJECT DATA

APN #		036-243-110
ZONE		RM-CZ/DR/CD
OCCUPANCY		R-3 / U
CONSTRUCTION TYPE		V-B
AUTOMATIC SPRINKLERS		YES - NEW
STORIES		2
SITE AREA		1.77 ACRES (74,250 SF)
FLOOR AREA		
MAX. ALLOWED		6,200 SF
ACTUAL	EXISTING	PROPOSED
FIRST FLOOR CONDITIONED AREA	N/A	1,348 SF
SECOND FLOOR CONDITIONED AREA	N/A	2,128 SF
ATTACHED GARAGE	N/A	667 SF
TOTAL	N/A	4,143 SF

SHEET INDEX

PLN2017-00017

MORRIS ARCHITECTURE
12 COZZOLINO CT | MILLBRAE, CA
650.995.1360 | www.morris-arch

BRASHER RESIDENCE
MEADOW #3 LOTS 32-37 BAY VIEW ROAD
MONTARA, CA 94044

LICENSED ARCHITECT RYAN G. MORRIS C 33359 REN. 06-30-19 STATE OF CALIFORNIA

1	PLNG REV 1
2	
3	
4	
5	
6	
7	

SITE PLAN NOTES:

1. GENERAL NOTES. SEE SHEETS A0.1, TOPOGRAPHIC SURVEY, GRADING AND DRAINAGE PLAN C-1, LANDSCAPE PLAN LP-1, AND FLOOR PLANS FOR ADDITIONAL INFO.
2. CAL GREEN. SEE SHEET GB.1 FOR CAL GREEN MANDATORY REQMNTS.
3. BOUNDARY VERIFICATION. THE G.C. SHALL VERIFY THE LOCATIONS OF ALL PROPERTY BOUNDARIES, SETBACKS, AND EASEMENT LOCATIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE FURTHER COMMENCEMENT OF WORK.
4. ENCROACHMENT. THE G.C. IS RESPONSIBLE FOR OBTAINING APPROVAL / PERMIT PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
5. UTILITIES. THE G.C. SHALL LOCATE ALL UTILITIES PRIOR TO ANY EXCAVATION, GRADING, OR TRENCHING.
6. UTILITIES. SEE ELECTRICAL PLAN SHEET E2.1 FOR EXACT LOCATIONS OF MAIN ELECTRIC METER AND GAS METER. COORDINATE FINAL LOCATION AND ROUTING WITH G.C. AND UTILITY SERVICE PROVIDER.
7. UTILITIES. THE G.C. SHALL COORDINATE THE LOCATION OF IRRIGATION VALVE BOXES WITH OWNER.
8. TREE PROTECTION. THE G.C. SHALL PROTECT EXISTING TREES FROM DAMAGE DURING CONSTRUCTION AND PROVIDE TREE PROTECTION PER LOCAL JURISDICTION REQUIREMENTS. LARGE ROOTS OR LARGE MASSES OF ROOTS TO BE CUT SHOULD BE INSPECTED BY A CERTIFIED ARBORIST PRIOR TO CUTTING. ANY ROOTS TO BE CUT SHALL BE MONITORED AND DOCUMENTED. ROOTS TO BE CUT SHOULD BE SEVERED CLEANLY WITH A SAW OR TOPPERS.
9. SLOPED GRADE. FINISH GRADE AROUND BUILDING TO HAVE A MIN. 2% SLOPE AWAY FROM BUILDING, FOR A MIN. OF 5' AROUND BUILDING.
10. FOOTING DEPTH. (N) FOUNDATION FOOTINGS SHALL BEAR ON NATIVE, UNDISTURBED SOIL. SEE GEOTECH. REPORT AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFO.
11. ADDRESS. STREET ADDRESS NUMERALS TO BE AT LEAST 4" HIGH WITH A MINIMUM 1/2" STROKE, MOUNTED ON A CONTRASTING BACKGROUND CLEARLY VISIBLE FROM THE STREET. ADDRESS NUMBERS SHALL BE AT LEAST SIX FEET ABOVE THE FINISHED SURFACE OF THE DRIVEWAY. CRC R1004
12. CHIMNEYS. THE INSTALLATION OF AN APPROVED SPARK ARRESTOR IS REQUIRED ON ALL CHIMNEYS, EXISTING AND NEW. SPARK ARRESTORS SHALL BE CONSTRUCTED OF WOVEN OR WELDED WIRE SCREENING OF 12 GAUGE USA STANDARD WIRE HAVING OPENINGS NOT EXCEEDING 1/2".

LEGEND:

(N) TREE- SEE LANDSCAPE PLAN

(E) TREE TO REMAIN

(E) TREE TO BE REMOVED - 14 TOTAL

1. LANDSCAPE: SEE LANDSCAPE AND CIVIL DWGS. FOR ALL SITE INFO.

MORRIS ARCHITECTURE
12 COZZOLINO CT | MILLBRAE, CA
650.995.1360 | www.morris-arch

BRASHER RESIDENCE

MEADOW #3 LOTS 32-37 BAY VIEW ROAD
MONTARA, CA 94044

LICENSED ARCHITECT
RYAN G. MORRIS
C 33359
REN. 08/2019
STATE OF CALIFORNIA

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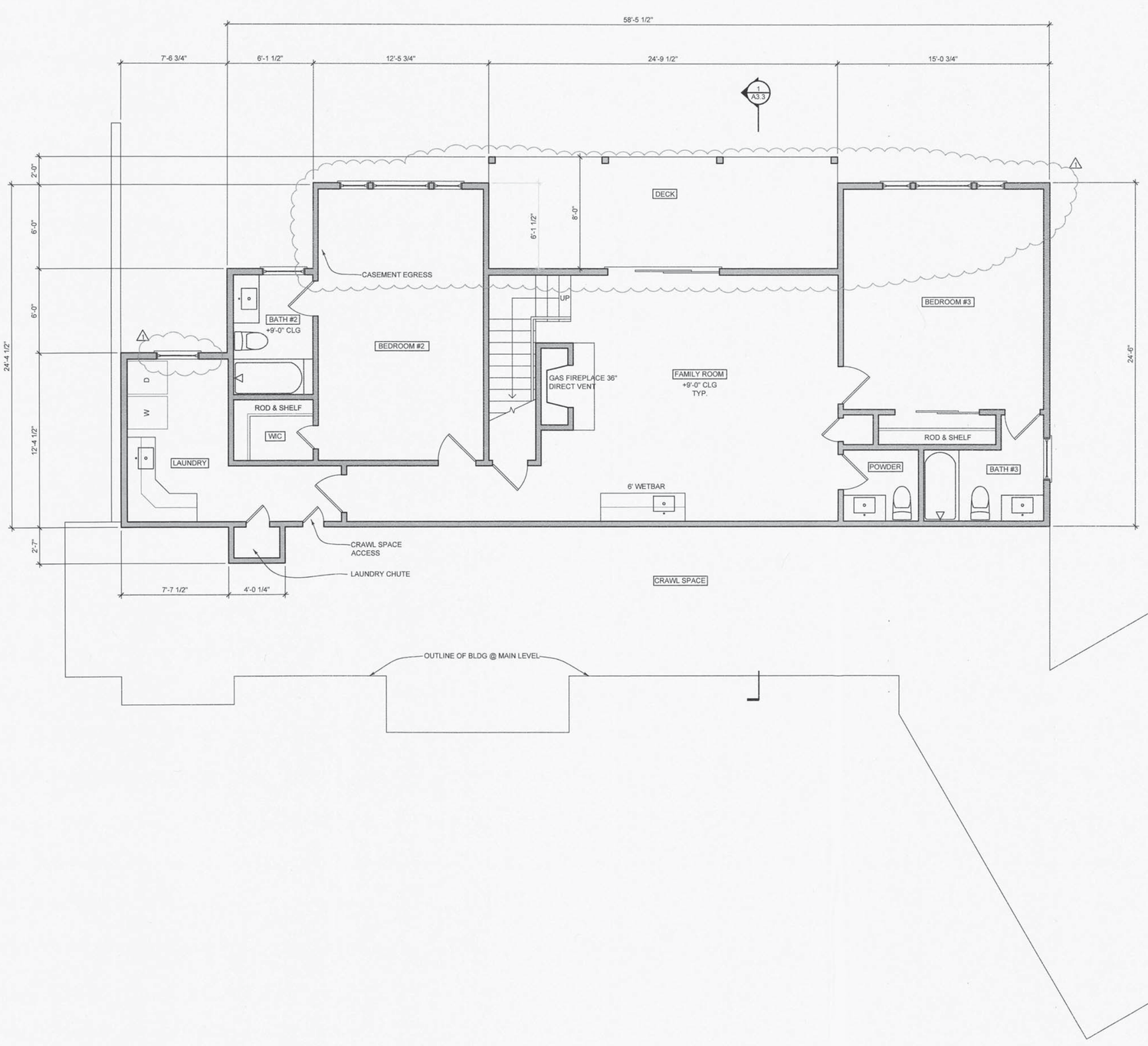

FOUNDATION & CONCRETE NOTES:

1. UNDER FLOOR ACCESS. PROVIDE MIN. OF 18"X24" THRU FLOOR OR 16"X24" THRU WALL ACCESS TO UNDER FLOOR AREAS. CRC R408.4
2. UNDER FLOOR ACCESS. FOR AN APPLIANCE IN AN UNDER FLOOR AREA, PROVIDE MIN. 22" X 30" ACCESS OR MIN. REQUIRED BY APPLIANCE. CMC 904.10
3. CRAWL SPACE. PROVIDE 18" TALL MIN. ACCESS PATHWAY THROUGH UNDER FLOOR AREA, INCLUDING UNDER DUCTS. CMC 603.1. FLOOR JOISTS OR FLOORS WITHOUT JOISTS WITH LESS THAN 18" CLR. TO EXPOSED GROUND SHALL BE PRESSURE TREATED. GIRDERS WITH LESS THAN 12" CLR. SHALL BE P.T. CBC 2304.11.2.1.
4. PRESSURE TREATED. EXTERIOR WOOD FRAMING & SHEATHING RESTING ON FOUNDATIONS AND LESS THAN 8" FROM EARTH OR 2" FROM PAVING SHALL BE P.T. CBC 2304.11.2.2. (SIDING MAY BE 6" FROM EARTH. CBC 2304.11.2.6)
5. VERIFICATION. G.C. TO VERIFY ALL CONCRETE ROUGH OPENING SIZES, ELEVATIONS, ETC. PRIOR TO FOUNDATION POUR. G.C. TO COORDINATE ALL LOCATIONS OF HOLDOWNS, CURBS, STEPS, PLUMBING & MECHANICAL SLEEVES, ETC.
6. VERIFICATION. PRIOR TO POURING ANY CONCRETE FOR FOUNDATIONS, IT IS RECOMMENDED THAT A LICENSED SURVEYOR CONFIRM THAT THE REQUIRED SETBACKS AS SHOWN ON THE APPROVED PLANS HAVE BEEN MAINTAINED.

FLOOR PLANS NOTES:

1. CAL GREEN. SEE SHEET GB.1 FOR CAL GREEN MANDATORY REQUIREMENTS
2. DOORS & WINDOWS. SEE SHEET A6.1 AND A6.2 FOR DOOR AND WINDOW SCHEDULES.
3. UNDERSTAIR SPACES. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDERSTAIR SURFACE, AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYP. BD. CRC 302.7
4. DRAFTSTOPS. SHALL BE INSTALLED IN FLOOR/ CEILING ASSEMBLIES WHERE THERE IS A USABLE SPACE ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY. DRAFT STOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET AND IS DIVIDED INTO APPROXIMATELY EQUAL AREAS. CRC R302.12
5. SHOWERS. SHOWER AND TUB/SHOWER WALLS SHALL HAVE A NONABSORBENT SURFACE MIN. 72" ABOVE THE FLOOR, INSTALLED OVER FIBER-CEMENT BACKER BD. WATER-RESISTANT GYPSUM BACKING BOARD MAY NOT BE USED. CRC R307.2, R702.4
6. INTERIOR WATERPROOFING. AT ALL LOCATIONS SUBJECT TO EXPOSURE TO WATER, G.C. TO PROVIDE WATERPROOF MEMBRANE OVER HORIZONTAL AREAS AND UP WALLS 6" MIN ABOVE FINISH.
7. CONCEALED WORK. MAINTAIN RECORD DRAWINGS, SPECIFICATIONS, AND PHOTOS OF CONCEALED WORK.
8. FRAMING. ALL NEW EXTERIOR WALLS TO BE 2X4 WD. STUDS AT 16" O.C., TYP. UNLESS OTHERWISE NOTED. ALL NEW INTERIOR WALLS TO BE 2X4 WD. STUDS AT 16" O.C., TYP. UNLESS OTHERWISE NOTED.
9. ROUGH OPENINGS. CONTRACTOR TO VERIFY ROUGH OPENINGS SHOWN ON PLAN OR SCHEDULES WITH REQUIREMENTS OF UNITS TO BE INSTALLED PRIOR TO FRAMING OPENINGS.
10. ATTIC ACCESS. PROVIDE MIN 22" X 30" ACCESS OPENING TO ATTICS GREATER THAN 30 SF AND WITH 30" MIN HEADROOM. THRU WALL ACCESS OPENING SHALL BE MIN 22" WIDE X 30" TALL.

INSULATION NOTES:

1. SEE TITLE 24 ENERGY REPORT FOR REQUIRED INSULATION VALUES.
2. INSULATION SHALL CONFORM TO FLAME-SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF CRC R302.10
3. AFTER INSTALLING INSULATION, THE INSTALLER SHALL POST AN INSULATION CERTIFICATE, SIGNED BY THE INSTALLER AND THE BUILDER, IN A CONSPICUOUS LOCATION IN THE BUILDING, STATING THAT THE INSTALLATION CONFORMS WITH THE REQUIREMENTS OF TITLE 24, PART 2, CH. 2-53 OF THE CALIFORNIA ADMINISTRATIVE CODE

WALL LEGEND:

- (E) WALL
- (E) WALL TO BE REMOVED
- (N) 2x4 WALL
- (E)/(N) 1 HR. RATED WALL
- (E)/(N) 2X6 WALL

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BRASHER RESIDENCE

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MONTARA, CA 94044

LICENSED ARCHITECT
RYAN G. MORRIS
C 33359
REN. 08.30.19
STATE OF CALIFORNIA

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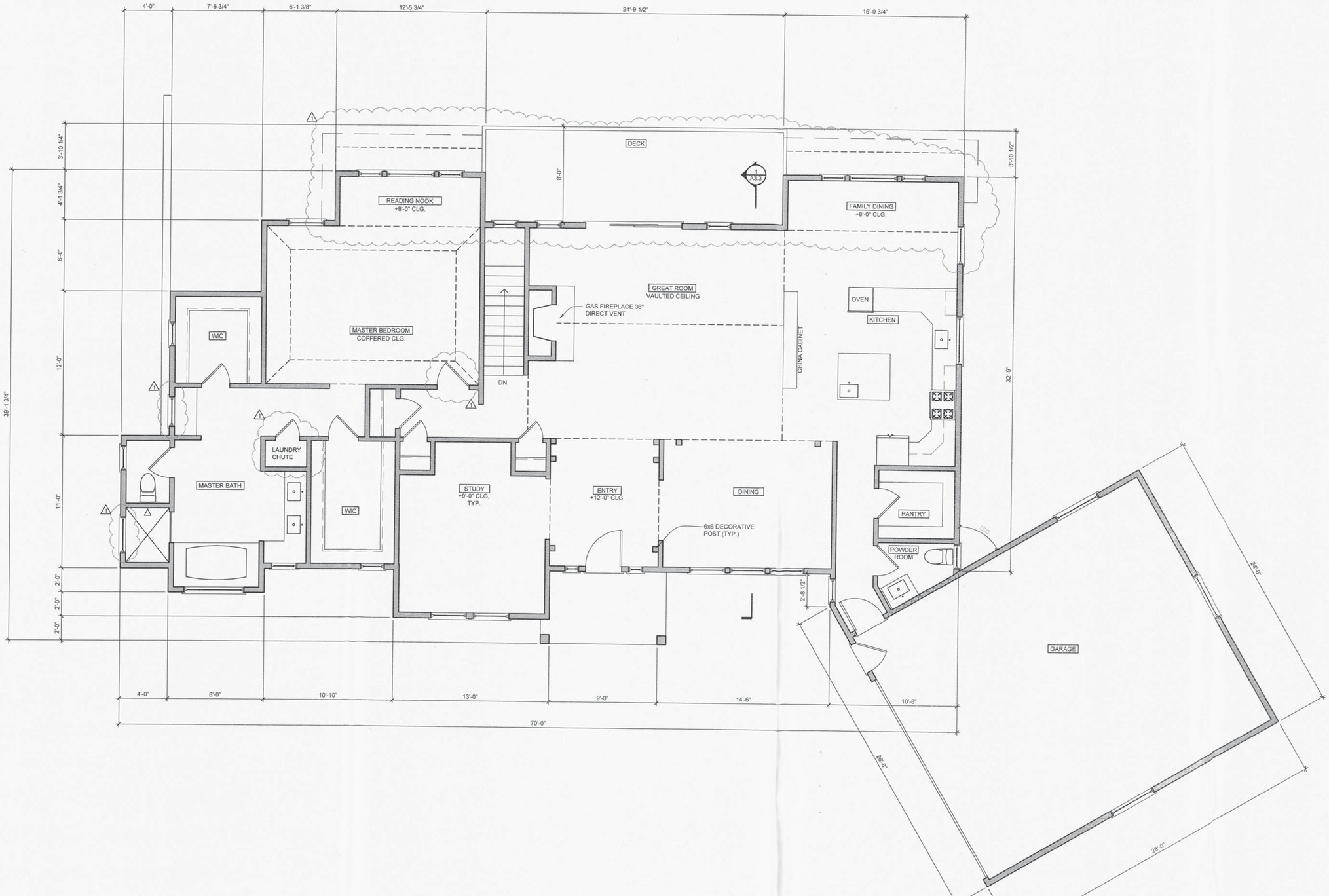
FLOOR PLAN NOTES:

1. REFERENCE. SEE SHEET A2.1 FOR TYPICAL FLOOR PLAN NOTES. SEE SHEET E2.1 FOR TYPICAL MECHANICAL, ELECTRICAL, AND PLUMBING NOTES



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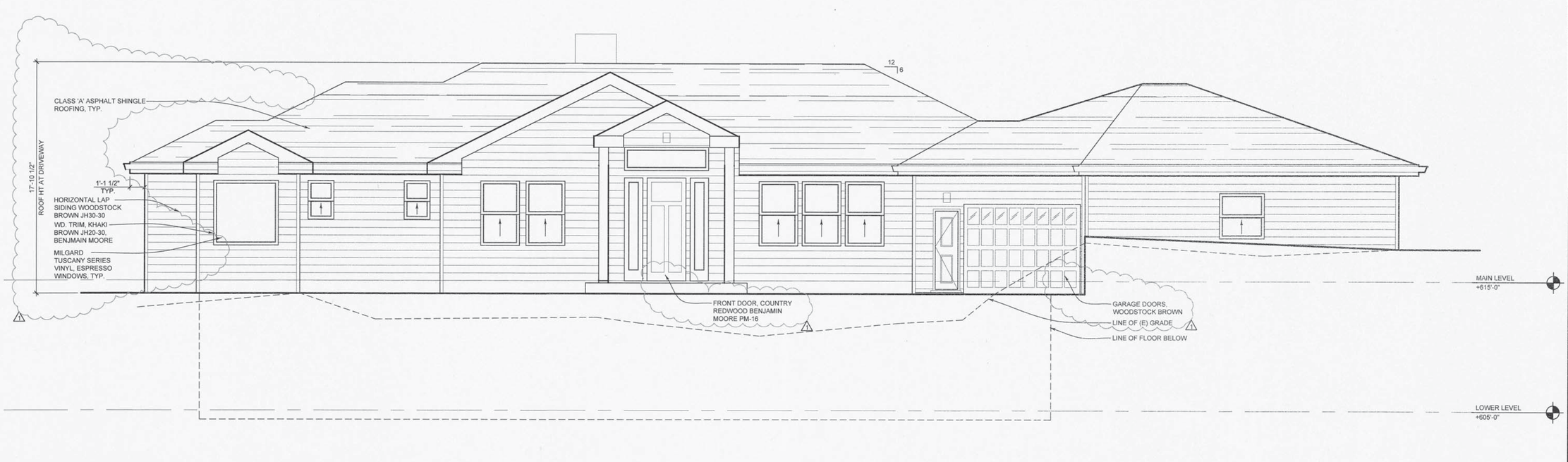
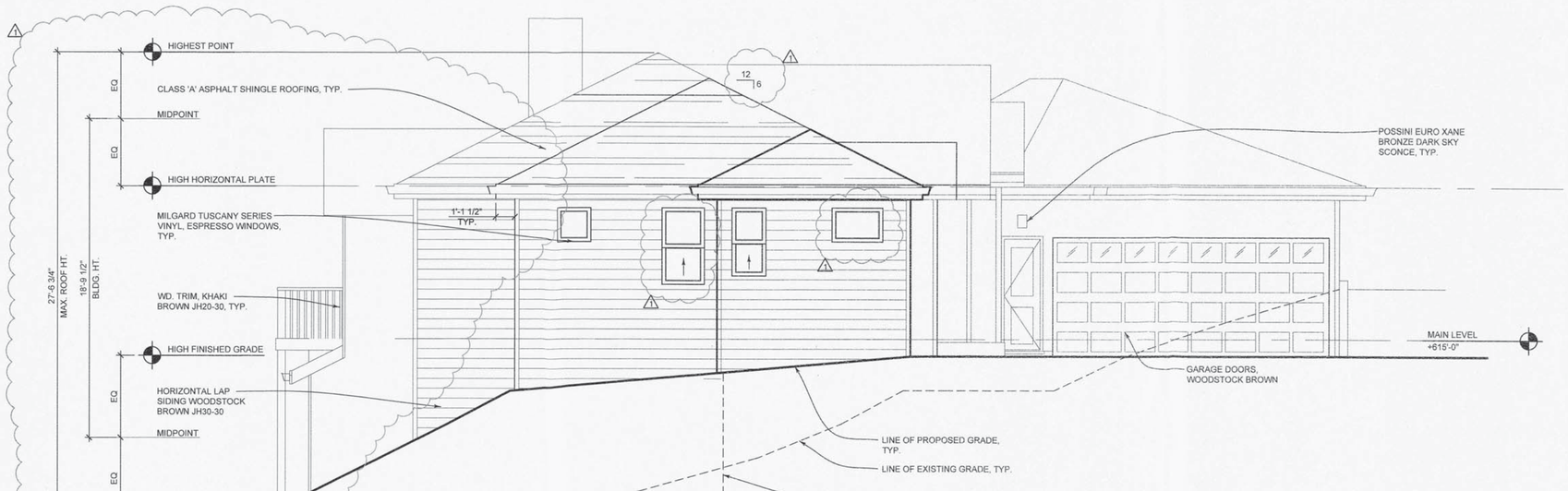


2 PROPOSED EAST ELEVATION
A3.1 1/4"=1'-0"



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LICENSED ARCHITECT RYAN G. MORRIS C 33359 REN. 06-30-19 STATE OF CALIFORNIA

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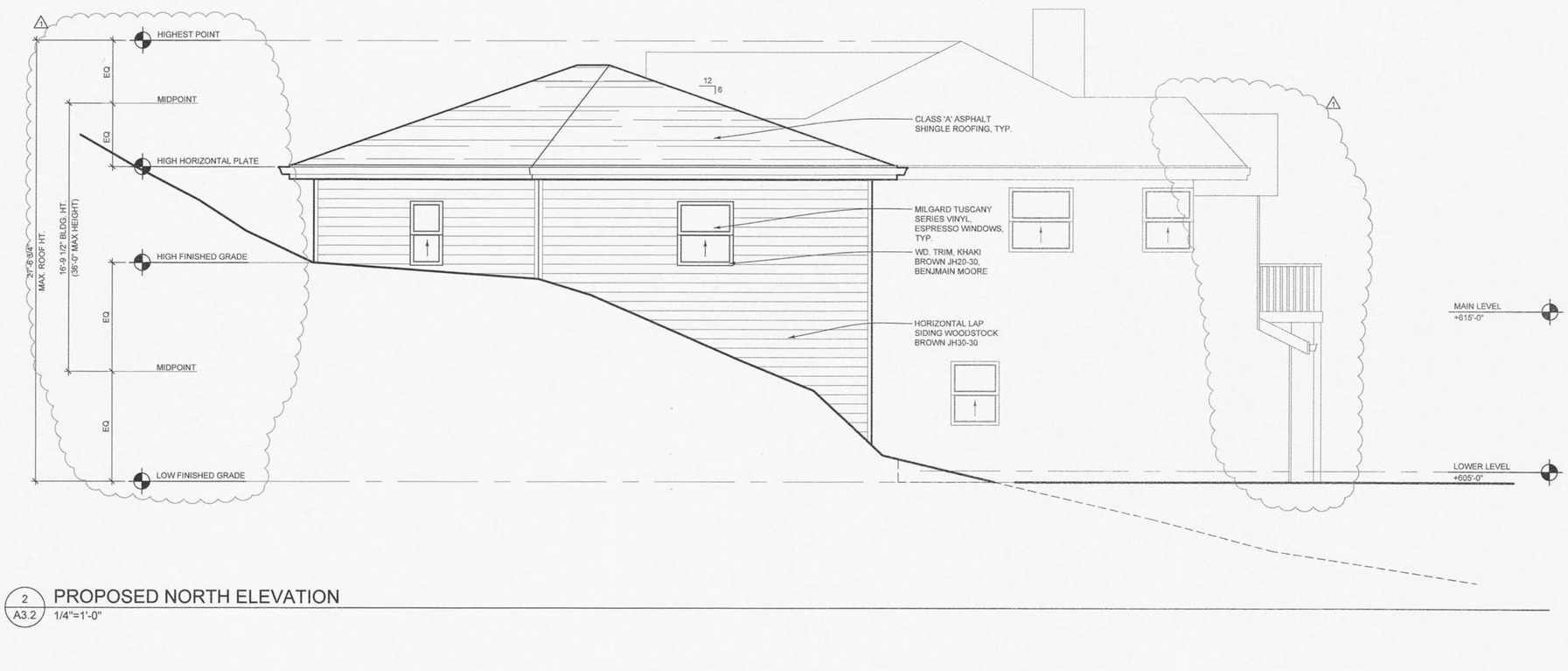
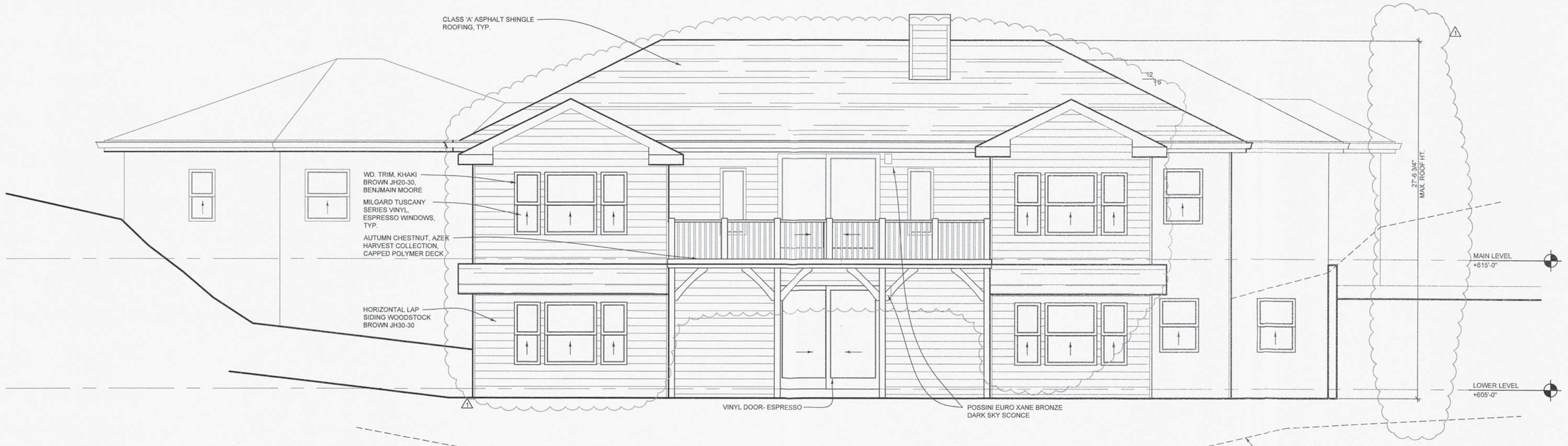


2 A3.2 PROPOSED NORTH ELEVATION
1/4"=1'-0"



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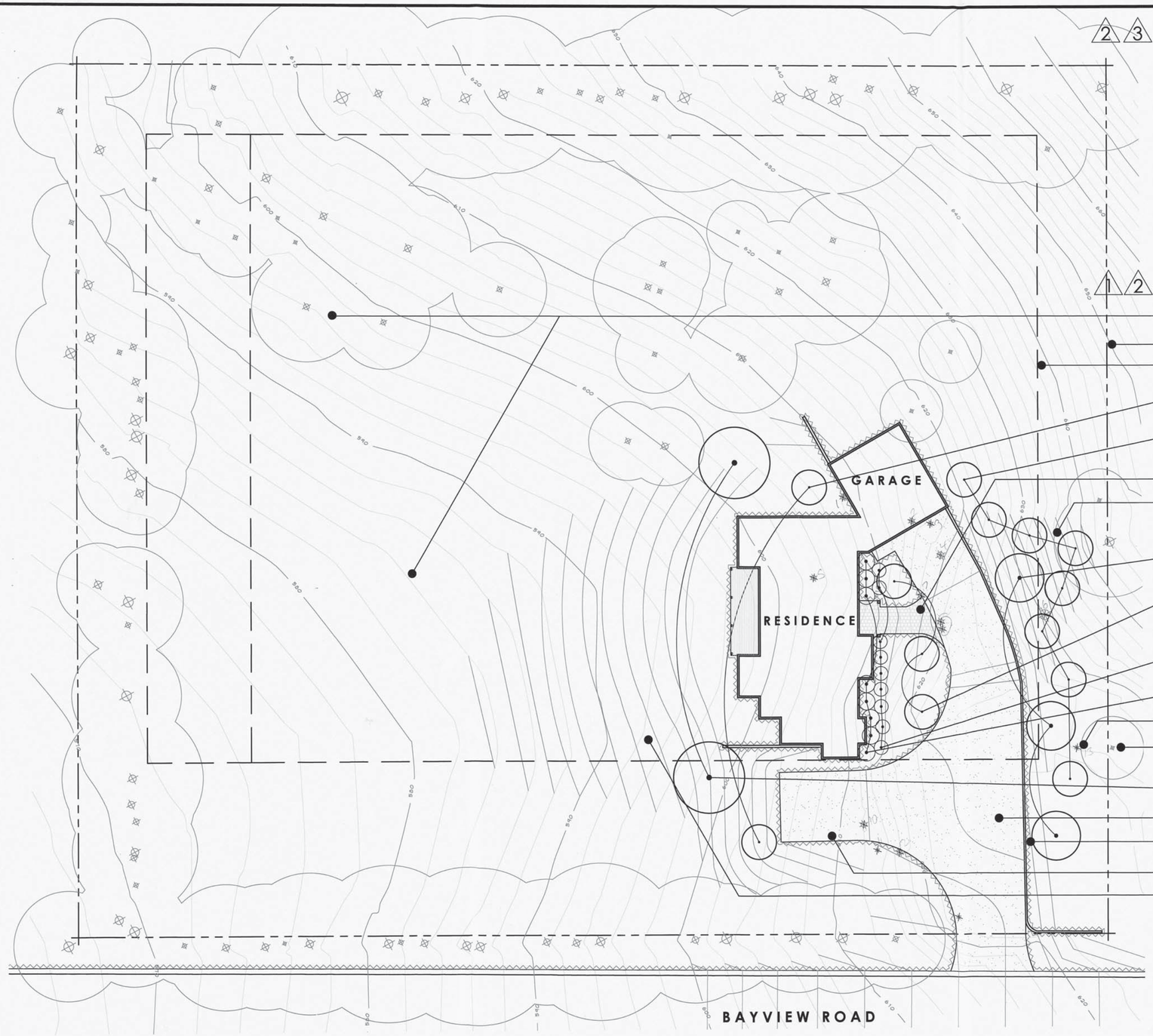

PLANT LEGEND

TREES

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WATER USE
CER. OCC.	15 GAL.	CERCIS OCCIDENTALIS	WESTERN REDBUD	LOW
LAU. NOB.	15 GAL.	LAURUS NOBLIS	BAY LAUREL	LOW
RHA. IND.	15 GAL.	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	LOW

SHRUBS

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WATER USE
COR. HYB.	1 GAL.	CORREA HYBRID 'IVORY BELLS'	WHITE AUSTRALIAN FUCHSIA	LOW
SAL. CHA.	5 GAL.	SALVIA CHAMAEDRYOIDES	GERMANDER SAGE	LOW

NOTES:
-PLANTS TO BE GROUPED IN HYDROZONES ACORDING TO WATER USES, ALL WATER USE INFORMATION WAS TAKEN FROM THE 2000 EDITION OF WUCOLS III

-100% OF PROPOSED PLANTS ARE LOW WATER USE (75% REQUIRED)

LAYOUT LEGEND

- DIMENSIONAL STARTING POINT
- TYP. TYPICAL
- EQ. EQUAL
- ALIGN
- ANGLE MEASUREMENT
- PROPERTY LINE
- CENTER LINE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- INDICATES PLANTING AREA
- INDICATES DETAIL NUMBER
- INDICATES PAGE NUMBER

IRRIGATION EFFICIENCY STATEMENT

"I HAVE COMPLIED WITH THE CRITERIA OF THE WATER CONSERVATION IN LANDSCAPING ORDINANCE AND HAVE APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN"

7-16-18

JOHN DALRYMPLE LANDSCAPE ARCHITECTURE - RLA 5632

NOTE:
EXTENT OF PROPOSED IRRIGATED LANDSCAPE IS 2,488 SQ. FT.

EX. NATIVE LANDSCAPE TO REMAIN UNDISTURBED

PROPERTY LINE (TYP.)

SETBACK LINE (TYP.)

2	15 GAL.	RHA. IND. STD.
8	15 GAL.	RHA. IND. STD.

PROPOSED 8'-0" WIDE INTERLOCKING PAVER ENTRY WALKWAY

PROPOSED SITE GRADING / DISTURBED AREA, SEE CIVIL DWGS.
TO BE HYDRO SEEDED W/ NATIVE GRASS MIX POST CONSTRUCTION COMPLETION

3	15 GAL.	CER. OCC.
3	15 GAL.	RHA. IND. STD.
9	1 GAL.	COR. HYB. 'IVORY BELLS'
8	5 GAL.	SAL. CHA.

INDICATES EX. TREE TO BE REMOVED (TYP.), UNDER SEPARATE PERMIT

INDICATES EX. TREE TO REMAIN.

2	15 GAL.	LAU. NOB.

PROPOSED ASPHALT DRIVEWAY, (TYP.)

PROPOSED RETAINING WALL (TYP.), SEE CIVIL DWGS. FOR SPECS.

