County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
www.sccoplanning.com

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
INITIAL STUDY/ENVIRONMENTAL CHECKLIST

Date:	Friday December 17, 2021	**Application Number:**	201208
Project Name:	Mattison Lane Apartments	**Staff Planner:**	Lezanne Jeffs

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Jim Weaver **APN(s):** 025-211-02 and -07

OWNER: Rubino Enterprises II LLC **SUPERVISORIAL DISTRICT:** First District

PROJECT LOCATION: The project is located on the south side of Mattison Lane, approximately 1,000 feet from the intersection of Mattison Lane and Soquel Drive, across the street from Good Shepherd School. The site lies within the community of Live Oak in unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

SUMMARY PROJECT DESCRIPTION:

This is a proposal to develop a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvement on two adjacent vacant parcels, with a combined area of approximately 2.5 acres. The project will be constructed in two phases, with the first phase including all site improvements and construction of four duet style buildings (eight units). An area for the second phase will be set aside for potential future construction of one additional duet style building.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- ☒ Aesthetics and Visual Resources
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☒ Biological Resources
- ☐ Cultural Resources
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population and Housing
- ☐ Public Services
- ☐ Recreation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- ☐ Energy
- ☐ Geology and Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards and Hazardous Materials
- ☒ Hydrology/Water Supply/Water Quality
- ☐ Land Use and Planning
- ☐ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities and Service Systems
- ☐ Wildfire
- ☐ Mandatory Findings of Significance

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

- ☐ General Plan Amendment
- ☐ Land Division
- ☐ Rezoning
- ☒ Development Permit
- ☐ Sewer Connection Permit
- ☐ Coastal Development Permit
- ☒ Grading Permit
- ☐ Riparian Exception
- ☐ LAFCO Annexation
- ☐ Other:

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., permits, financing approval, or participation agreement):

Permit Type/Action	Agency
Additional permits may be required.	California Department of Fish and Wildlife (CDFW)

CONSULTATION WITH NATIVE AMERICAN TRIBES: *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, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?*

No California Native American tribes traditionally and culturally affiliated with the area of Santa Cruz County have requested consultation pursuant to Public Resources Code section 21080.3.1.

DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

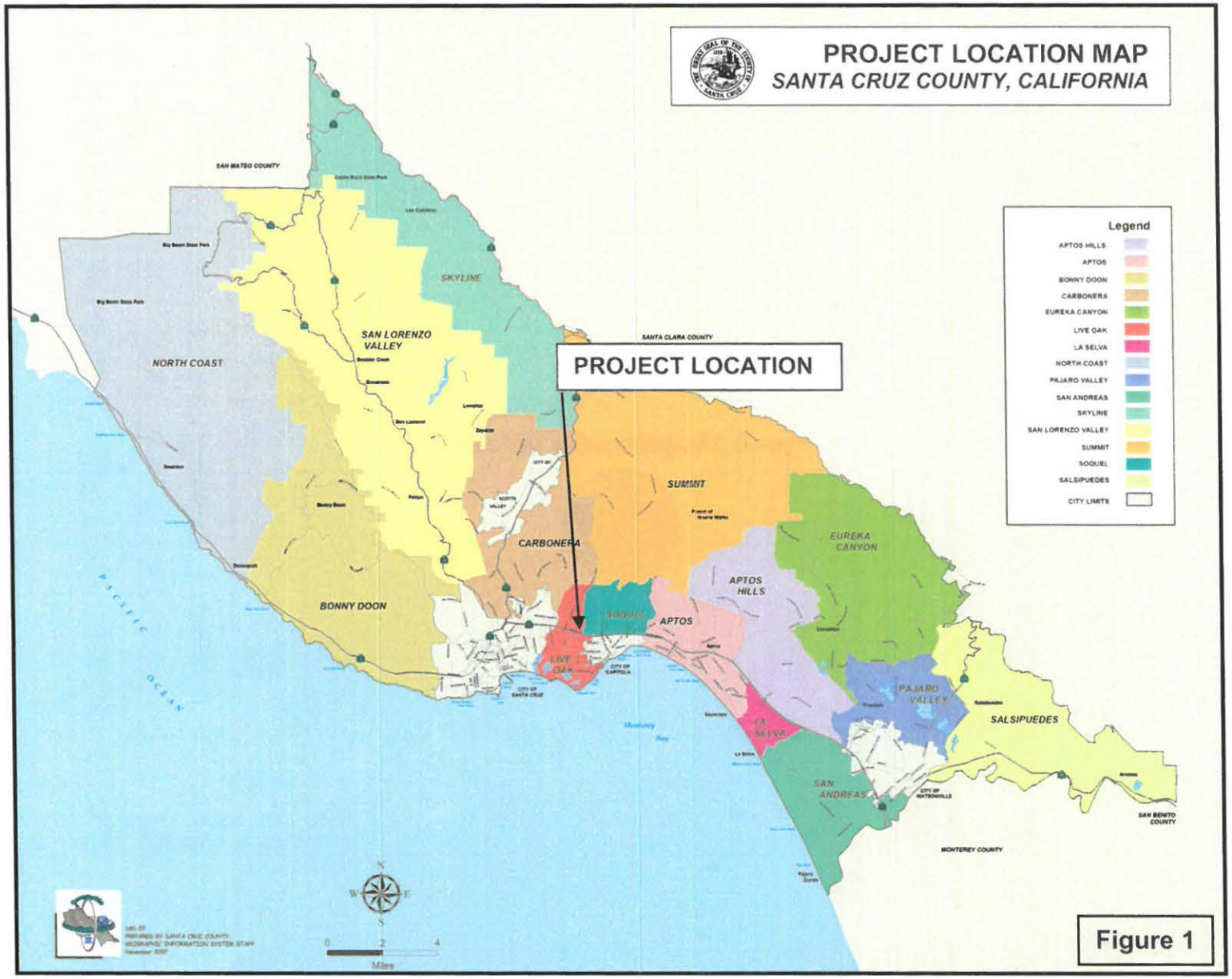
Matt Johnston

MATT JOHNSTON, Environmental Coordinator

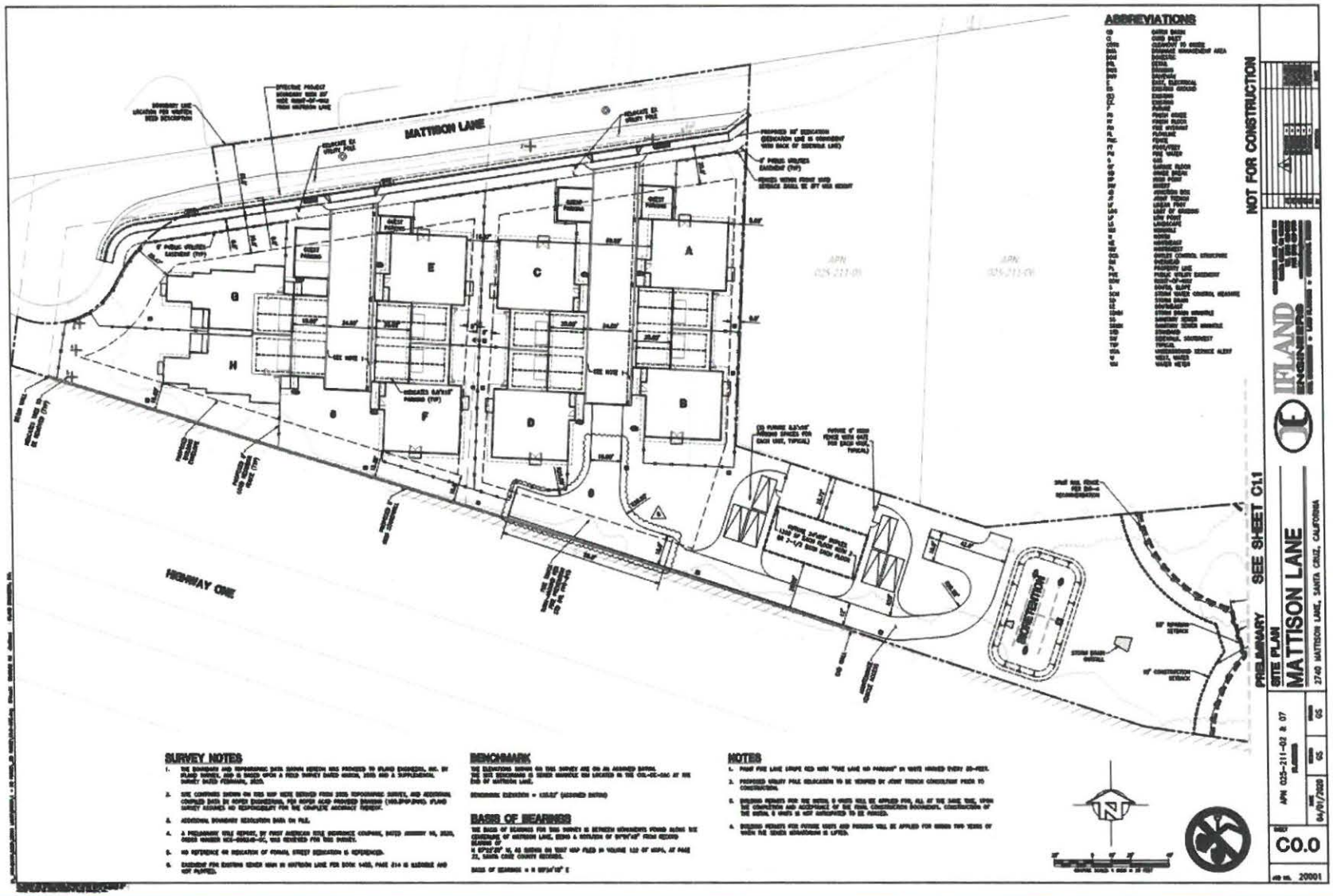
1/12/2022

Date

This page intentionally left blank.


PROJECT LOCATION MAP
SANTA CRUZ COUNTY, CALIFORNIA
PROJECT LOCATION
Legend
APTOS HILLS
APTOS
BONNY DOON
CARBONERA
EUREKA CANYON
LIVE OAK
LA SELVA
NORTH COAST
PAJARO VALLEY
SAN ANDREAS
SKYLINE
SAN LORENZO VALLEY
SUMMIT
SOQUEL
SALSIPUEDES
CITY LIMITS
SAN MATEO COUNTY
SANTA CLARA COUNTY
MONTEREY COUNTY
SAN BENITO COUNTY
PACIFIC OCEAN
Miles
Figure 1

This page intentionally left blank.



Project Site Plan **Figure 2**

This page intentionally left blank.

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS:

Parcel Size (acres):	Approximately 2.5 acres
Existing Land Use:	Vacant Lot
Vegetation:	Annual Grassland, Landscape Tree and Shrub Groves, and Mixed Riparian Woodland
Slope in area affected by project:	☒ 0 - 30% ☐ 31 – 100% ☐ N/A
Nearby Watercourse:	Rodeo Creek Gulch
Distance To:	0 feet – Rodeo Creek Gulch runs along the eastern boundary of the project site

ENVIRONMENTAL RESOURCES AND CONSTRAINTS:

Water Supply Watershed:	No	Fault Zone:	No
Groundwater Recharge:	Yes -Portion	Scenic Corridor:	Yes - HWY 1
Timber or Mineral:	No	Historic:	No
Agricultural Resource:	No	Archaeology:	Yes -Portion
Biologically Sensitive Habitat:	No	Noise Constraint:	No
Fire Hazard:	No	Electric Power Lines:	Overhead Power Lines Along Mattison Lane
Floodplain:	AE; X	Solar Access:	No
Erosion:	Low	Solar Orientation:	South
Landslide:	No	Hazardous Materials:	No
Liquefaction:	Low on developable area of the parcel	Other:	N/A

SERVICES:

Fire Protection:	Central Fire	Drainage District:	Zone 5
School District:	Soquel Union	Project Access:	Mattison Lane
Sewage Disposal:	County of Santa Cruz	Water Supply:	City of Santa Cruz

PLANNING POLICIES:

Zone District: RM-6
Special Designation: N/A
General Plan: R-UL; O-U

Urban Services Line:	☒ Inside	☐ Outside
Coastal Zone:	☐ Inside	☒ Outside

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

Natural Environment

Santa Cruz County is uniquely situated along the northern end of Monterey Bay approximately 55 miles south of the City of San Francisco along the Central Coast. The Pacific Ocean and Monterey Bay to the west and south, the mountains inland, and the prime agricultural lands along both the northern and southern coast of the county create limitations on the style and amount of building that can take place. Simultaneously, these natural features create an environment that attracts both visitors and new residents every year. The natural landscape provides the basic features that set Santa Cruz apart from the surrounding counties and require specific accommodations to ensure building is done in a safe, responsible and environmentally respectful manner.

The California Coastal Zone affects nearly one third of the land in the urbanized area of the unincorporated County with special restrictions, regulations, and processing procedures required for development within that area. Steep hillsides require extensive review and engineering to ensure that slopes remain stable, buildings are safe, and water quality is not impacted by increased erosion. The farmland in Santa Cruz County is among the best in the world, and the agriculture industry is a primary economic generator for the County. Preserving this industry in the face of population growth requires that soils best suited to commercial agriculture remain active in crop production rather than converting to other land uses.

PROJECT BACKGROUND:

The project site is located within the area identified in the Sustainable Santa Cruz County plan as the medical district/flea market focus area which envisions new housing close to services and stores. The site is located between Highway 1 and Soquel Drive, approximately 1,000 feet south of the intersection of Soquel Drive and Mattison Lane. The neighborhood consists of a wide variety of one and two-story single-family dwellings, including older and renovated residences, predominantly in a ranch style. The project is surrounded by single-family dwellings to the east, west, and north. To the north, across Mattison Lane, is a school campus (Good Shepard School) that serves students from preschool through eighth grade. To the south the project site abuts Highway 1, which is designated as a scenic road in the County's General Plan (Policy 5.10.10).

The project site consists of two contiguous parcels of land (APN: 025-211-02) approximately 1.9 acres in size, and (APN: 025-211-07) approximately 0.65 acre in size, totaling approximately 2.55 acres. The site is irregular in shape and is accessed via Mattison lane to the north. The subject property was historically used for agricultural purposes and was developed as a fruit processing plant sometime between 1931 to 1988. The property has been vacant since 2002 and is secured by a 6-foot-high chain-linked fence and a gate.

The property is relatively level. However, the site slopes down toward Rodeo Creek Gulch, which flows from north to south along the eastern property boundary. Although the site is mainly open grassland, a portion of the site close to the eastern property line, where it is within the riparian corridor along Rodeo Creek Gulch, contains a mixed riparian woodland. In addition, there is a 40-foot-wide area of tress and other vegetation within the adjacent Caltrans/Highway 1 right-of-way, which creates a buffer that separates the travelled roadway from the project site.

DETAILED PROJECT DESCRIPTION:

This is a proposal to develop the two adjacent vacant parcels (APNs: 025-211-02 and -07) with a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvements. Access to the site will be provided by two private driveways accessed from Mattison Lane. Individual entrances into the units will be provided on the ground floor along the building frontage facing these private driveways.

Per General Plan Objective 2.8 Urban Low Density Residential Designation (R-UL), densities set forth residential developments must be within the range of 4.4 to 7.2 units per net developable acre in areas within the Urban Service Line. With the proposed 10 units and the total combined net developable area of 1.9 acres, the proposed density is 5.2 units per acre, which meets the objective of the County General Plan and Local Coastal Program.

Santa Cruz County Board of Supervisors passed the Resolution No.05-18 on December 6, 2005 (Attachment 1) and adopted a moratorium on sewer connections due to the undersized trunklines within the Arana and Rodeo Gulch Basins. The County Sanitation District is actively working on upgrading the trunklines and currently awaiting to receive environmental clearances and bond financing. Construction of sewer improvements is anticipated to begin in the spring of 2022 and should be completed by the end of 2023.

The subject property is located within the Rodeo Gulch Sewer Basin and is therefore subject to the development restrictions of the Rodeo Gulch Moratorium, allowing only four sanitary sewer connections per vacant lot. Therefore, the project will be constructed in two phases. In the first phase, only eight units are proposed, with the remaining two units to be developed, as a second phase once the Santa Cruz County Sanitation District has completed their proposed upgrades to the sanitary sewer pipelines in the Rodeo Gulch Basin.

First phase includes construction of four duet style buildings for a total of eight units (Units A-H) and the associated site improvement. The associated site improvements are including but not limited to construction of a new sidewalk along Mattison Lane, placement of new utilities underground and relocation of the existing poles on Mattison lane. In addition, an eight-foot-high sound wall will be installed along the southern property line. The second phase includes construction of one additional duet style building, consisting of two units (Units I and J). The

buildings are mirror images of each other in form and floor plan, with minor differences in detailing, with each unit containing a private backyard.

The proposed unit sizes are for units A to F are each 1,902 square feet and for units G and H are each 1,713 square feet. Each duet will be connected at the garage common wall. Each unit contains four bedrooms and three bathrooms and will include two-car garages that are approximately 400 square feet each. The proposed unit sizes are for units I and J, that will be constructed in the second phase, are each 1,200 square feet and will contain two bedrooms and two bathrooms. No covered parking is proposed for units I and J but there will be uncovered parking for each dwelling, including two tandem spaces, located on either side of the building.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

III. ENVIRONMENTAL REVIEW CHECKLIST

A. AESTHETICS AND VISUAL RESOURCES

Except as provided in Public Resources Code section 21099, would the project:

1.	*Have a substantial adverse effect on a scenic vista?*	☐	☐	☒	☐

Discussion: The project site is potentially visible in scenic vistas from public trails located at the higher elevations of the Anna Jean Cummings Park, which is located approximately 0.5 miles northeast of the project site. However, the project site is surrounded by an existing urbanized area and therefore the proposed residential apartments would blend with the surrounding development and would not be prominent in views from the park. Impacts would therefore be less than significant.