FIRE ENGINE TURNAROUND, SEE CIVIL DWGS. FOR SPECS

PROPOSED SITE GRADING / DISTURBED AREA SEE CIVIL DWGS.
TO BE HYDRO SEEDED W/ NATIVE GRASS MIX POST CONSTRUCTION COMPLETION

PLANTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITES, PIPES & STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITES.
2. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, ARE DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING THE DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT THE ATTENTION OF THE OWNER. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH THE PLANTING OPERATION.
4. SEE DETAILS FOR STAKING METHOD, PLANT PIT DIMENSIONS AND BACKFILL REQUIREMENTS.
5. ALL PLANT PITS SHALL BE FREE FROM ROCKS AND DEBRIS GREATER THAN 2" IN DIAMETER.
6. PLANT MATERIAL LOCATIONS ARE DIAGRAMMATIC AND SUBJECT TO CHANGE IN THE FIELD AS DIRECTED BY THE LANDSCAPE ARCHITECT. LOCATE PLANT MATERIALS TO SCREEN UTILITIES, IRRIGATION DEVICES, ETC. AS MUCH AS POSSIBLE YET ALLOW ACCESS TO THEM.
7. THE OWNER RESERVES THE RIGHT TO MAKE SUBSTITUTIONS, ADDITIONS AND DELETIONS IN THE PLANTING SCHEME AS NECESSARY WHILE WORK ISINT PROGRESS. SUCH CASES ARE TO BE ACCOMPANIED BY EQUITABLE ADJUSTMENTS IN THE CONTRACT PRICE IF WHEN NECESSARY.
8. ALL PLANT MATERIAL SHALL BE APPROVED FOR QUALITY BY THE OWNER AND LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION.
9. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LANDSCAPE CONTRACTOR. LOCATION SHALL BE APPROVED PRIOR TO EXCAVATION.
10. LANDSCAPE CONTRACTOR TO RECEIVE SITE GRADED WITHIN .10 FOOT OF FINISHED GRADE. CONTRACTOR SHALL ACCEPT GRADE PRIOR TO COMMENCING WORK. STARTING WORK IMPLIES AN ACCEPTANCE OF GRADE. FINAL GRADES SHALL BE ADJUSTED AS DIREDTED BY OWNER. ALL GRADING SHALL BE COMPLETE PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS.
11. CONTRACTOR SHALL NOTIFY OWNER SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT SCHEDULES AS REQUIRED.
12. AMEND THE TOP 6"-8" OF TOP SOIL WITH A 3" LAYER NITROGEN AND IRON STABILIZED REDWOOD SOIL CONDITIONER SUCH AS GROWER'S WONDER GROW OR EQUAL IN ALL AREAS. THE PLANT BACK FILL MIX FOR ALL TREES, SHRUBS AND 1 GALLON GROUND COVER PLANTS SHALL CONSIST OF 1 PART REDWOOD SOIL CONDITIONER AND 1 PART NATIVE SOIL. PLANT BACKFILL MIX AND THE TOPSOIL AMENDMENT SHALL CONTAIN PER CUBIC YARD:
    2.5 LBS. MIXTURE OF COMMERCIAL FERTILIZER (20-10-10 OR EQUAL)
    1.0 LBS. UREA FORMALDEHYDE (30-0-0)
    1.0 LBS. IRON SULFATE
13. ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH LOCAL CODES AND ORDINANCES. THE LANDSCAPE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS. PROTECTING EXISTING TREES AS NECESSARY. FENCE AS NECESSARY. LOCATE ALL UTILITIES BEFORE PROCEEDING WITH THE WORK. COORDINATE ALL DIGGING AND TRENCHING PRIOR TO BEGINNING WORK WITH PROJECT SUPERVISOR FIRST.
14. APPLY 'RONSTAR' OR 'ELANCO XL' PRE-EMERGENT HERBICIDE TO ALL PLANTED AREAS. APPLY HERBICIDE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECS. THE LANDSCAPE SHALL BE WEED FREE AT THE TIME OF THE FINAL WALK-THROUGH.
15. INSTALL 3" LAYER OF MINI FIR BARK MULCH IN ALL NEWLY PLANTED AREAS.

NOTES

-EXTENT OF PROPOSED IRRIGATED LANDSCAPE IS 2,488 SQ. FT.
-SEE SHEET LP-2 FOR SPECIFIC HYDROZONES
-COORDINATE W/ JOB SUPERINTENDENT LOCATION AND CONNECTION OF IRRIGATION CONTROLLER TO 110VOLT POWER SUPPLY. INSTALL PER LOCAL CODES AND ORDINANCES.
-AVOID SOIL COMPACTION IN EXISTING AND PROPOSED LANDSCAPED AREAS. ALL EQUIPMENT OR STOCKPILING SHOULD BE LOCATED AWAY FROM ALL PROPOSED TREES TO REMAIN.
-UNLESS CONTRADICTED BY A SOILS TEST, COMPOST AT RATE OF A MINIMUM OF 4 CUBIC YARDS PER 1,000 SQ. FT. OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF 6 INCHES INTO THE SOIL.
-A MINIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUND COVERS, OR DIRECT SEATING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.
-AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.
-HYDROSEEDING CA NATIVE MIX TO INCLUDE; CALIFORNIA BROME, BLUE FESCUE, TOMCAT CLOVER, COMMON BARLEY
-UNDERGROUND SERVICE ALERT: BEFORE EXCAVATING CALL U.S.A. UNDERGROUND SERVICE ALERT. CALL TOLL FREE: 800-227-2600, 48 HOURS BEFORE ALL PLANNED WORK OPERATIONS.

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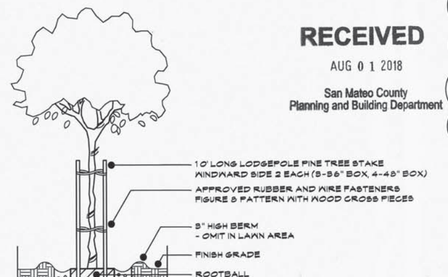
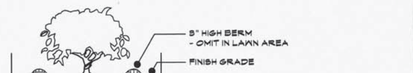
San Mateo County
Planning and Building Department





GENERAL NOTES

1. ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE CODES AND ORDINANCES BY EXPERIENCED WORKMEN AND A LICENSED LANDSCAPE CONTRACTOR.
2. CONTRACTOR TO FAMILIARIZE HIM / HERSELF WITH ALL ON SITE CONDITIONS PRIOR TO BIDDING PROJECT.
3. THE CONTRACTOR SHALL VERIFY ALL DISTANCES AND DIMENSIONS IN THE FIELD; ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND LANDSCAPE ARCHITECT.
9. ALL PROPERTY AND LOT LINES SHALL BE VERIFIED PRIOR TO COMMENCING WORK.
10. WRITTEN DIMENSIONS SHOWN ON DRAWINGS SHALL IN ALL CASES TAKE PRECEDENCE OVER SCALED DIMENSIONS.
11. ALL DIMENSIONS ARE FROM OUTSIDE THE FACE OF PAVING, WALLS, ETC., UNLESS OTHERWISE NOTED ON PLANS.
12. NOTES AND DETAILS ON SPECIFIC DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
20. ALL MATTER OF DEBRIS SHALL BE REMOVED BY THE CONTRACTOR FROM THE SURFACE UPON WHICH FILL IS TO BE PLACED.
21. THE CONTRACTOR SHALL STAKE THE LAYOUT FOR THE WALKWAYS, WALLS, FENCES, PRIOR TO CONSTRUCTION FOR LANDSCAPE ARCHITECT AND OWNERS REVIEW.
22. THE CONTRACTOR SHALL SUBMIT SAMPLES OF ALL FINISHES, COLORS AND PAVING MATERIALS TO THE LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

JOHN DALRYMPLE
LANDSCAPE ARCHITECTURE
650-549-8707
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301 Jackport Court, Suite 103
Redwood City, CA 94063

BRASHER PROPERTY 'MEADOW HOUSE'

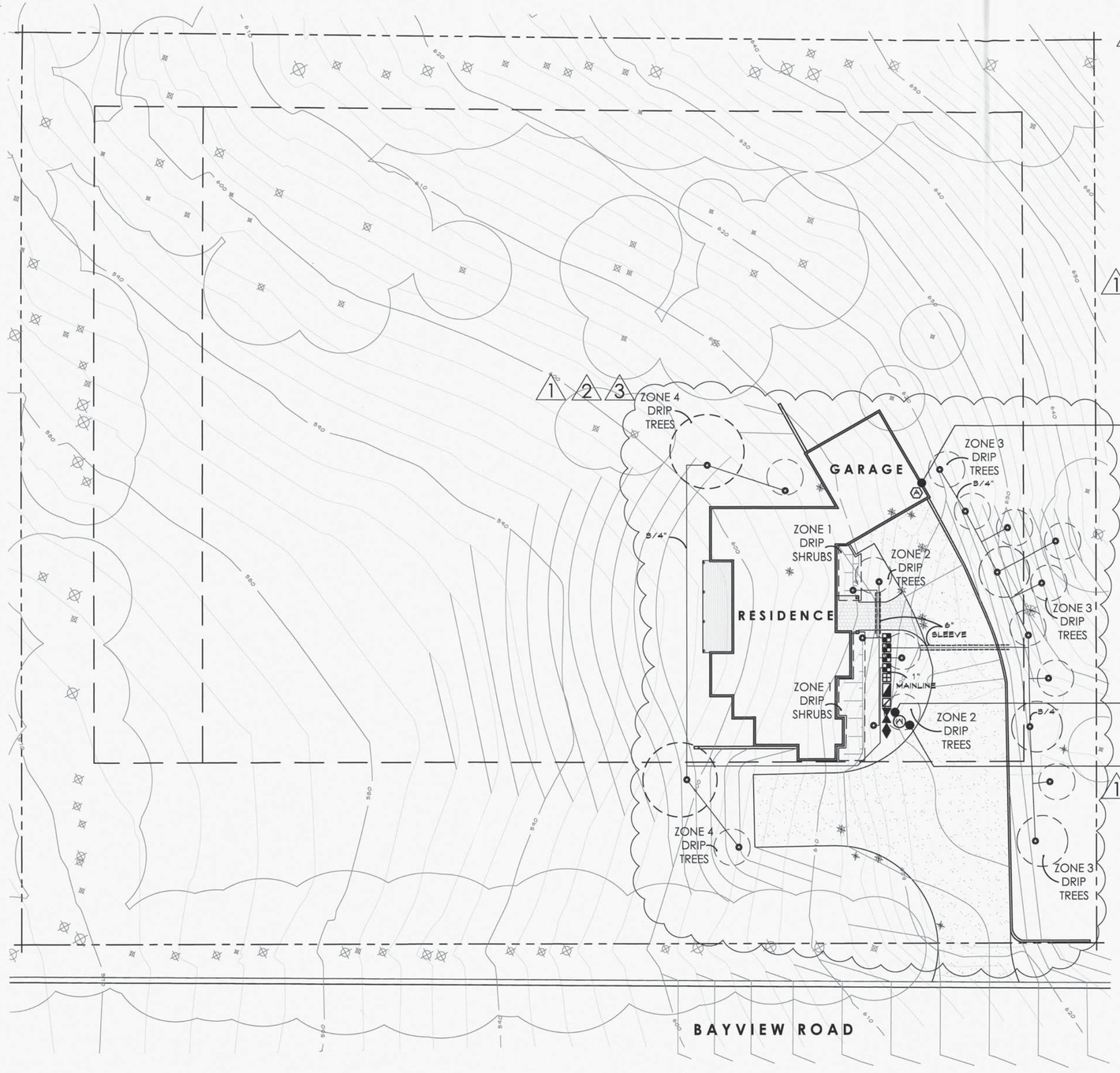
BAY VIEW ROAD
MONTARA, CA 94037

LANDSCAPE DESIGN & PLANTING PLAN

LICENSED LANDSCAPE ARCHITECT
JOHN N. DALRYMPLE
No. 5632
Signature
12-21-15
Renewal Date
7-16-18
Date
STATE OF CALIFORNIA

DATE
9-12-17
REVISIONS
1 9-22-17 PLAN CHECK COMM
2 10-4-17 PLAN CHECK COMM
3 7-16-18 CDRC COMMENTS

SCALE
1/16" = 1'-0"



IRRIGATION LEGEND

- IRRIGATION POINT OF CONNECTION
- 1 — DEDICATED IRRIGATION WATER METER 'NETAFIM' 1" WATER METER, CAST IRON BODY W/ REED SWITCH MONITOR OR 'EQ.' MODEL M-25IT-ER AVAILABLE: WWW.NETAFIMUSA.COM
- W — WELL LOCATION
- A — 6 STATION 'HUNTER' PCC CONTROLLER W/ PLASTIC CABINET, & SOLAR SYNC WITH RAIN SENSOR TO BE INCLUDED OR EQ.
- REDUCED PRESSURE BACKFLOW PREVENTER, FEBCO 825Y 1"
- WILKENS PRESSURE REDUCER ASSEMBLY; IF REQUIRED IF PRESSURE EXCEEDS 70 P.S.I., SET TO 70 P.S.I.; LINE SIZE, LOCATED IN LABLED PLASTIC BOX
- NIBCO BALL VALVE; LINE SIZE, LOCATED IN LABLED PLASTIC BOX
- 1" HUNTER PCZ-101 SERIES DRIVE REMOTE CONTROL VALVE ASSEMBLY W/ HY100 FILTER SYSTEM & PRESET 40 PSI PRESSURE REGULATOR
- PVC PIPE TO ½" DRIP TUBING POINT OF CONNECTION
- SCH. 40 PVC IRRIGATION MAINLINE LINE, SIZE PER PLAN
- SCH. 40 PVC IRRIGATION LATERAL LINE, SIZE PER PLAN
- SCH. 40 PVC SLEEVE, SIZE PER PLAN
- 1 — IRRIGATION ZONES
- PLANTING AREAS TO BE DRIP IRRIGATION W/ NETAFIM INLINE DRIP LINES OR SALCO ½" AR DRIP TUBING MAINLINES & ¼" TUBING TO PLANTS
  1.0 GPH DRIP EMMITERS FOR G.C. / SHRUB AREAS AS FOLLOWS
  1 GAL. - 1 EA. AT 6" FROM TRUNK / STEM
  5 GAL. - 3 EA. AT 8" FROM TRUNK / STEM
  15 GAL. - 4 EA. AT 12" FROM TRUNK
  24" BOX - 6 EA. AT 16" FROM TRUNK
- 10.00 GALLONS PER MINUTE
- SPRAY A1 VALVE / STATION NUMBER
- 1" VALVE SIZE
- IRRIGATION TYPE
- IRRIGATION CONTROLLER W/ RAIN SENSOR SHUT OFF SEE LEGEND FOR SPEC. CONNECT TO EXTERIOR GFIC PLUG (PLUG BY OTHERS) COORDINATE LOCATION OF PLUG W/ PROJECT SUPERINTENDENT — 1 2 3
- 35 GPH (0.58 GPM) A1 1" DRIP SHRUBS
- 12 GPH (0.20 GPM) A2 1" DRIP TREES FRONT
- 40 GPH (0.73 GPM) A3 1" DRIP TREES WALL
- 16 GPH (0.26 GPM) A4 1" DRIP TREES REAR
- 1 — PROPOSED BALL VALVE, DEDICATED IRRIGATION WATER METER, BACKFLOW PREVENTION DEVICE, & PRESSURE REDUCER (IF REQUIRED) INSTALL PER ALL LOCAL CODES & ORDINANCES
- WELL LOCATION & IRRIGATION POINT OF CONNECTION VERIFY FINAL LOCATION IN FIELD — 1 2 3

NOTES

-EXTENT OF PROPOSED IRRIGATED LANDSCAPE IS 2,488 SQ.FT.
-IRRIGATION SHALL BE SCHEDULED BETWEEN 8:00 PM AND 10:00 AM UNLESS FAVORABLE WEATHER PREVENTS IT OR OTHERWISE RENDERS IRRIGATION UNNECESSARY.
-COORDINATE W/ JOB SUPERINTENDENT LOCATION AND CONNECTION OF IRRIGATION CONTROLLER TO 110VOLT POWER SUPPLY. INSTALL PER LOCAL CODES AND ORDINANCES.
-AVOID SOIL COMPACTION IN EXISTING AND PROPOSED LANDSCAPED AREAS. ALL EQUIPMENT OR STOCKPILING SHOULD BE LOCATED WAY FROM ALL PROPOSED TREES TO REMAIN.
-UNDERGROUND SERVICE ALERT: BEFORE EXCAVATING CALL U.S.A. UNDERGROUND SERVICE ALERT. CALL TOLL FREE: 800-227-2600, 48 HOURS BEFORE ALL PLANNED WORK OPERATIONS.

IRRIGATION NOTES

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES ETC. SHOWN WITHIN THE PAVED AREAS OR BUILDINGS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. AVOID CONFLICTS WITH PLANTING, PIPINGS, UTILITIES AND ARCHITECTURE WHERE POSSIBLE.
2. DO NOT WILLFULLY INSTALL THE SYSTEMS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, GPM AVAILABILITY, OR PRESSURES EXISIT THAT MAY NOT HAVE BEEN INCLUDED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND LANDSCAPE ARCHITECT FOR A DECISION. IN THE EVENT THAT NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITES FOR ANY REVISIONS NECESSARY.
3. 120 VOLT ELECTRICAL POWER OUTLET AT THE IRRIGATION CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS. THE IRRIGATION CONTRACTOR SHALL MAKE FINAL HOOK-UP FROM REMOTE CONTROL VALVES TO CONTROLLER.
4. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, UTILITIES, PIPING, BUILDINGS, ETC. THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THEIR WORK WITH THE GENERAL CONTRACTOR FOR THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, STRUCTURES, ETC.
5. THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY A LICENSED LANDSCAPE CONTRACTOR AND EXPERIENCED WORKMEN. CONTRACTOR TO OBTAIN AND PAY FOR ALL IRRIGATION PERMITS AND REQUIREMENTS
6. CONTRACTOR TO CONFIRM THE LOCATION OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO EXCAVATION OF TRENCHES. CONTRACTOR TO REPAIR ANY DAMAGE CAUSED BY, OR DURING THE PERFORMANCE OF HIS WORK AT NO ADDITIONAL COST TO THE OWNER.
7. SYSTEM IS BASED UPON A STATIC MAINLINE PRESSURE OF 70 PSI. A PRESSURE REDUCER MAY (MAY NOT) BE REQUIRED SO THAT THE STATIC MAINLINE PRESSURE AS MEASURED AT THE POINT OF CONNECTION (AFTER THE BACK FLOW DEVICE) IS 70 PSI. AFTER CALCULATING PRESSURE LOSSES, THE SYSTEM IS DESIGNED TO OPPERATE AT APPROXIMATELY 35-40 PSI WORKING PRESSURE AT THE HEADS. THROUGH ANY ONE VALVE, THE SYSTEM IS DESIGNED TO OPERATE AT A MAXIMUM OF 13 GPMS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLEEVING REQUIRED FOR ELECTRICAL AND IRRIGATION. CONTRACTOR TO COORDINATE AND LOCATE ANY ELECTRICAL AND IRRIGATION SLEEVESPRIOR TO CONCRETE POUR. LANDSCAPE ARCHITECT TO REVIEW LAYOUT PRIOR TO CONCRETE POUR. SLEEVES TO BE SCH. 40 PVC PVC PIPE, SET 2" SAND BED CONTINUOUS AROUND ENTIRE SLEEVE, WITH MARKING TAPE AT EACH END. EXTEND PAST PAVING 6"
9. TRENCHES ARE TO BE OF SUFFICIENT DEPTH TO PROVIDE 18" OF COVER OVER MAINLINE AND LATERAL LINES PRIOR TO THE INSTALLATION OF OF IRRIGATION HEADS. MAINLINE TO BE VISUALLY INSPECTED FOR LEAKS UNDER FULL OPERATING PRESSURE PRIOR TO BACKFILLING. MAINLINES UNDER STREETS AND DRIVE WAY TO BE 24" MINIMUM DEPTH.
10. FLUSH MAINLINES PRIOR TO THE INSTALLATION OF REMOTE CONTROL VALVES. FLUSH LATERAL LINES PRIOR TO THE INSTALLATION OF IRRIGATION HEADS. MAINLINE TO BE VISUALLY INSPECTED FOR LEAKS UNDER FULL OPERATING PRESSURE PRIOR TO BACKFILLING.
11. IRRIGATION CONTROL WIRE SHALL BE #14 UL APPROVED FOR DIRECT BURIAL. COMMON WIRE SHALL BE #14 UL APPROVED FOR DIRECT BURIAL WHITE ON COLOR. WIRES TO BE MULTI-STRAND #18-9 REMOTE CONTROL VALVES SHALL BE A COLOR OTHER THAN WHITE. ALL SPLICES SHALL BE MADE WITHIN REMOTE CONTROL VALVE BOXES. LEAVE 24" EXCESS WIRE COIL AT REMOTE CONTROL LOCATIONS.
12. REMOTE CONTROL VALVE BOXES SHALL BE INSTALLED FLUSH WITH FINISH GRADE (NOT NECESSARILY PLUMB). ALIGN VALVE BOXES WITH ADJACENT PAVEMENT EDGES OR STRUCTURES. VALVE BOXES SHALL BE PLASTIC WITH BOLT DOWN LIDS AND WHITE NUMBERED VALVE STATIONS IN STENCILS.
13. ALL EXCAVATIONS SHALL BE BACKFILLED TO 90% COMPACTION MIN. CONTRACTOR TO REPAIR SETTLED TRENCHES ONE YEAR AFTER COMPLETION OF WORK.
14. CONTRACTOR TO MAKE MINOR ADJUSTMENTS IN HEAD LOCATIONS AND ADJUST HEADS FOR RADIUS (ARC IF APPLICABLE) TO OPTIMUM COVERAGE AND ELIMINATE SPRAYING INTO PAVEMENT, BUILDINGS AND WALLS. ADD HEADS AS NECESSARY FOR HEAD TO HEAD COVERAGE. INSTALL FLAT HEADS NEAR BUILDINGS.
15. CONTRACTOR TO MAINTAIN A SET OF 'AS-BUILT' DRAWINGS THROUGHOUT THE COURSE OF CONSTRUCTION AND DELIVER THESE DRAWINGS TO THE OWNER UPON THE COMPLETION OF WORK. THE DRAWINGS SHALL BE IN REPRODUCIBLE FORM.
16. CONTRACTOR SHALL GUARANTEE THE SYSTEM AND MATERIALS TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR STARTING WITH THE ACCEPTANCE AT THE FINAL SITE REVIEW.
17. ALL HEADS WHICH MAY EXPERIENCE LOW HEAD DRAINAGE SHOULD HAVE IN-LINE OR IN-HEAD CHECK VALVES INSTALLED.
18. THE IRRIGATION CONTRACTOR SHOULD ARRANGE WITH THE LANDSCAPE ARCHITECT AND OWNERFOR A SITE REVIEW OF THE SYSTEM. CALL WITHIN TWO DAYS PRIOR TO NOTICE TO ARRANGE REVIEW DATES. REVIEWS WILL BE SCHEDULED TO REVIEW:
    1. PRESSURE TEST TO MAINLINE PRIOR TO BACKFILLING TRENCHES.
    2. COVERAGE TEST OF SPRINKLER SYSTEM PRIOR TO PLANTING.
    3. FINAL WALK THROUGH OF ALL ASPECTS OF IRRIGATION SYSTEM.
19. WATER JET ALL TRENCHES, TYPICAL.

WATER EFFICIENT LANDSCAPE CALCULATIONS

HYDROZONE / PLANT USE WATER TYPE / IRRIGATION METHOD	ZONES / VALVES	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	HYDROZONE AREA % OF IRRIGATED LANDSCAPE AREA	ETAF X AREA	ESTIMATED TOTAL WATER USE (ETWU)
H-1 LOW WATER USE PLANTS DRIP	1	0.3	DRIP	0.81	0.37	345 SF 14%	128	2,674
H-2 LOW WATER USE TREES DRIP	2, 3, 4	0.3	DRIP	0.81	0.37	2,143 SF 86%	793	16,569
TOTAL:						2,488 SF	921	19,243

ESTIMATED ANNUAL GALLONS REQUIRED: 33.7 X 0.62 (ETAF X AREA) = ETWU TOTAL 19,243 GAL / YEAR (DESIGN CASE)

ESTIMATED ANNUAL GALLONS ALLOWED: 33.7 X 0.62 X [(0.55 X LA) + (1- ETAF X SLA)] = MAWA TOTAL 28,591 GAL / YEAR (BASELINE CASE)

CALCULATION REFERENCE

ETWU (ANNUAL GALLONS REQUIRED) (GALLONS PER YEAR): ETo X 0.62 (ETAF x AREA)
ETo: REFERENCE EVAPOTRANSPIRATION (33.7 INCHES PER YEAR IN HALF MOON BAY, MONTARA NOT GIVEN)
0.62: CONVERSION FACTOR (INCHES PER SQUARE FOOT TO GALLONS PER SQUARE FOOT)
ETAF: PLANT FACTOR / IRRIGATION EFFICIENCY
AREA: TOTAL LANDSCAPE AREA

MAWA (ANNUAL GALLONS ALLOWED) (GALLONS PER YEAR): ETo X 0.62 (ETAF x LA) + [(1-ETAF) x SLA)
ETo: REFERENCE EVAPOTRANSPIRATION (33.7 INCHES PER YEAR IN HALF MOON BAY, MONTARA NOT GIVEN)
0.62: CONVERSION FACTOR (INCHES PER SQUARE FOOT TO GALLONS PER SQUARE FOOT)
ETAF: PLANT FACTOR / IRRIGATION EFFICIENCY
LA: TOTAL LANDSCAPE AREA
SLA: SPECIAL LANDSCAPE AREA (SQUARE FEET)

ETAF CALCULATIONS - ETAF FOR REGULAR LANDSCAPE AREAS MUST BE 0.55 OR BELOW FOR RESIDENTIAL AREAS

REGULAR LANDSCAPE AREAS	
TOTAL ETAF X AREA	1,116
TOTAL AREA	2,488
AVERAGE ETAF	.38

ALL LANDSCAPE AREAS	
TOTAL ETAF X AREA	1,116
TOTAL AREA	2,488
SITEWIDE ETAF	.38

IRRIGATION EFFICIENCY STATEMENT

"I HAVE COMPLIED WITH THE CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN"

7-16-18
JOHN DALRYMPLE LANDSCAPE ARCHITECTURE - RLA 5632

JOHN DALRYMPLE
LANDSCAPE ARCHITECTURE
650.349.8707
jrd@johndalrymplela.com
501 Seaport Court, Suite 103
Redwood City, CA 94063

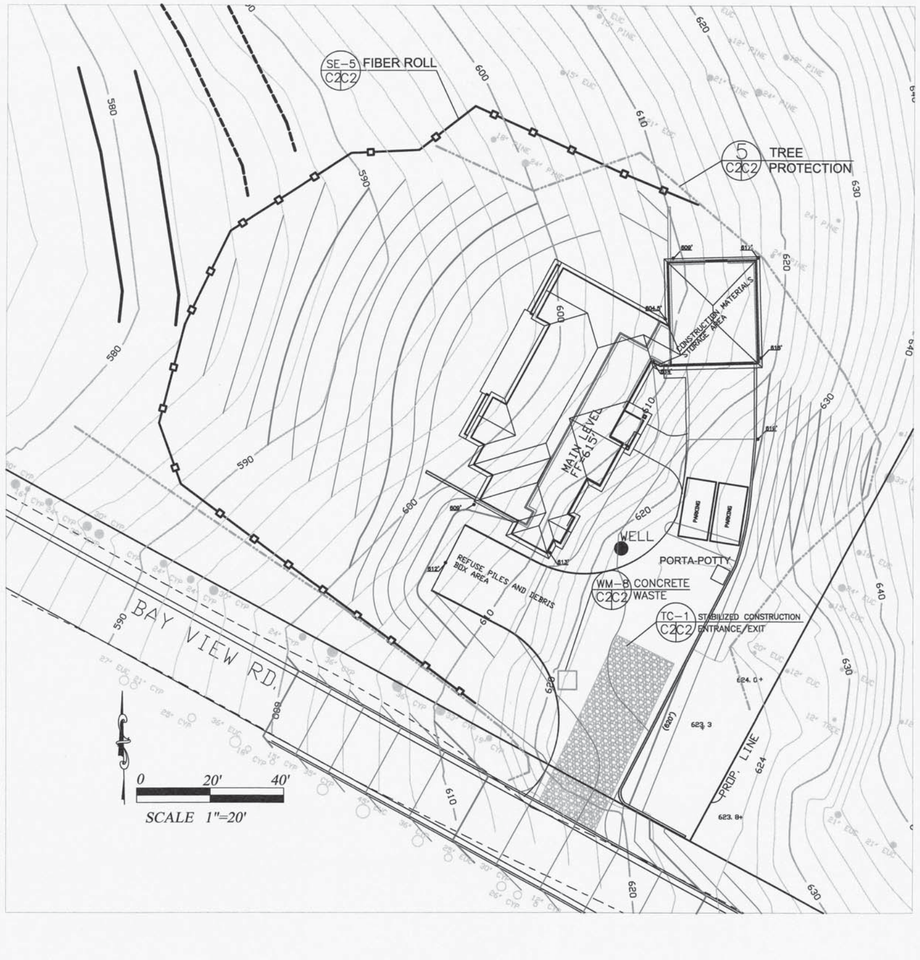
BRASHER PROPERTY
'MEADOW HOUSE'
BAY VIEW ROAD
MONTARA, CA 94037

IRRIGATION DESIGN PLAN

LICENSED LANDSCAPE ARCHITECT
JOHN W. DALRYMPLE
No. 5632
Signature
Renewal Date 12-31-19
Date 7-16-18
STATE OF CALIFORNIA

DATE
9-12-17
REVISIONS
1 9-22-17 PLAN CHECK COMMENTS
2 10-4-17 PLAN CHECK COMMENTS
3 7-16-18 CDRC COMMENTS

SCALE
1/16" = 1'-0"



EROSION CONTROL POINT OF CONTACT

THIS PERSON WILL BE RESPONSIBLE FOR EROSION CONTROL AT THE SITE AND WILL BE THE COUNTY'S MAIN POINT OF CONTACT IF CORRECTIONS ARE REQUIRED.

NAME: NED BRASHER

TITLE/QUALIFICATION: OWNER/BUILDER

PHONE: 650-728-5199

PHONE:

E-MAIL: nbrasher@comcast.com

- USE OF PLASTIC SHEETING BETWEEN OCTOBER 1st AND APRIL 30th IS NOT ACCEPTABLE, UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH FIBER ROLLS CONTAINING THE BASE OF THE STOCKPILE.
- TREE PROTECTION SHALL BE IN PLACE BEFORE ANY GRADING, EXCAVATING, OR GRUBBING IS STARTED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- There will be no stockpiling of soil. All excavated soil will be hauled off-site as it is excavated.
- Perform clearing and earth-moving activities only during dry weather. Measures to ensure adequate erosion and sediment control shall be installed prior to earth-moving activities and construction.
- Measures to ensure adequate erosion and sediment control are required year-round. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 30.
- Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
- Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- Use sediment controls or filtration to remove sediment when dewatering site and obtain Regional Water Quality Control Board (RWQCB) permit(s) as necessary.
- Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
- Limit construction access routes to stabilized, designated access points
- Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
- Train and provide instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.
- Placement of erosion materials is required on weekends and during rain events.
- The areas delineated onh the plans for parking, grubbing, storage etc., shall not be enlarged or "run over."
- Dust control is required year-round.
- Erosion control materials shall be stored on-site
- Use of plastic sheeting between October 1st and April 30th is not acceptable.
- The tree protection shall be in place before any grading, excavating or grubbing is started.

TREE PROTECTION NOTES

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY GRADING AND REMAIN ON-SITE THROUGHOUT CONSRUCTION PROCESS.

2. TREE PROTECTION FENCES SHALL BE INSTALLED AS CLOSE TO DRIP LINES AS POSSIBLE.

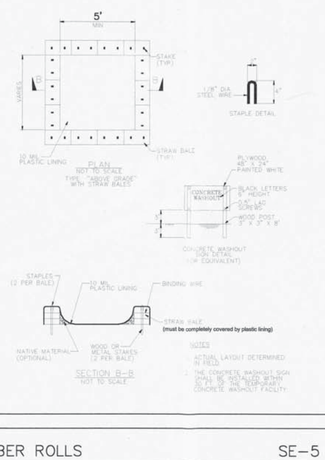
3. OWNER/BUILDER SHALL MAINTAIN TREE PROTECTION ZONES FREE OF EQUIPMENT AND MATERIALS STORAGE AND SHALL NOT CLEAN ANY EQUIPMENT WITHIN THESE AREAS.

4. ANY LARGE ROOTS THAT NEED TO BE CUT SHALL BE INSPECTED BY A CERTIFIED ARBORIST OR REGISTERED FORESTER PRIOR TO CUTTING, AND MONITORED AND DOCUMENTED.

5. ROOTS TO BE CUT SHALL BE SEVERED WITH A SAW OR TOPPER.

6. PRE-CONSTRUCTION SITE INSPECTION WILL BE

CONCRETE WASTE MANAGEMENT WM-8



FIBER ROLLS SE-5

STABILIZED CONSTRUCTION ENTRANCE/EXIT TC-1

EROSION CONTROL NOTES

FIBER ROLE
INSTALL AT LOCATIONS SHOWN.
AFIX AS SHOWN IN DETAIL SE-5

1. GRADING MAY TAKE PLACE DURING WET WEATHER AFTER OCTOBER 1 PROVIDED THE FOLLOWING PROVISIONS ARE FOLLOWED.
2. NO GRADING SHALL TAKE PLACE DURING RAINY WEATHER OR FOR A PERIOD OF AT LEAST 24 HOURS FOLLOWING RAIN.
3. ALL EXPOSED SOIL SHALL BE TEMPORARILY PROTECTED FROM EROSION WITH JUTE NETTING.
4. ALL STOCKPILED SOIL SHALL BE COVERED AT ALL TIMES AND REMOVED FROM SITE AS SOON AS POSSIBLE, IF SCHEDULED FOR OFF-HAUL.
5. ALL EXPOSED SURFACES SHALL BE PERMANENTLY PROTECTED FROM EROSION WITH SEEDING AND/OR LANDSCAPING. SEED MIX SHALL BE 75 LB PER ACRE ANNUAL RYGRASS OR APPROVED SUBSTITUTE. SEED SHALL BE COVERED WITH STRAW MULCH AT A RATE OF 2 TONS/ACRE.
6. ROCKED CONSTRUCTION ENTRANCE SHALL BE 50 FEET LONG BY 17 FEET WIDE AND CONFORM TO THE FOLLOWING:
   A. THE MATERIAL FOR THE PAD SHALL BE 3 TO 6 INCH STONE.
   B. PAD SHALL BE NOT LESS THAN 12" THICK.
   C. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE

REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9-30-19
EXPIRES
CIVIL
STATE OF CALIFORNIA

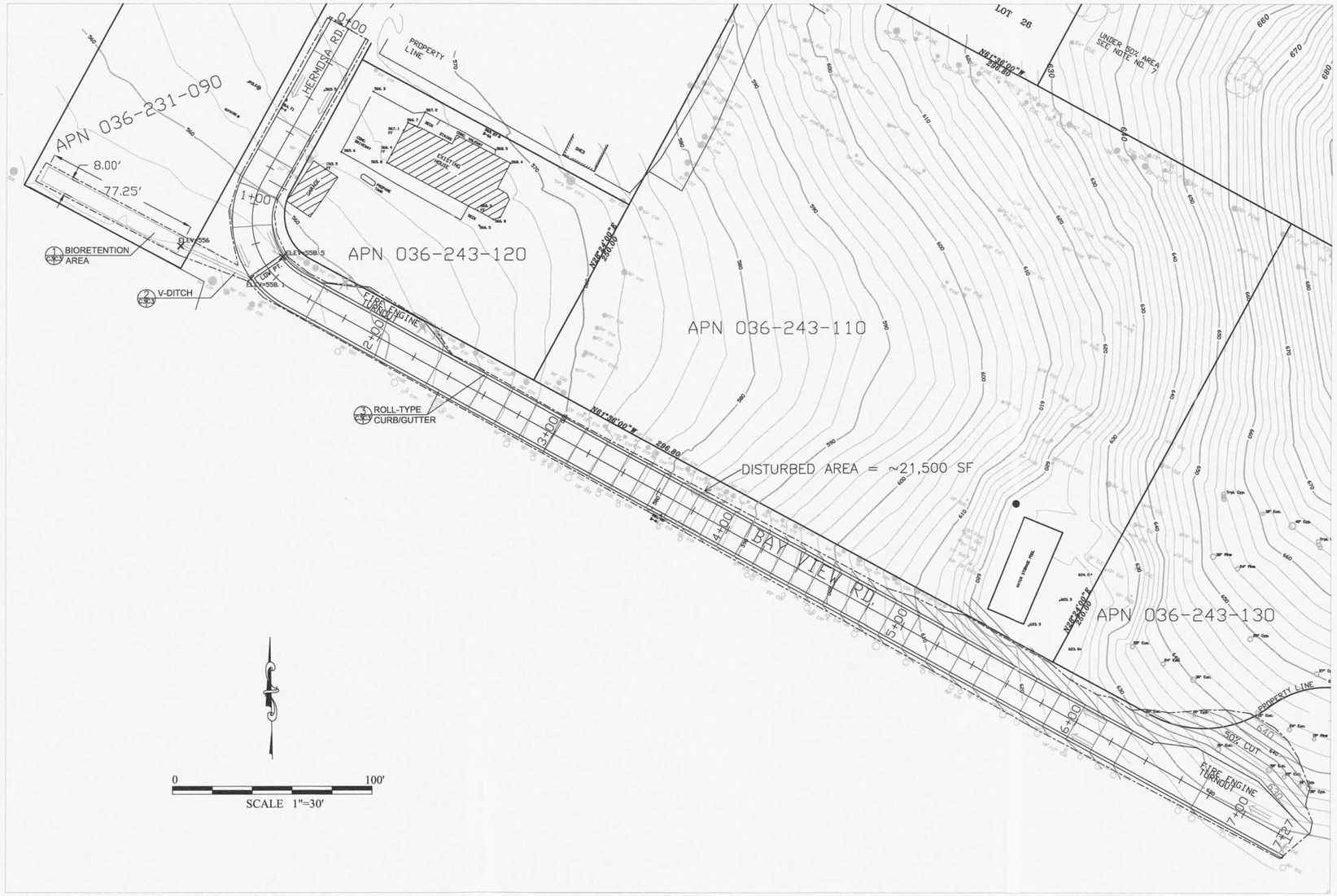
Sigma Prime Geosciences, Inc.

SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019

DATE: 5-11-17	DRAWN BY: CMK	CHECKED BY: AZG	REV. DATE: 7-16-18

EROSION CONTROL PLAN

NED BRASHER PROPERTY
[illegible] DOWNHOUSE



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TREE TO BE REMOVED
- DIRECTION OF SURFACE DRAINAGE FLOW

EARTHWORK NOTES

BAY VIEW ROAD:
CUT VOLUME: 370 CY
FILL VOLUME: 170 CY
NET VOLUME: 200 CY EXPORT

LENGTH OF PAVED ROAD = 727 FT
AREA OF PAVED SURFACE = 14,540 SF
VOLUME OF AGGRAGATE ROAD BASE (AB) = 260 CY

MAX. HEIGHT OF CUT: 6 FEET
MAX. HEIGHT OF FILL: 2 FEET

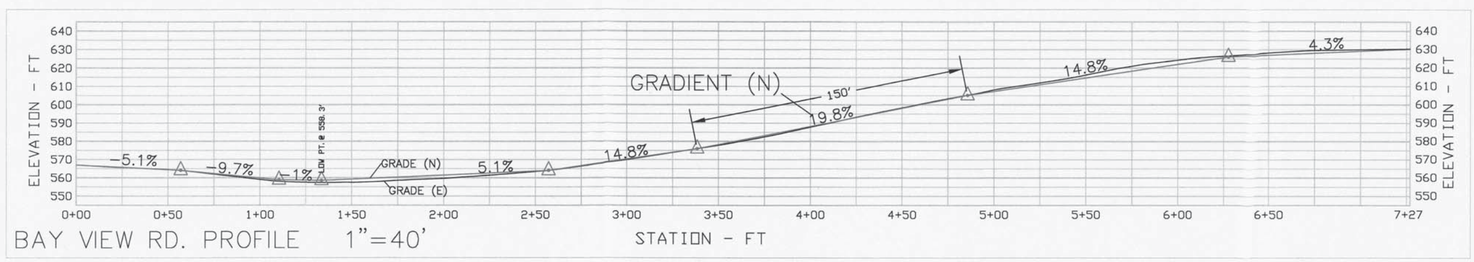
1. FILL MATERIAL SHOULD BE PLACED IN 12" LOOSE LIFTS, MOISTURE CONDITIONED, AND COMPACTED TO 92 PERCENT RELATIVE COMPACTION.
2. ON-SITE SOILS MAY BE USED FOR FILL. REFER TO SOILS REPORT FOR RECOMMENDATIONS ON EARTHWORK.

GENERAL NOTES

1. PLANS PREPARED AT THE REQUEST OF:
   MR. NED BRASHER
   P.O. BOX 438
   MONTARA, CA 94037
2. SURVEY BY OTHERS: ELEVATIONS BASED ON ASSUMED DATUM.
3. THIS IS NOT A BOUNDARY SURVEY.

DRAINAGE NOTES

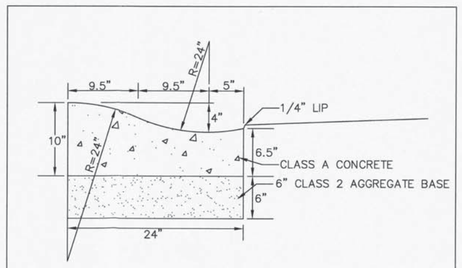
1. DRAINAGE DIRECTION AS SHOWN BY DRAINAGE ARROWS ON PLAN: POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT.
2. RUNOFF IN ROAD SHALL BE DIRECTED TO GUTTERS ON BOTH SIDES OF ROAD, AS SHOWN.
3. NO CONCENTRATED WATER IS TO FLOW ACROSS CUT SLOPES.
4. SIZING OF DETENTION SYSTEM BASED ON 4% METHOD: 4% OF PAVED AREA OF 14,450 SF = 618 SF.
5. IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE DRAINAGE SYSTEM. THE BIORETENTION AREA SHALL BE CHECKED EVERY FALL AND CLEARED OF DEBRIS.



BAY VIEW RD. PROFILE 1"=40'

FIRE PROTECTION NOTES

1. FIRE DEPARTMENT TURNAROUNDS AND TURNOUTS ARE TO BE UNOBSTRUCTED AT ALL TIMES.
2. ACCESS ROAD SURFACE SHALL BE "ALL WEATHER",



1. CONCRETE GUTTER SHALL BE INSTALLED PRIOR TO PAVING.
2. REINFORCEMENT SHALL CONSIST OF 6"X 6"-#10/#10 WELDED WIRE FABRIC.
3. PLACE 1/2" DIAMETER X 18" LONG DOWELS, AT EXPANSION JOINTS
4. PLACE 1/4" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER. DEEP SCORE AT 10' INTERVALS BETWEEN EXPANSION JOINTS.

3 C3C3 ROLL-TYPE GUTTER AND GUTTER
NOT TO SCALE

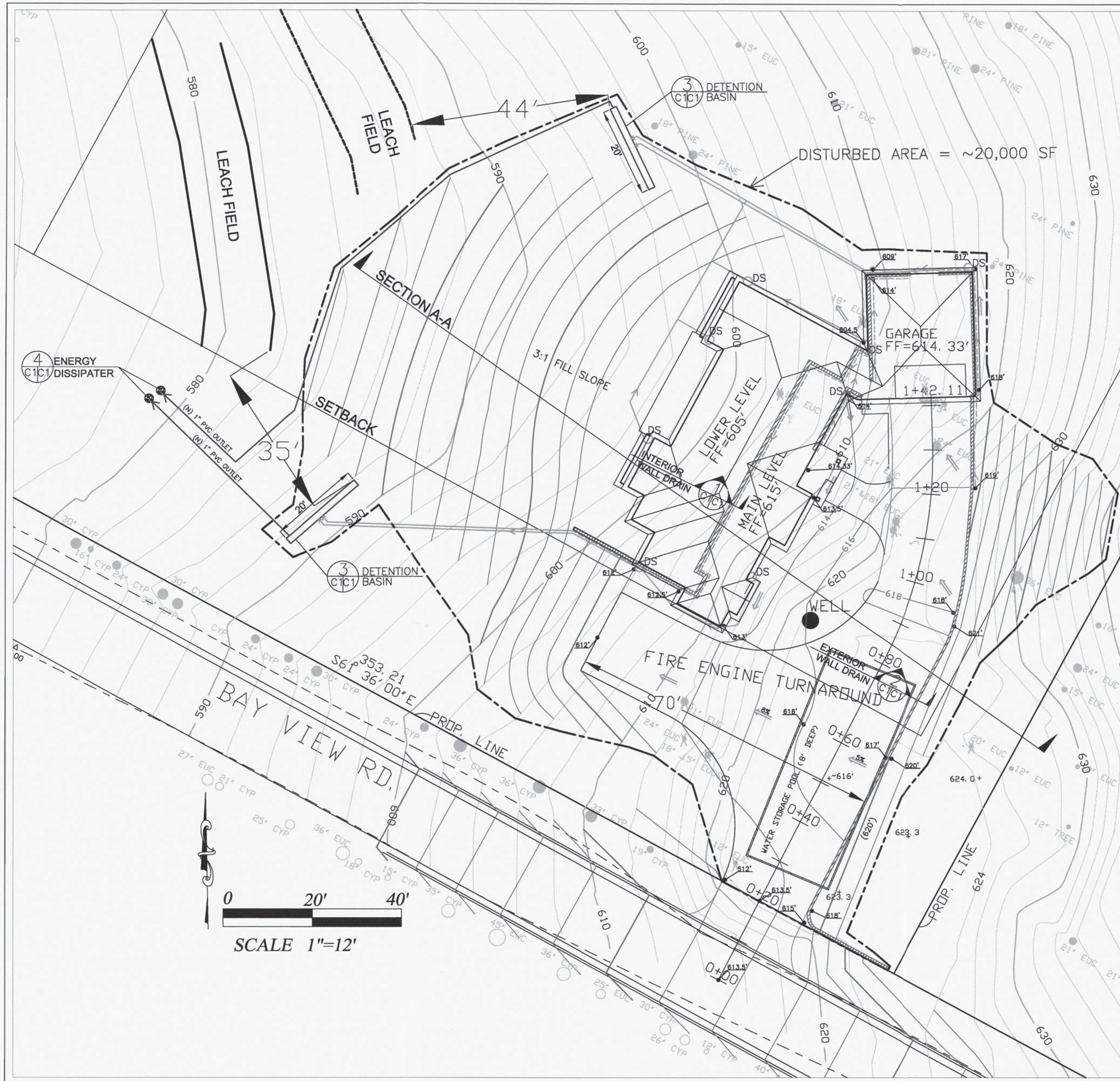
REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KOSICO
No. 62264
9-30-19
EXPIRES
CIVIL
STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE

DATE: 12-28-16
DRAWN BY: CMK
CHECKED BY: AZG
REV. DATE: 5-11-17

BAY VIEW ROAD PLAN

PLN 2017-00017



LEGEND

624. 0+	SPOT ELEVATION (E)
620'	SPOT ELEVATION (N)
	EXISTING CONTOURS
	PROPOSED CONTOURS
DS	DOWNSPOUT
	SOLID PLASTIC DRAIN PIPE, SDR 35 @ 1% MINIMUM SLOPE. ALL SDR 35 DRAIN PIPES TO BE 4" DIA. UNLESS OTHERWISE NOTED.
	PERFORATED PIPE @ WALL FOOTING: 3" DIA. RIGID SDR 35, HOLES DOWN. 1% MIN. SLOPE.
	DIRECTION OF SURFACE DRAINAGE FLOW
	TREE TO BE REMOVED
	PROPOSED RETAINING WALL

E	EXISTING
N	NEW, OR PROPOSED
BW	BOTTOM OF WALL
TW	TOP OF WALL

GRADING NOTES

CUT VOLUME : 1100 CY
FILL VOLUME: 1100 CY
NET VOLUME: 0 CY

1) THE SUBGRADE BELOW ALL PAVED AREAS SHALL BE BASEROCK COMPACTED TO 95%.

2) WELLHEAD SHALL BE CUT 5 FEET TO MATCH PROPOSED GRADE. A 25-FOOT SEAL WILL REMAIN.

3) ALL GRADING SHALL CONFORM TO LOCAL CODES AND ORDINANCES.

4) EMBANKMENT FILLS SHALL BE PLACED ON KEYED AND BENCHED SURFACES, AS SHOWN IN SECTION A-A, AND COMPACTED IN 6" LOOSE LIFTS TO 92% OF MAXIMUM DRY DENSITY. ON-SITE SOILS MAY BE USED AS BACKFILL.

5) ALL TRENCHES UNDER PROPOSED PAVED AREAS OR CONCRETE SHALL BE BACKFILLED TO SUBGRADE ELEVATION WITH COMPACTED APPROVED GRANULAR MATERIALS. IF TRENCHES ARE IN PROPOSED LANDSCAPE AREAS, THEY SHALL BE BACKFILLED WITH COMPACTED APPROVED GRANULAR MATERIAL TO WITHIN ONE FOOT OF FINISHED GRADE, AND THEN FILLED WITH HAND TAPPED SOILS.

6) WATER STORAGE POOL SHALL BE FILLED IN TO BRING GRADE UP TO ROAD LEVEL. ON-SITE SOIL MAY BE USED, PLACED IN 12-INCH LOOSE LIFTS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY.

DRAINAGE NOTES

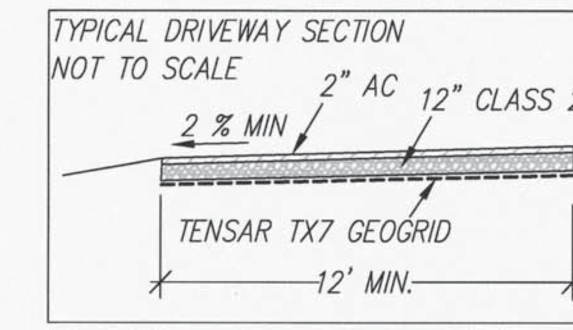
1. DRAINAGE INTENT: IT IS THE INTENT OF THE DRAINAGE SYSTEM TO CONVEY ROOF RUNOFF TO A SAFE LOCATION, TO MINIMIZE EXCESSIVE MOISTURE AROUND FOUNDATIONS, AND TO PROVIDE DRAINAGE FOR RETAINING WALLS.

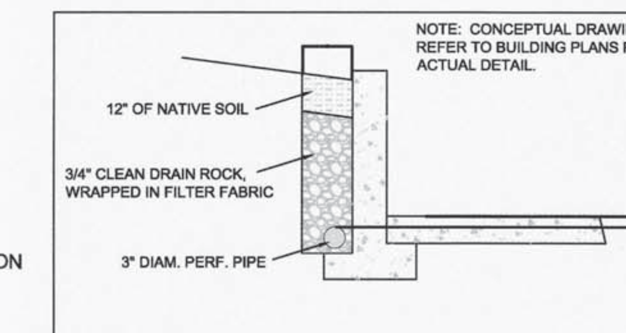
2. ALL DRAIN LINES SHALL LEAD TO DETENTION BASINS SHOWN.

3. ALL PERFORATED PIPES SHALL DRAIN TO SOLID PIPES. A SOLID PIPE SHALL NOT DRAIN DRAIN TO A PERFORATED PIPE UNLESS PERFORATED PIPE IS PART OF AN ENERGY DISSIPATER.

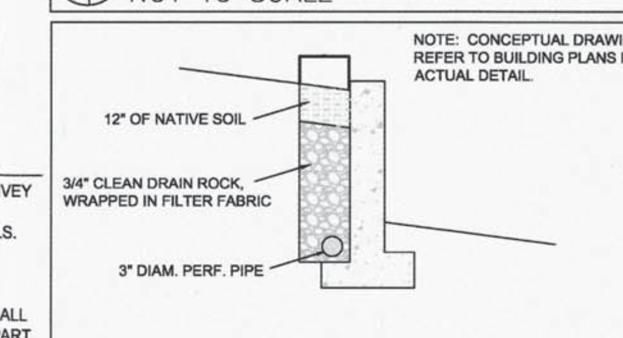
4. ALL ROOF DRAINAGE PIPES SHALL BE 4" DIAMETER SOLID PIPE, SLOPED AT 1% MINIMUM.

5. IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE DRAINAGE SYSTEM. THE DETENTION BASINS SHALL BE CHECKED EVERY FALL AND CLEARED OF DEBRIS.



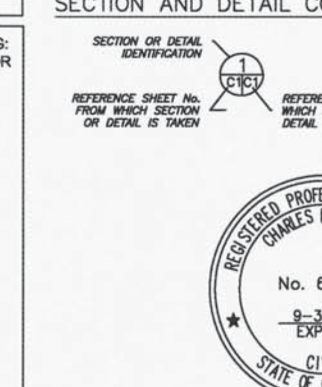


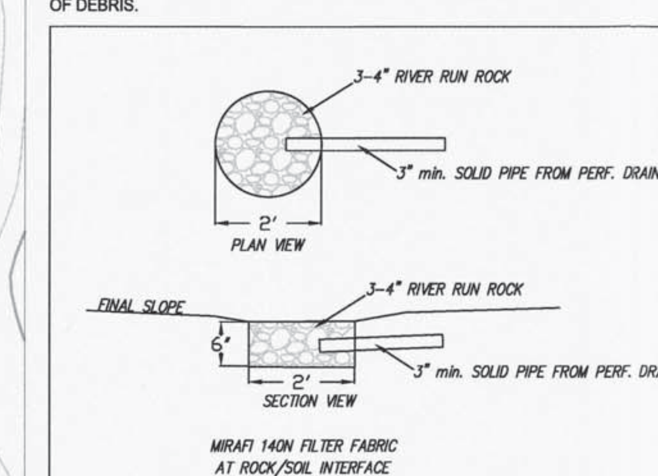
1 C1C1 INTERIOR WALL DRAINAGE
NOT TO SCALE



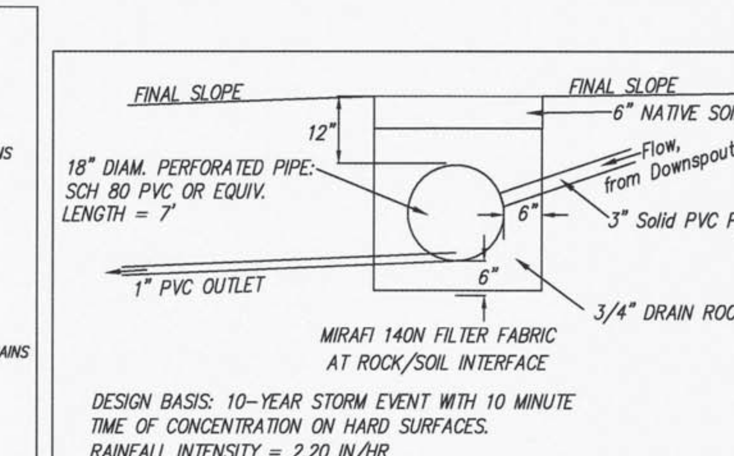
2 C1C1 EXTERIOR WALL DRAINAGE
NOT TO SCALE

SECTION AND DETAIL CONV



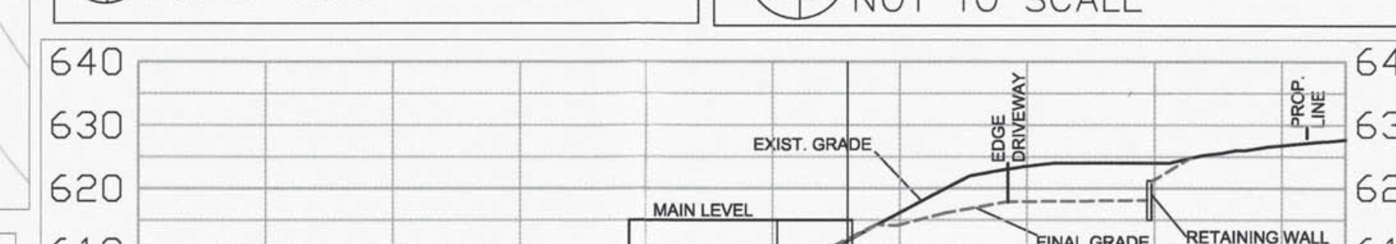


4 C1C1 ENERGY DISSIPATER
NOT TO SCALE



DESIGN BASIS: 10-YEAR STORM EVENT WITH 10 MINUTE TIME OF CONCENTRATION ON HARD SURFACES.
RAINFALL INTENSITY = 2.20 IN/HR

3 C1C1 DETENTION BASIN
NOT TO SCALE



Sigma Prime Geosciences, Inc.
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE

DATE: 12-28-16
DRAWN BY: CMK
CHECKED BY: AZG
REV. DATE: 5-11-17

ADING AND
INAGE PLAN
RASHER PROPERTY

FIRE PROTECTION NOTES

County of San Mateo - Planning and Building Department

ATTACHMENT C

COUNTY OF SAN MATEO
PLANNING AND BUILDING

County Government Center
455 County Center, 2nd Floor
Redwood City, CA 94063
650-363-4161 T
650-363-4849 F
www.planning.smcgov.org

November 13, 2018

Ned Brasher
PO Box 370438
Montara, CA 94037

Dear Mr. Brasher:

SUBJECT: Coastside Design Review Recommendation of Approval
Bay View Road, Montara
APN 036-243-110; County File No. PLN 2017-00017

At its meeting of September 13, 2018, the San Mateo County Coastside Design Review Committee (CDRC) considered your application for a design review recommendation to allow construction of a new two (2)-story, 3,476 sq. ft. residence, plus a 667 sq. ft. garage, located on a legal 1.77-acre parcel (legality confirmed via Merger, PLN 2004-00514) associated with a hearing-level Coastal Development Permit, Resource Management Permit, and Grading Permit. The construction of the residence involves 1,100 cubic yards of cut and 1,100 cubic yards of fill and the removal of eleven (11) significant trees. This project also includes road and utility improvements that are necessary for the subject parcel and the development of three (3) other legal parcels (APNs 036-243-010, 036-243-130, and 036-243-120) on Bay View Road under common ownership, which involve an additional 370 cubic yards of cut and 170 cubic yards of fill and the removal of eleven (11) additional significant trees. The associated Coastal Development Permit is appealable to the California Coastal Commission. The completion and circulation of an Initial Study and Negative Declaration for review and comments will be followed by a hearing before the Planning Commission.
Based on the plans, application forms, and accompanying materials submitted, the Coastside Design Review Committee recommended approval of your project based on and subject to the following findings and recommended conditions:

FINDINGS

The Coastside Design Review Committee found that:

1. For the Design Review

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

a. *Section 6565.20(D) ELEMENTS OF DESIGN. 1. Building Mass, Shape and Scale. A Relationship to Existing Topography. Standards 1 and 3: The structure steps down and tucks into the hillside in the same direction as the existing grade. Building elements extending out over the downward slope have been minimized.*

b. *Section 6565.20(D) ELEMENTS OF DESIGN. 3. Roof Design. A Massing and Design of Roof Forms: The mass of the roof is articulated and contributes to the character of the house.*

c. *Section 6565.20(D) ELEMENTS OF DESIGN. 4. Exterior Materials and Colors. Standards a(1), a(3), and b: The exterior colors and materials are compatible with the surrounding natural features, of similar or better quality of those used in the neighborhood, and consistent with the architecture of the house.*

RECOMMENDATIONS

1. Detach the garage and allow for covered passage to the house.

RECOMMENDED CONDITIONS

Current Planning Section

1. The project shall be constructed in compliance with the plans once approved by the Planning Commission and as reviewed by the Coastside Design Review Committee on September 13, 2018. Any changes or revisions to the approved plans shall be submitted to the Design Review Officer for review and approval prior to implementation. Minor adjustments to the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Alternatively, the Design Review Officer may refer consideration of the revisions to the Coastside Design Review Committee, with applicable fees to be paid.

2. The applicant shall provide "finished floor elevation verification" to certify that the structure is actually constructed at the height shown on the submitted plans. The applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site.

    a. The applicant shall maintain the datum point so that it will not be disturbed by the proposed construction activities until final approval of the building permit.

    b. This datum point and its elevation shall be shown on the submitted site plan. This datum point shall be used during construction to verify the elevation of the finished floors relative to the existing natural or to the grade of the site (finished grade).

    c. Prior to Planning approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of

the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades.

d. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).

e. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

f. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.

3. The applicant shall indicate the following on the plans submitted for a building permit, as stipulated by the Coastside Design Review Committee:

a. Remove rear deck post supports and increase the size of the header supporting the deck. Increase the size of the windows and doors above and below the rear deck to a span of 16 feet.

b. Use Autumn Chestnut for the trim color.

c. Use Khaki Brown for the body color.

d. Add a total of twelve (12) trees that are approximately 40 feet tall at maturity. The trees shall be planted at a 3:1 (evergreen: deciduous) ratio.

e. Remove Indian Hawthorn (*Rhaphiolepis indica*) from the plant palette of the project because of its propensity to attract and be eaten by deer.

4. The property owner shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

a. Delineation with field markers of clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

c. Performing clearing and earth-moving activities only during dry weather.

d. Stabilization of all denuded areas and maintenance of erosion control measures continuously between October 1 and April 30.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges, to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering the site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving the site shall be clear and running slowly at all times.

n. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

5. The applicant shall include an erosion and sediment control plan to comply with the County's Erosion Control Guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed

upon the commencement of construction in order to maintain the stability of the site and prevent erosion and sedimentation off-site.

6. The project site is located within the Fitzgerald Area of Special Biological Significance (ASBS) Watershed and is considered a Construction Stormwater Regulated Site. Weekly construction inspections are required throughout the duration of land disturbance during the rainy season (October 1 to through April 30) for sites within the ASBS Watershed, as required by the State Water Resources Control Board General Exceptions to the California Ocean Plan with Special Protections adopted on March 20, 2012.

7. The project site is located within the Fitzgerald Area of Special Biological Significance (ASBS) watershed. Runoff and other polluted discharges from the site are prohibited. Development shall minimize erosion, treat stormwater from new/replaced impervious surfaces, and prevent polluted discharges into the ASBS or a County storm drain (e.g., car washing in a driveway or street, pesticide application on lawn).

8. All new power and telephone utility shall be placed underground.

9. The applicant shall apply for a building permit and shall adhere to all requirements from the Building Inspection Section, the Department of Public Works, the Montara Water and Sanitary District, the Coastside Fire Protection District, and Environmental Health Services.

10. No site disturbance shall occur, including any tree/vegetation removal or grading, until a building permit has been issued.

11. To reduce the impact of construction activities on neighboring properties, comply with the following:

    a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.

    b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.

    c. The applicant shall ensure that no construction-related vehicles shall impede through traffic along the right-of-way on Hermosa Avenue. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on Hermosa Avenue. There shall be no storage of construction vehicles in the public right-of-way.

12. The exterior colors and materials as conditioned by the CDRC are approved. Color verification shall occur in the field after the applicant has applied the approved materials and colors but before a final inspection has been scheduled.

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

14. Installation of the approved landscape plan is required prior to final inspection.

15. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO) and provide the required forms. WELO applies to new landscape projects equal to or greater than 500 sq. ft. and rehabilitated landscape projects equal to or greater than 2,500 square feet. A prescriptive checklist is available as a compliance option for projects under 2,500 square feet. The Performance approach is applicable to new and/or rehabilitated landscape projects over 2,500 square feet.

16. At the building permit application stage, the applicant shall submit a tree protection plan which protects on- and off-site trees within the proximity of grading and/or construction activities, including the following:

    a. Identify, establish, and maintain tree protection zones throughout the entire duration of the project.

    b. Isolate tree protection zones using five (5)-foot tall, orange plastic fencing supported by poles pounded into the ground, located at the driplines as described in the arborist's report.

    c. Maintain tree protection zones free of equipment and materials storage; contractors shall not clean any tools, forms, or equipment within these areas.

    d. If any large roots or large masses of roots need to be cut, the roots shall be inspected by a certified arborist or registered forester prior to cutting as required in the arborist's report. Any root cutting shall be undertaken by an arborist or forester and documented. Roots to be cut shall be severed cleanly with a saw or toppers. A tree protection verification letter from the certified arborist shall be submitted to the Planning Department within five (5) business days from site inspection following root cutting.

    e. Normal irrigation shall be maintained, but oaks shall not need summer irrigation, unless the arborist's report directs specific watering measures to protect trees.

    f. Street tree trunks and other trees not protected by dripline fencing shall be wrapped with straw wattles, orange fence, and 2 x 4 boards in concentric layers to a height of eight (8) feet.

g. Prior to issuance of a Building Permit or Demolition Permit, the Planning and Building Department shall complete a pre-construction site inspection, as necessary, to verify that all required tree protection and erosion control measures are in place.

17. Prior to the issuance of the building permit, the applicant shall submit language to be added to the deeds of all the parcels to be served by the well located on APN 036 243 110 that acknowledges the water system and the responsibilities and maintenance associated with said water system by the respective property owners to the Community Development Director for review and approval. Once the language is to the satisfaction of the Community Development Director, the applicant shall record a deed restriction with the San Mateo County Recorder's Office with the approved language for all of the associated parcels.

18. Applicant shall prepare a Stormwater Management Plan (SWMP) that includes, at a minimum, exhibit(s) showing drainage areas and location of Low Impact Development (LID) treatment measures; project watershed; total project site area and total area of land disturbed; total new and/or replaced impervious area; treatment measures and hydraulic sizing calculations; a listing of source control and site design measures to be implemented at the site; hydromodification management measures and calculations, if applicable; Natural Resources Conservation Service (NRCS) soil type; saturated hydraulic conductivity rate(s) at relevant locations or hydrologic soil type (A, B, C or D) and source of information; elevation of high seasonal groundwater table; a brief summary of how the project is complying with Provision C.3 of the MRP; and detailed Maintenance Plan(s) for each site design, source control and treatment measure requiring maintenance.

19. Project shall comply with all requirements of the Municipal Regional Stormwater NPDES Permit Provision C.3. Please refer to the San Mateo Countywide Water Pollution Prevention Program's (SMCWPPP) C.3 Stormwater Technical Guidance Manual for assistance in implementing LID measures at the site.

20. Efficient irrigation systems shall be used throughout all landscaped areas in accordance with the Model Water Efficient Landscape Ordinance.

21. On-site storm drain inlets shall be clearly marked with the words "No Dumping! Flows to Bay," or equivalent using thermoplastic material or a plaque.

22. Project shall incorporate landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices such as Bay-Friendly Landscaping.

23. Fire sprinkler test water shall discharge to on-site vegetated areas, or alternatively shall be discharged to the sanitary sewer system, subject to the local sanitary sewer agency's authority and standards.

24. Minimize land disturbance and impervious surface (especially for new parking lots).

25. Protect sensitive areas, including wetland and riparian areas, and minimize changes to the natural topography.

26. Plant or preserve interceptor trees (Section 4.1, C.3 Technical Guidance).

Grading Permit

27. Unless approved, in writing, by the Community Development Director, no grading shall be allowed during the winter season (October 1 to April 30) to avoid potential soil erosion. The applicant shall submit a letter to the Current Planning Section stating the date when grading will begin.

28. No grading activities shall commence until the property owner has been issued a grading permit (issued as the "hard card" with all necessary information filled out and signatures obtained) by the Current Planning Section.
29. Prior to any land disturbance and throughout the grading operation, the property owner shall implement the erosion control plan, as prepared and signed by the engineer of record and approved by the decision maker. Revisions to the approved erosion control plan shall be prepared and signed by the engineer and submitted to the Community Development Director for review and approval.

30. Prior to issuance of the grading permit "hard card," the property owner shall submit a schedule of all grading operations to the Current Planning Section, subject to review and approval by the Current Planning Section. The submitted schedule shall include a schedule for winterizing the site. If the schedule of grading operations calls for the grading to be completed in one grading season, then the winterizing plan shall be considered a contingent plan to be implemented if work falls behind schedule. All submitted schedules shall represent the work in detail and shall project the grading operations through to completion.

31. It shall be the responsibility of the engineer of record to regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected, as determined by and implemented under the observation of the engineer of record.

32. For the final approval of the grading permit, the property owner shall ensure the performance of the following activities within 30 days of the completion of grading at the project site: (a) The engineer shall submit written certification that all grading has been completed in conformance with the approved plans, conditions of approval/mitigation measures, and the Grading Regulations, to the Department of Public Works and the Planning and Building Department's Geotechnical Engineer, and (b) The geotechnical consultant shall observe and approve all applicable work during construction and sign Section II of the Geotechnical Consultant Approval form, for submittal to the Planning and Building Department's Geotechnical Engineer and the Current Planning Section.
33. As the project involves over 1-acre of land disturbance, the property owner shall file a Notice of Intent (NOI) with the State Water Resources Board to obtain coverage under

the State General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit. A copy of the project's NOI, WDID Number, and Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the Current Planning Section and the Building Inspection Section, prior to the issuance of the grading permit "hard card."

Building Inspection Section

34. Project is subject to a building permit from San Mateo County Planning and Building Department.

35. Project shall be designed and constructed according to the latest California Building Standards. Current County of San Mateo Building Regulations shall be followed as well.

36. Project is located in a High Fire Hazard Severity Zone and shall be designed and constructed for Materials and Construction Methods for Exterior Wildfire Exposure.

37. Prior to the issuance of the building permit (for Provision C3 Regulated Projects), the applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Drainage Section for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off of the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Drainage Section for review and approval.

38. The applicant shall submit to the Drainage Section, for review, documentation of drainage and other utility easements for the applicant's use and the use of others.

Montara Water and Sanitary District (MWSD)

39. Applicant is required to obtain a Septic System Permit prior to issuance of the building permit. Distance to MWSD Public Drinking Water Well may require MWSD Hydrologic Investigation and possible alterations to the Septic System design as condition to the Private Sewerage System Permit.

40. The property proposed for development is located outside the urban-rural boundary and therefore, is ineligible for domestic water service.

41. The property appears to front an existing water main; therefore, the District will provide fire service to the property and facilitate a Private Fire Protection (PFP) connection. Certified Fire Protection Contractor must certify adequate fire flow calculations. Connection fee for fire protection system is required. Connection charges must be paid prior to issuance of Private Fire Protection permit.

42. Applicants must first apply directly to District for permits and not their contractor.

Department of Public Works

43. Prior to the issuance of the Building Permit or Planning Permit (if applicable), the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

44. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

45. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.

46. The applicant shall submit, for review by the Department of Public Works and the appropriate Fire District, a Plan and Profile of both the existing and the proposed access from the nearest "publicly" maintained roadway to the proposed building site. Applicant shall provide plan, profile, and cross-sections at various intervals, and drainage calculations for review.