2.	*Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*	☐	☐	☒	☐

Discussion: The project is located within the area identified in the Sustainable Santa Cruz County plan as the medical district/flea market focus area which envisions new housing close to services and stores. Although the subject property is currently vacant, it is surrounded by other developments such as single-family dwellings to the east, west, and north and a school to the north. Primary access to the project site is from Mattison Lane which is a county-maintained local road.

The project site abuts Highway 1 to the south, which is designated as a scenic road in the County's General Plan (Policy 5.10.10). However, Highway 1 is not visible from Mattison lane due to a 40-foot-wide row of tress and vegetation that runs along the southern property line, within the Caltrans/Highway 1 right-of-way. These trees create a buffer that separates Highway 1 and the project site. Similarly, the view from Highway 1 into the project site is restricted due to the vegetation which screens the subject property from view. In addition, the applicant is proposing to construct an eight-foot-high sound wall along the southern property line and this structure will restrict views of the proposed development from the adjacent travel lanes. The wall itself may be visible beneath the canopy of the trees but will match other walls along the highway and so will not have a significant visual impact.

As designed and laid out the project would not directly impact any public scenic vistas along Highway 1 and therefore the visual impacts from the project will be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3. *Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*	☐	☐	☒	☐

Discussion: The subject property is located within an urbanized area and the proposed development of ten multi-family dwelling units constitutes an appropriate development that will be consistent with the site's R-UH General Plan designation. The project has been designed to be consistent with County Code sections that regulate height, bulk, density and setbacks within the RM-6 zone district and will also comply with the landscaping, and other design guidelines for new structures as set out in County Code Chapter 13.11, Site, Architectural and Landscape Design Review. Impacts from the development would therefore be less than significant.

4. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*	☐	☐	☒	☐

Discussion: The project would contribute an incremental amount of night lighting to the visual environment. However, lighting at the proposed apartment complex would be consistent with the surrounding urban uses and, has been designed in conformance with the standards for lighting set out in the Santa Cruz County Code designed reduce the impact of lighting on surrounding uses. These standards, together with the following additional requirements, that are included as conditions of approval of the project, will further reduce an already less than significant impact:

- All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties.
- All lighting shall meet energy code requirements of the California Building Code.
- Light sources shall not be visible from adjacent properties. Light sources shall be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into the building design.
- Final plans shall include a lighting plan which demonstrates site lighting does not result in glare or excess light leaving the subject property (no spill over).
- All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light fixtures shall not exceed 15 feet in height.

- In the event that site lighting results in off-site glare as determined by the Planning Director, the following measures shall be implemented to the extent necessary to reduce glare:
  - Reduction in the total effective light emitted (change in wattage or bulb intensity,
  - Change in the type or method of lighting (change in bulb or illumination type),
  - Removal of lighting creating the off-site glare.

As proposed the project will not adversely day or nighttime views of the area and would not have a significant impact

B. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment 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 forest land, 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:

1.	*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?*	☐	☐	☐	☒

Discussion: The project site does not contain any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance would be converted to a non-agricultural use. No impact would occur from project implementation.

2.	*Conflict with existing zoning for agricultural use, or a Williamson Act contract?*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The project site is zoned RM-6, which is not considered to be an agricultural zone. Additionally, the project site's land is not under a Williamson Act contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact is anticipated.

3.	*Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*	☐	☐	☐	☒

Discussion: The project site is mostly comprised of open grassland area and does not contain any timber resources. Further the site is not located within the vicinity of any land designated for Timber Production or mapped as containing Timber Resources. Therefore, the project would not affect any timber resource or access to harvest any resource in the future and there will be no impact.

4.	*Result in the loss of forest land or conversion of forest land to non-forest use?*	☐	☐	☐	☒

Discussion: No forest land occurs on the project site or in the immediate vicinity. See discussion under B-3 above. No impact is anticipated.

5.	*Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*	☐	☐	☐	☒

Discussion: The project site and surrounding area within a radius of 1.3 miles does not contain any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide, or Farmland of Local Importance would be converted to a non-agricultural use. In addition, the project site contains no forest land, and no forest land occurs within 4.9 mile(s) of the project site. Therefore, no impacts are anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

C. AIR QUALITY

The significance criteria established by the Monterey Bay Air Resources District (MBARD)[1] has been relied upon to make the following determinations. Would the project:

1.	*Conflict with or obstruct implementation of the applicable air quality plan?*	☐	☐	☒	☐

Discussion: Option: The project would not conflict with or obstruct any long-range air quality plans of the MBARD. including the District's Air Quality Management Plan (AQMP). Because general construction activity related emissions (i.e., temporary sources) are accounted for in the emission inventories included in the air quality plans, impacts to air quality plan objectives are less than significant.

General estimated basin-wide construction-related emissions are included in the MBARD emission inventory (which, in part, form the basis for the air quality plans cited below) and are not expected to prevent long-term attainment or maintenance of the ozone and particulate matter standards within the North Central Coast Air Basin (NCCAB). Therefore, temporary construction impacts related to air quality plans for these pollutants from the project would be less than significant, and no mitigation would be required, since they are presently estimated and accounted for in the District's emission inventory, as described below.

The project would result in some new long-term operational emissions from vehicle trips (mobile emissions), the use of natural gas (energy source emissions), and consumer products, architectural coatings, and landscape maintenance equipment (area source emissions). Mobile source emissions constitute most operational emissions from this type of land use development project. However, emissions associated with buildout of this type of project is not expected to exceed any applicable MBARD thresholds. No stationary sources would be constructed that would be long-term permanent sources of emissions. Therefore, impacts to regional air quality as a result of the long-term operation of the project would be less than significant.

Santa Cruz County is located within the North Central Coast Air Basin (NCCAB). The NCCAB does not meet state standards for ozone (reactive organic gases [ROGs] and nitrogen oxides [NOx]) and fine particulate matter (PM10). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors and PM10.

The primary sources of ROG within the air basin are on and off-road motor vehicles, petroleum production and marketing, solvent evaporation, and prescribed burning. The primary sources of NOx are on and off-road motor vehicles, stationary source fuel combustion, and industrial processes. In 2010, daily emissions of ROGs were estimated at 63

[1] Formerly known as the Monterey Bay Unified Air Pollution Control District (MBUAPCD).

tons per day. Of this, area-wide sources represented 49%, mobile sources represented 36%, and stationary sources represented 15%. Daily emissions of NOx were estimated at 54 tons per day with 69% from mobile sources, 22% from stationary sources, and 9% from area-wide sources. In addition, the region is "NOx sensitive," meaning that ozone formation due to local emissions is more limited by the availability of NOx as opposed to the availability of ROGs (MBUAPCD, 2013b).

PM10 is the other major pollutant of concern for the NCCAB. In the NCCAB, highest particulate levels and most frequent violations occur in the coastal corridor. In this area, fugitive dust from various geological and man-made sources combines to exceed the standard. The majority of NCCAB exceedances occur at coastal sites, where sea salt is often the main factor causing exceedance. In 2005 daily emissions of PM10 were estimated at 102 tons per day. Of this, entrained road dust represented 35% of all PM10 emission, windblown dust 20%, agricultural tilling operations 15%, waste burning 17%, construction 4%, and mobile sources, industrial processes, and other sources made up 9% (MBUAPCD, 2008).

Given the modest amount of new traffic that would be generated by the project there is no indication that new emissions of ROGs or NOx would exceed MBARD thresholds for these pollutants; and therefore, there would not be a significant contribution to an existing air quality violation.

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Table 1 summarizes the threshold of significance for construction activities.

Table 1: Construction Activity with Potentially Significant Impacts from Pollutant PM10

Activity	Potential Threshold*
Construction site with minimal earthmoving	8.1 acres per day
Construction site with earthmoving (grading, excavation)	2.2 acres per day

*Based on Midwest Research Institute, Improvement of Specific Emission Factors (1995). Assumes 21.75 working weekdays per month and daily watering of site.

Note: Construction projects below the screening level thresholds shown above are assumed to be below the 82 lb/day threshold of significance, while projects with activity levels higher than those above may have a significant impact on air quality.

Additional mitigation and analysis of the project impact may be necessary for those construction activities.

Source: Monterey Bay Unified Air Pollution Control District, 2008.

Impacts

Construction

As required by the MBARD, construction activities (e.g., excavation, grading, on-site vehicles) which directly generate 82 pounds per day or more of PM10 would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors such as the Good Shepherd School. The school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. Construction projects below the screening level thresholds shown in Table 1 are assumed to be below the 82 lb/day threshold of significance, while projects with activity levels higher than those thresholds may have a significant impact on air quality. The proposed project would require minimal grading. Although the project would produce PM10, it would be far below the 82 pounds per day threshold. This would result in less than significant impacts on air quality from the generation of PM10.

Construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders that temporarily emit precursors of ozone (i.e., volatile organic compounds [VOC] or oxides of nitrogen [NOx]), are accommodated in the emission inventories of state- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone ambient air quality standard (AAQS) (MBUAPCD 2008).

Although not a mitigation measure per se (i.e., required by law), California ultralow sulfur diesel fuel with a maximum sulfur content of 15 ppm by weight will be used in all diesel-powered equipment, which minimizes sulfur dioxide and particulate matter.

The following BMPs will be implemented during all site excavation and grading operations.