Coastside Fire Protection District (CFPD)

47. Fire Department access shall be within 150 feet of all exterior portions of the facility and all portions of the exterior walls of the first story of the buildings as measured by an approved access route around the exterior of the building or facility. Access shall be a minimum of 20 feet wide, all weather capability, and able to support a fire apparatus weighing 75,000 pounds. Where a fire hydrant is located in the access, a minimum of 26 feet is required for a minimum of 20 feet on each side of the hydrant. This access shall be provided from a publicly maintained road to the property. Grades over 15% shall be paved and no grade shall be over 20%.

48. All buildings that have a street address shall have the number of that address on the building, mailbox, or other type of sign at the driveway entrance in such a manner that the number is easily and clearly visible from either direction of travel from the street. New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building.

Residential address numbers shall be at least 6 feet above the finished surface of the driveway. An address sign shall be placed at each break of the road where deemed applicable by the Coastside Fire Protection District. Numerals shall be contrasting in color to their back ground and shall be no less than 4 inches in height, and have a minimum 3/4-inch stroke. Remote signage shall be a 6-inch x 18-inch green reflective metal sign.

49. Contact the Fire Marshal's Office to schedule a Final Inspection prior to occupancy and Final Inspection by a building inspector. Allow for a minimum 72-hours' notice to the Fire Department at 650/726-5213.

50. A fire flow of 1,000 gallons per minute (gpm) for 2 hours with a 20 pounds per square inch (psi) residual operating pressure must be available as specified by additional project conditions to the project site. The applicant shall provide documentation including hydrant location, main size, and fire flow report at the building permit application stage. Inspection required prior to Fire's final approval of the building permit or before combustibles are brought on site.

51. Maintain around and adjacent to such buildings or structures a fuel break/firebreak made by removing and clearing away flammable vegetation for a distance of not less than 30 feet and up to 100 feet around the perimeter of all structures, or to the property line, if the property line is less than 30 feet from any structure.

52. The applicant shall install the proper occupancy separations, as per current California Building and Residential Codes. Plans at the building permit application stage shall include listing and construction details. Inspections will occur throughout construction and prior to Fire's final approval of the building permit.

53. All roof assemblies in Fire Hazard Severity Zones shall have a minimum CLASS-A fire resistive rating and be installed in accordance with the manufacturer's specifications and current California Building and Residential Codes.

54. An approved Automatic Fire Sprinkler System meeting the requirements of NFPA-13D shall be required to be installed for your project. Plans shall be submitted to the San Mateo County Building Inspection Section for review and approval by the authority having jurisdiction.

55. An interior horn/strobe and exterior audible alarm activated by automatic fire sprinkler system water flow shall be required to be installed in all residential systems. All hardware must be included on the submitted sprinkler plans.

56. An approved Automatic Fire Sprinkler System meeting the requirements of NFPA-13R shall be required to be installed for your project. Plans shall be submitted to the San Mateo County Building Inspection Section for review and approval.

57. All dead end roadways shall be terminated by a turnaround bulb of not less than 96 feet in diameter.

58. This project is located in a wildland urban interface area. Roofing, attic ventilation, exterior walls, windows, exterior doors, decking, floors and underfloor protection to meet CRC R327 or CBC Chapter 7A requirements.

Environmental Health Services

59. At the building permit application stage, the applicant will need to demonstrate adequate water supply (quantity and quality) to serve proposed and existing structures. If 5 to 14 water connections are proposed, they shall be regulated by San Mateo County Environmental Health Services as a State Small Water Systems Program.

Please note that the decision of the Coastside Design Review Committee is a recommendation regarding the project's compliance with design review standards, not the final decision on this project, which requires a Mitigated Negative Declaration and hearing-level Coastal Development Permit, Resource Management Permit, and Grading Permit.

For more information, please contact Ruemel Panglao, at 650/363-4582, or by email at rpanglao@smcgov.org.

Please remove all story poles and materials used to demonstrate the footprint as soon as possible.

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

Sincerely,

Dennis P. Aguirre, Design Review Officer

DPA:RSP:ann – RSPCC0485_WNN.DOCX

cc: Stuart Grunow, Member Architect
Bruce Chan, Member Landscape Architect
Beverly Garrity, Montara Community Representative
Sheila Bruno, Interested Member of the Public, PO Box 430, Moss Beach, CA 94038
Sheila Fellows, Interested Member of the Public, PO Box 370995, Montara, CA 94037
Margaret Dean, Interested Member of the Public, PO Box 370224, Montara, CA 94037
Leslie and Linda Steinhoff, Interested Member of the Public, PO Box 370329, Montara, CA, 94037

Envelope:

Sheila Bruno, Interested Member of the Public, PO Box 430, Moss Beach, CA 94038
Sheila Fellows, Interested Member of the Public, PO Box 370995, Montara, CA 94037
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County of San Mateo - Planning and Building Department

ATTACHMENT D

Search

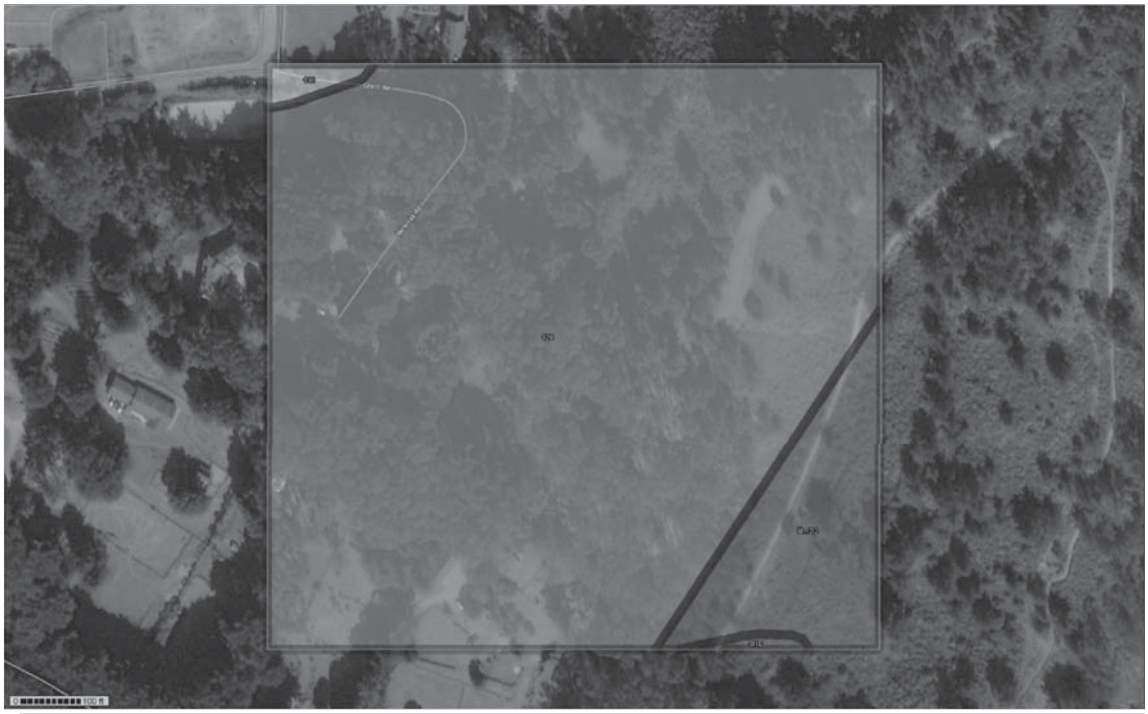
Suitabilities and Limitations Ratings

Open All | Close All

- Building Site Development
- Construction Materials
- Disaster Recovery Planning
- **Land Classifications**
  - California Revised Storie Index (CA)
    - View Description | View Rating
    - **View Options**
      - Map
      - Table
        - Component Breakdown
      - Description of Rating
      - Rating Options
        - Detailed Description
    - **Advanced Options**
    - View Description | View Rating
  - Conservation Tree and Shrub Group
  - Ecological Site ID
  - Ecological Site Name
  - Farmland Classification
  - Hydric Rating by Map Unit
  - Irrigated Capability Class
  - Irrigated Capability Subclass
  - National Commodity Crop Productivity Index
  - NH Forest Soil Group
  - Nonirrigated Capability Class
  - Nonirrigated Capability Subclass
  - Order of Soil Survey
  - Soil Taxonomy Classification
- Land Management
- Military Operations
- Recreational Development
- Sanitary Facilities
- Soil Health
- Vegetative Productivity
- Waste Management
- Water Management

Map — California Revised Storie Index (CA)

Scale (not to scale)



Warning: Soil Ratings Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,000 to 1:24,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Tables — California Revised Storie Index (CA) — Summary By Map Unit

Summary by Map Unit — San Mateo Area, California (CA637)
Summary by Map Unit — San Mateo County, Eastern Part, and San Francisco County, California (CA689)

Summary by Map Unit — San Mateo Area, California (CA637)

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
MmD2	Miramar coarse sandy loam, moderately steep, eroded	Grade 3 - Fair	Miramar (85%)	2.4	10.4%
ShD	Sheridan coarse sandy loam, moderately steep	Grade 3 - Fair	Sheridan (85%)	0.1	0.4%
Subtotals for Soil Survey Area				**2.4**	**10.7%**

Summary by Map Unit — San Mateo County, Eastern Part, and San Francisco County, California (CA689)

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
128	Scarper-Miramar complex, 30 to 75 percent slopes	Grade 5 - Very Poor	Scarper (40%)	20.1	88.4%
130	Typic Argiustolls, loamy-Urban land association, 5 to 1 5 percent slopes	Grade 2 - Good	Typic Argiustolls (50%)	0.2	0.8%
Subtotals for Soil Survey Area				**20.3**	**89.3%**
Totals for Area of Interest				**22.7**	**100.0%**

Description — California Revised Storie Index (CA)

The Revised Storie Index is a rating system based on soil properties that govern the potential for soil map unit components to be used for irrigated agriculture in California.

The Revised Storie Index assesses the productivity of a soil from the following four characteristics:

- Factor A: degree of soil profile development
- Factor B: texture of the surface layer
- Factor C: steepness of slope
- Factor X: drainage class, landform, erosion class, flooding and ponding frequency and duration, soil pH, soluble salt content as measured by electrical conductivity, and sodium adsorption ratio

Revised Storie Index numerical ratings have been combined into six classes as follows:

- Grade 1: Excellent (81 to 100)
- Grade 2: Good (61 to 80)
- Grade 3: Fair (41 to 60)
- Grade 4: Poor (21 to 40)
- Grade 5: Very poor (11 to 20)
- Grade 6: Nonagricultural (10 or less)

The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one shown for the map unit. The percent composition of each component in a particular map unit is given to help the user better understand the extent to which the rating applies to the map unit.

Other components with different ratings may occur in each map unit. The ratings for all components, regardless the aggregated rating of the map unit, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options — California Revised Storie Index (CA)

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

County of San Mateo - Planning and Building Department

ATTACHMENT E

PLN 2017-00017

MIG | TRA ENVIRONMENTAL SCIENCES

Hermosa Road
Biological Resources Evaluation

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Project Number: 16092

Contents

List of Abbreviated Terms

AMM	Avoidance and Mitigation Measure
BMP	Best Management Practices
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSSC	California Species of Special Concern
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FESA	Federal Endangered Species Act
LCP	Local Coastal Program
LSAA	Lake and Streambed Alteration Agreement
NCCP	Natural Community Conservation Plan
NOAA Fisheries Service	National Oceanic and Atmospheric Administrations' National Marine Fisheries Service
NPPA	Native Plant Protection Act
RWQCB	Regional Water Quality Control Board
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

Introduction

This report presents results of a biological resources evaluation and impact analysis for the development of parcels in Montara, San Mateo County, California. San Mateo County requires this report in support of the requirements of the San Mateo County Local Coastal Program and the California Environmental Quality Act. The report describes the resources on five parcels (APNs 036-231-090/100, 036-243-120, 036-243-110, and 036-243-130; Figures 1 and 2).

This report responds to the questions on the San Mateo's Local Coastal Program (LCP) Biological Resources form, and complies with the County's requirements for an LCP Biological Resources Report. The biological evaluation and impact analysis was completed by MIG | TRA Environmental Sciences (MIG). It identifies sensitive biological resources on and near the parcels and potential impacts to those resources resulting from development of the parcels. This report provides:

- an overview of the proposed project and a description of the parcels
- a list of the federal, state, and local regulations that may pertain to the parcels
- a description of the environmental conditions within the parcels, including vegetation communities and associated wildlife habitats present
- a discussion of special-status plant and animal species and sensitive communities that are known to occur or that could potentially occur at or near the parcels
- an evaluation of the potential impacts to biological resources that may occur because of development of the parcels
- recommendations to avoid or minimize the significance of those impacts
- responses to the California Environmental Quality Act (CEQA) Guidelines Appendix G questions related to biological resources

Summary of the Biological Resources

The five parcels are located at the end of Hermosa Road in Montara, CA, which is in unincorporated San Mateo County. The parcels are located within the Coastal Zone and the approximate area of the parcels is 3.4 acres. Development within the parcels is subject to the requirements of the San Mateo County Local Coastal Plan.

Proposed development within the parcels include the paving of an existing dirt road, the construction of a single-family home, and installation of underground utilities.

No special status animals or plants identified by state or federal agencies or in the LCP were determined to have the potential to occur within the study area. No additional surveys are recommended at this time.

Habitats within the study are dominated by non-native vegetation and are classified as developed and disturbed. The parcels do not contain habitat for special-status species, and are not within federally designated Critical Habitat for any species.

The parcels do not contain wetlands or waters of the U.S. and/or Waters of the State falling under USACE and RWQCB jurisdiction. There are no wetlands as defined by the LCP.

The study area is primarily surrounded by residential development and does not serve as a continuous regional connection for wildlife species.

The proposed development activities do not require the removal of trees: therefore, a tree survey is not required for the study area.

The trees and dense vegetation found within the study area supports potential nesting habitat for birds and raptors. To avoid impacts to nesting birds and violation of state and federal laws pertaining to birds, all construction-related activities should occur outside the avian nesting season (that is, prior to February 1 or after September 15). If construction and construction noise occurs within the avian nesting season, a pre-construction nesting bird survey needs to be completed.

Location and Project Description

The parcels are located at the end of Hermosa Road in Montara, CA, which is in unincorporated San Mateo County. The parcels are located within the Coastal Zone and include: APN 036-231-090, APN 036-231-100, APN 036-243-120, APN 036-243-110, and APN 036-243-130 (Figure 2). For the purposes of this report, the "study area" refers to all the parcels. The approximate area of all the parcels is 3.4 acres. The entire study area, as well as much of the surrounding area, is designated as very low density residential on the San Mateo County LCP Mid-Coast Land Use Map (County of San Mateo 2013). The study area lies approximately 1.4 miles east of Highway 1 and abuts Rancho Corral de Tierra, which is part of the Golden Gate National Recreation Area (GGNRA). At nearly 4,000 acres, Rancho Corral de Tierra is one of the largest undeveloped parcels of land on the San Mateo peninsula. Nearby creeks include San Vicente Creek, approximately 0.25 miles to the southeast and Sunshine Valley Creek, approximately 0.5 miles to the northwest. The topography within the study area consists of level ground to approximately 18% slopes. The elevation ranges from approximately 412 to 500 feet above mean sea level. The study area lies within the Central Coast sub-region of the California Floristic Province and within the San Vicente Creek Watershed. The 60-year annual precipitation average is approximately 27 inches per year (Western Regional Climate Center 2016).

At this time, the applicant proposes the following construction activities within the parcels:

- paving of an existing dirt road that connects the parcels to Hermosa Road

- infrastructure, including underground utilities, installation of water pipes from an existing shared well to serve the undeveloped parcels, and an emergency vehicle turn-around area
- a bio-retention area to catch water run-off from the paved road; a permanent drainage system for surface run-off; and a single-family house with attached garage, driveway, and associated retaining walls will is proposed to be built on APN 036-243-110

Future development of the other lots will require subsequent impact analysis and assessment of compliance with the LCP.

Regulatory Setting

Biological resources in California are protected under federal, state, and local laws. The laws that may pertain to the biological resources found within the study area include the following:

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA), as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), (3) prohibitions against "taking" (i.e., harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take". FESA also provides for recovery plans and the designation of critical habitat for listed species. Both the USFWS and NOAA Fisheries Service share the responsibility for administration of FESA. During the NEPA review process, each agency is given the opportunity to comment on the potential of a proposed project to affect plants and animals listed, proposed for listing, or candidate for listing.

U.S. Migratory Bird Treaty Act

The U.S. Migratory Bird Treaty Act (MBTA; 16 USC §§ 703 et seq., Title 50 Code of Federal Regulations [CFR] Part 10) states it is "unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill; attempt to take, capture or kill; possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or in part, of any such bird or any part, nest or egg thereof..." In short, under MBTA it is illegal to disturb a nest that is in active use,

since this could result in killing a bird, destroying a nest, or destroying an egg. The United States Fish and Wildlife Service (USFWS) enforces MBTA. It does not protect all birds that are non-native or human-introduced or that belong to families that are not covered by any of the conventions implemented by MBTA.

Clean Water Act

The Clean Water Act (CWA) is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the U.S. Environmental Protection Agency (EPA). However, the EPA depends on other agencies, such as the individual states and the U.S. Army Corps of Engineers (USACE), to assist in implementing the CWA. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 and 401 of the CWA apply to activities that would impact waters of the U.S. The USACE enforces Section 404 of the CWA and the California State Water Resources Control Board enforces Section 401.

Section 404

As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into "waters of the U.S.". "Waters of the U.S." include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high water marks. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it is in compliance with Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

Substantial impacts to waters of the U.S. may require an Individual Permit. Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, if such permits' other respective conditions are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions.

Section 401

Any applicant for a federal permit to impact waters of the U.S. under Section 404 of the CWA, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a certification or waiver from the State of California. The "401 Certification" is

provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB).
The RWQCB issues and enforces permits for discharge of treated water, landfills, storm-water runoff, filling of any surface waters or wetlands, dredging, agricultural activities and wastewater recycling. The RWQCB recommends the "401 Certification" application be made at the same time that any applications are provided to other agencies, such as the USACE, USFWS, or NOAA Fisheries. The application to the RWQCB is similar to the pre-construction notification that is required by the USACE. It must include a description of the habitat that is being impacted, a description of how the impact is to be minimized, and proposed mitigation measures with goals, schedules, and performance standards. Mitigation must include a replacement of functions and values, and replacement of wetland at a minimum ratio of 2:1, or twice as many acres of wetlands provided as are removed. The RWQCB looks for mitigation that is on site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed or impacted.

California Fish and Game Code

California Endangered Species Act

The California Endangered Species Act (CESA; Fish and Game Code 2050 et seq.) generally parallels the federal Endangered Species Act. It establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Section 2080 of the California Fish and Game Code prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or by the regulations. "Take" is defined in Section 86 of the California Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." This definition differs from the definition of "take" under FESA. CESA is administered by California Department of Fish and Wildlife (CDFW). CESA allows for take incidental to otherwise lawful projects, but mandates that State lead agencies consult with the CDFW to ensure that a project would not jeopardize the continued existence of threatened or endangered species.

Non-Game Mammals

Sections 4150-4155 of the California Fish and Game Code protects non-game mammals. Section 4150 states "A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission". The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage.

California Fish and Game Code Sections 3500-3513

Section 3503 of the California Fish and Game Code specifies that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrow (*Passer domesticus*) and European Starling (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey) from "take". Section 3513 essentially overlaps with the MBTA, prohibiting the "take" or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW.

California Fish and Game Code Sections 1600-1607

Sections 1600-1607 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions in the application and, if necessary, prepares a Lake or Streambed Alteration Agreement that includes measures to protect affected fish and wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was created in 1977 with the intent to preserve, protect, and enhance rare and endangered plants in California (California Fish and Game Code sections 1900 to 1913). The NPPA is administered by CDFW, which has the authority to designate native plants as endangered or rare and to protect them from "take." CDFW maintains a list of plant species that have been officially classified as endangered, threatened or rare. These special-status plants have special protection under California law.

Fully Protected Species and Species of Special Concern

The classification of California fully protected (CFP) species was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (§5515 for fish, §5050 for amphibian and reptiles, §3511 for birds, §4700 for mammals) deal with CFP species and state that these species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species". Take" of these species may be authorized for necessary scientific research. This language makes the CFP designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with CFP species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

California species of special concern (CSSC) are broadly defined as animals not currently listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special

consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique in constituent components, of relatively limited distribution in the region, or of particularly high wildlife value. These communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFW (i.e., CNDDB) or the USFWS. The CNDDB identifies a number of natural communities as rare, which are given the highest inventory priority (Sawyer et. al. 2009; CDFW 2010).

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface and ground water. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as "waters of the State," include isolated waters that are not regulated by the USACE. Any person discharging, or proposing to discharge, waste (e.g. dirt) to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

California Coastal Act

The California Coastal Act of 1976, administered by the California Coastal Commission, was created to provide long-term protection of California's 1,100-mile coastline for the benefit of future generations. Integral to the Coastal Act are its policies which provide for protection and expansion of public access to the shoreline and recreational opportunities and resources; protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays, estuaries, riparian habitat, certain woodlands and grasslands, streams, lakes and habitat for rare or endangered plants or animals; protection of productive agricultural lands, commercial fisheries and archaeological resources; protection of the scenic beauty of coastal landscapes and seascapes; practical establishment of urban-rural boundaries and directing new housing and other development into areas with adequate

services to avoid wasteful urban sprawl and leapfrog development; environmentally sound expansion of existing industrial ports and electricity-generating power plants, as well as for the siting of coastal dependent industrial uses; and protection against loss of life and property from coastal hazards.

The following are definitions given for specific ecological features that fall within the purview of the California Coastal Act: §30121 defines a wetland as: lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens; Commission Regulation §13577(b) elaborates: wetlands are lands where the water table is at near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuation of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep water habitats...; §30107.5 defines an Environmentally Sensitive Habitat Area as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Under the Coastal Act, local governments that lie in whole or in part within the Coastal Zone are required to prepare Local Coastal Programs (LCPs) (Cal. Pub. Res. Code §30500).

The entire study area is within the Coastal Zone. LCPs identify the location, type, densities, and other ground rules for future development in the coastal zone. Each LCP includes a land-use plan and its implementing measures. The Coastal Commission helps shape each LCP and then formally reviews them for consistency with Coastal Act standards. Once finalized, coastal permitting authority is transferred to the local government, with the exception of proposed development on the immediate shoreline, which stays with the Commission. In developing an LCP, a local government may choose to recognize specific botanical or wildlife resources as locally rare and that therefore garner protection.

San Mateo Local Coastal Program

The San Mateo County LCP prohibits any land use or development that would have significant adverse impact on sensitive habitat areas. Development in areas adjacent to sensitive habitats shall be sited and designated to prevent impacts that could significantly degrade the sensitive habitats. The LCP defines sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area that 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
8. Sand dunes

Sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, and habitats supporting rare, endangered, and unique species. The LCP defines wetlands as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric.

In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat.

San Mateo County Tree Ordinances

The San Mateo County Ordinance Code (Ordinance No. 2427) requires a permit from the San Mateo County Planning Department to cut down, destroy, move or trim any heritage tree growing on any public or private property within the unincorporated area of San Mateo County.

The Significant Tree Ordinance of San Mateo County (Part Three of Division VIII of the San Mateo County Ordinance Code) requires a permit for the cutting down, removing, poisoning or otherwise killing or destroying or causing to be removed any significant tree or community of trees, whether indigenous or exotic, on any private property (Section 12,020). A "Significant Tree" is any live woody plant rising above the ground with a single stem or trunk of a circumference of thirty-eight inches (38") or more measured at four and one half feet (4 1/2') vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes (Section 12,012). Additionally, a criterion for permit approval requires that significant trees that are removed be replaced by plantings approved by the Planning Director or Design Review Administrator, unless special conditions indicate otherwise (Section 12,023).

Methods

This section describes the methods used to complete the biological resources evaluation, including a database and literature review, field survey, an assessment of plant communities and wildlife habitats, an assessment of sensitive habitats and aquatic features, and a habitat evaluation for special-status species.

Database and Literature Review

Available background information pertaining to the biological resources on and in the vicinity of the study area was reviewed prior to conducting a field survey. Information was compiled and subsequently compared against site conditions during the field survey. The following sources were consulted:

- CDFW California Natural Diversity Database (CNDDB) record search within a 3-mile radius of the study area (CDFW 2016).
- CNPS Rare Plant Program Inventory of Rare and Endangered Plants of California record search within a 3-mile radius of the study area (CNPS 2016)
- USFWS list of endangered and threatened species and Critical Habitat record search for the study area (USFWS 2016)
- Calflora Database (Calflora 2012)
- San Mateo County Breeding Bird Atlas (Sequoia Audubon Society 2001)
- The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012)
- San Mateo Local Coastal Program Policies (County of San Mateo 2013)

Field Survey

A reconnaissance-level biological survey of the study area was conducted on September 7, 2016 by MIG biologist David Gallagher. The entire study area was surveyed on foot from approximately 08:00 am to 11:00 am. All wildlife species observed or recognized by diagnostic sign (e.g., scat, tracks, prey remains, burrows, etc.) were recorded and identified. All plant species in bloom, or otherwise recognizable, were identified to a level necessary to determine their regulatory status. Focused or protocol species surveys were not conducted during the site visit.

Plant Communities and Wildlife Habitats

Plant communities were classified based on existing descriptions in "A Manual of California Vegetation, Second Edition" (Sawyer et. al. 2009). However, in some cases it is necessary to identify variants of plant community types or to describe non-vegetated areas that are not described in the literature.

Sensitive Habitats and Aquatic Features

The study area was inspected for the presence of wetlands, drainages, streams, and other aquatic features, including those that support stream-dependent (i.e., riparian) plant species that could be subject to jurisdiction by the LCP, USACE, RWCQB, or CDFW. All plant communities observed within the study area were evaluated to determine if they are considered sensitive. Sensitive natural communities are communities that are especially diverse; regionally uncommon; or of special concern for local, state, and federal agencies.

Special-Status Species Habitat Evaluation

During the field survey, the biologist evaluated the suitability of the habitat to support special-status species documented in and within the vicinity of the study area. For the purposes of this assessment, special-status species include those plant and animals listed, proposed for listing or candidates for listing as threatened or endangered by the USFWS or NOAA Fisheries Service under the FESA, those listed or proposed for listing as rare, threatened or endangered by the CDFW under the CESA, animals designated as CFP or CSSC by the CDFW, and plants assigned a California Rare Plant Rank by the CNPS.

The potential occurrence of special-status plant and animal species within the study area was evaluated by developing a list of special-status species that are known to or have the potential to occur in the vicinity of the study area based on a search of the CNDDB, CNPS, and USFWS databases. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field survey. Each species was evaluated for its potential to occur on or in the immediate vicinity of the study area according to the following criteria:

> *Not Expected:* There is no suitable habitat present (i.e., habitats are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation, hydrology, plant community, disturbance regime]). Additionally, there are no recent known records of occurrence in the vicinity of the study area. The species has no potential of being found in the study area.
>
> *Low Potential:* Limited suitable habitat is present (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the study area. The species has a low probability of being found in the study area.
>
> *Moderate Potential*. Suitable habitat is present (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat is suitable or of marginal quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the study area. The species has a moderate probability of being found in the study area.

High Potential: Highly suitable habitat is present (i.e., all habitat components meeting the species requirements are present and/or the habitat is highly suitable or of high quality). Additionally, there are few or many records of occurrences within the last ten years and within 3 miles of the study area. This species has a high probability of being found in the study area.

Present or Assumed Present. Species was observed in the study area or has a recent (within five years) recorded observation in the CNDDB or literature within the study area.

Environmental Setting

Study Area Description

The study area includes five parcels. APN 036-231-090, APN 036-231-100, APN 036-243-120, APN 036-243-110, and APN 036-243-130 (Figure 2). On the day of the field visit, all sites had been recently mowed. There is an unpaved road that connects all the parcels to Hermosa Road. See Appendix B for representative photographs of the study area.

APN 036-231-090/-100

These two parcels are approximately 0.15 acres (APN 036-231-090) and 0.25 acres (APN 036-231-100) in size and form the northwest edge of the study area. They are surrounded by residential development on all sides. Both parcels have level topography. Hermosa Road, which is a county maintained road, ends at and abuts parcel APN-036-231-090. There is a small wooden shed on the larger parcel and a small greenhouse on the smaller parcel. Both parcels are mowed and the vegetation is dominated by non-native forbs and grasses as well as ornamental trees/shrubs.

APN 036-243-120

This parcel is approximately 0.36 acres in size. There is currently an occupied single family home (50 Hermosa Road) on the parcel. The parcel is surrounded by the two parcels, APN 036-231-090/-100 to the northwest and parcel APN 036-243-110 to the southeast as well as residential development to the north and south. Hermosa Road, which is a county maintained road, abuts the parcel. The parcel includes a large fenced yard and is dominated by ornamental landscaping. The parcel has level topography. The only proposed development within this parcel is the paving of the existing dirt road, which is located in the southernmost portion of the parcel. Only the vegetation in the area to be paved was identified.

APN 036-243-110

This parcel is approximately 1.7 acres in size. It is surrounded by the two parcels, APN 036-243-120 to the northwest and APN 036-243-130 to the southeast as well as residential development to the north and south. However, the parcel is bordered by a dense understory of

vegetation to the north. A north-south band thick understory vegetation separates this parcel from parcel APN 036-243-130. The parcel slopes moderately upwards from south to north (14 to 18% slope). An unused concrete water basin is located on the parcel and is approximately 50-ft x 20-ft in size and 6-ft deep, and is overgrown with cape ivy. There is a large dense patch of periwinkle and cape ivy in the northwest corner. Most of the parcel is mowed but there are scattered eucalyptus and Monterey pine trees. The parcel is dominated by non-native vegetation. However, native coffeeberry and sticky monkeyflower were observed in the thick understory between the parcels.

APN 036-243-130

This parcel is approximately 0.92 acres in size and forms the southeast edge of the study area. It is surrounded by parcel APN 036-243-110 to the northwest and the open space of the GGNRA is to the southeast as well as residential development to the north and south. The northern and eastern edges of the parcel have a thick understory of vegetation. There are no structures on the parcel. The parcel slopes moderately upwards from south to north (14 to 18% slope). The parcel is dominated by non-native vegetation. Most of the parcel is mowed but there are scattered eucalyptus trees and acacia shrubs. The dirt road ends in the southern portion of the parcel.

Soils and Hydrology

There is one soil series within the study area: Scarper-Miramax complex, 30 to 75% slopes (USDA 2016). This soil series is not listed as hydric in San Mateo County on the national Hydric Soils List (USDA 2015). The Miramar series consists of moderately deep, well drained soils on coastal uplands. These soils form in material weathered from quartz-diorite. Soils of the Miramar series are fine-loamy, mixed, isomeric Pacific Argiustolls.

San Vicente Creek and Sunshine Valley Creek or Dean Creek are the closet water features to the study area and are 0.25 miles to the southeast and 0.5 miles to the northwest, respectively. San Vicente Creek is a perennial creek and flows into the Fitzgerald Marine Reserve and Sunshine Valley Creek flows into the Pacific Ocean just north of the Fitzgerald Marine Reserve.

Plant Communities and Associated Wildlife Habitats

The survey area consists entirely of developed and disturbed habitat. Vegetation and habitat type are prime factors in determining the suitability for use by certain wildlife species and the occurrence of certain plant species. Each habitat type and/or vegetation community is described below. In some cases, it was necessary to identify variants of plant community types that do not match the descriptions in the literature; these descriptions are based the biologists' observations of the dominant plant species and the physical characteristics of the areas in which they grow.

Developed Habitat

Developed land includes areas where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is cleared, tended, and maintained. Parcel APN 036-243-120 was classified as developed habitat due to the permanent structure and maintained landscaping.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads) or lands containing a preponderance of non-native plant species. This type of habitat can also include areas that are mowed regularly and, thus, preclude the development of native vegetation communities. Parcels APN 036-231-090, APN 036-231-100, APN 036-243-110, and APN 036-243-130 were classified as disturbed habitat. These parcels are dominated by non-native vegetation and are mowed on a regular basis. See Appendix C for a complete list of plant and animal species observed in disturbed habitat within the study area.

Aquatic Features, Sensitive Habitats, Riparian Habitat, and Critical Habitats

Aquatic Features

There are not wetlands or waters of the U.S. or State within the study area. Additionally, there are no wetlands, as defined by the LCP, present in the biological study area.

Sensitive Habitats

The study area does not support any sensitive natural community types, as defined by LCP or CDFW.

Riparian Habitat

There is no riparian habitat, as defined by CDFW or LCP present within the study area.

Critical Habitats

There are no critical habitats within the study area, as identified by the USFWS (USFWS 2016).

Migration, Travel Corridors and Habitat Fragmentation

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e. linear habitats that naturally connect and provide passage between two or more otherwise disjunct larger habitats or habitat fragments). In general, studies suggest that habitat corridors provide connectivity for

and are used by wildlife, and as such are an important conservation tool (Beier and Noss 1998). Wildlife habitat corridors should fulfill several functions. They should maintain connectivity for daily movement, travel, mate-seeking, and migration; plant propagation; genetic interchange; population movement in response to environmental change or natural disaster; and recolonization of habitats subject to local extirpation (Beier and Loe 1992).

The suitability of a habitat as a wildlife movement corridor is related to, among other factors, the habitat corridor's dimensions (length and width), topography, vegetation, exposure to human influence, and the species in question (Beier and Loe 1992). Species utilize movement corridors in several ways. "Passage species" are those species that use corridors as thru-ways between outlying habitats. The habitat requirements for passage species are generally less than those for corridor dwellers. Passage species use corridors for brief durations, such as for seasonal migrations or movement within a home range. As such, movement corridors do not necessarily have to meet any of the habitat requirements necessary for a passage species' everyday survival. Large herbivores, such as deer and elk, and medium-to-large carnivores, such as coyotes, bobcats and mountain lions, are typically passage species. "Corridor dwellers" are those species that have limited dispersal capabilities – a category that includes most plants, insects, reptiles, amphibians, small mammals, and birds – and that use corridors for a greater length of time. As such, wildlife movement corridors must fulfill key habitat components specific to a species' life history requirements for them to survive (Beier and Loe 1992). In general, however, the suitability and/or utility of the landscape – specifically, of the landscape as corridor habitat – is best evaluated on a species-level (Beier and Noss 1998).

The project is situated adjacent to the open space of the GGNRA within a residential setting. However, the study area does not directly connect the open space of the GGNRA to other nearby open space areas. Additionally, the movement and migration of wildlife species within the study area is substantially limited due to habitat fragmentation caused by development or disturbance (e.g., large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas, or development of roads which result in barriers to smaller or less mobile wildlife species). For these reasons, the study area does not serve as a continuous regional connection for wildlife species.

Special-Status Species

Based on a review of the CNDDB and CNPS databases, the biologist's knowledge of sensitive species, and an assessment of the types of habitats within the survey area, it was determined that no special-status plant or animal species are expected to occur within the study area (i.e., all special-status species were ranked as "Not Expected" or "Low Potential"). However, given the proximity of the study area to known occurrences of California red-legged frog (CRLF; *Rana draytonii)* and San Francisco garter snake (SFGS; *Thamnophis sirtalis tetrataenia*), a habitat analysis is included in this report. No special-status plant species are expected to occur within the study area. This determination was made due to the lack of essential habitat requirements, the lack of known occurrences close to the survey area, local range restrictions, regional extirpations, lack of connectivity with areas of suitable or occupied habitat, incompatible land

use, and habitat degradation/alteration of on-site or adjacent lands. A complete list of all species considered as part of this assessment, their regulatory status, habitat requirements, local distribution, and potential for occurrence are provided in Appendix D (Tables 1 and 2).