Recommended Measures:

- No mitigation is required. However, MBARD recommends the use of the following BMPs for the control of short-term construction generated emissions: Water all active construction areas at least twice daily as necessary and indicated by soil and air conditions.
- Prohibit all grading during periods of high wind (over 15 mph).
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)

- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed areas.
- Haul trucks shall maintain at least 2' 0" freeboard.
- Cover all trucks hauling soil, sand, and other loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as quickly as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all existing trucks.
- Pave all roads on construction sites.
- Sweep streets, if visible soil material is carried out from the construction site.
- Post a publicly visible sigh which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance),
- Limit the area under construction at any one time.

Implementation of the above recommended BMPs for the control of construction-related emissions would further reduce construction-related particulate emissions. These measures are not required by MBARD or as mitigation measures, as the impact would be less than significant without mitigation. These types of measures are commonly included as conditions of approval associated with development permits approved by the County.

2.	*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?*	☐	☐	☒	☐

Discussion: The primary pollutants of concern for the NCCAB are ozone and PM_{10}, as those are the pollutants for which the district is in nonattainment. Project construction would have a limited and temporary potential to contribute to existing violations of California air quality standards for ozone and PM_{10} primarily through diesel engine exhaust and fugitive dust. The criteria for assessing cumulative impacts on localized air quality are the same as those for assessing individual project impacts. Projects that do not exceed MBARD's construction or operational thresholds and are consistent with the AQMP would not have cumulatively considerable impacts on regional air quality (MBARD, 2008). Because the project would not exceed MBARD's thresholds and is consistent with the AQMP, there would not be cumulative impacts on regional air quality.

3.	*Expose sensitive receptors to substantial pollutant concentrations?*	☐	☐	☒	☐

Discussion: Good Shepherd School, the closest land use supporting sensitive receptors, is located directly to the north of the project site, across Mattison Lane. The school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. In addition, there are several medical office buildings within less than one-half mile northwest of the project site, that provide services to a population considered to be sensitive receptors.

Diesel exhaust contains substances (diesel particulate matter [DPM], toxic air contaminants [TACs], mobile source air toxics [MSATs]) that are suspected carcinogens, along with pulmonary irritants and hazardous compounds, which may affect sensitive receptors such as young children, senior citizens, or those susceptible to respiratory disease. Where construction activity occurs in proximity to long-term sensitive receptors, a potential could exist for unhealthful exposure of those receptors to diesel exhaust, including residential receptors.

Impacts

The project is located on the boarder of Live Oak and Soquel and sensitive receptors would be as close as 150 feet measuring from the school building to the project area. All the recreational areas of the school are located behind the school building. Since construction is anticipated to occur over a 78-week period (18 months), the sensitive receptors would be affected for a maximum of 18 months, which is less than two percent of the 70-year maximum exposed individual criteria used for assessing public health risk due to emissions of certain air pollutants (MBUAPCD 2008).

Due to the intermittent and short-term temporary nature of construction activities (i.e., 18 months), emissions of DPM, TACs, or MSATs would not be sufficient to pose a significant risk to sensitive receptors from construction equipment operations during the course of the project.

The project would not be expected to expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

4.	*Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*	☐	☐	☒	☐

Discussion: Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses that would be associated with objectionable odors. Odor emissions from the proposed project

would be limited to odors associated with vehicle and engine exhaust and idling from cars entering, parking, and exiting the facility. The project does not include any known sources of objectionable odors associated with the long-term operations phase.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. California ultralow sulfur diesel fuel with a maximum sulfur content of 15 ppm by weight would be used in all diesel-powered equipment, which minimizes emissions of sulfurous gases (sulfur dioxide, hydrogen sulfide, carbon disulfide, and carbonyl sulfide). As the project site is in a coastal area that contains coastal breezes off of the Monterey Bay, construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors. The nearest sensitive receptors are the students at Good Shepherd School. The school boundary is located approximately 30 feet north of the project site, However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. Therefore, no objectionable odors are anticipated from construction activities associated with the project. Furthermore, any construction-related odors would be short-term and would cease upon completion.

The project is not expected to result in significant impacts related to objectionable odors during construction or operation and would not create any long-term objectionable odors that would affect a substantial number of people; therefore, the project would have a less than significant impact.

D. BIOLOGICAL RESOURCES

Would the project:

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

Discussion: The project site is located in an area that was identified as a potential area of biotic concern during preliminary analysis. A biotic report was prepared for this project by Biotic Resources Group, dated October 5, 2020. This report has been reviewed and accepted by the Planning Department Environmental Section (Attachment 2). In addition, an Arborist's Report prepared by Maureen Hamb Professional Consulting Services, dated August 28, 2018, and a Biological Constraints memo prepared by Olberding Environmental Inc., dated April 17, 2018, were also considered during this review.

The Project Impact Area is comprised primarily of non-native grassland, with some sparse trees and shrubs that are located along Mattison Lane in an area mapped by the project Biologist as landscape tree and shrub groves. This existing landscape area will require removal as will three dead/dying Monterey pines which were recommended for removal in the 2017 Arborist Report for risk management. Additionally, construction activities and permanent development, including a sound wall and driveway, are proposed within the dripline of existing oak trees located along the Caltrans ROW beyond the chain link fence. Grading or trenching could potentially cause direct mortality or decline of these trees after construction is complete. To protect these trees, all recommendations included in the Arborist Report for proper root and canopy pruning must be adhered to.

There are sensitive habitat constraints on the project site associated with arroyo riparian Woodland (located at the western edge of the project site), oak trees, and habitat for nesting birds that must be considered prior to and during project implementation. The proposed project meets the required minimum 50-foot riparian corridor setback and an additional 10-foot construction setback. The residential buildings, future building site and all parking, as well as the bioretention basin and storm drain outfall, will be located outside this County-designated riparian corridor setback. Therefore, the completed project is not expected to create any permanent impediments to dispersal of wildlife. Landscaping activities associated with the project will result in a net increase in tree cover on the parcel.

Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All migratory bird species are protected by the MBTA. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a "take" of the species under federal law.

Impacts

The project area provides potential nesting habitat for birds of prey and birds listed by the MBTA. The project includes a comprehensive landscape plan that shows many trees and shrubs planted throughout the parcel. Trees, shrubs, and grassland in and adjacent to the study area provide potential nesting and foraging habitat for birds of prey and migratory birds. Birds of prey and migratory birds are offered protection under the California Fish and Game Code, and

the Federal Migratory Bird Treaty Act (MBTA). Conditions have been included in the Biotic Report to protect nesting birds during project construction.

There are sensitive habitat constraints on the project site associated with arroyo riparian woodland, oak trees, and habitat for nesting birds that must be considered prior to and during project implementation. Conditions have been included below to protect native oak trees ensure that impacts to special status species, their habitats, and other sensitive habitats will be less than significant.

The mitigation measures below shall be incorporated into all phases of development for this project and shall also apply to all future development activities engaged in on the property.

Mitigation Measures

BIO-1: Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor, Environmental Planning Staff, and the project biologist.

BIO-2: All recommended Avoidance, Minimization, and Mitigation Measures (Bio-1-Bio-4) outlined in Chapter 6 of the attached Biotic Report dated October 5, 2020, prepared by Biotic Resources Group shall be adhered to.

BIO-3: If a special-status animal is identified at any time prior to or during construction, work shall cease immediately in the vicinity of the individual. The animal shall either be allowed to move out of harm's way on its own or a qualified biologist shall move the animal out of harm's way to a safe relocation site.

BIO-4: Prior to construction, high visibility construction fencing or flagging as outlined in Bio-1 of the Biotic Report shall be installed, with the assistance of a qualified biologist, to indicate the limits of work and prevent inadvertent grading or other disturbance within the adjacent sensitive habitat. No work-related activity including equipment staging, vehicular access, and grading shall be allowed outside the limits of work.

BIO-5: Impacts to oak trees shall be avoided to the maximum extent possible. All recommended measures for protection of oak trees outlined in the attached Arborist Report dated August 28, 2018, prepared by Maureen Hamb Professional Consulting Service, shall be adhered including proper root and canopy pruning. Trees to be retained shall be protected at or outside of the dripline, if possible, by a system of

fencing and straw bale barricades. The exact locations of the protection measures shall be determined in the field with the assistance of a qualified arborist or biologist.

BIO-6: Excavation will likely expose structural roots of several mature coast live oak trees in the Caltrans ROW (including trees #7 and #12 as identified in the arborist report). Several other trees will require heavy canopy pruning to provide clearance for construction access.

BIO-7: To compensate for impacts to oak trees and other native trees and comply with Santa Cruz County General Plan Policy 5.1.12, the following conditions shall be adhered to:

- All native trees compromised through grading, trenching, or heavy pruning shall be compensated for by planting in-kind on site at a minimum 3:1 ratio.
- To compensate for impacts to trees #7 and #12, a minimum of six coast live oak trees (or equivalent native species available at local nurseries) shall be planted on site.
- The species, size, and locations of all native tree plantings shall be included in the site-specific landscape plan and plant list. Native tree plantings shall be located in the 50-foot arroyo buffer (open grassy area between the split rail fence and the riparian woodland). All work associated with native tree plantings in this location must be completed by hand.
- The site-specific landscape plan shall include a 3-year management plan for maintenance and monitoring of native tree planting areas to maintain minimum 80% survival at year 3. Replacement plants shall be installed as needed during the monitoring period to meet survival rates. Annual habitat monitoring reports shall be submitted to the County Environmental Coordinator by December 31 of each monitoring year.
- The landscape Plan shall include the removal of acacia and pampas or jubata grass present on the subject parcels and monitoring and maintenance shall target the eradication of these species from the site.

BIO-8: Any seed mix used for erosion control purposes on temporarily impacted areas and exposed soils shall be limited to seeds of native species common to the surrounding habitat and/or sterile seeds.

2.	*Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal*	☐	☐	☒	☐

zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Discussion: The project site is located in an area that was identified as a potential area of biotic concern during preliminary analysis. A biotic report was prepared for this project by Biotic Resources Group, dated October 5, 2020. This report has been reviewed and accepted by the Planning Department Environmental Section (Attachment 2).

Riparian Woodland

Streams and their riparian corridors (as defined by Santa Cruz County Code Section 16.30.030) are granted special protections under the County's Sensitive Habitat Protection and Riparian Corridor and Wetlands Protection ordinances (Chapters 16.30 and 16.32). Lands extending 50 feet out from each side of a perennial stream, and lands containing a riparian woodland are considered Riparian Corridors. Development activities are prohibited within Riparian Corridors unless Riparian Exception Findings (SCCC 16.30.060) are met, and a Riparian Exception is approved by County Planning.

At the project site, Rodeo Creek meets the definition of an arroyo under County Code. Projects located on properties abutting an arroyo are subject to additional development buffers. A 50-foot buffer is required from the edge of this Riparian Corridor as defined in SCCC 16.30.040(B), and an additional 10-foot setback from the edge of the buffer is required for all structures.

All components of the proposed project including the residential buildings, associated site improvements, a detention/retention pond, and a storm drain outfall, are located outside both the required riparian buffer and the associated construction setback at the arroyo. The 50-foot buffer and 10-foot construction setback are clearly identified on the project Plans. To further protect the riparian corridor, the project proposes installation of a permanent split rail fence at the boundary of the 50-foot buffer to protect the arroyo from future disturbance. Therefore, the project will not result in significant impacts to the Riparian Corridor.

3.	*Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*	☐	☐	☐	☒

Discussion: There are no mapped or designated federally protected wetlands on or adjacent to the project site. Therefore, no impacts would occur from project implementation.

4.	*Interfere substantially with the movement of any native resident or migratory fish or*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

wildlife species or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Discussion: The project does not involve any activities that would interfere with the movements or migrations of fish or wildlife or impede use of a known wildlife nursery site. Therefore, no impacts would occur.

5. *Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)?*	☐	☐	☐	☒

Discussion: The project would not conflict with any local policies or ordinances and no impact would occur.

6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*	☐	☐	☐	☒

Discussion: The project would not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

E. CULTURAL RESOURCES

Would the project:

1. *Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?*	☐	☐	☐	☒

Discussion: There are no structures on the property, and the project site has been vacant since 2002. As a result, no impacts to historical resources would occur from project implementation.

2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*	☐	☐	☒	☐

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: An Archaeological Survey Report was prepared for this project by Holman & Associates Archeological Consultants, dated January 2019. This report has been reviewed and accepted by the Planning Department Environmental Section (Attachment 3).

No archaeological resources have been identified in the project area. However, pursuant to SCCC section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the project has been conditioned to require that responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in SCCC Chapter 16.40.040. Therefore, no significant impact is anticipated.

3.	*Disturb any human remains, including those interred outside of dedicated cemeteries?*	☐	☐	☒	☐

Discussion: Impacts are expected to be less than significant. However, pursuant to section 16.40.040 of the SCCC, and California Health and Safety Code sections 7050.5-7054, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archaeological report shall be prepared, and representatives of local Native American Indian groups shall be contacted. If it is determined that the remains are Native American, the Native American Heritage Commission will be notified as required by law. The Commission will designate a Most Likely Descendant who will be authorized to provide recommendations for management of the Native American human remains. Pursuant to Public Resources Code section 5097, the descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. Disturbance shall not resume until the significance of the resource is determined and appropriate mitigations to preserve the resource on the site are established.

F. ENERGY

Would the project:

1.	*Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*	☐	☐	☒	☐

Discussion: The project, like all development, would be responsible for an incremental increase in the consumption of energy resources during site grading and construction. All project construction equipment would be required to comply with the California Air Resources Board (CARB) emissions requirements for construction equipment, which includes measures to reduce fuel-consumption, such as imposing limits on idling and requiring older engines and equipment to be retired, replaced, or repowered. In addition, the project would comply with General Plan policy 8.2.2, which requires all new development to be sited and designed to minimize site disturbance and grading. As a result, impacts associated with the small temporary increase in consumption of fuel during construction are expected to be less than significant.

The project's permanent operational energy use is also expected to be minimal. The project involves a new 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvement. Once constructed, consumption of energy will be minimal, as the project involves the development of multi-family uses. Compliance with the CALGreen, the State of California's green building code, will ensure the energy efficiency of the buildings. In addition, as of 2018, residents and businesses in the County were automatically enrolled in Monterey Bay Community Power's community choice energy program, which provides locally controlled, carbon-free electricity delivered on existing transmission lines. Also, the location of this project is within an existing urbanized neighborhood with close access to Highway 1 and transit, which will help to reduce automobile usage. As a result, impacts will be less than significant.

In addition, the County has strategies to help reduce energy consumption and greenhouse gas (GHG) emissions. These strategies included in the *County of Santa Cruz Climate Action Strategy* (County of Santa Cruz, 2013) are outlined below.

Strategies for the Reduction of Energy Use and GHG Emissions

- Develop a Community Choice Aggregation (CCA) Program, if feasible.[2]
- Increase energy efficiency in new and existing buildings and facilities.
- Enhance and expand the Green Business Program.
- Increase local renewable energy generation.
- Public education about climate change and impacts of individual actions.

[2] Monterey Bay Community Power (MBCP) was formed in 2017 to provide carbon-free electricity. All Pacific Gas & Electric Company (PG&E) customers in unincorporated Santa Cruz County were automatically enrolled in the MBCP in 2018.

- Continue to improve the Green Building Program by exceeding the minimum standards of the state green building code (Cal Green).
- Form partnerships and cooperative agreements among local governments, educational institutions, nongovernmental organizations, and private businesses as a cost-effective way to facilitate mitigation and adaptation.
- Reduce energy use for water supply through water conservation strategies.

Strategies for the Reduction of Energy Consumption and GHG Emissions from Transportation

- Reduce vehicle miles traveled (VMT) through County and regional long-range planning efforts.
- Increase bicycle ridership and walking through incentive programs and investment in bicycle and pedestrian infrastructure and safety programs.
- Provide infrastructure to support zero and low emissions vehicles (plug in, hybrid plug-in vehicles).
- Increase employee use of alternative commute modes: bus transit, walking, bicycling, carpooling, etc.
- Increase the number of electric and alternative fuels vehicles in the County fleet.

Therefore, the project will not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts are expected to be less than significant.

2.	*Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*	☐	☐	☒	☐

Discussion: AMBAG's 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) recommends policies that achieve statewide goals established by CARB, the California Transportation Plan 2040, and other transportation-related policies and state senate bills. The SCS element of the MTP targets transportation-related greenhouse gas (GHG) emissions in particular, which can also serve to address energy use by coordinating land use and transportation planning decisions to create a more energy efficient transportation system.

The Santa Cruz County Regional Transportation Commission (SCCRTC) prepares a County-specific regional transportation plan (RTP) in conformance with the latest AMBAG MTP/SCS. The 2040 RTP establishes targets to implement statewide policies at the local level, such as reducing vehicle miles traveled and improving speed consistency to reduce fuel consumption.

In 2013, Santa Cruz County adopted a Climate Action Strategy (CAS) focused on reducing the emission of greenhouse gases, which is dependent on increasing energy efficiency and the use of renewable energy. The strategy intends to reduce energy consumption and greenhouse gas emissions by implementing a number of measures such as reducing vehicle miles traveled through County and regional long-range planning efforts, increasing energy efficiency in new and existing buildings and facilities, increasing local renewable energy generation, improving the Green Building Program by exceeding minimum state standards, reducing energy use for water supply through water conservation strategies, and providing infrastructure to support zero and low emission vehicles that reduce gasoline and diesel consumption, such as plug in electric and hybrid plug in vehicles.

In addition, the Santa Cruz County General Plan has historically placed a priority on "smart growth" by focusing growth in the urban areas through the creation and maintenance of an urban services line. Objective 2.1 (Urban/Rural Distinction) directs most residential development to the urban areas, limits growth, supports compact development, and helps reduce sprawl. The Circulation Element of the General Plan further establishes a more efficient transportation system through goals that promote the wise use of energy resources, reducing vehicle miles traveled, and transit and active transportation options.