The present botanical study is not floristic in nature. A complete determination of the presence or absence of potentially occurring botanical resources would require focused surveys to be conducted during all appropriate blooming periods. Additionally, certain plant species, especially annuals, may not be present in all years due to varying flowering phenologies and life forms, such as bulbs, biennials, annuals as well as annual variations in temperature and rainfall, which influence plant phenology. Colonization of new populations within an area may also occur from year to year. Specific plant species identifications in this report are tentative due to the absence of morphological characters, resulting from immature reproductive structures or seasonal desiccation, which are required to make species level determinations.

Special-Status Animals

California red-legged frog. CRLF is listed as a threatened species under the Endangered Species Act and is designated a California Species of Special Concern. CRLF is distributed throughout 26 counties in California, but is most abundant in the San Francisco Bay Area. California red-legged frogs predominantly inhabit permanent water sources such as streams, lakes, marshes, natural and man-made ponds, and ephemeral drainages in valley bottoms and foothills up to 5000 feet in elevation (Jennings and Hayes 1994, Bulger et al. 2003, Stebbins 2003). California red-legged frogs breed between November and April in standing or slow moving water at least 2.5 feet in depth with emergent vegetation, such as cattails (*Typha* spp.), tules (*Schoenoplectus* spp.) or overhanging willows (*Salix* spp.) (Hayes and Jennings 1988). Egg masses containing 2,000 to 5,000 eggs are attached to vegetation below the surface and hatch after 6 to 14 days. Larvae undergo metamorphosis 3½ to 7 months following hatching and reach sexual maturity 2 to 3 years of age (Jennings and Hayes 1994). California red-legged frogs breed in a variety of aquatic habitats. Larvae and meta-morphs use streams, deep pools, backwaters of streams and creeks, ponds, marshes, sag ponds, dune ponds, and lagoons.

Breeding adults are commonly found in deep, still or slow-moving water with dense, shrubby riparian or emergent vegetation. Adult frogs have also been observed in shallow sections of streams that are not shrouded by riparian vegetation. Generally, streams with high flows and cold temperatures in spring are unsuitable for eggs and tadpoles. Stock ponds are frequently used by this species for breeding if they are managed to provide suitable hydro-period, pond structure, vegetative cover, and control of nonnative predators such as bullfrogs and exotic fish. Most frogs move away from breeding ponds to non-breeding areas. The distance moved is site dependent, though one recent study shows that only a few frogs move farther than the nearest suitable non-breeding habitat. In this Marin County study, the furthest distance traveled was 2.25 miles and most dispersing frogs moved through grazed pastures to reach the nearest riparian habitat (Fellers and Kleeman 2007). CRLF do not show preferences when moving

between ponds but when breeding ponds dry, CRLF use moist microhabitats of dense shrubs and herbaceous vegetation within 350 feet of ponds (Bulger et al. 2003).

The study area is not in within or near designated Critical Habitat for CRLF. The closest occurrences of CRLF are from downstream areas of San Vicente Creek and Denniston Creek, both of which are approximately 0.8 miles from the study area. It is possible that CRLF use the upper reaches of San Vicente Creek as a dispersal corridor. San Vicente Creek passes within 0.25 mile of the study area (1,250 feet). However, it is unlikely that CRLF use the study area for dispersal or foraging because the study area is within a residential development dominated by developed and disturbed habitats.

The study area does not support breeding or upland habitat for CRLF, based on a field assessment of site conditions, the lack of suitable burrows, and the lack of wetlands.

CRLF are not expected to occur within the study area.

San Francisco garter snake. SFGS is federal and state-listed as endangered and is a fully protected species under §5050 of the California Fish and Game Code. A highly aquatic subspecies of the common garter snake endemic to the San Francisco Bay Area, SFGS are distributed along the western San Francisco Peninsula from the southern San Francisco County border south to Waddell Lagoon south of Año Nuevo and as far east as Crystal Springs Reservoir. It occurs sympatrically with its primary prey species, the California red-legged frog; however, it will opportunistically prey on a variety of species including frogs, tadpoles, egg masses, newts, small fish, salamanders, reptiles, small mammals, birds and their eggs and several small invertebrates (Stebbins 2003).

San Francisco garter snakes prefer dense habitats close to water and will retreat to it when disturbed (Stebbins 2003). The species often occurs near ponds, marshes, streams and other wetlands associated with cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and rushes (*Juncus* and *Eleocharis* spp.). Mating occurs shortly after they leave their winter retreats in May and females give birth to live young between June and September. Species may hibernate near the coastal areas in fossorial mammal burrows and other refuges, or remain active year-round, weather permitting.

The study area is not in within or near designated Critical Habitat for SFGS. The closest occurrence of SFGS is from Denniston Creek, which is approximately 0.8 miles from the study area. It is unlikely that SFGS use the study area for dispersal or foraging because the study area is not adjacent to or include riparian vegetation or wetlands.

The study area does not support breeding or upland habitat for SFGS, based on a field assessment of site conditions, the lack of suitable burrows, the lack of wetlands, and it also not known from the San Vicente Creek watershed.

SFGS are not expected to occur within the study area.

Migratory Birds and Raptors

The trees and dense vegetation found within the study area support potential nesting habitat for birds and raptors. Most bird species are protected under the MBTA and all bird species are protected under California Fish and Game code.

Biological Impact Assessment

This section describes potential impacts to sensitive biological resources—including special-status plants and animals, and waters of the U.S. and the state—that may occur from development within the study area. Each impact discussion includes Avoidance and Minimization Measures (AMMs) that would be implemented during the proposed project to avoid and/or reduce the potential for and/or level of impacts to each resource. A complete list of AMMs that have been proposed has been included in the Conclusions and Recommendations section. With the implementation of the AMMs, all impacts to biological resources are anticipated to be reduced to less than significant under CEQA.

Significance Criteria

Potential impacts to biological resources were determined in accordance with Appendix G of the CEQA Guidelines. Impacts would be considered potentially significant if the proposed project will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS

- Have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS

- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plant (NCCP), or other approved local, regional, or state HCP

Direct take of a federally or state-listed species is considered a significant impact. Temporary and/or permanent habitat loss is not considered a significant impact to sensitive species (other than for listed or candidate species under the FESA and CESA) unless a significant percentage of total suitable habitat throughout the species' range is degraded or somehow made unsuitable, or areas supporting a large proportion of the species' population are substantially and adversely impacted.

Potential impacts to nesting bird species will be considered significant due to their protection under the MBTA and California Fish and Game code, and such impacts will need to be avoided or minimized.

Sensitive Species – *Less-than-Significant Impact with Avoidance and Mitigation Measures Incorporated*

Special-Status Plants

No suitable habitat for special-status plants is present within the study area; therefore, no special-status plants are anticipated to occur within the study area.

Special-status Animals

No suitable habitat for special-status animals is present within the study area; therefore, no special-status animals are anticipated to occur within the study area.

Nesting Birds

Nesting birds, including raptors, protected under the MBTA and California Fish and Game Code are potentially present in the trees and shrubs within the study area. If activities associated with development or construction occur within the parcels during the avian breeding season (generally February 1 to September 15), injury to individuals or nest abandonment could occur. In addition, noise and increased activity could temporarily disturb nesting or foraging activities, potentially resulting in the abandonment of nest sites. However, with the implementation of AMMs, the impacts from the project would be less than significant. These AMMs include conducting pre-construction nesting bird surveys during the breeding season, and establishing a buffer around active nests.

Sensitive Natural Vegetation Communities, Including Wetlands – *No Impact*

There are no sensitive vegetation communities or jurisdictional waters within the study area.

Interfere with Native Wildlife Movement – *No Impact*

The study area is residential and is not located within an established wildlife movement corridor.

Conflict with Local Policies – *No Impact*

The proposed development activities do not require the removal of trees. If it is determined that trees need to be removed, it is recommended that a tree survey be conducted by a certified arborist to determine if the trees to be removed are classified as heritage or significant, as defined by the County of San Mateo. Depending on the tree survey results, a tree removal permit may be required and the permittee would have to comply with the conditions of the permit. Therefore, proposed development activities within the study area will not conflict with local policies, if trees need to be removed.

Conflict with Conservation Plan – *No Impact*

The study area is not within an area covered by an HCP or NCCP. As a result, the project will have no impact related to a conservation plan.

Conclusions and Recommendations

The following section provides recommended AMMs that should be incorporated prior to and during proposed development activities in order to minimize impacts to sensitive species.

Special-Status Species

Special-Status Animals

No further surveys are warranted.

Special-Status Plants

No further botanical surveys are recommended at this time.

Nesting Birds

Nesting birds, including raptors, protected under the MBTA and California Fish and Game Code are potentially present in the trees and shrubs in the study area. If construction activities occur during the avian breeding season (February 1 to September 15), injury to individuals or nest abandonment could occur. In addition, noise and increased construction activity could temporarily disturb nesting or foraging activities, potentially resulting in the abandonment of nest sites. However, with the implementation of AMMs, the impacts from the project would be less than significant. These AMMs include a pre-construction nesting bird survey if construction is scheduled during the breeding season and consultation with CDFW if an active nest is discovered. An active nest can result in a delay in construction.

To avoid impacts to nesting birds and violation of state and federal laws pertaining to birds, all

construction-related activities (including but not limited to mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) should occur outside the avian nesting season (February 1 or after August 31). If construction and construction noise occurs within the avian nesting season, all suitable habitats located within the project's area of disturbance including staging and storage areas plus a 250-foot (passerines) and 1,000-foot (raptor nests) buffer around these areas shall be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented.

If no active nests are present within the project area and buffers, construction can proceed without additional mitigation.

If pre-construction nesting bird surveys result in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), shall take place within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with the California Department of Fish and Wildlife, until the chicks have fledged. Monitoring shall be required to insure compliance with MBTA and relevant California Fish and Game Code requirements. Monitoring dates and findings shall be documented.

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Appendix A: Figures

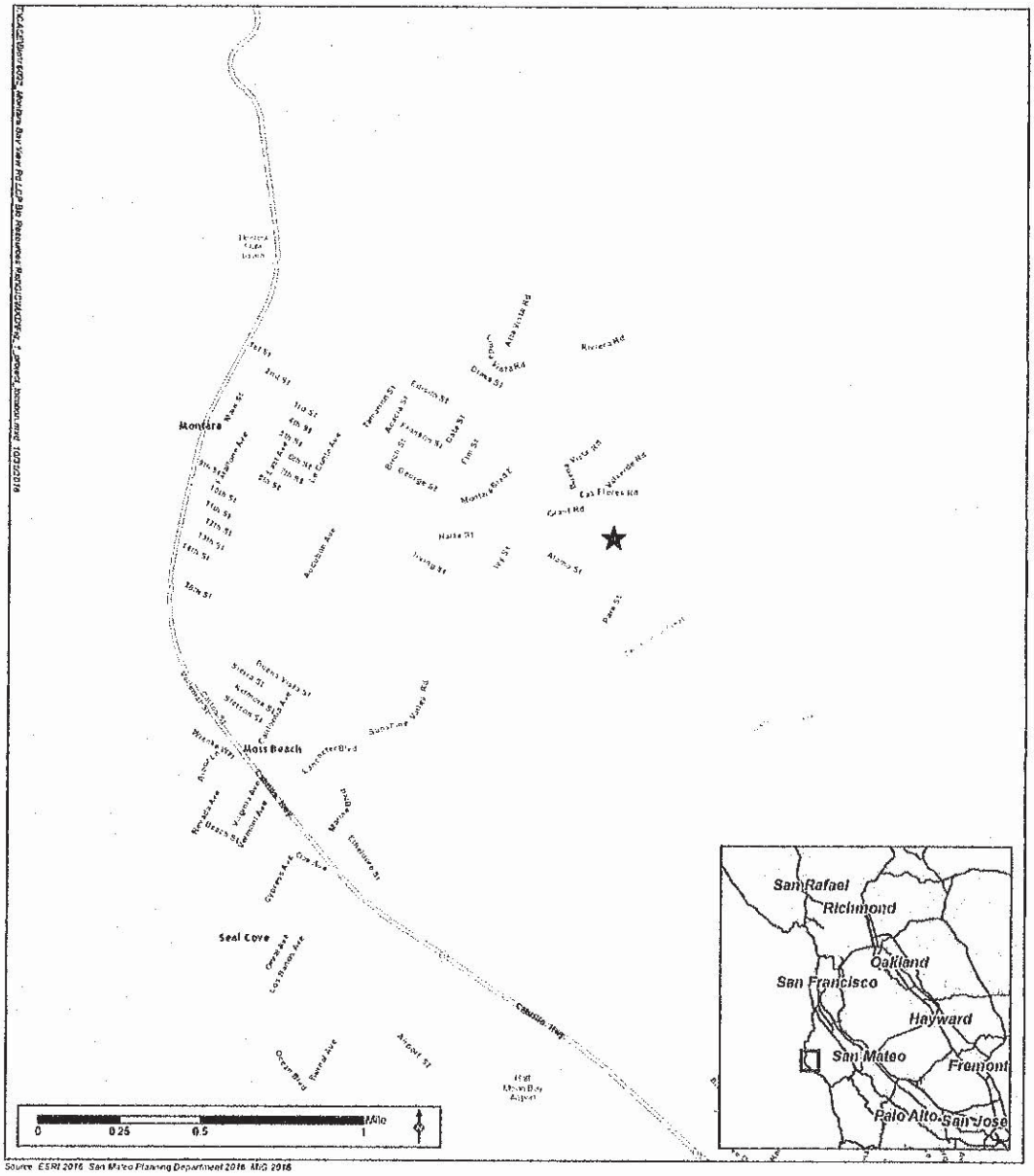

Figure 1 Project Location
Hermosa Road Biological Resources Evaluation

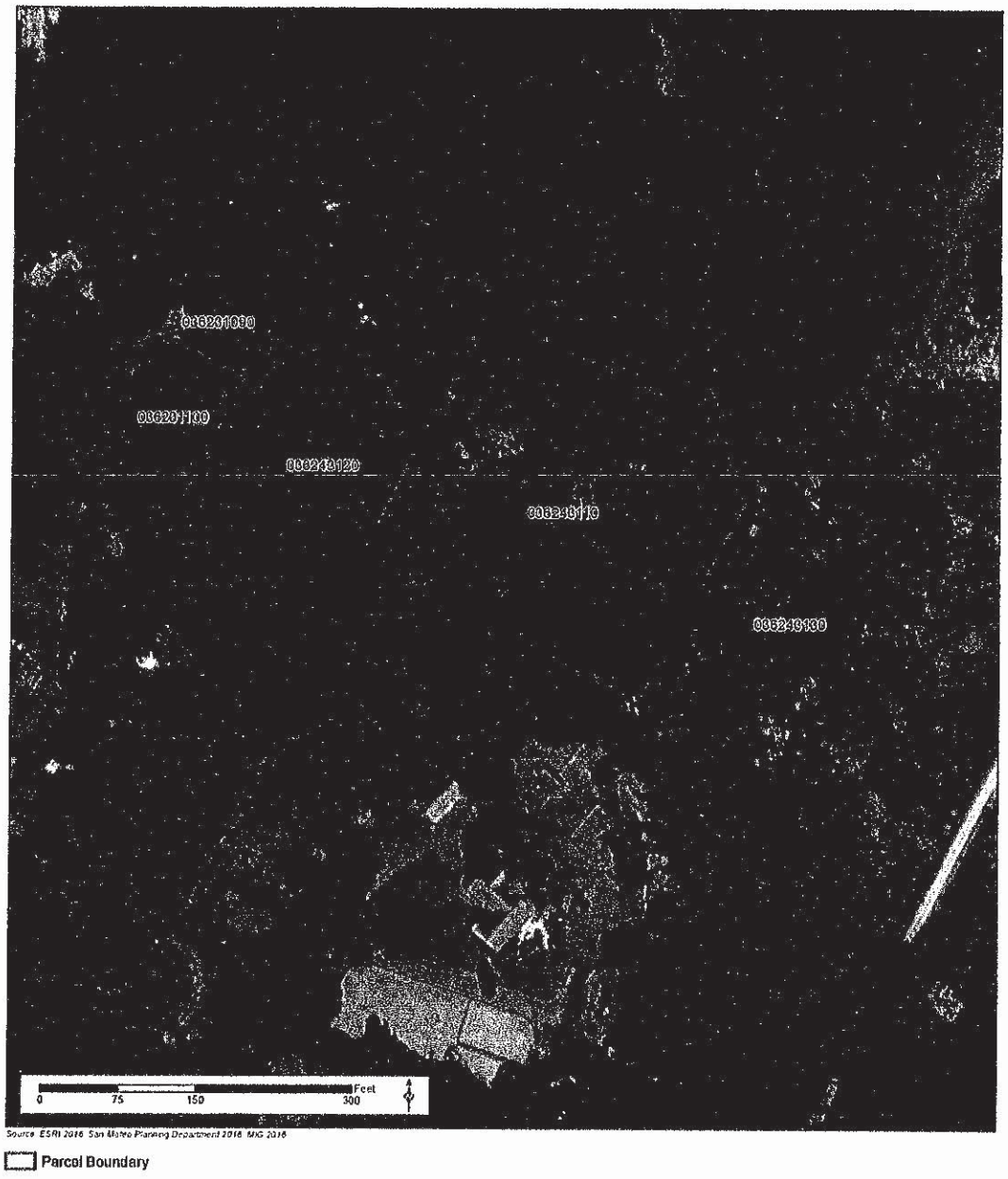

Figure 2 Study Area
Hermosa Road Biological Resources Evaluation

Appendix B: Representative Photographs

Photo 1. End of Hermosa Road. The road continues as a dirt road and connects all the parcels within the study area. Parcels APN-036-231-090 and APN-036-231-100 are to the right of the road.

Photo 2. Looking southwest at Parcel APN-036-231-100. The parcel is regularly mowed and has a wooden shed that is currently used for storage. Parcel APN-036-231-090 abuts this parcel to the northeast and is also regularly mowed.

Photo 3. Looking southeast at the dirt road that connects all the parcels within the study area. Development plans for the study area include the paving of this road. The trees are planted Monterey pine and Monterey cypress. Parcel APN-036-342-110 is just to the left of the road.

Photo 4. Looking northeast at parcel APN-036-243-120 from the dirt road. A single family home occupies this parcel. In the background is parcel APN-036-243-110.

Photo 5. Looking north at parcel APN 036-243-110 from the dirt road. The parcel is regularly mowed and has scattered eucalyptus trees. Development plans for this parcel include the construction of a single-family home with an attached garage and paved driveway. The green patch of vegetation in the upper left is primarily cape ivy and periwinkle.

Photo 6. Looking north at parcel APN 036-243-130 from the end of the dirt road. The parcel is regularly mowed and has scattered eucalyptus and Monterey pine trees. The GGNRA is east of the parcel.

Appendix C: List of Plant and Animal Species Observed Within the Study Area

Table 1. Grass and Forb Species Observed within the Study Area

Scientific Name	Common Name	Comments
Avena sp.	wild oats	non-native, grass
Briza maxima	rattlesnake grass	non-native, grass
Bromus hordeaceus	soft brome	non-native, grass
Bromus diandrus	ripgut brome	non-native, grass
Canna sp.	canna lily	non-native
Carduus pycnocephalus	Italian thistle	non-native
Conium maculatum	poison hemlock	non-native
Convolvulus arvensis	field bindweed	non-native
Daucus carota	Queen Anne's lace	non-native
Delairea odorata	cape ivy	non-native
Hordeum murinum	foxtail barley	non-native, grass
Hypochaeris glabra	smooth cat's ear	non-native
Mimulus aurantiacus	sticky monkeyflower	native
Oxalis pes-caprae	Bermuda buttercup	non-native
Phalaris aquatica	Harding grass	non-native, grass
Plantago lanceolata	English plantain	non-native
Poa annua	annual blue grass	non-native, grass
Polystichum munitum	western sword fern	native
Rosmarinus officinalis	rosemary	non-native
Rubus armeniacus	Himalayan blackberry	non-native
Toxicodendron diversilobum	western poison oak	native
Vinca major	bigleaf periwinkle	non-native

Table 2. Tree and Shrub Species Observed Within the Study Area

Scientific Name	Common Name	Comments
Acacia dealbata	silver wattle	non-native
Cupressus macrocarpa	Monterey cypress	native, but planted as ornamental
Genista monospessulana	French broom	non-native
Eucalyptus globulus	blue gum	non-native
Frangula californica	California coffeeberry	native
Myoporum laetum	lollypop tree	non-native
Pinus radiata	Monterey pine	native, but planted as ornamental
Cotoneaster sp.	Cotoneaster	non-native

Table 3. Animal Species Observed or Detected Within or Nearby the Study Area

Scientific Name	Common Name	Comments
Buteo lineatus	red-shouldered hawk	native; heard
Poecile rufescens	chestnut-backed chickadee	native; heard
Junco hyemalis	dark-eyed junco	native; visual identification
Odocoileus hemionus columbianus	black-tailed deer	native; scat detected
Canis latrans	coyote	native; heard in GGNRA

Appendix D: Special-Status Plant and Animal Species Evaluated for Potential to Occur within the Study Area

Table 1. Special-Status Plant Species Evaluated for Potential to Occur within the Study Area

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Potential to Occur
Agrostis blasdalei (Blasdale's bent grass)	1B.2	Perennial grass. Occurs in coastal scrub, dunes, and prairie.	May – July	There is no suitable habitat for this species within the study area. Known from a nearby coastal site in San Mateo County. **Not Expected**
Allium peninsulare var. *franciscanum* (Franciscan onion)	1B.2	Perennial herb. Occurs on clay in cismontane woodland and valley and foothill grassland often on Serpentine, clay, and volcanic soils.	May – June	There is no suitable habitat for this species within the study area. Lack of bedrock geology. Known from the Crystal Springs Reservoir area within the GGNRA. **Not Expected**
Arctostaphylos montarensis (Montara manzanita)	1B.2	Evergreen shrub. Occurs in maritime chaparral and coastal scrub.	January– March	There is no suitable habitat for this species within the study area. Vegetative material would have been detectable during the site visit. None detected. Known from higher elevations within the GGNRA. **Not Expected**
Arctostaphylos regismontana (Kings Mountain manzanita)	1B.2	Evergreen shrub. Occurs on granite or sandstone in broadleaved upland forest, chaparral, and North Coast coniferous forest.	January – April	There is no suitable habitat for this species within the study area. Vegetative material would have been detectable during the site visit. None detected. Known from higher elevations within the GGNRA. **Not Expected**
Cirsium andrewsii (Franciscan thistle)	1B.2	Perennial herb. Occurs on mesic and sometimes serpentine substrates in broadleaved upland forest, coastal bluff scrub, coastal prairie, and coastal scrub.	March – July	There is no suitable habitat for this species within the study area. There is serpentinite bedrock geology. Known from McNee Ranch State Park area. **Not Expected**

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Potential to Occur
Collinsia multicolor (San Francisco collinsia)	1B.2	Annual herb. Occasionally occurs on serpentine in closed cone coniferous forest and coastal scrub.	March – May	There is no suitable habitat for this species within the study area. There is serpentinite bedrock geology. Last known occurrence near study area is from 1893. **Not Expected**
Dirca occidentalis (western leatherwood)	1B.2	Decidous shrub. Occurs on mesic sites in broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian scrub, and riparian woodland.	January – April	There is no suitable habitat for this species within the study area. Vegetative material would have been detectable during the site visit. None detected. Known from San Pedro Valley County Park area. **Not Expected**
Eriophyllum latilobum (San Mateo woolly Sunflower)	FE, SE, 1B.1	Perennial herb. Occurs on serpentine in cismontane woodland, often on roadcuts.	May – June	There is no suitable habitat for this species within the study area. Lack of bedrock geology. Taxon is highly restricted in distribution. Known from the Crystal Springs Reservoir area within the GGNRA. **Not Expected**
Fritillaria liliacea (fragrant fritillary)	1B.2	Perennial herb. Occurs in cismontane woodland, Coastal prairie, coastal scrub, valley and foothill grassland near the coast, on clay or serpentine soils.	February – April	No suitable habitat for this species is present within the study area. Last known occurrence is from 1931 near the Crystal Springs Reservoir area. **Not Expected**
Grindelia hirsutula var. *maritima* (San Francisco gumplant)	1B.2	Perennial herb. Occurs on serpentine or sandy substrates in coastal bluff scrub, coastal scrub, and valley and foothill grassland.	August – September	No suitable habitat is present within the study area. No sandy or serpentine substrates. Known from Mc Nee State Park area. **Not Expected**
Lasthenia californica ssp. *macrantha* (perennial goldfields)	1B.2	Perennial herb. Occurs in coastal dunes, coastal bluff scrub, and coastal scrub.	January – November	No suitable habitat is present within the study area. The study area lacks preferred sandy substrate. Known from Montara State Beach area. **Not Expected**

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Potential to Occur
Leptosiphon croceus (coast yellow leptosiphon)	1B.1	Annual herb. Occurs in coastal bluff scrub and coastal prairie.	May	No suitable habitat is present within the study area. Known from a nearby coastal site in San Mateo County. **Not Expected**
Leptosiphon rosaceus (rose linanthus)	1B.1	Annual herb. Occurs in coastal bluff scrub.	April – June	No suitable habitat is present within the study area. Known from the Pillar Point Bluff area. **Not Expected**
Limnanthes douglasii var. *ornduffii* (Ornduff's meadowfoam)	1B.2	Annual herb. Occurs in mesic meadows and seeps as well as agricultural fields in coastal prairie.	November – May	No suitable habitat is present within the study area. Known from the Pillar Point Bluff area. **Not Expected**
Malacothamnus arcuatus (arcuate bush mallow)	1B.2	Evergreen shrub. Occurs in chaparral.	April – September	There is no suitable habitat for this species within the study area. Vegetative material would have been detectable during the site visit. None detected. Last known occurrence is from 1902 at higher elevations within the GGNRA. **Not Expected**
Monolopia gracilens (woodland wollythreads)	1B.2	Annual herb. Occurs in serpentine soils and serpentine outcrops within chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland, and broadleafed upland forest.	February – July	No suitable habitat is present within the study area. No serpentine soils. Last known occurrence was in 1949 from the Crystal Springs Reservoir area. **Not Expected**
Pentachaeta bellidiflora (white-rayed pentachaeta)	FE, SE, 1B.1	Annual herb. Often occurs on serpentine in valley and foothill grassland.	March – May	There is no suitable habitat for this species within the study area. Lack of bedrock geology. Taxon is highly restricted in distribution. Known from the Crystal Springs Reservoir area within the GGNRA. **Not Expected**

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Flowering Phenology	Potential to Occur
Potentilla hickmanii (Hickman's cinquefoil)	FE, SE, 1B.1	Perennial herb. Occurs in coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps.	April – August	There is no suitable habitat for this species within the study area. Taxon is highly restricted in distribution. Known from the McNee Ranch State Park area. **Not Expected**
Silene verecunda ssp. *verecunda* (San Francisco campion)	1B.2	Perennial herb. Occurs on sandy soils in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland.	March – August	There is no suitable habitat for this species within the study area. Lack of sandy soils. Last known occurrence is from 1900 at higher elevations within the GGNRA. **Not Expected**

STATUS KEY:

Federal

FE: Federally-listed Endangered

FT: Federally-listed Threatened

State

CE: California-listed Endangered

CT: California-listed Threatened

CR: California-listed Rare

California Native Plant Society (CNPS):

Rank 1A – Presumed extinct in California

Rank 1B – Rare, threatened, or endangered in California and elsewhere

Rank 2A – Plants presumed extirpated in California, but more common elsewhere; Rank 2B: Rare, threatened, or endangered in California, but more Common elsewhere

Rank 3 – Plants for which more information is needed – A review list

Rank 4 – Plants of limited distribution – A watch list

Additional threat ranks endangerment codes are assigned to each taxon or group as follows:

.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table 2. Special-Status Animal Species Evaluated for Potential to Occur within the Study Area.

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Potential to Occur
Invertebrates			
Callophrys mossii bayensis (San Bruno elfin butterfly)	FE	The San Bruno elfin is found in coastal mountains near San Francisco Bay, in the fogbelt of steep north facing slopes that receive little direct sunlight. It lives near prolific growths of the larval food plant, *Sedum spathulifolium* (broadleaf stonecrop), which is a low growing succulent. Broadleaf stonecrop is associated with rocky outcrops (often in the shade) that occur on steep, mainly north- facing slopes from 200 to 5,000 feet elevation. There are known colonies on San Bruno Mountain (the largest population), Milagra Ridge, and Montara Mountain of San Mateo County; Mount Diablo in Contra Costa County; and near Alpine Lake at Dillon Beach in Marin Count.	No suitable habitat within study area. The parcels lack the presence of the host plant *Sedum spathulifolium*. The study area is outside the species known range. **Not Expected**
Amphibians			
Rana draytanii (California red-legged frog)	FT, CSSC	California red-legged frog (CRLF) occurs in different habitats depending on life stage, season, and weather conditions. CRLF typically use a variety of aquatic habitats (e.g., ephemeral ponds, intermittent streams, seasonal wetlands, springs, seeps, perennial creeks, artificial ponds, marshes, dune ponds, and lagoons), as well as riparian and upland habitats. The common factor among habitats where CRLF occur is the association with a permanent water source with deep pools, ideally free of non-native predators.	There is no suitable habitat within the study area. There are several occurrences within 3 miles of the study area. The closest occurrences are from Denniston Creek and the lower reaches of San Vicente Creek, both of which are 0.8 miles away from the study area. **Not Expected**

Species Name	Federal, State, and CNPS Listing Status[1]	Habitat Preferences, Distribution Information, and Additional Notes	Potential to Occur
Reptiles			
Thamnophlis sirtalis tetrataenia (San Francisco garter snake)	FE, SE, CFP	San Francisco garter snake is a highly aquatic species that is found in or near densely vegetated freshwater ponds with adjacent open hillsides where they can bask, feed, and find cover in rodent burrows. Almost always sympatrically with its primary prey, California red-legged frog.	There is no suitable habitat within the study area. The closest occurrence is from Denniston Creek, 0.8 miles south of the study area. **Not Expected**
Birds			
Geothylpis trichas sinuosa (saltmarsh common yellowthroat)	CSSC	Saltmarsh common yellowthroat nests and forages in fresh and saltwater marshes and seasonal wetlands. It breeds on the ground or up to 8 centimeters off the ground under the cover of dense shrubs and emergent aquatic vegetation.	There is no suitable nesting habitat present within the study area. This species is known form the Pillar Point Bluff area. **Not Expected**
Mammals			
Taxidea taxus (American badger)	CSSC	American badger is rare in western San Francisco Bay area. It occurs in grasslands and open stages of forest and scrub habitats with friable soils and good prey base of burrowing rodents.	There is no suitable habitat for this species within the study area. The last known occurrence was in 1948 in the vicinity of McNee Beach State Park. **Not Expected**

Notes: FE – Federal Endangered; FT – Federal Threatened; FC – Federal Candidate; CE – State Endangered; CT – State Threatened; CPT – State Proposed Threatened; CPE – State Proposed Endangered; CFP – California Fully Protected; CSSC – California Species of Special Concern

County of San Mateo - Planning and Building Department

ATTACHMENT F

PLN 2017-00017

Tree Inventory Report
For
Ned Brasher
Brasher Properties in Montara, CA

Submitted by
Ned Patchett
Certified Arborist WE-4597A
Date: January 17, 2017

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Table of Contents

Summary

Ned Brasher retained my services to survey trees 12 inches in diameter and larger on the Brasher Properties located at Bayview Road in Montara, CA. The purpose of my examination was to assess the health and condition of the trees, determine if a tree is considered a Significant Tree per the County of San Mateo and determine if the condition of each tree warrants retention or removal.

There are a total of (111) trees in this tree inventory report. Of these (111) trees, I have recommended removal of (2) trees because they are dead or hazardous. Additionally, (24) trees require removal to accommodate the proposed construction of Bay View Road and the new home and garage. All of these trees that are designated for removal are considered Significant Trees per the County of San Mateo.

The proposed construction of Bay View Road and installation of utility lines has the potential to impact the trees that border the proposed road and cause decline. Therefore, I have provided recommendations to reduce the potential for these construction impacts.

I have provided a tree map within this report showing the location of all trees included within this report.

Many of the existing trees show evidence of past maintenance and pruning to enhance tree health and mitigate fire risk. However, several of the trees that are designated for retention require pruning and maintenance to prevent unnecessary and potentially hazardous tree failures and to maintain a healthy treescape.

Introduction

Assignment

Ned Brasher retained my services to perform the following tasks:

1. Assess tree health and condition on all trees 12 inches in diameter and larger on Brasher Properties located in Montara, CA.
2. Determine if a tree is considered a Significant Tree per the County of San Mateo 3. Determine if the condition of each tree warrants retention or removal
4. Document this information in a written report.

Limits of Assignment

I did not perform a detailed **root crown inspection** nor climb the trees to perform an **aerial inspection**.

Tree Inventory Methods

On November 30, 2016, Dan Patchett (Certified Arborists WE-7686A) and I visited the site to collect field data on the trees included in this report.

A **Visual Tree Assessment (VTA)** was performed on all trees that are included within this report. Each tree inventoried for this report has been tagged with an aluminum tree tag and assigned a number that corresponds to the tree numbers in this report and to the tree numbers on the corresponding tree map included within this report. The following outlines the procedure for collecting information for the tree inventory:

1. Identify tree species
2. Measure the diameter of the trunk at 54 inches above grade (Diameter at Standard Height)
3. Assess the health and condition of each tree 4. Assess the structural stability of each tree 5. Inspect the trees for pest or disease.

Condition Rating

Each tree has been assigned a condition rating (see Tree Inventory in Appendix A) that represents an evaluation of the trees health and structural condition. The following is an overview of these condition ratings:

- Condition Rating of **Poor**-Tree is completely dead or shows signs of advanced disease or pest infestation. Tree is a significant hazard. Immediate removal of tree is recommended.

- Condition Rating of **Poor to Fair**-Tree shows signs of decline in upper crown, significant structural flaws, suppressed by neighboring trees, unbalanced and onesided crown, significant dead branches present in the upper crown, significant lean to the main trunk or upper crown, signs of pest or disease and risk of branch or ground failure. Removal should be considered, if retained then recommended action should be taken immediately.

- Condition Rating of **Fair**-Tree shows minor signs of decline in upper crown, structural flaws that can be minimized through the use of arboricultural support systems or through pruning, minimally suppressed by neighboring trees, slightly unbalanced and one-sided crown, some dead branches present in the upper crown, some lean to the main trunk or upper crown, early signs of pest or disease and minor risk of branch or ground failure. Tree is suitable for retention and the recommended action should be taken immediately.

- Condition Rating of **Fair to Good**-Minor dead branches in upper crown, minor structural flaws, insignificant lean to the main trunk or upper crown and no signs of pest or disease. Tree is suitable for retention and recommended action is not critical but should be performed in the near future.

- Condition Rating of **Good**-No dead branches, no structural flaws, uniform distribution of scaffold branches and well-balanced upper crown, no lean to main trunk or upper crown and no signs of pest or disease. Tree is excellent candidate for retention and no work is required at the present time.

San Mateo County-Significant Tree Definition

SIGNIFICANT TREE" shall mean any live woody plant rising above the ground with a single stem or trunk of a circumference of thirty-eight inches (38") or more measured at four and one half feet (4 1/2') vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes.