Energy efficiency is a major priority throughout the County's General Plan. Measure C was adopted by the voters of Santa Cruz County in 1990 and explicitly established energy conservation as one of the County's objectives. The initiative was implemented by Objective 5.17 (Energy Conservation) and includes policies that support energy efficiency, conservation, and encourage the development of renewable energy resources. Goal 6 of the Housing Element also promotes energy efficient building code standards for residential structures constructed in the County.

The project will be consistent with the AMBAG 2040 MTP/SCS and the SCCRTC 2040 RTP. The project would also be required to comply with the Santa Cruz County General Plan and any implemented policies and programs established through the CAS. In addition, the project design would be required to comply with CALGreen, the state of California's green building code, to meet all mandatory energy efficiency standards. Therefore, the project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

G. GEOLOGY AND SOILS

Would the project:

1. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

California Environmental Quality Act (CEQA) Initial Study/Environmental Checklist	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*	☐	☐	☒	☐
B. *Strong seismic ground shaking?*	☐	☐	☒	☐
C. *Seismic-related ground failure, including liquefaction?*	☐	☐	☒	☐
D. *Landslides?*	☐	☐	☒	☐

Discussion (A through D): All of Santa Cruz County is subject to some hazard from earthquakes, and there are several faults within the County. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989, Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in documented in the history of central California.

The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone or any County-mapped fault zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). The project site is located approximately 8.5 miles southwest of the San Andreas fault zone, and approximately 5.5 miles southwest of the Zayante fault zone.

A geotechnical investigation for the project was performed by Dees & Associates, Inc. dated May 2016 (updated October 5, 2021). This report has been reviewed and accepted by the Planning Department Environmental Section (Attachment 4).

The report concluded that the proposed development will be subject to at least one moderate to severe earthquake from one of the faults during the next fifty years. However, structures designed to the current California Building Code can resist strong seismic shaking. The proposed site improvements will be located within the western portion of the site, at least 300 feet from the steep slope that descends to Rodeo Creek Gulch and at least 50 feet from the six to eight-foot-high cut slope running along Highway 1 to the south. Based on the distance to nearby slopes, there is a very low potential for landslides to affect the proposed

improvements. Therefore, impacts associated with geologic hazards will be less than significant.

Implementation of the additional requirements included in the review letter prepared by Environmental Planning staff dated October 19, 2021, will serve to further reduce the potential risk of seismic shaking.

2. *Result in substantial soil erosion or the loss of topsoil?* ☐ ☐ ☒ ☐

Discussion: A letter was prepared by Dees & Associates, Inc. dated October 18,2021, indicating that there is a potential for some erosion to occur where a low spot in the graded bench concentrates runoff, but there was no erosion observe in that location at this time.

The proposed drainage system will collect runoff and meter the runoff onto a gentle slope east of the proposed improvements. The gentle slope continues over one hundred feet past the proposed discharge area before the slope steepens along the edges of the drainage. There is a low potential for erosion to occur from the proposed drainage system as long as the drainage outlet is armored.

In addition, prior to approval of a grading or building permit, the project must have an approved stormwater pollution control plan (SCCC Section 7.79.100), which would specify detailed erosion and sedimentation control measures. The plan would include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion. Impacts from soil erosion or loss of topsoil would be considered less than significant.

3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?* ☐ ☐ ☒ ☐

Discussion: The report project that was prepared by Dees & Associates, Inc. dated May 2016 (updated October 5, 2021) did not identify a significant potential for damage caused by any of these hazards (see discussion under G-1). Therefore, no impact is anticipated.

4. *Be located on expansive soil, as defined in section 1803.5.3 of the California Building Code (2016), creating substantial direct or indirect risks to life or property?* ☐ ☐ ☐ ☒

Discussion: The geotechnical report for the project did not identify any elevated direct or indirect risks associated with expansive soils. Therefore, no impact is anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. *Have soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*	☐	☐	☐	☒

Discussion: No septic systems are proposed. The project would connect to the Santa Cruz County Sanitation District, and the applicant would be required to pay standard sewer connection and service fees that fund sanitation improvements within the district as a Condition of Approval for the project. Therefore, no impact is anticipated.

6. *Directly or indirectly destroy a unique paleontological resource or site of unique geologic feature?*	☐	☐	☐	☒

Discussion: No unique paleontological resources or sites or unique geologic features are known to occur in the vicinity of the project. A query was conducted of the mapping of identified geologic/paleontological resources maintained by the County of Santa Cruz Planning Department, and there are no records of paleontological or geological resources in the vicinity of the project parcel. No direct or indirect impacts are anticipated.

H. GREENHOUSE GAS EMISSIONS

Would the project:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*	☐	☐	☒	☐

Discussion: The project, like all development, would be responsible for an incremental increase in greenhouse gas (GHG) emissions by usage of fossil fuels during the site grading and construction. In 2013, Santa Cruz County adopted a Climate Action Strategy (CAS) intended to establish specific emission reduction goals and necessary actions to reduce greenhouse gas levels to pre-1990 levels as required under Assembly Bill (AB) 32 legislation. The strategy intends to reduce GHG emissions and energy consumption by implementing measures such as reducing vehicle miles traveled through the County and regional long-range planning efforts and increasing energy efficiency in new and existing buildings and facilities. Implementing the CAS, the MBCP was formed in 2017 to provide carbon-free electricity. All PG&E customers in unincorporated Santa Cruz County were automatically enrolled in the MBCP in 2018. All project construction equipment would be required to comply with the CARB emissions requirements for construction equipment. Further, all new buildings are required to meet the State's CalGreen building code. As a result, impacts associated with the temporary increase in GHG emissions are expected to be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
2. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*	☐	☐	☐	☒

Discussion: See the discussion under H-1 above. No significant impacts are anticipated.

I. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

1. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*	☐	☐	☒	☐

Discussion: The project would not create a significant hazard to the public or the environment. No routine transport or disposal of hazardous materials is proposed. However, during construction, it is likely that fuel would be used at the project site. In addition, fueling may occur within the limits of the staging area proposed to be located at the proposed fire turn around in the south portion of the property near the highway. Best management practices would be used to ensure that no impacts would occur. Impacts are expected to be less than significant.

2. *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?*	☐	☐	☒	☐

Discussion: See discussion under I-1 above. Project impacts would be considered less than significant.

3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*	☐	☐	☒	☐

Discussion: The Good Shepherd School is located at 2727 Mattison Lane in Santa Cruz, approximately 25 feet to the north of the project site. The school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. Although fueling of equipment is likely to occur within the staging area, BMPs to contain spills would be implemented. No impacts are anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
4. *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?*	☐	☐	☐	☒

Discussion: The project site is not included on the December 3, 2018, list of hazardous sites in Santa Cruz County compiled pursuant to Government Code section 65962.5. No impacts are anticipated from project implementation.

5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*	☐	☐	☐	☒

Discussion: The project is not located within two miles of a public airport or public use airport. No impact is anticipated.

6. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*	☐	☐	☐	☒

Discussion: The project would not conflict with implementation of the County of Santa Cruz Local Hazard Mitigation Plan 2015-2020 (County of Santa Cruz, 2020). Therefore, no impacts to an adopted emergency response plan or evacuation plan would occur from project implementation.

7. *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*	☐	☐	☒	☐

Discussion: See discussion under Wildfire Question T-2. Impacts would be less than significant.

J. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY

Would the project:

1. *Violate any water quality standards or waste discharge requirements or*	☐	☐	☒	☐

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

otherwise substantially degrade surface or ground water quality?

Discussion: The project is located adjacent to Rodeo Creek; However, as proposed all drainage infrastructure will be located outside of the riparian corridor. Although, the project would not discharge runoff either directly or indirectly into a public or private water supply, runoff from this project may contain small amounts of chemicals and other household contaminants, such as pathogens, pesticides, trash, and nutrients. No commercial or industrial activities are proposed that would contribute contaminants. Potential siltation from the project would be addressed through implementation of erosion control BMPs. No water quality standards or waste discharge requirements would be violated, and surface or ground water quality would not otherwise be substantially degraded. Impacts would be less than significant.

2. *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?* ☐ ☐ ☒ ☐

Discussion: The project would obtain water from the City of Santa Cruz Water Department and would not rely on private well water. Although the project would incrementally increase water demand, Santa Cruz has indicated that adequate supplies are available to serve the project (Attachment 5). The eastern portion of the project site is in a mapped groundwater recharge area. However, the proposal would be consistent with General Plan policies 5.8.2 (Land Division and Density Requirements in Primary Groundwater Recharge Areas), 5.8.3 (Uses in Primary Groundwater Recharge Areas), and 5.8.4 (Drainage Design in Primary Groundwater Recharge Areas). The project would also be consistent with section 7.79.110 of the SCCC (New Development and Redevelopment). The code states, "All responsible parties shall mitigate impacts due to development and implement Best Management Practices (BMPs) per the County Design Criteria adopted by the County of Santa Cruz and Chapters 16.20 and 16.22 of the SCCC to control the volume, runoff rate, and potential pollutant load of stormwater runoff from new development and redevelopment projects to minimize the generation, transport, and discharge of pollutants, prevent runoff in excess of predevelopment conditions, and maintain predevelopment groundwater recharge." No adverse impact would occur to groundwater recharge with project implementation such that the project may impede sustainable groundwater management of the basin.

See Question J-5 for further discussion of sustainable groundwater management.

California Environmental Quality Act (CEQA) Initial Study/Environmental Checklist	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*	☐	☐	☒	☐
A. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
B. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
C. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;	☐	☐	☒	☐
D. impede or redirect flood flows?	☐	☐	☒	☐

Discussion: Drainage calculations prepared by Ifland Engineers, dated March 2020, (Attachment 7) have been reviewed for potential drainage impacts and accepted by the County Department of Public Works Stormwater Management Section staff. The calculations show that the project will result in approximately 34,076 square feet of new impervious area. With the construction of the new sound wall and drainage improvements, drainage will be directed to Rodeo Creek after passing through the proposed on-site bioretention/detention pond, which would adequately control the runoff rate from the property. Flood control (detention) and water quality (biofiltration) mitigations have been included into the proposed drainage design and are required to be fully met at project implementation. The system will be sized so that the required detention volume is provided in storage beyond the required 4% biofiltration cross section (ex: additional rock storage, surface ponding, or a larger biofiltration footprint can be provided) and so that the entire watershed will be directed to the project drainage system, including the offsite impervious areas from Mattison Lane. In addition, pervious surfacing will be included into the final project design, including along the proposed sidewalk on the Mattison Lane frontage, and this is supported by the geotechnical report provided for the project.

Maintenance of all drainage facilities including the proposed inlets and storm drain in Mattison Lane will be the responsibility of the property and will be included in a recorded stormwater facilities maintenance agreement for the project.

The County Department of Public Works Stormwater Management staff has reviewed the project and determined that the proposed storm water facilities are adequate to handle the increase in drainage associated with the project. Project impacts would therefore be less than significant.

4.	*In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*	☐	☐	☒	☐

Discussion:

Flood Hazards:

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated May 16, 2012, a portion of the project site lies within the X (500-year) and AE (100-year) flood hazard zone. However, all proposed structures would be located outside these flood zones. The project will therefore meet the minimum flood plain management standards of the National Flood Insurance Program and the minimum flood plain design criteria in County Code section 16.10.070(F)(3). Impacts would be less than significant.

Tsunami and Seiche Zones:

There are two primary types of tsunami vulnerability in Santa Cruz County. The first is a teletsunami or distant source tsunami from elsewhere in the Pacific Ocean. This type of tsunami is capable of causing significant destruction in Santa Cruz County. However, this type of tsunami would usually allow time for the Tsunami Warning System for the Pacific Ocean to warn threatened coastal areas in time for evacuation (County of Santa Cruz 2010).

A greater risk to the County of Santa Cruz is a tsunami generated as the result of an earthquake along one of the many earthquake faults in the region. Even a moderate earthquake could cause a local source tsunami from submarine landsliding in Monterey Bay. A local source tsunami generated by an earthquake on any of the faults affecting Santa Cruz County would arrive just minutes after the initial shock. The lack of warning time from such a nearby event would result in higher causalities than if it were a distant tsunami (County of Santa Cruz 2010).

Seiches are recurrent waves oscillating back and forth in an enclosed or semi-enclosed body of water. They are typically caused by strong winds, storm fronts, or earthquakes.

The project site is located approximately 1.3 miles inland, approximately 0.6 to 0.8 miles beyond the effects of a tsunami. There are no nearby bodies of water. The project site is

located approximately 1.2 miles from Arana Gulch and would not be affected by a seiche. Therefore, there would be no impact.

5.	*Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*	☐	☐	☒	☐

All County water agencies are experiencing a lack of sustainable water supply due to groundwater overdraft and diminished availability of streamflow. Because of this, coordinated water resource management has been of primary concern to the County and to the various water agencies. Projects seeking approval must be consistent with numerous water management plans as described below.

As required by state law, each of the County's water agencies serving more than 3,000 connections must update their Urban Water Management Plans (UWMPs) every five years, with the most recent updates completed in 2021. This project falls within the City of Santa Cruz Water Department service area. The City of Santa Cruz Water Department is anticipating that water use through 2040 will slightly increase, and they are planning accordingly through the development of several diverse water supply projects.

County staff are working with the water agencies on various integrated regional water management programs to provide for sustainable water supply and protection of the environment. Effective water conservation programs have reduced overall water demand in the past 20 years, despite continuing growth. In August 2014, the Board of Supervisors and other agencies adopted the Santa Cruz Integrated Regional Water Management (IRWM) Plan Update 2014, which identifies various strategies and projects to address the current water resource challenges of the region. In 2020, an updated climate change chapter was added to the IRWMP. A Countywide Storm Water Resources Plan was created through a related effort in 2016 to ensure the coordinated use of storm water as a resource.

The County is working closely with water agencies to implement the Sustainable Groundwater Management Act (SGMA) of 2014. There are three groundwater basins in the County that are subject to SGMA, the Santa Margarita Basin, the Santa Cruz Mid-County Basin, and the Pajaro Valley Basin. The project is located in the Santa Cruz Mid-County Groundwater Basin.

In 2016, Soquel Creek Water District (SqCWD), Central Water District (CWD), County, and City of Santa Cruz adopted a Joint Powers Agreement to form the Santa Cruz Mid-County Groundwater Agency for management of the Mid-County Basin under SGMA. The Groundwater Sustainability Plan (GSP) written by the Groundwater Agency was approved by the Department of Water Resources in June 2021. The GSP outlines an approach to reach sustainability by 2040 which relies on projects including a purified recycled water and an aquifer storage and recovery project to provide additional supply to the Basin. Projects and

Management Actions included in the Plan originated through the SqCWD Community Water Plan and the City of Santa Cruz Water Supply Augmentation Strategy.

In addition to the Groundwater Sustainability Plan, Urban Water Management Plans, and the Integrated Regional Water Management Plan, the project will comply with SCCC Chapters 13.13 (Water Conservation – Water Efficient Landscaping), 7.69 (Water Conservation) and 7.70 (Water Wells), as well as Chapter 7.71 (Water Systems) section 7.71.130 (Water use measurement and reporting).

K. LAND USE AND PLANNING

Would the project:

1.	*Physically divide an established community?*	☐	☐	☐	☒

Discussion: The project does not include any element that would physically divide an established community. No impact would occur.

2.	*Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*	☐	☐	☒	☐

Discussion: The project site is located within the area identified in the Sustainable Santa Cruz County plan as the medical district/flea market focus area which envisions new housing close to services and stores. The project site is zoned RM-6 (Multi-Family Residential –6,000 square feet land area per dwelling unit) which is consistent with the General Plan Designations of R-UL (Urban Low Density Residential) and O-U (Urban Open Space). The project proposes a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvement, which is allowed in the zone districts subject to approval by the Planning Commission.

The project would not cause a significant environmental impact due to a conflict with any land use plan, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. General Plan policy 5.2.3 (Activities Within Riparian Corridors and Wetlands) states: "Development activities, land alterations and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance". Please see complete discussion under Question D-5. Impacts would be considered less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

L. MINERAL RESOURCES

Would the project:

1. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*	☐	☐	☐	☒

Discussion: The site does not contain any known mineral resources that would be of value to the region and the residents of the state. Therefore, no impact is anticipated from project implementation.

2. *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?*	☐	☐	☐	☒

Discussion: The project site is zoned RM-6 (Multi-Family Residential –6,000 square feet land area per dwelling unit, which is not considered to be an Extractive Use Zone (M-3) nor does it have a land use designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project.

M. NOISE

Would the project result in:

1. *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*	☐	☐	☒	☐

Discussion:

County of Santa Cruz General Plan

The County of Santa Cruz has not adopted noise thresholds for construction noise. The following applicable noise related policy is found in the Public Safety and Noise Element of the Santa Cruz County General Plan (Santa Cruz County 1994).

- Policy 6.9.7 Construction Noise. Require mitigation of construction noise as a condition of future project approvals.The General Plan also contains the following table, which specifies the maximum allowable noise exposure for stationary noise sources (operational or permanent noise sources) (Table 2).

Table 2: Maximum Allowable Noise Exposure for Stationary Noise Sources[1]

	Daytime[5] (7:00 am to 10:00 pm)	Nighttime[2, 5] (10:00 pm to 7:00 am)
Hourly Leq average hourly noise level, dB[3]	50	45
Maximum Level, dB[3]	70	65
Maximum Level, dB – Impulsive Noise[4]	65	60

Notes:
1 As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied to the receptor side of noise barriers or other property line noise mitigation measures.
2 Applies only where the receiving land use operates or is occupied during nighttime hours
3 Sound level measurements shall be made with "slow" meter response.
4 Sound level measurements shall be made with "fast" meter response
5 Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced to 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.
Source: County of Santa Cruz 1994

County of Santa Cruz Code

There are no County of Santa Cruz ordinances that specifically regulate construction or operational noise levels. However, Section 8.30.010 (Curfew—Offensive noise) of the SCCC contains the following language regarding noise impacts:

(A) No person shall make, cause, suffer, or permit to be made any offensive noise.