Observations

Site Description

The site is located at Bayview Road and a portion of Hermosa Road in Montara, CA. The proposed construction consists of a new home and detached garage and paved road and installation of utilities for the homes that will be developed on the properties.

Trees

There are (111) trees included in this report and I have provided tree an assessment on their health in condition and outlined which trees require removal within the tree inventory section of this report (see Tree Inventory in Appendix A).

Conclusion

There are a total of (111) trees in this tree inventory report. Of these (111) trees, I have recommended removal of (2) trees because they are dead or hazardous. Additionally, (24) trees require removal to accommodate the proposed construction of Bay View Road and the new home and garage. All of these trees that are designated for removal are considered Significant Trees per the County of San Mateo.

The proposed construction of Bay View Road and installation of utility lines has the potential to impact the trees that border the proposed road and cause decline. Therefore, I have provided recommendations to reduce the potential for these construction impacts.

I have provided a tree map within this report showing the location of all trees included within this report.

Many of the existing trees show evidence of past maintenance and pruning to enhance tree health and mitigate fire risk. However, several of the trees that are designated for retention require pruning and maintenance to prevent unnecessary and potentially hazardous tree failures and to maintain a healthy treescape.

Tree Protection Recommendations

The proposed construction of Bay View Road, a portion of Hermosa Road and the installation of utilities lines along this road have the potential to impact the trees that line the proposed road and cause decline that could result in dieback in the upper crown or destabilize the trees. The following are my recommendations to reduce the potential for impacts during these construction activities.

Bay View Road Construction Recommendations

1. The new road should be construction in a manner that minimizes excavation in the root zone of these trees. Excavation into the root zone should not exceed 6-12 inches. Fill material in some road areas could help reduce excavation.

2. Roots that are 1 inch in diameter and smaller that are encountered during these excavation activities can be cleaning cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter should be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

3. Biaxial Geo-grid can be used to minimize the thickness of the required base material.

Utility Line Installation Recommendations

1. Underground boring should be used for installation of the utilities to minimize root impacts.

2. The utilities should be routed down the center of the road.

3. Hand digging can be used if underground boring is not possible. Roots that are 1 inch in diameter and smaller that are encountered during these excavation activities can be cleaning cut at the edge of the excavation zone. Any roots that are larger than 2 inches in diameter should be retained and wrapped in burlap and kept moist until the project arborist can inspect the roots to determine an appropriate course of action.

Glossary of Terms

Aerial inspection	An inspection of the upper crown of the tree that requires climbing.
Crown	Parts of the tree above the trunk, including leaves, branches and scaffold limbs. (Matheny and Clark, 1994)
Crown Cleaning	The Selective removal of dead branches, selective thinning, removal of diseased and broken branches and selective branch removal or reduction to reduce the concentration of end weight and potential for branch or limb failure.

Diameter at standard height (DSH)	The diameter of a tree's trunk as measured at 4.5 feet from the ground. (Matheny and Clark, 1994)
Root crown	Area where the main roots join the plant stem, usually at or near ground level. Root Collar. (Glossary of Arboriculture Terms, 2007)
Root crown inspection	Process of removing soil to expose and assess the root crown of a tree. (Glossary of Arboriculture Terms, 2007)
Tree protection zone (TPZ)	Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development. (Glossary of Arboriculture Terms, 2007)
Visual Tree Assessment (VTA)	A method of visual assessing the condition of a tree that does not include a root crown inspection or an aerial inspection.

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Matheny, N.P. and J.R. Clark. *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas* (2nd Edition). Pleasanton, CA. HortScience Inc., 1994.

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Harris, R.W. *Arboriculture Integrated Management of Landscape Trees, Shrubs, and Vines*. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1992

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Appendix A – Tree Inventory

Tree #	Species	Botanical Name	DBH (inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
1	Monterey Cypress	Cupressus macrocarpa	54	Yes	Fair	Dead branches in the upper crown. Ivy growing on trunk. Lean to main trunk.	Retain
2	Monterey Cypress	Cupressus macrocarpa	36	Yes	Poor to Fair	Dead branches in the upper crown. Ivy growing on trunk. Lean to main trunk.	Retain
3	Monterey Cypress	Cupressus macrocarpa	32	Yes	Fair	Dead branches in upper crown. No lower limbs.	Retain
4	Monterey Cypress	Cupressus macrocarpa	17	Yes	Poor to Fair	Some dead branches in the upper crown. Tree one sided and has a lean.	Retain
5	Eucalyptus	Eucalyptus	36	Yes	Poor to Fair	Dead branches and broken branches in the upper crown.	Retain
6	Monterey Pine	Pinus radiata	40	Yes	Poor to Fair	Dead branches in the upper crown. Multiple branch attachments that could lead to failures.	Retain
7	Monterey Cypress	Cupressus macrocarpa	19	Yes	Fair	Dead branches in the upper crown.	Retain
8	Monterey Pine	Pinus radiata	40	Yes	Fair	Dead branches in upper crown. Abnormal growth in upper crown.	Retain
9	Monterey Cypress	Cupressus macrocarpa	17	Yes	Fair	Dead branches in the upper crown.	Retain
10	Monterey Pine	Pinus radiata	33	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
11	Eucalyptus	Eucalyptus	31	Yes	Poor to Fair	Dead branches in the upper crown, over-extended branches. Codominant branch attachments.	Retain
12	Monterey Cypress	Cupressus macrocarpa	15	Yes	Poor to Fair	Dead branches in upper crown and suppressed by neighbors trees.	Retain
13	Monterey Cypress	Cupressus macrocarpa	13	Yes	Poor to Fair	Dead branches in upper crown and suppressed by neighbors trees.	Retain
14	Eucalyptus	Eucalyptus	16	Yes	Poor to Fair	Dead branches in the upper crown. Minimal living branches left in upper crown.	Retain

15	Eucalyptus	Eucalyptus	38	Yes	Poor to Fair	Dead branches in upper crown and heavy and over-extended limbs, which are susceptible to failure.	Retain

Tree #	Species	Botanical Name	DBH (Inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
16	Monterey Cypress	Cupressus macrocarpa	13	Yes	Poor to Fair	Dead branches in the upper crown and suppressed by neighboring trees.	Retain
17	Eucalyptus	Eucalyptus	26	Yes	Poor to Fair	Dead branches in upper crown and codominant branch attachments that are susceptible to failure.	Retain
18	Monterey Cypress	Cupressus macrocarpa	23	Yes	Fair to Good	Some dead branches in the upper crown.	Retain
19	Monterey Cypress	Cupressus macrocarpa	22	Yes	Fair	Dead branches in the upper crown.	Retain
20	Monterey Cypress	Cupressus macrocarpa	28	Yes	Fair to Good	Dead branches in the upper crown.	Retain
21	Eucalyptus	Eucalyptus	31	Yes	Poor to Fair	Large over-extended branches and dead branches in the upper crown.	Retain
22	Monterey Cypress	Cupressus macrocarpa	21	Yes	Poor to Fair	Past failure in upper crown that left a large wound. Dead branches in the upper crown.	Retain
23	Monterey Cypress	Cupressus macrocarpa	25	Yes	Poor to Fair	Dead and broken branches in the upper crown.	Retain
24	Eucalyptus	Eucalyptus	37	Yes	Poor	Lean to the main trunk and large overextended limbs that are susceptible to failure.	Remove
25	Monterey Cypress	Cupressus macrocarpa	17	Yes	Poor to Fair	Dead branches in the upper crown. Large wound on main trunk. Suppressed by neighboring trees.	Retain
26	Monterey Cypress	Cupressus macrocarpa	16	Yes	Poor to Fair	Dead branches in upper crown. Show signs of severe decline.	Retain
27	Monterey Cypress	Cupressus macrocarpa	31	Yes	Poor to Fair	Dead branches and over-extend branches hanging over neighbors property.	Retain

28	Eucalyptus	Eucalyptus	45	Yes	Poor to Fair	This tree is located on the other side of the fence. Dead branches in the upper crown and large limbs that are over-extended and susceptible to failure.	Retain
29	Monterey Cypress	Cupressus macrocarpa	36	Yes	Poor to Fair	Dead branches in the upper crown. Codominant branch attachments that can lead to failures. Overextended limbs that can lead to failures.	Retain

Tree #	Species	Botanical Name	DBH (Inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
30	Eucalyptus	Eucalyptus	24	Yes	Poor to Fair	Dead branches in the upper crown. No lower limbs on the trunk.	Retain
31	Monterey Cypress	Cupressus macrocarpa	31	Yes	Poor to Fair	One-sided upper crown. Dead branches in upper crown.	Retain
32	Monterey Cypress	Cupressus macrocarpa	27	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
33	Monterey Cypress	Cupressus macrocarpa	12-8-6	Yes	Poor to Fair	Two main stems are dead. Remaining living portion is sparse.	Retain
34	Monterey Cypress	Cupressus macrocarpa	40	Yes	Poor to Fair	Evidence of past limb failures. Dead branches in upper crown.	Retain
35	Monterey Cypress	Cupressus macrocarpa	35	Yes	Poor to Fair	Dead branches in the upper crown. Over-extended branches hanging over neighbors yard.	Retain
36	Eucalyptus	Eucalyptus	33	Yes	Poor to Fair	Topped in the past. Dead branches in upper crown.	Retain
37	Eucalyptus	Eucalyptus	17-18	Yes	Poor to Fair	Few leaving branches in the upper crown.	Retain
38	Eucalyptus	Eucalyptus	25	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
39	Eucalyptus	Eucalyptus	25	Yes	Poor to Fair	Codominant branches attachments that are susceptible to failure. Dead branches in the upper crown.	Retain
40	Eucalyptus	Eucalyptus	33	Yes	Poor to Fair	Dead branches and heavy overextended limbs in the upper crown.	Retain

41	Monterey Cypress	Cupressus macrocarpa	36	Yes	Poor to Fair	A part of the tree is completely dead and has a wire wrapped around it. Dead branches in the crown.	Retain
42	Eucalyptus	Eucalyptus	38	Yes	Poor to Fair	Dead branches in upper crown. 4 main stems suppressing each other.	Retain
43	Eucalyptus	Eucalyptus	32	Yes	Poor to Fair	Dead branches in the upper crown. Sparse appearance to the upper crown.	Retain
44	Eucalyptus	Eucalyptus	24	Yes	Poor to Fair	Tree shows signs of decline and has dead branches in the upper crown.	Retain
45	Eucalyptus	Eucalyptus	36	Yes	Poor to Fair	Dead branches in the upper crown. Split in the main trunk.	Remove

Tree #	Species	Botanical Name	DBH (inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
46	Eucalyptus	Eucalyptus	36	Yes	Poor to Fair	Dead branches in the upper crown. Sparse appearance to the upper crown.	Retain
47	Eucalyptus	Eucalyptus	28	Yes	Poor to Fair	Dead branches in crown.	Retain
48	Eucalyptus	Eucalyptus	24	Yes	Poor to Fair	Dead branches in the upper crown. Lean to the upper crown.	Retain
49	Eucalyptus	Eucalyptus	12	Yes	Poor to Fair	Dead branches in upper crown. Few lower limbs on the main trunk.	Retain
50	Eucalyptus	Eucalyptus	20	Yes	Fair	Dead branches in upper crown.	Retain
51	Eucalyptus	Eucalyptus	20	Yes	Poor to Fair	Significant lean to main trunk. Dead branches in upper crown.	Retain
52	Eucalyptus	Eucalyptus	34	Yes	Poor to Fair	Dead branches in upper crown.	Retain
53	Eucalyptus	Eucalyptus	32	Yes	Poor to Fair	Dead branches in upper crown.	Retain
54	Monterey Cypress	Cupressus macrocarpa	30	Yes	Fair	Dead branches in upper crown and poor past pruning cuts.	Remove
55	Monterey Cypress	Cupressus macrocarpa	20	Yes	Poor to Fair	Dead branches in upper crown and poor past pruning cuts. Evidence of root damage.	Remove

56	Eucalyptus	Eucalyptus	20	Yes	Poor to Fair	Dead branches in the upper crown and few lower limbs on the main trunk.	Remove
57	Eucalyptus	Eucalyptus	28	Yes	Poor to Fair	Dead branches in the upper crown and large over-extended limb that is susceptible to failure.	Remove
58	Monterey Pine	Pinus radiata	19	Yes	Poor to Fair	Dead branches in the upper crown. Upper crown is partially one-sided.	Retain
59	Eucalyptus	Eucalyptus	22	Yes	Poor to Fair	Tree shows signs of decline and has dead branches in the upper crown.	Retain
60	Eucalyptus	Eucalyptus	20	Yes	Poor to Fair	Tree shows signs of decline and has dead branches in the upper crown.	Remove
61	Monterey Cypress	Cupressus macrocarpa	29	Yes	Fair	Broken branches and dead branches in upper crown. Poor past pruning cuts.	Retain

Tree #	Species	Botanical Name	DBH (inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
62	Monterey Cypress	Cupressus macrocarpa	24	Yes	Fair	Dead branches in upper crown. Poor past pruning cuts.	Retain
63	Monterey Cypress	Cupressus macrocarpa	15	Yes	Fair	Dead branches in upper crown. Poor past pruning cuts.	Remove
64	Eucalyptus	Eucalyptus	28	Yes	Poor to Fair	Dead branches in the upper crown. Tree is sparse.	Remove
65	Eucalyptus	Eucalyptus	19	Yes	Poor to Fair	Dead branches in the upper crown. Tree is sparse.	Remove
66	Eucalyptus	Eucalyptus	19	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
67	Eucalyptus	Eucalyptus	24/10	Yes	Poor to Fair	Dead branches in the upper crown and ivy growing on the trunk.	Remove
68	Eucalyptus	Eucalyptus	24/20	Yes	Poor to Fair	Estimated diameter due to Poison Oak surrounding trunk. Dead branches in the upper crown. Codominant stems that can lead to failures.	Remove
69	Eucalyptus	Eucalyptus	20	Yes	Poor to Fair	Dead branches in the upper crown and ivy growing on main trunk. Tree has a lean.	Remove

70	Eucalyptus	Eucalyptus	27	Yes	Poor to Fair	Dead branches in the upper crown. Over-extended branches and ivy growing on trunk.	Remove
71	Eucalyptus	Eucalyptus	15	Yes	Poor to Fair	Dead branches in the upper crown. Suppressed by neighboring trees. Lean to main trunk.	Remove
72	Eucalyptus	Eucalyptus	24	Yes	Poor to Fair	Topped or experienced a failure to the upper crown. Dead branches in the upper crown.	Remove
73	Monterey Pine	Pinus radiata	20	Yes	Poor to Fair	Dead branches in upper crown and Poison Oak around the base.	Remove
74	Monterey Pine	Pinus radiata	21	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
75	Eucalyptus	Eucalyptus	24	Yes	Fair	Dead branches in the upper crown.	Remove
76	Eucalyptus	Eucalyptus	24	Yes	Poor to Fair	Dead branches in the upper crown.	Remove

Tree #	Species	Botanical Name	DBH (Inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
77	Eucalyptus	Eucalyptus	20	Yes	Fair	Dead branches in the upper crown.	Remove
78	Eucalyptus	Eucalyptus	28	Yes	Poor to Fair	Dead branches in the upper crown and upper crown is sparse. Ivy growing on lower trunk.	Remove
79	Eucalyptus	Eucalyptus	19/18	Yes	Poor to Fair	Codominant branches attachments that are susceptible to failure. Dead branches in the upper crown.	Remove
80	Monterey Cypress	Cupressus macrocarpa	19	Yes	Poor to Fair	Large wound on base extending up main trunk approximately 7 feet. Several other wounds on tree. Dead branches in upper crown.	Retain
81	Monterey Cypress	Cupressus macrocarpa	30	Yes	Poor to Fair	Codominant branch attachment, which is susceptible to failure at approximately 50 feet from the ground. Dead branches in the upper crown.	Retain

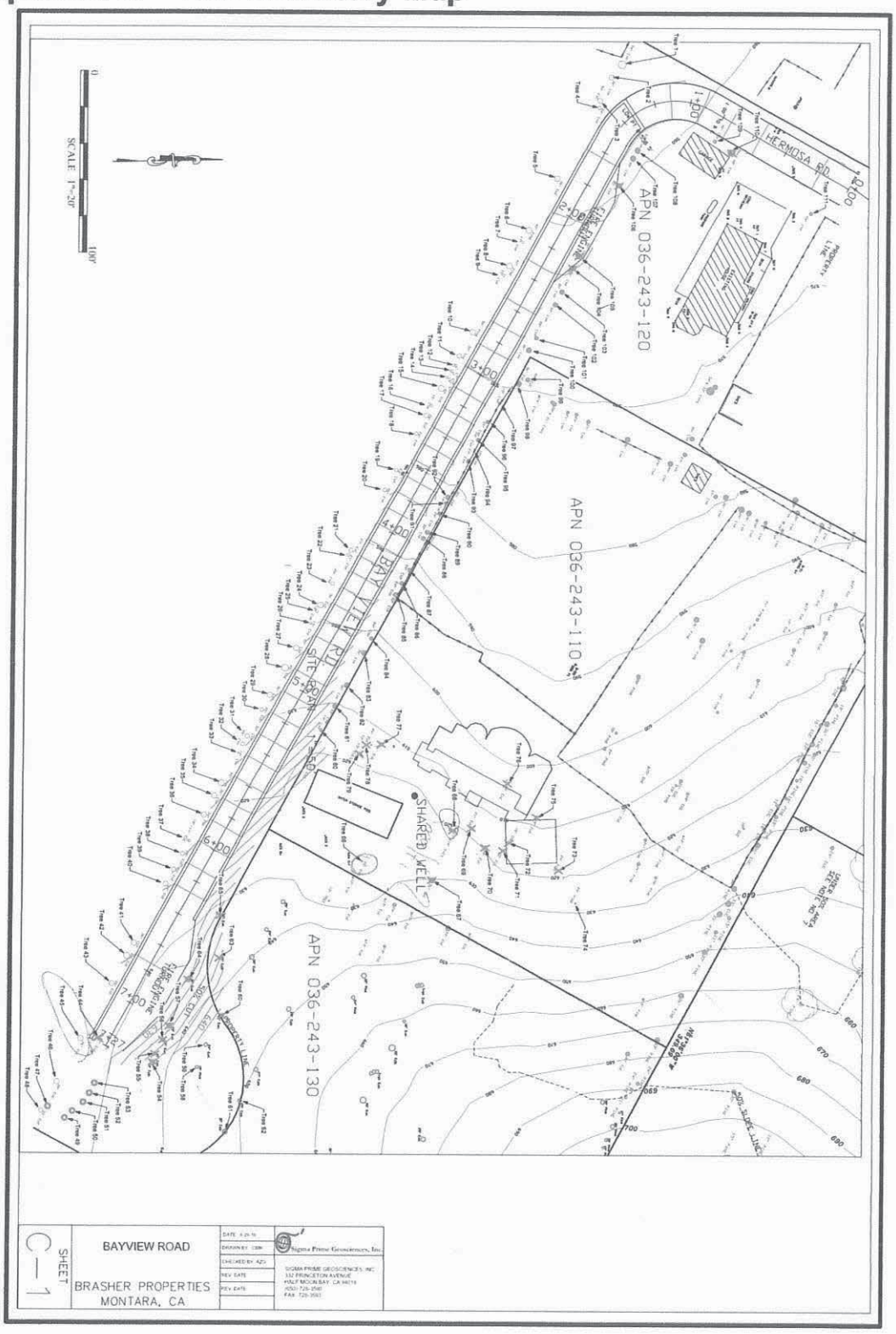
82	Monterey Cypress	Cupressus macrocarpa	32	Yes	Poor to Fair	Codominant branch attachment, which is susceptible to failure at approximately 50 feet from the ground. Dead branches in the upper crown.	Retain
83	Monterey Cypress	Cupressus macrocarpa	40	Yes	Poor to Fair	Evidence of past failures in upper crown. Large over-extended branches that are susceptible to failures. Dead branches in the upper crown.	Retain
84	Monterey Cypress	Cupressus macrocarpa	25	Yes	Fair	Dead branches in the upper crown. Few lower branches on main trunk.	Retain
85	Monterey Cypress	Cupressus macrocarpa	36	Yes	Fair	Dead branches in the upper crown.	Retain
86	Monterey Cypress	Cupressus macrocarpa	22	Yes	Poor to Fair	Dead branches in the upper crown. Lean to upper crown.	Retain
87	Monterey Cypress	Cupressus macrocarpa	26	Yes	Poor to Fair	Lean to upper crown. Dead branches and over-extended limbs in the upper crown.	Retain
88	Monterey Cypress	Cupressus macrocarpa	33	Yes	Fair	Dead branches in the upper crown.	Retain

Tree #	Species	Botanical Name	DBH (inches)	Significant Tree	Health & Condition Rating	Observations	Retain Or Remove
89	Monterey Cypress	Cupressus macrocarpa	33	Yes	Poor to Fair	Lean to upper crown. Codominant branch attachments that are susceptible to failure. Dead branches in the upper crown.	Retain
90	Monterey Cypress	Cupressus macrocarpa	26	Yes	Poor to Fair	Dead branches in the upper crown. No branches on lower trunk.	Retain
91	Monterey Cypress	Cupressus macrocarpa	19	Yes	Poor to Fair	Lean to main trunk and upper crown. Dead branches in the upper crown.	Retain
92	Monterey Cypress	Cupressus macrocarpa	31	Yes	Poor to Fair	Wire imbedded in trunk. Dead branches in the upper crown.	Retain
93	Monterey Cypress	Cupressus macrocarpa	24	Yes	Poor to Fair	Minor lean to main trunk. Dead branches in the upper crown.	Retain

94	Monterey Cypress	Cupressus macrocarpa	13	Yes	Poor to Fair	Lean to main trunk and upper crown. Broken and dead branches in the upper crown.	Retain
95	Monterey Cypress	Cupressus macrocarpa	27	Yes	Poor to Fair	Significant lean and dead branches in the upper crown.	Retain
96	Monterey Cypress	Cupressus macrocarpa	25	Yes	Poor to Fair	Broken branches and evidence of past limb failures. Dead branches in the upper crown.	Retain
97	Monterey Cypress	Cupressus macrocarpa	17	Yes	Poor to Fair	Evidence of failure in the upper crown. Wound on main trunk.	Retain
98	Eucalyptus	Eucalyptus	37	Yes	Poor to Fair	Evidence of past limb failures. Dead branches in the upper crown. Overextended branches, which are susceptible to failures.	Retain
99	Eucalyptus	Eucalyptus	22	Yes	Poor to Fair	Lean to upper crown. Dead branches in the upper crown.	Retain
100	Monterey Cypress	Cupressus macrocarpa	32	Yes	Poor to Fair	Dead branches in the upper crown.	Retain
101	Monterey Cypress	Cupressus macrocarpa	25	Yes	Poor to Fair	Abnormal growth in upper crown with no central leader. Dead branches in the upper crown.	Retain
102	Monterey Cypress	Cupressus macrocarpa	35	Yes	Fair	Wire embedded in the trunk tree. Dead branches in the upper crown.	Retain
Tree #	**Species**	**Botanical Name**	**DBH (inches)**	**Significant Tree**	**Health & Condition Rating**	**Observations**	**Retain Or Remove**
103	Monterey Cypress	Cupressus macrocarpa	27	Yes	Poor to Fair	Co-dominant stem at about 60 feet. Dead branches in the upper crown.	Retain
104	Monterey Cypress	Cupressus macrocarpa	38	Yes	Poor to Fair	Embedded wires in main trunk. Onesided upper crown with heavy overextended branches. Lean towards house and dead branches in the upper crown.	Remove
105	Monterey Cypress	Cupressus macrocarpa	37	Yes	Poor to Fair	Over-loaded branches that are susceptible to failure. Dead branches in upper crown. Lean to main trunk and upper crown.	Remove

106	Monterey Cypress	Cupressus macrocarpa	31	Yes	Poor to Fair	One-sided upper crown. Lean towards house. Dead branches in the upper crown. Evidence of past limb failures.	Remove
107	Monterey Cypress	Cupressus macrocarpa	43	Yes	Poor to Fair	Evidence of past limb failures. Dead branches in the upper crown. Overloaded branches that are susceptible to failure.	Retain
108	Monterey Cypress	Cupressus macrocarpa	35	Yes	Poor to Fair	Sparse upper crown that shows signs of decline. Lean to main trunk. Dead branches in upper crown. Termite activity in roots.	Retain
109	Monterey Cypress	Cupressus macrocarpa	34	Yes	Fair	Wire embedded in the trunk tree. Dead branches in the upper crown. Evidence of past limb failures. Located near garage.	Retain
110	Monterey Cypress	Cupressus macrocarpa	39	Yes	Poor	Tree is dead.	Remove
111	Monterey Cypress	Cupressus macrocarpa	30	Yes	Fair	Dead branches in the upper crown and overloaded limbs.	Retain

Appendix B – Tree Inventory Map



Appendix C – Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees. They recommend measures to enhance the beauty and health of trees and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below the ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for a specified period of time. Likewise, remedial treatments like any medicine cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Ned Patchett

Ned Patchett
Certified Arborist WE-4597A

Appendix D – Certification of Performance

I, Ned Patchett, certify;

- That I have personally inspected the trees and the property referred to in this report. I have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms of Assignment;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with the parties involved;
- That the analysis, opinions and conclusions within this report are my own;

- That my analysis, opinions and conclusions were developed and this report has been prepared accordingly to commonly accepted arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am an International Society of Arboriculture Certified Arborist, and have been involved in the practice of arboriculture and the study of trees for over 24 years.

Signed: Ned Patchett

Date: 01/17/2017

County of San Mateo - Planning and Building Department

ATTACHMENT G

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November 7th, 2017

50 Hermosa Way
Montara
CA 94037

Dear Mr. Brasher,

Below is my report detailing my observations and recommendations for the potential impacts caused by the proposed underground utility installation work along Bay View Rd, Montara.

SUMMARY

Wishing to install underground utility lines along the side of a parcel of land, earmarked for future development, Mr. Brasher asked me to submit a report that documented my opinions regarding the impact this work may have on the trees in this area. I then inspected and recorded a number of individuals that would be impacted by such work.

Based on my visual assessments and using best management practices and guidelines, I have provided ways in which this work can be mitigated to prevent unnecessary damage to these trees.

INTRODUCTION

Background

On October 24, 2017, Mr. Ned Brasher, contacted me regarding the installation of underground utility lines on Bay View Rd, Montara. The proposed utility lines and road border his property - APN 036-243-130, in Montara, CA 94037 (See Appendix 1 - Site Map). Mr. Brasher stated that there are a number of trees in and around this road that may be impacted by this work.

Mr. Brasher previously contracted an **ISA Certified Arborist** to produce a tree inventory report, for the purposes of the road installation, and a new property and garage. This was produced by Ned Patchett (WE-4597A) on January 17, 2017. This report highlighted all the trees that are required to be assessed as per San Mateo County guidelines for

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Significant Trees. In Mr. Patchett's original report, he suggested that underground boring should be used for utility line installation, and that they should be located within the center of the road.

Since that time, Mr. Brasher has been made aware of the exact proposed location of the utility lines. This area is circled in red (see Appendix 1 - Site Map).

Mr. Brasher would like an independent opinion as to any trees that may be impacted by this work and provide best management practices whilst this work is performed.

After reviewing the situation and discussing my terms of employment, I agreed to examine the site and any trees that could be impacted.

Assignment

During my October 24, 2017, phone conservation with Mr. Brasher, I agreed to provide the following services:

- Perform a visual ground inspection of any tree that could be impacted by underground utility installation.
- Provide recommendations for the care and management of the trees during construction work.
- Submit a formal written report which details my findings both for use by Mr. Brasher, and, if required, by the local forestry board should the trees require removal or pruning of live branches.

Limits of the Assignment

In terms of this assignment, my investigation was limited to above-ground portions of the subject trees. My investigation is based solely on my inspection of the trees detailed in this report, in my site visit on October 30, 2017.

This report is not a valuation appraisal or risk assessment, nor does it provide any estimates for the cost of remedies. My expertise in this matter is limited to the realms of **arboriculture**, landscape construction and forestry and this report is not intended as, and does not represent legal advice.

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The recommendations and conclusions provided in this report are based on visual observations only. No soil or plant tissue samples were taken and submitted for laboratory testing.

Purpose and Use of Report

The purpose of this report is to document the trees that could be impacted by the underground utility line installation along Bay View Rd, Montara, CA 94037; and to provide my observations, opinions and recommendations towards the care and management of these trees.

This information is to be used by Mr. Brasher and, if required, by the local forestry board should the trees require removal or pruning of live branches.

TREE PROTECTION

Tree Protection Techniques

Tree protection involves activities designed to preserve and protect tree health by avoiding damage to tree roots, trunks, or crown. Site development planning prior to site disturbance should include identifying tree protection zones (TPZs) for all trees designated for retention (Matheny & Clark, 1998).

Tree protection may be passive or active. Passive tree protection, most commonly used during the planning or post-development stages, simply means avoiding any disturbance or harmful activity near the tree.

Active tree protection, by contrast, involves physical protective barriers and is generally required during any site disturbance that may impact retained trees, such as grading, building construction and maintenance, infrastructure and utility installation and maintenance, and other landscape changes that may affect the structural integrity and stability of retained trees.

Critical Root Zone Protection

A critical step in protecting healthy trees during construction and development is the protection of tree roots from disturbance. Each tree has a **critical root zone (CRZ)** that varies by species and site conditions. The **International Society of Arboriculture (ISA)** defines CRZ as an area equal to 1-foot radius from the base of the tree's trunk for each 1

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inch of the tree's diameter at 4.5 feet above grade (also known as **diameter at breast height**). See Table 1 (below) for an example of these calculations.

Table 1 - Critical root zone radius distances calculated by tree diameter at breast height (ISA)

Tree Diameter	CRZ Radius	Total Protection Zone Diameter, including trunk
2 inches	2 feet	4+ feet
6 inches	6 feet	13.5 feet
20 inches	20 feet	42 feet
46 inches	46 feet	96 feet

Under certain circumstances, disturbing or cutting roots in the CRZ may be unavoidable. In such cases, the work should be done only under the onsite supervision of an ISA Certified Arborist.

OBSERVATIONS

Site Visit

On October 30, 2017, I visited 50 Hermosa Way, Montara and inspected trees surrounding the proposed utility line installation along Bay View Road (see Appendix 1 - Site Map) to assess the condition of any tree that may be impacted through this work.

Site Location and Condition

Bay View Road is situated in Montara, CA. It is situated to the East of Mr. Brasher's home, at 50 Hermosa Way. The road itself borders the following property parcels: 036-243-120, 036-243-110 and 036-243-130.

The proposed utility lines run alongside parcel 036-243-130. The trees in this report are located on parcel number 036-243-130 and 036-243-010.

All these areas can be seen in Appendix 1 - Site Map.

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Tree Analysis

This report is concerned with the protection of trees that have the potential to be impacted during the installation of the utility lines.

To ascertain what trees would be impacted by the utility line installation, I measured the diameter at breast height (dbh) of all trees within a 40 feet distance, to the edge of the 10 foot wide area where the lines will be installed underground. On site, this area was marked out by markers and stakes.

The 40 foot area was chosen as a way of incorporating any trees of a certain size, whose CRZ would overlap at any point with the installation area. As an example, the smallest tree measured had a 17 inch dbh. As per ISA guidelines, this would mean the tree has a 17 feet CRZ. This particular tree was 5 feet from the edge of the installation area, hence the CRZ of this tree entered and actually exited the 10 feet wide installation area.

Table 2 (below) lists all the trees recorded on site that have a CRZ that enters into the 10 foot wide area where the underground utility lines will be installed. Each tree was tagged on site and given a letter (A to Z). The approximate locations of these trees can be seen in Appendix 2 - Tree Locations.

Furthermore, the tree condition was given a rating. I used the same system as referred to in the original January 2017 report, by Ned Patchett. Appendix 3 - Tree Condition Rating System, explains this.

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Table 2 - Trees with a CRZ that enters the underground utility line installation area

Tag #	Species	DBH (inches)	Condition Rating (see Appendix 3)	Distance to Installation Area (feet)
A	Blue Gum (*Eucalyptus globulus*)	20	Fair	Inside area
B	Blue Gum	33	Fair-Good	Inside area
C	Blue Gum	30.5	Fair-Good	2
D	Monterey Cypress (*Hesperocyparis macrocarpa*)	23.5	Good	2
E	Monterey Pine (*Pinus radiata*)	24	Good	Inside area
F	M. Pine	24	Poor-Fair	6
G	Blue Gum	35.5	Fair-Good	Inside area
H	Blue Gum	44.5	Good	Inside area
I	M. Pine	24	Fair-Good	Inside area
J	M. Pine	26	Fair-Good	Inside area
K	M. Pine	30	Fair-Good	Inside area
L	M. Pine	17	Poor	5
M	M. Pine	35	Good	10
N	Blue Gum	21	Poor-Fair	15
O	Blue Gum	34	Poor-Fair	Inside area
P	Blue Gum	27	Poor-Fair	Inside area

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Tag #	Species	DBH (inches)	Condition Rating (see Appendix 3)	Distance to Installation Area (feet)
O	Monterey Pine (*Pinus radiata*)	27	Fair	15
R	Blue Gum (*Eucalyptus globulus*)	24	Fair	Inside area
S	Blue Gum	18	Fair	Inside area
T	M. Pine	24	Fair-Good	Inside area
U	M. Pine	33	Poor-Fair	Inside area
V	Blue Gum	17	Good	Inside area
W	Blue Gum	22	Good	7
X	Blue Gum	24.5	Good	Inside area
Y	M. Pine	39	Good	8
Z	M. Pine	37	Poor-Fair	Inside area

Table 2 - Trees with a CRZ that enters the underground utility line installation area (cont)

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DISCUSSION

Cutting or disturbing a large percentage of a tree's roots increases the likelihood of the tree's failure or death. Most trees roots over 4 inches in diameter are likely to be structural roots; cutting these roots may impact the structural stability of the tree (Matheny & Clark, 1998).

The Best Management Practices (BMPs) below, as recommended by the ISA, retain good air and water supply to the critical roots of protected trees, as well as protect them from mechanical damage, to help trees remain as healthy and stable as possible during the construction process and beyond.

- Establish a CRZ for both large and small trees.
- Install strong fencing around the CRZ and require the fence to remain in place for the life of the development project (see Appendix 4 - Tree Protection Fencing).
- Avoid cutting tree roots over 4 inches in diameter.
- Make all necessary cuts to tree roots cleanly with sharp tools: never tear with a backhoe. A clean cut encourages good wound closure and confines the spread of decay.

In the case of this utility line installation project, Mr. Brasher has confirmed that the installation will be performed by boring. This is an installation technique that is far preferable to trenching.

As this boring will be within the CRZ of a number of trees, the following BMPs are relevant for the proposed work on Bay View Road.

To protect trees and tree roots within the fenced CRZ, do not do the following (reproduced from the ISA):

- Stockpile construction materials or demolotion debris.
- Park vehicle or equipment.
- Pile soil and/or mulch.
- Trench for utilities installation or repair, or for irrigation system installation.
- Change soil grade by cutting or filling.

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- Damage roots by grading, tearing, or grubbing.
- Compact soil with equipment, vehicles, material storage, and/or foot traffic.
- Contaminate soil from washing out equipment and vehicle maintenance.
- Install impervious parking lots, driveways, and walkways.
- Wound or break tree trunks or branches through contact with vehicles and heavy equipment.
- Wound trunks with string weed trimmers and lawn mowers.
- Cause injury by fire or excessive heat.

CONCLUSION

As can be seen in Table 2, there are a total of 26 trees that have a CRZ that enter into the installation zone of the underground utility lines. Due to this, any root pruning or damage to roots in these areas could possibly be detrimental to the health and structural stability of any one of these trees.

If underground utility installation work has to proceed in this area, then activities such as trenching or back-hoe digging should be avoided, as per BMPs and ISA guidelines.

The process of boring to install these cables would be far less invasive and detrimental to the health of the trees listed in Table 2.

Furthermore, there should be a reassessment period, perhaps three to six months after the installation, (or before any change in land use, such as increased human activity), to reinspect the condition of these trees to see if the condition has declined to the extent that further pruning or removal work may be deemed necessary.

Finally, during the construction phase, tree protection fencing (see Appendix 4) should be installed to protect the trees from any inadvertent damage.

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RECOMMENDATIONS

Based on my investigation and conclusions I recommend the following actions to be taken to maintain a healthy cultural environment for the subject trees.

1. Underground utility lines should be installed by boring or hand digging, not by trenching.
2. Follow the BMPs guidelines in the Conclusions for any of the trees labelled A to Z.
3. Install Tree Protection Fencing (Appendix 4) during construction.
4. Consider removal of Tree 'L'. Consider removal or mitigation on all trees with a condition rating of Poor-Fair.
5. Reinspect trees within one year, or before a change in land use (such as increased traffic) to ascertain if the underground utility installation work has had a negative effect on any of these trees.

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GLOSSARY

Arboriculture - practice and study of the care of trees and other woody plants in the landscape.

Critical Root Zone (CRZ) - area of soil around a tree where the minimum amount of roots considered critical to the structural stability or health of the tree are located. CRZ determination is sometimes based on the drip line or a multiple of dbh, but because root growth is often asymmetric due to site conditions, on-site investigation is preferred.

Diameter at Breast Height (dbh) - tree diameter at breast height. Measured at 1.4 meters (4.5 feet) above ground in the United States.

International Society of Arboriculture (ISA) - Through research, technology, and education, the International Society of Arboriculture (ISA) promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees.

ISA Certified Arborist - an arborist who has passed an independent exam administered by the International Society of Arboriculture, and maintains the credential through continuing education.

Tree Protection Zone (TPZ) - defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

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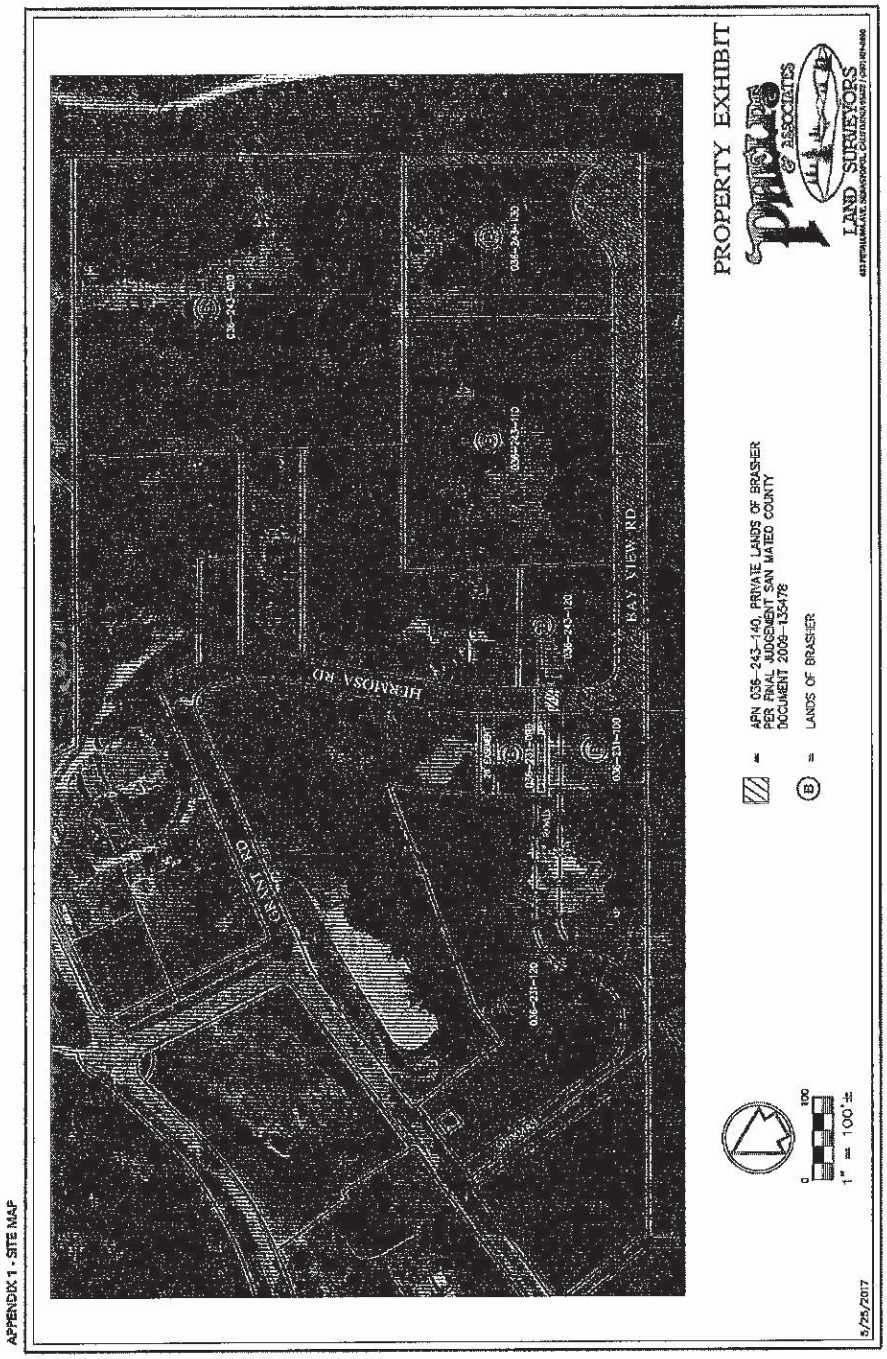
APPENDIX 1 - SITE MAP



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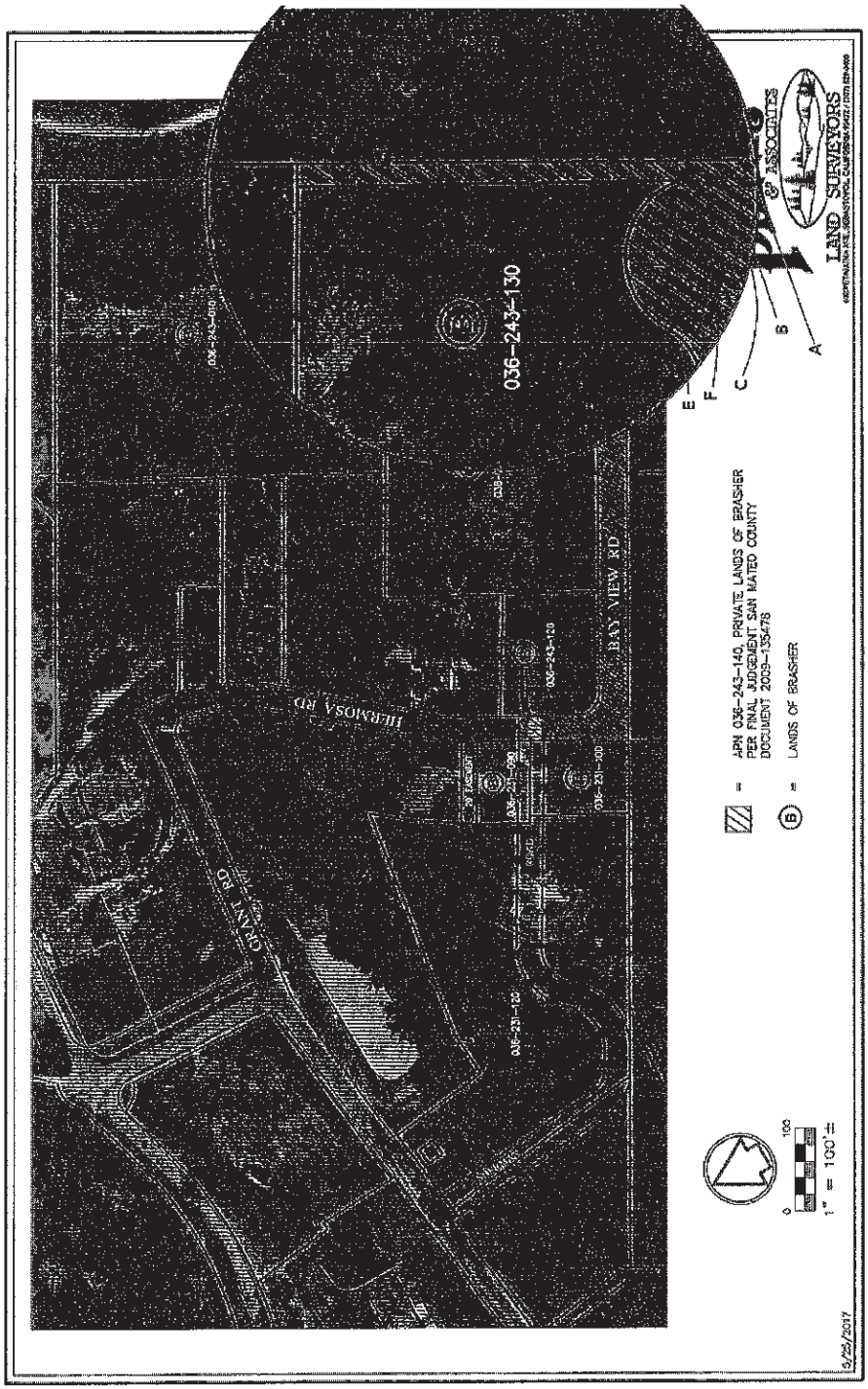
APPENDIX 2 - TREE LOCATIONS



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APPENDIX 3 - TREE CONDITION RATING SYSTEM

- Condition Rating of **Poor**-Tree is completely dead or shows signs of advanced disease or pest infestation. Tree is a significant hazard. Immediate removal of tree is recommended.

- Condition Rating of **Poor to Fair**-Tree shows signs of decline in upper crown, significant structural flaws, suppressed by neighboring trees, unbalanced and one sided crown, significant dead branches present in the upper crown, significant lean to the main trunk or upper crown, signs of pest or disease and risk of branch or ground failure. Removal should be considered, if retained then recommended action should be taken immediately.

- Condition Rating of **Fair**-Tree shows minor signs of decline in upper crown, structural flaws that can be minimized through the use of arboricultural support systems or through pruning, minimally suppressed by neighboring trees, slightly unbalanced and one-sided crown, some dead branches present in the upper crown, some lean to the main trunk or upper crown, early signs of pest or disease and minor risk of branch or ground failure. Tree is suitable for retention and the recommended action should be taken immediately.

- Condition Rating of **Fair to Good**-Minor dead branches in upper crown, minor structural flaws, insignificant lean to the main trunk or upper crown and no signs of pest or disease. Tree is suitable for retention and recommended action is not critical but should be performed in the near future.

- Condition Rating of **Good**-No dead branches, no structural flaws, uniform distribution of scaffold branches and well-balanced upper crown, no lean to main trunk or upper crown and no signs of pest or disease. Tree is excellent candidate for retention and no work is required at the present time.

This tree condition rating system was used in the initial tree report, produced by Ned Patchett.

JAMES
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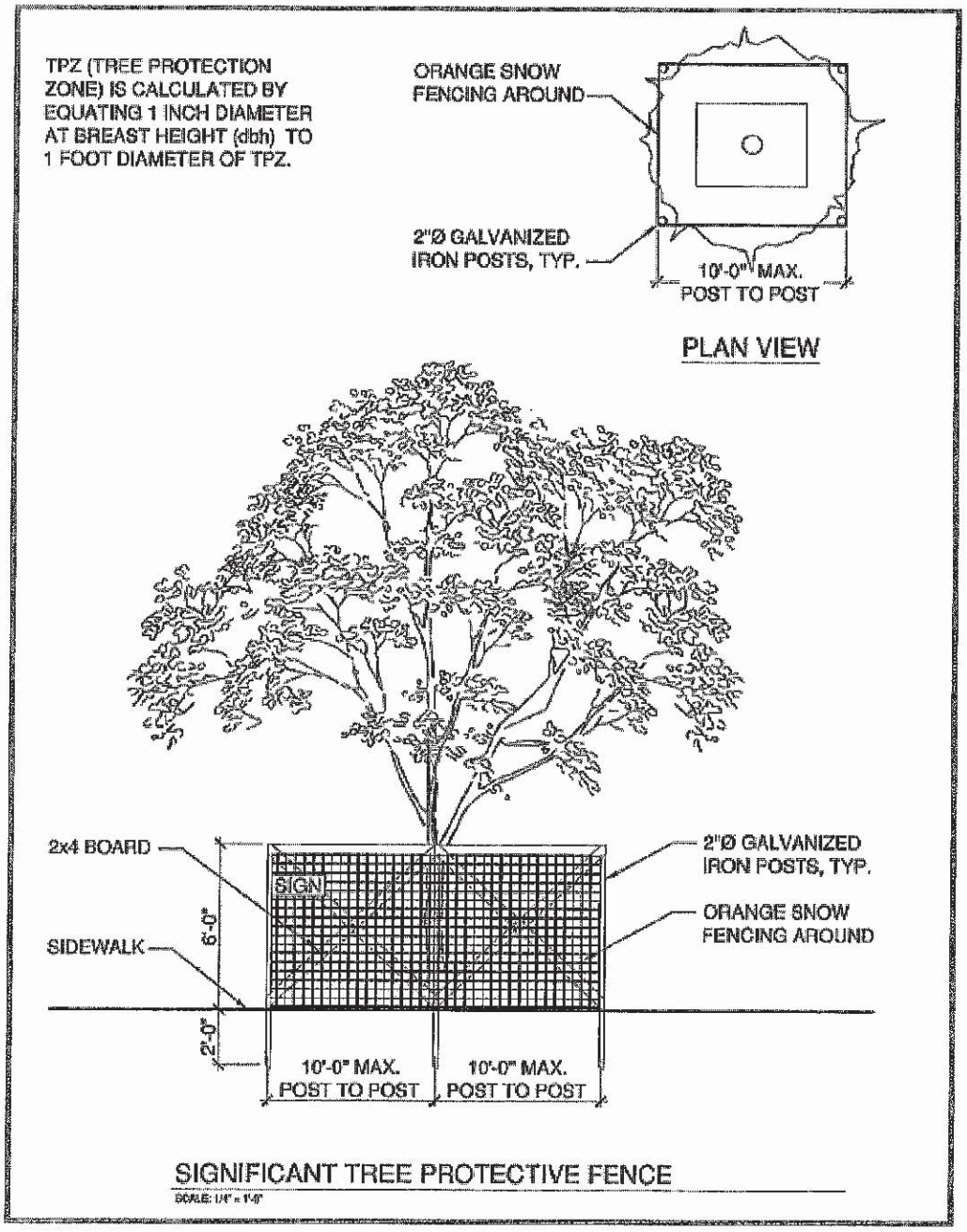
CONSULTING
ARBORIST

415 490 7316
james@goodrumfortrees.com
www.goodrumfortrees.com

ISA Certified Arborist, No. WE-10042A
ISA Tree Risk Assessment Qualified
Member, American Society of Consulting Arborists

APPENDIX 4 - EXAMPLE OF TREE PROTECTION FOR CONSTRUCTION



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APPENDIX 5 - ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

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APPENDIX 6 - QUALIFICATIONS, ASSUMPTIONS, AND LIMITING CONDITIONS

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation R. T. Arborist as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only the examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

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APPENDIX 7 - CERTIFICATION OF PERFORMANCE

I, James Goodrum certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation is stated in the attached report and the Limits of the Assignment.
- I have no current or prospective interest in the trees or the property that are the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists, and the International Society of Arboriculture. I have been involved in the field of Arboriculture in a full-time capacity for over 10 years.

Signed: *James Goodrum*

Dated: 7th November 2017

County of San Mateo - Planning and Building Department

ATTACHMENT H

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

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

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

October 10, 2018 File No.: 18-0708

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

re: PLN2017-00017 / Bay View Road, APN 036-243-110 / Ned Basher

Dear Ruemel Panglao,

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Project Description: Proposed new 2-story, 3,442 sq. ft. residence, plus a 672 sq. ft. garage

Previous Studies:

XX This office has no record of any previous cultural resource studies for the proposed project area *(see recommendation below)*.

Archaeological and Native American Resources Recommendations:

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

XX The proposed project area has a low possibility of containing unrecorded archaeological site(s). Native American resources in this part of San Mateo County have been recorded in broad midslope terraces, immediately adjacent to perennial and intermittent watercourses, and in particular concentration near the coastline. The proposed project area contains a moderate slope and is not adjacent to a watercourse. Therefore, no further study for archaeological resources is recommended.

If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

Built Environment Recommendations:

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

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

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

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at http://www.chrisinfo.org. If you have any questions please give us a call (707) 588-8455.

Sincerely,

Cameron Felt
Researcher

County of San Mateo - Planning and Building Department

ATTACHMENT I

15.1M

SAN MATEO COUNTY GENERAL PLAN

NATURAL HAZARDS

GEOTECHNICAL HAZARD

- AREA OF HIGH LANDSLIDE SUSCEPTIBILITY (V, VI & L-MF 360) U.S.G.S.
- ALQUIST-PRIOLO SPECIAL STUDIES ZONE
- TSUNAMI AND SEICHE INUNDATION AREAS

COASTAL CLIFF STABILITY

- LS LOW STABILITY
- MS MODERATE STABILITY
- HS HIGH STABILITY

FIRE HAZARD

- HAZARDOUS FIRE AREAS

FLOOD HAZARD

- AREAS OF SPECIAL FLOOD HAZARD (UNINCORPORATED AREA ONLY)
- DAM FAILURE INUNDATION ZONES

NOTE: FOR GENERAL PLANNING PURPOSES ONLY. NOT TO BE USED FOR SITE SPECIFIC STUDIES. SEE TEXT FOR SOURCES.

0 4000 8000 16000 32,000 FEET

99 320 ac.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PLANNING AND DEVELOPMENT DIVISION · SAN MATEO COUNTY · CALIFORNIA

north

BRISBANE
SIERRA POINT
OYSTER POINT
SOUTH SAN FRANCISCO
POINT SAN BRUNO
SAN FRANCISCO BAY
MUSSEL ROCK
PACIFICA
MORI POINT
POINT SAN PEDRO
MILLBRAE
COYOTE POINT
HILLSBOROUGH
BURLINGAME
SAN MATEO
FOSTER CITY
BELMONT
SAN CARLOS
REDWOOD CITY
REDWOOD POINT
RAVENSWOOD POINT
MENLO PARK
MONTARA POINT
PILLAR POINT
MOSS BEACH
MIRAMONTE
SAN ANDREAS FAULT ZONE
SEAL COVE - SAN GREGORIO FAULT ZONE
WOODSIDE
PORTOLA VALLEY
SANTA CLARA COUNTY
PACIFIC OCEAN
SAN GREGORIO RANCHO
PESCADERO POINT
BOLSA POINT
PIGEON POINT
FRANKLIN POINT
ANO NUEVO POINT
SANTA CRUZ COUNTY

County of San Mateo - Planning and Building Department

ATTACHMENT J

PLN2017-00017

Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

BRASHER RESIDENCE
MEADOW PROPERTY
BAY VIEW ROAD
MONTARA, CALIFORNIA
APN 036-243-110

PREPARED FOR:
NED BRASHER
PO BOX 438
MONTARA, CALIFORNIA 94037

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

MAY, 2007

Sigma Prime Geosciences, Inc.
Effective Solutions

May 7, 2007

Ned Brasher
P.O. Box 370438
Montara, CA 94037

Re: Geotechnical Report for Proposed Residence on Bay View Road ("Meadow Property"), Montara
APN: 036-243-110
Sigma Prime Job No. 04-151

Dear Mr. Brasher:

As per your request, we have performed a geotechnical study for the proposed residence on Bay View Road in Montara, California. The accompanying report summarizes the results of our field study, laboratory testing, and engineering analyses, and presents geotechnical recommendations for the planned improvements.

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

Yours,

Sigma Prime Geosciences, Inc.

Charles M. Kissick, P.E.

111 Vassar Street, Half Moon Bay, CA 94019 (650) 728-3590 fax 728-3593

TABLE OF CONTENTS

Page No.

1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed residence on Bay View Road in Montara, California, at the location shown in the vicinity map in Figure 1. The purpose of this investigation was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed construction.

1.1 PROJECT DESCRIPTION

We understand that you plan to construct a single family dwelling on the lot located on Bay View Road, California. This lot is referred to as the "Meadow Lot", to differentiate it from adjacent lots that will also be developed in the future. The 2-story structure is expected to be of wood frame construction and have wooden floors constructed over a crawl space or a partial basement with a slab-on-grade. Structural loads are expected to be relatively light as is typical for this type of construction.

1.2 SCOPE OF WORK

The scope of work for this study was presented in our proposal dated July 8, 2004. In order to complete this project we have performed the following tasks:

- Reviewed published information on the geologic and seismic conditions in the site vicinity;
- Subsurface study, including 2 soil borings at the site for the house foundation design;
- Laboratory testing of selected soil samples, to establish their engineering properties, and for soil classification purposes;
- Engineering analysis and evaluation of the subsurface data to develop geotechnical design criteria; and
- Preparation of this report presenting our recommendations for the proposed improvements.

2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on October 14, 2004. The subsurface study consisted of drilling 2 soil borings with continuous drive sampling. The soil borings were advanced to depths of 8 feet and 14 feet. The approximate locations of the borings, numbered B-1 and B-2, are shown in Figure 2. The borings were drilled when the location of the house had not yet been finalized. Therefore, we drilled at two locations that would show a generalized difference in subsurface conditions, with one boring on the side of the slope, and one boring in an area that is more level. The boring logs and the results of the laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the 1.7-acre lot was undeveloped and adjacent to other undeveloped parcels on an undeveloped portion of Bay View Road. The lot is generally clear in the middle, with several large cypress and eucalyptus trees scattered around the perimeter. A domestic water well had been installed near the east side of the parcel, as shown in Figure 2.

Bay View Road will be improved from Hermosa Road to a cul-de-sac about 100 feet past the subject property. Bay View Road is presently a "paper street", 35 feet wide. A narrow (about 10 feet wide), rough dirt road currently provides access up the road. There are no utilities under Bay View Road.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Pampeyan (1994), and observations while soil sampling, the site vicinity is primarily underlain by Holocene age slope wash and colluvium deposits. These deposits are described as unconsolidated to moderately consolidated sand, silt, clay, and rock fragments accumulated by slow downslope movement of weathered rock debris and soil. In the project site vicinity, these deposits overlie the Cretaceous age Montara Granodiorite.

2.4 SITE SUBSURFACE CONDITIONS

Based on the soil borings, the subsurface conditions on the slopes of the property consist of about 5 to 6 feet of stiff, low-plasticity sandy clays on top of Montara Granodiorite. In the more level area, the overlying soil thickened to 11 to 12 feet, with a dense silty sand with gravel at a depth of 6 to 11.5 feet in Boring B-2. The granodiorite is highly weathered and an extremely weak rock, but very dense.

2.5 GROUNDWATER

No groundwater was observed. Groundwater is not expected to impact the project.

2.6 FAULTS AND SEISMICITY

The site is in an area of high seismicity, with active faults associated with the San Andreas fault system. The closest active fault to the site is the San Gregorio-Seal Cove fault, located offshore, about 1.5 km to the southwest. The San Andreas fault is located about 7.5 km to the northeast. Other faults most likely to produce significant seismic ground motions include the Hayward, Rodgers Creek, and Calaveras faults. Selected historical earthquakes in the area with an estimated magnitude greater than 6-1/4, are presented in Table 1 below.

TABLE 1
HISTORICAL EARTHQUAKES

Date	Magnitude	Fault	Locale
June 10, 1836	6.5[1]	San Andreas	San Juan Bautista
June 1838	7.0[2]	San Andreas	Peninsula
October 8, 1865	6.3[2]	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0[2]	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9[3]	San Andreas	Golden Gate
July 1, 1911	6.6[4]	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1[5]	San Andreas	Loma Prieta, Santa Cruz Mountains

(1) Borchardt & Toppozada (1996)
(2) Toppozada et al (1981)
(3) Petersen (1996)
(4) Toppozada (1984)
(5) USGS (1989)

2.7 1997 UBC EARTHQUAKE DESIGN PARAMETERS

Based on the 1997 Uniform Building Code (UBC), the site is located within Seismic Zone 4. Therefore a Seismic Zone Factor, Z, of 0.40 applies to the site. Based on the subsurface conditions encountered at the site, and the presence of the Montara granodiorite, Soil Profile Type S_C (very dense soil and soft rock) applies to the site. The site is 1.5 kilometer from the active, Type A, San Gregorio Fault. The recommended UBC seismic design parameters are shown in Table 2 below.

TABLE 2
UBC SEISMIC PARAMETERS

Fault	Distance - km	N_a	N_v	C_a	C_v
San Gregorio	1.5	1.5	2.0	0.60	1.12

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

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

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

3.2 GEOLOGIC HAZARDS

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

- Fault Rupture - The site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is considered low, in our opinion.

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

- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. Provided the foundations are built according to our recommendations, and due to the dense nature of the underlying soil and bedrock, the likelihood of significant damage to the structure from differential compaction is very low.

- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose, saturated silty sands were not encountered at the site. Therefore, in our opinion, the likelihood of liquefaction occurring at the site is very low.

- Slope Stability – Based on the geologic map and our site reconnaissance, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The existing hillsides slope gently to moderately, and the stiff clays and granodiorite that comprise the slope are conducive to a stable condition. There are no springs or unusually wet areas. There are no signs that the slopes in the area may be unstable. Therefore, it is our opinion that the likelihood of a landslide impacting the site is low.

3.3 EARTHWORK

3.3.1 Clearing & Subgrade Preparation

All deleterious materials, including trees, topsoil, roots, vegetation, etc., should be cleared from building and driveway areas. Figure 2 shows an old, concrete-lined water storage pool that will need to be removed to build the driveway.

The actual stripping depth required will depend on site usage prior to construction, and should be established by the Contractor during construction. Topsoil should be stockpiled separately for later use in landscaping areas.

After the site has been properly cleared, stripped, and excavated to the required grades, the exposed surface soil in areas to receive a slab-on-grade should be scarified to a depth of 6 inches, moisture conditioned, and compacted to the specifications listed below under the section captioned "compaction."

3.3.2 Temporary And Permanent Slopes

The contractor should be responsible for the design and construction of all temporary slopes and any required shoring. Shoring and bracing should be provided in accordance with all applicable local, state and federal safety regulations, including the current OSHA excavation and trench safety standards.

Permanent slopes should be cut or filled to an inclination of 2:1 (horizontal to vertical). Exposed slopes may be subject to minor sloughing and erosion, which

may require periodic maintenance. We recommend that the stockpiled topsoil be placed on the permanent slopes, and that the slopes be planted to minimize erosion.

3.3.3 Compaction

The scarified surface soils should be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 92 percent of the maximum dry density, as determined by ASTM D1157-78. All trench backfill should also be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 92 percent of the maximum dry density.

3.3.4 Surface Drainage

The finish grades should be designed to drain surface water away from foundations, retaining walls and slab areas, to suitable discharge points. Slopes of at least 2 percent within 5 feet of the structures are recommended. Ponding of water should not be allowed adjacent to the structure.

3.4 FOUNDATIONS

A pier-and-grade-beam type of foundation is recommended for this project. Piers should be drilled and cast-in-place, and be a minimum of 16 inches in diameter. The piers should extend at least 8 feet into the granodiorite. A vertical skin friction of 500 psf, starting 2 feet below lowest adjacent grade, should be used in design. The skin friction value may be increased by 1/3 for seismic loads and wind loads. Because of the difficulty in cleaning the bottoms of the pier holes, end bearing should be neglected, however the pier holes should be kept as clean as possible.

We recommend that grade beams be provided between piers supporting the structures. Drilled piers should have a center-to-center spacing of three pier diameters, as a minimum. The perimeter grade beam should extend at least 6-inches below the crawl space grade to help limit the infiltration of surface runoff under the structures.

Our representative should observe the pier excavations prior to placing reinforcing steel to see that they are sufficiently clean and deep, and correspond to the design drawings.

3.4.1 Lateral Loads

Resistance to lateral loads may be provided by passive pressure acting against the piers, neglecting the upper 2 feet of the pier, and acting across 1.5 pier

diameters. We recommend that an equivalent fluid pressure of 350 pcf be used in design.

3.4.2 Slabs-on-Grade

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

3.5 RETAINING WALLS

Retaining walls should be designed to resist lateral earth pressure from the adjoining natural soils and/or backfill. The walls should be founded on drilled piers with the same requirements as those discussed above.

We recommend that walls that are restrained from lateral movement be designed to resist an equivalent fluid pressure of 60 pounds per cubic foot (pcf). Retaining walls that are not restrained from lateral movement should be designed to resist an equivalent fluid pressure of 50 pcf.

Retaining walls with sloping backfill with grades up to 2:1 (horizontal to vertical) should be designed to resist an equivalent fluid pressure of 70 pcf for unrestrained walls, and 60 pcf for restrained walls.

Retaining walls should include a subsurface drainage system behind the walls to prevent any buildup of water pressure from surface water infiltration. The drainage system should consist of a 4-inch (Schedule 40 PVC) perforated pipe (perforations placed down) located below the adjacent slab elevation. The pipe should be embedded in a 12-inch width of 1/2-inch crushed rock. The remaining backfill may consist of 1/2-inch crushed rock, extending to within 2 feet of the level of the outside finish grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 2 feet of backfill should consist of native soil. The subdrain should slope to a free draining outlet. Cleanouts should be provided. Damp proofing of walls should be included in areas where wall moisture would be undesirable.

Miridrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative. If used, the drainage fabric should extend from a depth of 2 feet to the drain pipe at the base of the wall. The 12-inch width of 1/2-inch crushed rock and filter fabric should be placed around the drainpipe, as discussed in the earlier section.

Backfill placed behind the walls should be compacted to at least 90 percent relative compaction, using light compaction equipment. If heavy compaction equipment is used, the walls should be temporarily braced.

3.6 CONSTRUCTION OBSERVATION AND TESTING

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

4. LIMITATIONS

This report has been prepared for the exclusive use of Ned Brasher for specific application in developing geotechnical design criteria, for the currently planned residence on Bay View Road in Montara, California (APN 036-243-110). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

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

5. REFERENCES

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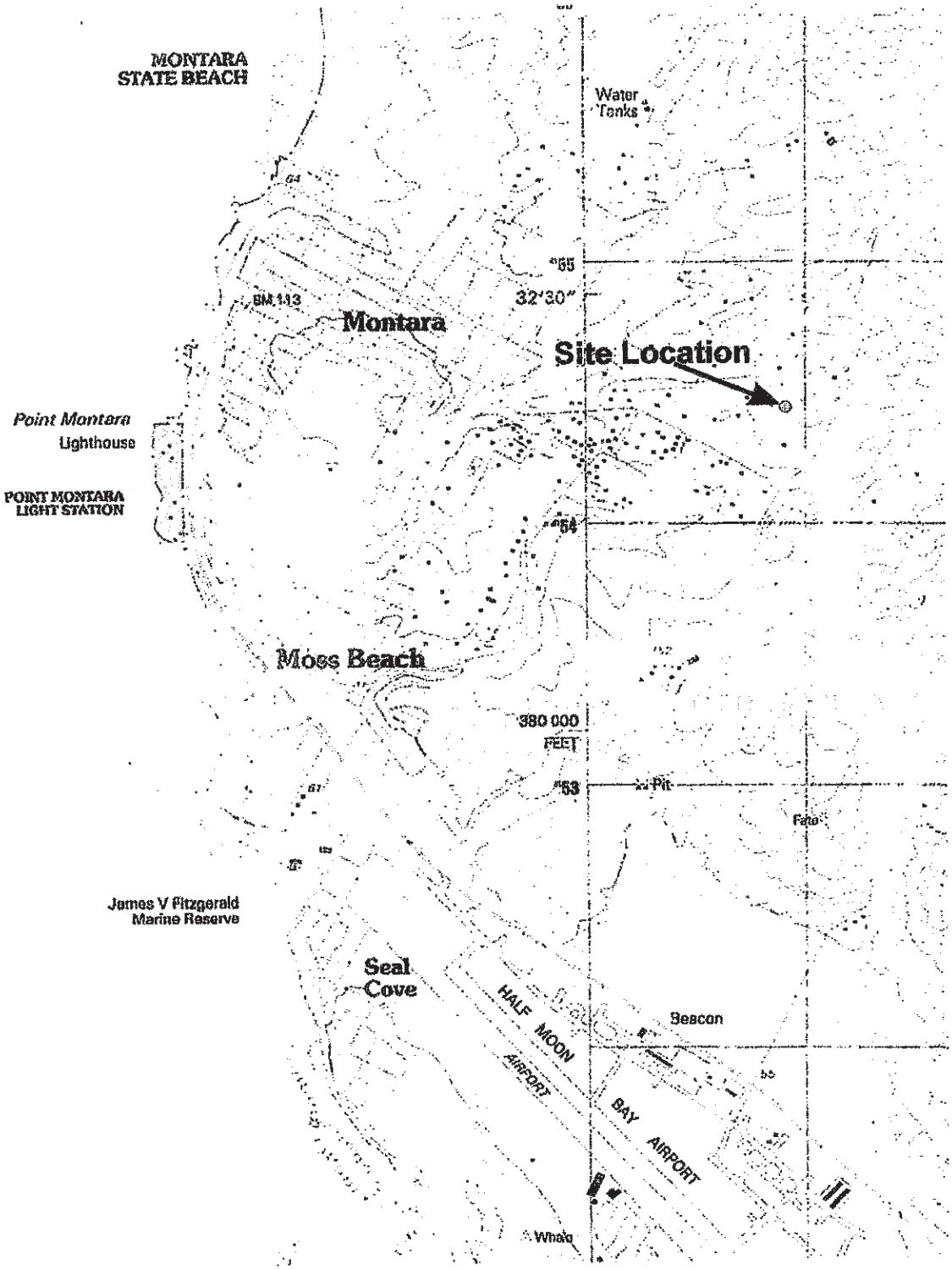
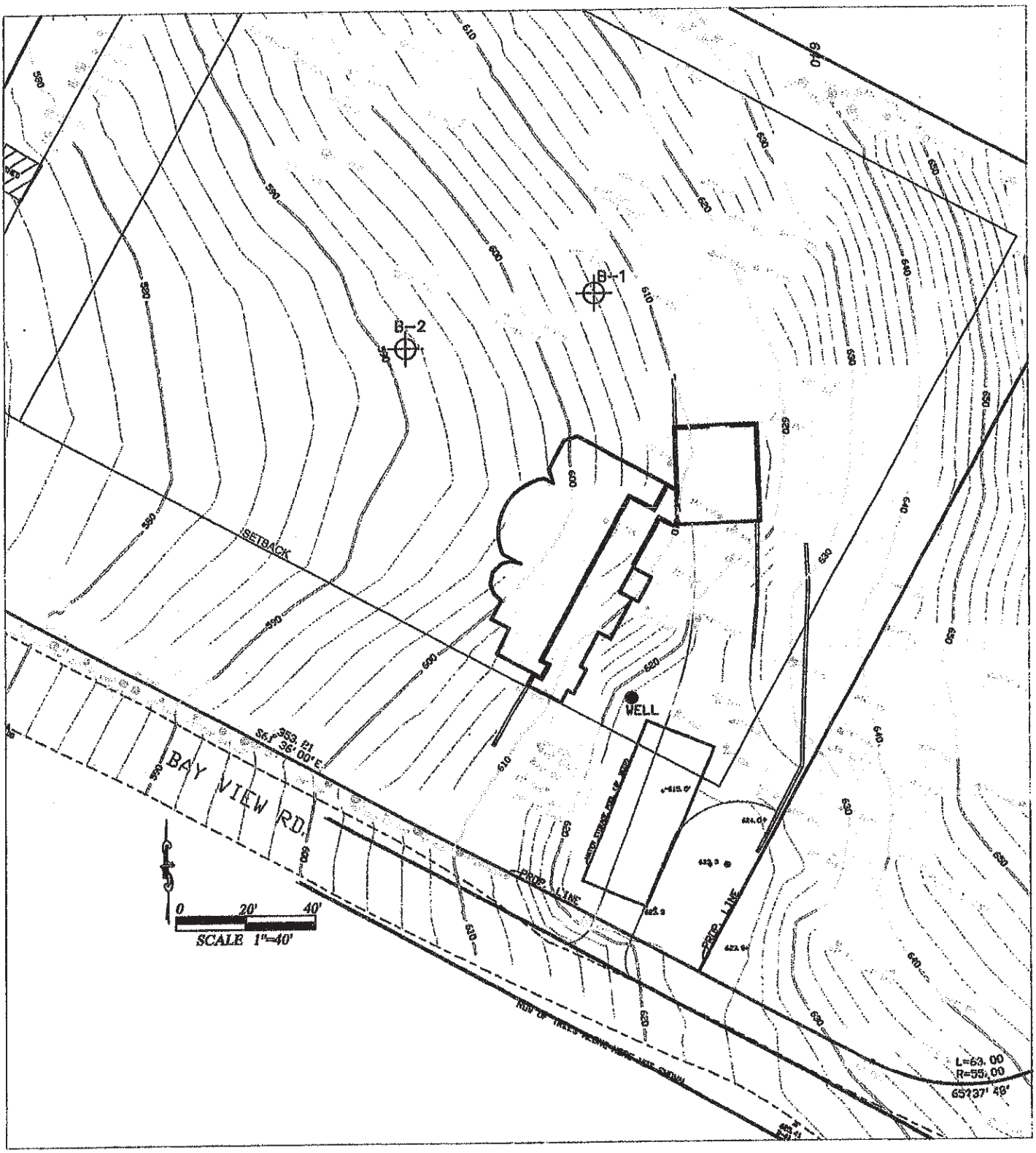


Sigma Prime Geosciences, Inc.

Figure	1
Date:	5/7/07
Job No.:	04-151

SITE LOCATION MAP

BRASHER, MEADOW LOT, MONTARA



Explanation

B-2 Soil Boring Drilled 10-14-04

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Figure	2
Date:	5/7/07
Job No.:	04-151

SITE MAP

BRASHER, MEADOW PROPERTY, MONTARA

APPENDIX A

FIELD INVESTIGATION

Six soil borings were drilled for this project on October 14, 2004. The locations of the borings are shown in Figure 2. The soils encountered during drilling were logged by our representative, and samples were obtained at depths appropriate to the investigation. The samples were taken to our laboratory where they were carefully observed and classified in accordance with the Unified Soil Classification System. The logs of our borings, as well as a summary of the soil classification system, are attached.

Several tests were performed in the field during drilling. A modified version of the standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 24 inches. (The non-modified standard penetration test drives the sampler 18 inches instead of 24 inches; our method gives only slightly differing data.) The modified standard penetration resistance is the number of blows required to drive the sampler the last 12 inches, and is recorded on the boring logs at the appropriate depth. The results of these field tests are also presented on the boring logs.

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

Brasher - Meadow Lot					04-151		Sigma Prime Geosciences, Inc.	
Location: Back-right of Lot								
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum	Boring No.	B-1
Continuous	4.0"	8.0'	5.5'	2.5'	606'	Assumed		
Drilling Company: Access Soil Drilling				Logged By: C. Kissick			Page	1 of 1
Type of Drill Rig: Minuteman		Type of Sampler(s): Mod Cal, 2½", SPT		Hammer Weight and Fall: 140 lb, 30"			Date(s)	10/14/04

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
0	0 - 5.5': Sandy Clay: dark brown; stiff; dry; coarse sand.		CL	3 8 9 10	1	MC	
				11 10 11 12	2	MC	Lab, Sample #2: Moisture%=5.2 % Dry Density=100.4 pcf LL=27, PL=18, PI=9
5	5.5-8' - :Montara Granodiorite: Orange with white specks; extremely weak; completely weathered; friable; moist.			8 7 13 19	3	2½"	
				20 30 42 44	4	SPT	
	Bottom of Hole 8.0' No groundwater encountered						
10							
15							
20							

Project Name	Brasher - Meadow Lot				04-151		Sigma Prime Geosciences, Inc.	
Location	Back-right of Lot							
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum	Boring No.	B-2
Continuous	4.0"	14.0'	11.5'	2.5'	591'	Assumed	Page	1 of 1
Drilling Company	Access Soil Drilling		Logged By	C. Kissick			Date(s)	10/14/04
Type of Drill Rig	Minuteman	Type of Sampler(s)	Mod Cal, 2½", SPT	Hammer Weight and Fall	140 lb, 30"			

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
0	0 - 6': Sandy Clay: dark brown; stiff; dry; coarse sand.		CL	7 9 11 8		MC	
					1		
				8 9 10 10		MC	
					2		Lab, Sample #2: Moisture%=6.7 % Dry Density=96.2 pcf LL=26, PL=19, PI=7
5	05': Color change to orange-brown.			9 8 8 8	3	2½"	
	6 - 11.5': Silty Sand with Gravel: orange-brown; medium dense; slightly moist; fine gravel; coarse sand, all granitic derived.		SM	11 8 10 10	4	2½"	
				8 8 6 6	5	SPT	
10				9 8 10 14	6	SPT	
	11.5-14' - :Montara Granodiorite: Orange with white specks; extremely weak; completely weathered; friable; moist.			16 23 22 20	7	SPT	
	Bottom of Hole 14.0' No groundwater encountered						
15							
20							

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

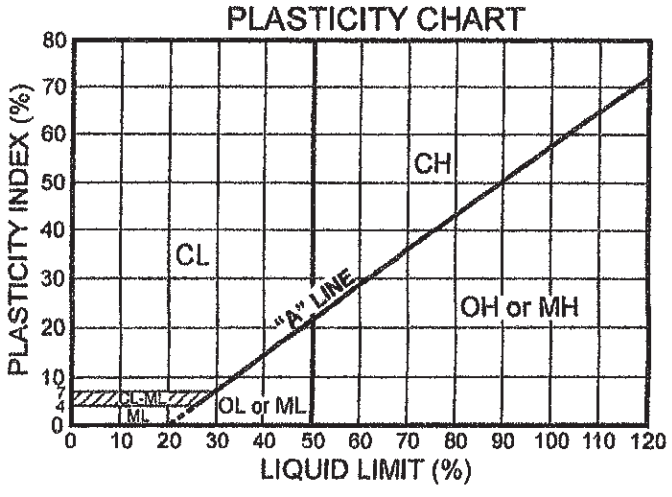
MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS > 50% RETAINED ON NO. 4 SIEVE	GRAVELS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	Cu > 4 AND 1 < Cc < 3	GW	WELL-GRADED GRAVEL
			Cu < 4 AND/OR 1 > Cc > 3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

NOTE: $Cu=D_{60}/D_{10}$

$Cc=(D_{30})^2/(D_{10}\cdot D_{60})$

BLOW COUNT

THE NUMBER OF BLOWS OF THE HAMMER REQUIRED TO DRIVE THE SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE. THE NOTATION 50/4 INDICATES 4 INCHES OF PENETRATION ACHIEVED IN 50 BLOWS.



SAMPLE TYPES

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

ADDITIONAL TESTS

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

LEGEND TO SOIL DESCRIPTIONS

Sigma Prime Geosciences, Inc.

JOB NO.:04-151 | Brasher. Meadow Lot - Montara. California | FIGURE A-1

APPENDIX B

LABORATORY TESTS

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

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

The plasticity of the clay content of selected fine grained soils was determined in accordance with ASTM D 4318. These results are presented on the boring logs, at the appropriate sample depth.

County of San Mateo - Planning and Building Department

ATTACHMENT K

Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

BRASHER - MEADOW PROPERTY
BAY VIEW ROAD
MONTARA, CALIFORNIA
APN 036-243-110

PREPARED FOR:
NED BRASHER
P.O. BOX 438
MONTARA, CA 94037

PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CALIFORNIA 94019

APRIL, 2017

Sigma Prime Geosciences, Inc.
Effective Solutions

April 6, 2017

Ned Brasher
P.O. Box 439
Montara, CA 94037

Re: Geotechnical Report for Proposed Single Family Dwelling located on Bay View Road, Montara. (APN 036-243-110)
Sigma Prime Job No. 04-151

Dear Mr. Brasher:

As per your request, we have performed a geotechnical study for the proposed construction of a single family dwelling located on Bay View Road in Montara, California. The accompanying report summarizes the results of our field study and engineering analyses, and presents geotechnical recommendations for the planned structure.

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

Yours,

Sigma Prime Geosciences, Inc.

Charles M. Kissick, P.E.

332 Princeton Avenue, Half Moon Bay, CA 94019 (650) 728-3590 fax 728-3593

GEOTECHNICAL STUDY
BRASHER – MEADOW PROPERTY
BAY VIEW ROAD
MONTARA, CALIFORNIA
(APN 036-243-110)

PREPARED FOR:
NED BRASHER
P.O. BOX 439
MONTARA, CA 94037

PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CALIFORNIA 94019

APRIL 6, 2017

TABLE OF CONTENTS

1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed residence located on Bay View Road in Montara, California at the location shown in Figure 1. The purpose of this investigation was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed construction.

1.1 PROJECT DESCRIPTION

We understand that you plan to construct a home on the property. The structure is expected to be of wood frame construction and have wooden floors constructed over a crawl space. Structural loads are expected to be relatively light as is typical for this type of construction. In addition to the house, Bay View Road must be built to provide access to the house.***

1.2 SCOPE OF WORK

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

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

2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on September 26, 2016. The subsurface study consisted of drilling 1 soil boring to a depth of 10-10" feet bgs (below ground surface). The approximate location of the boring is shown in Figure 2. The boring log and results of the laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the site was an undeveloped in-fill lot. The property slopes moderately to the south, at an inclination averaging about 30 percent. Vegetation on the subject property consists of several large trees and shrubs.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Pampeyan (1994), the site vicinity is underlain by the Cretaceous age Montara granodiorite. This formation is a dense, highly weathered granitic bedrock of unknown thickness.

2.4 SITE SUBSURFACE CONDITIONS

Based on the soil boring, the subsurface conditions at the site consist of about a foot of leaf litter from the dense eucalyptus forest, over about 9 feet of soil. Granodiorite occurs at a depth of about 9.5 feet, based on Boring B-1. The overlying soil consists of stiff to very stiff sandy clay with beds of dense silty sand. The granodiorite is highly weathered and friable, and very dense.

2.5 GROUNDWATER

Groundwater was not encountered in the boring and is not expected to impact the construction.

2.6 FAULTS AND SEISMICITY

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

TABLE 1
HISTORICAL EARTHQUAKES

Date	Magnitude	Fault	Locale
June 10, 1836	6.5[1]	San Andreas	San Juan Bautista
June 1838	7.0[2]	San Andreas	Peninsula
October 8, 1865	6.3[2]	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0[2]	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9[3]	San Andreas	Golden Gate
July 1, 1911	6.6[4]	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1[5]	San Andreas	Loma Prieta, Santa Cruz Mountains

(1) Borchardt & Toppozada (1996)
(2) Toppozada et al (1981)
(3) Petersen (1996)
(4) Toppozada (1984)
(5) USGS (1989)

2.7 2016 CBC EARTHQUAKE DESIGN PARAMETERS

Based on the 2016 California Building Code (CBC) and our site evaluation, we recommend using Site Class Definition C (soft rock) for the site. The other pertinent CBC seismic parameters are given in Table 2 below.

Table 2
CBC SEISMIC DESIGN PARAMETERS

S_S	S_1	F_a	F_v	S_{MS}	S_{M1}	S_{DS}	S_{D1}
2.134	0.814	1.0	1.3	2.560	1.139	1.707	0.759

Because the S_1 value is greater than 0.75, Seismic Design Category E is recommended, per CBC Section 1613.5.6. The values in the table above were obtained from a USGS software program which provides the values based on the latitude and longitude of the site, and the Site Class Definition. The latitude and longitude were 37.5286 and –122.5099, respectively, and were accurately obtained from Google Earth™. These same values can be obtained directly from maps in the CBC, however the scale of the map makes it impractical to achieve satisfactory accuracy. The map in the CBC was derived from the same work that led to the USGS software. The remaining parameters were also obtained by the same USGS program.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

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

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

3.2 GEOLOGIC HAZARDS

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

- Fault Rupture - The site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low, in our opinion.

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

- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. There is a dense silty sand on the site, however it will either be excavated during construction or penetrated with drilled piers for the foundation. In any case, the density of the silty sand makes it marginally prone to differential compaction. Therefore, the likelihood of significant damage to the structure from differential compaction is very low.

- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. Loose, saturated silty sands were not encountered at the site. Therefore, in our opinion, the likelihood of liquefaction occurring at the site is nil.

- Slope Stability – Based on the geologic map and our site reconnaissance, there are no indications that landslide activity will adversely impact the subject site during the design lifetime. The slope is moderately steep, at about 30 percent, however the granodiorite is shallow and stable. The upper soils are generally dense and stiff. There are no springs or seepage on the site. The likelihood of a landslide impacting the site is low.

3.3 EARTHWORK

3.3.1 Clearing & Subgrade Preparation

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

3.3.2 Fills

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

3.3.3 Compaction

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

3.3.4 Surface Drainage

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

3.4 FOUNDATIONS

A pier-and-grade-beam type of foundation is feasible for the proposed construction. Piers should be drilled and cast-in-place, and be a minimum of 16 inches in diameter. The piers should extend a minimum of 8 feet into the weathered granodiorite, as measured from the bottom of the adjacent grade beam. The actual pier depths should be determined by the structural engineer, based on the criteria given below. The grade beams should extend at least 8 inches below the crawl space grade.

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

Drilled piers should have a center-to-center spacing of not less than three pier diameters. The concrete should not be allowed to free-fall more than 5 feet. If groundwater fills the pier holes to more than 2 feet deep, the concrete should be tremied into the holes.

The planned improvements supported on drilled piers are anticipated to settle less than 1/2 inch. Differential settlements are anticipated to be less than 1/4 inch over a 25-foot span.

3.4.1 Lateral Loads

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

3.4.2 Slabs-on-Grade

We recommend that slabs-on-grade be underlain by at least 4-inches of non-expansive granular fill. Where floor wetness would be detrimental, a vapor barrier, such as Stego wrap or equivalent should be used.

3.5 RETAINING WALLS

Retaining walls should be designed to resist lateral earth pressure from the adjoining natural soils and/or backfill. The walls should be founded on drilled piers with the same requirements as those discussed above. We recommend that walls that are restrained from lateral movement be designed to resist an at-rest equivalent fluid pressure of 60 pounds per cubic foot (pcf). Retaining walls that are not restrained from lateral movement should be designed to resist an active equivalent fluid pressure of 45 pcf. These values assume sloping backfill and some degree of potential downhill creep.

To account for seismic loads, we recommend adding a dynamic pressure increment of 14H, where H is the height of the wall. The dynamic load is a rectangular distribution acting halfway up the wall. This value is obtained using a modified Mononobe-Okabe procedure, by first estimating the peak ground acceleration at the site, based on the average of four published attenuation relationships. The peak ground acceleration at the project site is estimated to be 0.56g. This peak value is reduced by 0.65 (denoted as k_h) because peak accelerations are too short in duration to have an impact. Therefore, k_h = 0.364g. The static coefficient of lateral earth pressure, K_A, equal to 0.172 in this case, is applied. A relationship between k_h and K_A is used to obtain the total lateral earth pressure coefficient, $K_{AE\text{-}TOT}$, due to both the dynamic and the static increments. The static increment is then subtracted to obtain the dynamic increment, $K_{AE\text{-}DYN}$. The dynamic increment, $K_{AE\text{-}DYN}$, is then applied to obtain the dynamic pressure, $P_{AE\text{-}DYN}$, using the equation,

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

where gamma is the unit weight of soil.

Retaining walls should include a subsurface drainage system behind the walls to prevent any buildup of water pressure from surface water infiltration. The drainage system should consist of a 4-inch (Schedule 40 PVC) perforated pipe (perforations placed down) located below the adjacent slab elevation. The pipe should be embedded in a 12-inch width of 1/2-inch crushed rock. The remaining backfill may consist of 1/2-inch crushed rock, extending to within 2 feet of the level of the outside finish grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper 2 feet of backfill should consist

of native soil. The subdrain should slope to a free draining outlet. Cleanouts should be provided. Damp proofing of walls should be included in areas where wall moisture would be undesirable. Miridrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative. If used, the drainage fabric should extend from a depth of 2 feet to the drain pipe at the base of the wall. The 12-inch width of 1/2-inch crushed rock and filter fabric should be placed around the drainpipe, as discussed in the earlier section.

3.6 CONSTRUCTION OBSERVATION AND TESTING

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

4. LIMITATIONS

This report has been prepared for the exclusive use of the property owner for specific application in developing geotechnical design criteria, for the currently planned residence at Bay View Road in Montara, California (APN 036-243-110). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

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

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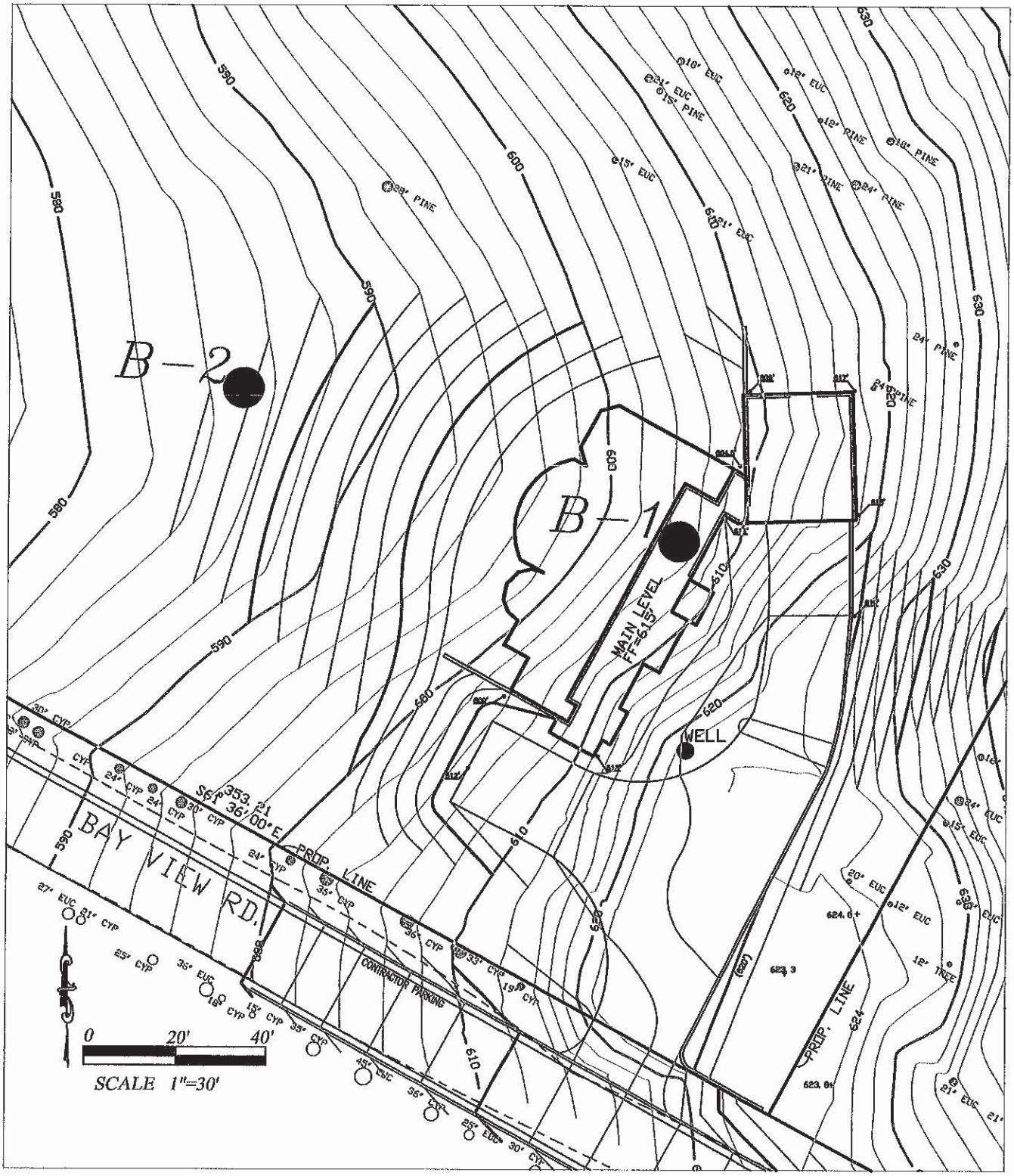
N

Sigma Prime Geosciences, Inc.

Figure	1
Date:	4/6/17
Job No.:	04-151

Location Map

Meadow Property, Bay View, Montara



EXPLANATION

B-1 Soil Boring Location

Sigma Prime Geosciences, Inc.

Figure	2
Date:	4/6/17
Job No.:	04-151

Site Map
Meadow Property, Bay View, Montara

APPENDIX A

FIELD INVESTIGATION

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

Several tests were performed in the field during drilling. The standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 24 inches. The standard penetration resistance is the number of blows required to drive a standard split spoon sampler the last 12 inches of an 18-inch sample and is recorded on the boring logs at the appropriate depth. Use of the standard split spoon sampler defines a Standard Penetration Test (SPT), and yields an SPT-equivalent blow count. (Where we drove the sampler 24 inches in some cases, this is a modified SPT test.) A modified California (Mod-Cal) sampler was also used, which results in blow counts that are higher than an SPT-equivalent blow count, due to the Mod-Cal sampler's larger diameter. For analyses, it is normal practice to reduce the Mod-Cal blow counts to correspond to an SPT-equivalent blow count. The blow counts from the Mod-Cal sampler are uncorrected on the logs. The results of these field tests are presented on the boring logs.

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

Project Name	Project Number
Brasher - Meadow Property	04-151

Location
East side of property

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Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum
Cont. Sampling	4"	8'	5.5'	2.5'	607'	Assumed

Drilling Company	Logged By:	Boring No.	B-1
Access Soil Drilling, Inc.	CMK	Page	1 of 1
Type of Drill Rig N/A	**Type of Sampler(s)** MC, SPT, 2.5" ID	**Hammer Weight and Fall** 140 lb, 30"	**Date(s)** 10/14/04

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
5	0' - 5.5': Sandy Clay: dark brown; stiff; slightly moist. Coarse sand.		CL	3 8 9 10	1	MC	
				11 10 11 12	2	MC	Lab. Sample #2: Moisture%= 5.2% Dry Density= 105.6 pcf LL= 27, PL=18, PI= 9
				8 7 13 19	3	2.5"	
	5.5' - 8': Granodiorite: orange-brown with white specks; completely weathered; extremely weak.			20 30 42 44	4	SPT	
10	Bottom of Hole @ 8' No groundwater encountered.						
15							
20							

Project Name	Project Number
Brasher - Meadow Property	04-151

Location: West side of property

Sigma Prime Geosciences, Inc.

Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum
Cont. Sampling	4"	14'	11.5'	2.5'	585'	Assumed

Boring No.	B-2
Page	1 of 1
Date(s)	10/14/04

Drilling Company	Logged By:	Type of Drill Rig	Type of Sampler(s)	Hammer Weight and Fall
Access Soil Drilling, Inc.	CMK	N/A	MC, SPT, 2.5" ID	140 lb, 30"

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
	0' - 6': Sandy Silt with Clay: dark brown; stiff; slightly moist. Coarse sand.		ML	7 9 11 8	1	MC	
				8 9 10 10	2	MC	Lab. Sample #2: Moisture%= 6.7% Dry Density= 96.2 pcf LL= 26, PL=19, PI= 7
5	Color change to orange-brown.			9 8 8 9	3	2.5"	
	6' - 11.5': Silty Sand with Gravel: orange- brown; medium dense; slightly moist. Fine gravel, coarse sand, all granitic derived.		SM	11 8 10 10	4	2.5"	
				8 8 6 6	5	SPT	
10				9 8 10 14	6	SPT	
	11.5' - 14': Granodiorite: orange-brown with white specks; completely weathered; extremely weak.			16 23 22 20	7	SPT	
15	Bottom of Hole @ 14' No groundwater encountered.						
20							

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

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

NOTE: $Cu=D_{60}/D_{10}$

$Cc=(D_{30})^2/(D_{10}+D_{60})$

BLOW COUNT

THE NUMBER OF BLOWS OF THE HAMMER REQUIRED TO DRIVE THE SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE. THE NOTATION 50/4 INDICATES 4 INCHES OF PENETRATION ACHIEVED IN 50 BLOWS.

ROCK DESCRIPTIONS

WEATHERING

Residual Soil: Original minerals entirely decomposed to secondary minerals; original rock fabric not apparent; easily broken by hand.

Completely Weathered: Original minerals almost entirely decomposed to secondary minerals, but original rock fabric may be intact; can be granulated by hand.

Highly Weathered: More than half of rock is decomposed; minimum 2" diameter sample can be easily broken by hand.

Moderately Weathered: Discolored, noticeably weakened, but less than half decomposed; 2" diameter sample can't be broken readily by hand.

Slightly Weathered: Slightly discolored, but not noticeably weaker than fresh rock.

Fresh: No discoloration, loss of strength, or other effects of weathering.

STRENGTH

Extremely Weak: Can be indented by thumbnail.

Very Weak: Can be peeled easily by pocket knife.

Weak: Can be peeled with difficulty by pocket knife.

Medium Strong: Can be indented 5mm with sharp end of pick.

Strong: Requires one hammer blow to fracture.

Very Strong: Requires many hammer blows to fracture.

Extremely Strong: Can only be chipped with hammer blows.

SAMPLE TYPES

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

ADDITIONAL SOIL TESTS

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

LEGEND TO SOIL/ROCK DESCRIPTIONS

Sigma Prime Geosciences, Inc.

APPENDIX B

LABORATORY TESTS

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

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

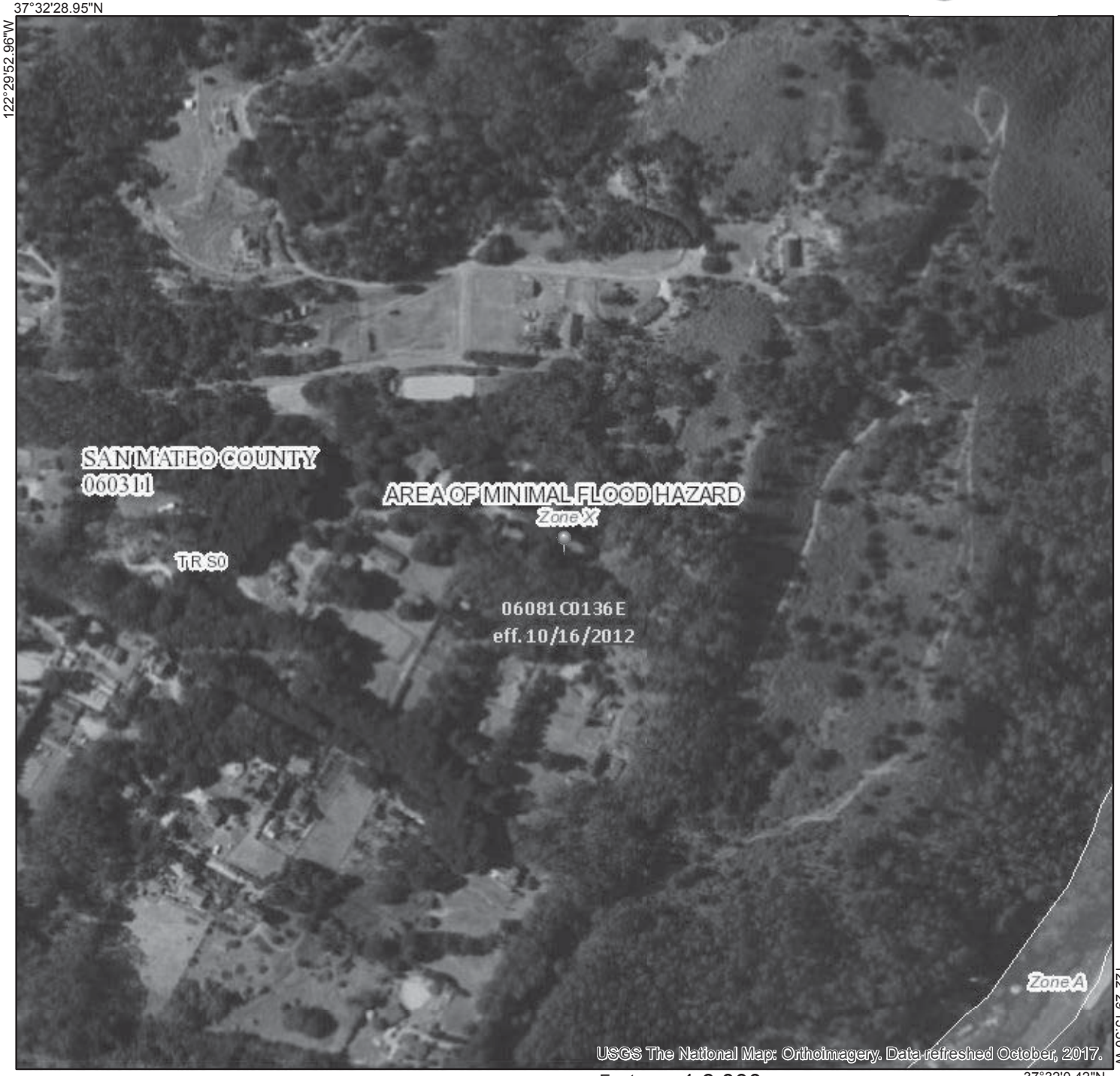
The plasticity of the clayey soil was determined on one soil sample in accordance with ASTM D 422. These results are presented on the boring log, at the appropriate sample depth.

County of San Mateo - Planning and Building Department

ATTACHMENT L

National Flood Hazard Layer FIRMette

FEMA



Feet

0 250 500 1,000 1,500 2,000

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/25/2019 at 5:29:24 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

County of San Mateo - Planning and Building Department

ATTACHMENT M

Sigma Prime Geosciences, Inc.

December 28, 2016

Ned Brasher
P.O. Box 370438
Montara, CA 94037

Subject: Drainage Analysis for Proposed Development of "Meadow Property", Bay View Road, Montara. (APN 036-243-110)

Dear Mr. Brasher:

We have performed a drainage analysis for the above-referenced property, using the San Mateo County Guidelines for Drainage Review as a guideline. Because San Mateo County does not have recommended procedures for all aspects of this type of analysis, Santa Cruz County's Design Criteria for single-family home detention systems was consulted. The only drainage issue that applies to this site is a detention system to maintain runoff at or below pre-construction levels.

The building site is in a moderately sloping area with no drainage channels. Any runoff that currently flows across the site occurs as dispersed sheet flow. The site is vegetated with grasses and trees. The maximum gradient of the site is about 50% to the west. There are no springs or shallow groundwater on the site. The moderate slope is very stable.

Because of the large size of the parcel and the long drainage paths from the house site, the runoff from the roof will be directed to two large energy dissipaters and the runoff will then travel through landscaped areas, per Item b., Worksheet C, of the San Mateo County C.3 and C.6 Development Review Checklist. The runoff will soak into the ground and undergo filtration.

With the proposed detention system, the post-development runoff will be less than the pre-development runoff. No runoff is diverted from one drainage area to another. There will be no appreciable downstream impacts. Current drainage patterns indicate minimal runoff from adjacent impervious surfaces onto the subject property.

If there are any questions regarding the contents of this letter, please do not hesitate to call me at (650) 728-3590.

Yours,
Sigma Prime Geosciences, Inc.

Charles M. Kissick, P.E.

REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9/30/17
EXPIRES
CIVIL
STATE OF CALIFORNIA

RECEIVED
MAY 12 2017
San Mateo County
Planning Division

332 Princeton Avenue, Half Moon Bay, CA 94019 tel: (650) 728-3590 fax: 728-3593

PLN2017-00017

County of San Mateo - Planning and Building Department

ATTACHMENT N

Sigma Prime Geosciences, Inc.

December 28, 2016

Ned Brasher
P.O. Box 370438
Montara, CA 94037

Subject: Drainage Analysis for Proposed Construction of Bay View Road, Montara.

Dear Mr. Brasher:

We have performed a drainage analysis for the above-referenced property, using the San Mateo County Guidelines for Drainage Review as a guideline. Because San Mateo County does not have recommended procedures for all aspects of this type of analysis, Santa Cruz County's Design Criteria for single-family home detention systems was consulted. The only drainage issue that applies to this site is a detention system to maintain runoff at or below pre-construction levels.

The site is in a level to moderately sloping area with no drainage channels. Any runoff that currently flows across the site occurs as dispersed sheet flow. The road alignment is vegetated with grasses. The maximum gradient of the alignment is about 20% to the west. There are no springs or shallow groundwater on the site. The moderate slope is very stable.

For our analyses, we used the Rational Method for both pre-construction and post-construction conditions, and for only the area that will be covered with impervious surfaces. The procedures are outlined in detail in the attached calculations. The equation for the Rational Method is:

$$Q=CIA$$

where:
Q=Quantity of Runoff (cubic feet per second)
C= Runoff Coefficient (unitless)
I= Rainfall Intensity for a 10-year storm (in/hour)
A= Area of land modified by construction (acres)

C and I are the only variables that change in this analysis. A pre-construction runoff coefficient, C, of 0.3 was used. For post-construction, C was increased to 0.9. For rainfall intensity, a 10-year event was used in the design of the detention system, as per the San Mateo County guidelines. (A 10-year storm is also recommended by Santa Cruz County.) Rainfall intensity is dependant on

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the time-of-concentration. As Santa Cruz County recommends, we used a pre-construction time-of-concentration of 15 minutes, and a post-construction time-of-concentration of 10 minutes. Using San Mateo County rainfall map, rainfall intensities of 2.46 in/hr and 2.94 in/hr were used for pre-construction and post-construction, respectively. For area, the design drawings were used to determine that a total of 14.540 square feet of land will be covered with a new paving. Our analyses were made for one large bioretention area. The recommended drainage system is shown on Sheet C-1.

With the proposed detention system, the post-development runoff will be less than the pre-development runoff. No runoff is diverted from one drainage area to another. There will be no appreciable downstream impacts. Current drainage patterns indicate minimal runoff from adjacent impervious surfaces onto the subject property.

If there are any questions regarding the contents of this letter, please do not hesitate to call me at (650) 728-3590.

Yours,
Sigma Prime Geosciences, Inc.

Charles M. Kissick, P.E.

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