(B) "Offensive noise" means any noise which is loud, boisterous, irritating, penetrating, or unusual, or that is unreasonably distracting in any other manner such that it is likely to disturb people of ordinary sensitivities in the vicinity of such noise, and includes, but is not limited to, noise made by an individual alone or by a group of people engaged in any business, activity, meeting, gathering, game, dance, or amusement, or by any appliance, contrivance, device, tool, structure, construction, vehicle, ride, machine, implement, or instrument.

(C) The following factors shall be considered when determining whether a violation of the provisions of this section exists:

(1) Loudness (Intensity) of the Sound.

(a) Day and Evening Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 8:00 a.m. and 10:00 p.m. and it is:

(i) Clearly discernible at a distance of 150 feet from the property line of the property from which it is broadcast; or

(ii) In excess of 75 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.

A noise not reaching this intensity of volume may still be found to be offensive depending on consideration of the other factors outlined below.

(b) Night Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 10:00 p.m. and 8:00 a.m. and it is:

(i) Clearly discernible at a distance of 100 feet from the property line of the property from which it is broadcast; or

(ii) In excess of 60 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.

A noise not reaching this intensity of volume may still be found to be offensive depending on consideration of the other factors outlined below.

(2) Pitch (frequency) of the sound, e.g., very low bass or high screech;

(3) Duration of the sound;

(4) Time of day or night;

(5) Necessity of the noise, e.g., garbage collecting, street repair, permitted construction activities;

(6) The level of customary background noise, e.g., residential neighborhood, commercial zoning district, etc.; and

(7) The proximity to any building regularly used for sleeping purposes. [Ord. 5205 § 1, 2015; Ord. 4001 § 1, 1989]

Sensitive Receptors

Some land uses are generally regarded as being more sensitive to noise than others due to the type of population groups or activities involved. Sensitive population groups generally include children and the elderly. Noise sensitive land uses typically include all residential uses (single- and multi-family, mobile homes, dormitories, and similar uses), hospitals, nursing homes, schools, and parks.

The nearest sensitive receptors are the students at Good Shepherd School. The school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. The nearest residential unit to the project site is located approximately 30 feet east of the proposed apartment buildings.

Table 3: Typical Noise Levels for Common Construction Equipment (at 50 feet)

Equipment	L_{max} (dBA)
Air Compressor	80
Backhoe	80
Chain Saw	85
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Saw	90
Crane	83
Dozer	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84
Fork Lift	75
Generator	82
Grader	85
Hoe-ram	90
Jack Hammer	88
Loader	80
Paver	85
Pick-up Truck	55
Pneumatic Tool	85
Roller	85
Tree Chipper	87
Truck	84

Source: Federal Transit Authority, 2006, 2018.

Impacts

Potential Temporary Construction Noise Impacts

The use of construction equipment to accomplish the project would result in noise in the project area, i.e., construction zone. Table 3 shows typical noise levels for common construction equipment. The sources of noise that are normally measured at 50 feet, are used to determine the noise levels at nearby sensitive receptors by attenuating 6 dB for each doubling of distance for point sources of noise such as operating construction equipment. Noise levels at the nearest sensitive receptors for each site were analyzed on a worst-case basis, using the equipment with the highest noise level expected to be used.

Although construction activities would likely occur during daytime hours, noise may be audible to nearby residents, students and employees at Good Shepherd School However, periods of noise exposure would be temporary. Noise from construction activity may vary substantially on a day-to-day basis.

Construction activity would be expected to use equipment listed in Table 3. Based on the activities proposed for the project, the equipment with the loudest operating noise level that would be used often during activity would be an excavator, compactor, or cement mixer,

which would produce noise levels of 85 dBA at a distance of 50 feet. The nearest sensitive receptors are students at Good Shepherd school. The school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. At that distance, the decibel level is reduced by approximately 11.13 to 73.87 decibels. However, these impacts would also be temporary.

Noise generated during project construction would increase the ambient noise levels in adjacent areas. Construction would be temporary, and construction hours would be limited as a condition of approval. Given the limited duration of construction and the limited hours of construction activity, this impact is considered to be less than significant.

Potential Permanent Impacts

The project would not result in a permanent increase in the ambient noise level. The main source of ambient noise in the project area is from traffic along Highway 1, and no substantial increase in traffic trips along that highway is anticipated as a result of the project. Furthermore, construction of a sound wall along the southern boundary of the project site, along the edge of the Caltrans right-of-way, as well as the proposed residential structures, will likely decrease the ambient noise levels for the existing homes in the neighborhood surrounding the project site and at the Good Shepherd School, located across Mattison Lane. Therefore, project impacts are expected to be less than significant.

2.	*Generation of excessive groundborne vibration or groundborne noise levels?*	☐	☐	☒	☐

Discussion: The use of construction and grading equipment would potentially generate periodic vibration in the project area. This impact would be temporary and periodic and is not expected to cause damage; therefore, impacts are not expected to be significant.

3.	*For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*	☐	☐	☐	☒

Discussion: The project is not in the vicinity of a private airstrip or within two miles of a public airport. Therefore, the project would not expose people residing or working in the project area. No impact is anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

N. POPULATION AND HOUSING

Would the project:

1.	*Induce substantial unplanned 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)?*	☐	☐	☒	☐

Discussion: The project would not induce substantial population growth in an area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area including, but limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes including General Plan amendments, specific plan amendments, zone reclassifications, sewer or water annexations; or LAFCO annexation actions. The project proposes only to develop a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvement which would not induce population growth.

The project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Recognizing the sewer moratorium in the area and limitations on current development, the applicant is proposing a phased development. Additionally, the project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect. Impacts would be less than significant.

2.	*Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*	☐	☐	☐	☒

Discussion: The project would not displace any existing housing and would provide additional, much needed, rental housing for the County of Santa Cruz, which is considered to be a positive impact from the proposed project. No negative impacts would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

O. PUBLIC SERVICES

Would the project:

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

a. *Fire protection?*	☐	☐	☒	☐
b. *Police protection?*	☐	☐	☒	☐
c. *Schools?*	☐	☐	☒	☐
d. *Parks?*	☐	☐	☒	☐
e. *Other public facilities; including the maintenance of roads?*	☐	☐	☒	☐

Discussion (a through e): The project site is served by the Central Fire Protection District and County Sheriff. Nearby schools are the Good Shepherd School, located across Mattison Lane from the project site (which serves students from preschool through eighth grade. Good Shepherd school boundary is located approximately 30 feet north of the project site; However, the closest building is located 150 feet north of the project site and the school's recreation areas are beyond the school building and further away from the proposed development. The Bay School (which provides programs for children and adults with autism and other special needs) is located across from HWY 1, approximately 1,200 feet southwest of the project site. Parks in the vicinity include Winkle Farm County Park, which is located approximately 2,000 feet northwest of the proposed development.

While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all standards and requirements identified by the local fire agency or California Department of Forestry, as applicable, and school, childcare, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase in demand for school and recreational facilities and public roads. Impacts would therefore be considered less than significant.

P. RECREATION

Would the project:

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The project, which is for the development of 10 residential units, would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. Impacts would be considered less than significant.

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

Discussion: The project does not propose the expansion or require the construction of additional recreational facilities. No impact would occur.

Q. TRANSPORTATION

Would the project:

1.	*Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*	☐	☐	☒	☐

Discussion:

Senate Bill (SB) 743, signed by Governor Jerry Brown in 2013, changed the way transportation impacts are identified under CEQA. Specifically, the legislation directed the State of California's Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts. OPR issued its "Technical Advisory on Evaluating Transportation Impacts in CEQA" (December 2018) to assist practitioners in implementing the CEQA Guidelines revisions to use vehicle miles traveled (VMT) as the preferred metric for assessing passenger vehicle related impacts. The CEQA Guidelines were also updated in December 2018, such that vehicle level of service (LOS) will no longer be used as a determinant of significant environmental impacts, and an analysis of Vehicle Miles Traveled (VMT) will be required as of July 2020. A discussion of consistency with the Santa Cruz County General Plan LOS policy is provide below for informational purposes only.

The project would create a small incremental increase in traffic on nearby roads and intersections. The increased trip number generated after the first phase is about 54 per ITE, (Trip Generation Manual, 10th Edition) and will increase to 67 after the completion of the phase two. This increase would not cause the LOS at any nearby intersection to drop below LOS D, consistent with General Plan Policy 3.12.1.

The project design would comply with current road requirements, including the regulations under section 13.11.074 of the County Code, "Access, circulation and parking" to prevent potential hazards to motorists, bicyclists, and/or pedestrians, as well as the County of Santa

Cruz Department of Public Works design criteria. In addition, the proposed vehicle parking design meets County code and design criteria for spacing, circulation and location. In addition, the project will not result in any inconsistency with regional plans. Therefore, impacts would be less than significant.

2.	*Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1) (Vehicle Miles Traveled)?*	☐	☐	☒	☐

Discussion: In response to the passage of Senate Bill 743 in 2013 and other climate change strategies, OPR amended the CEQA Guidelines to replace LOS with VMT as the measurement for transportation impacts. The "Technical Advisory on Evaluating Transportation Impacts in CEQA," prepared by OPR (2018) provides recommended thresholds and methodologies for assessing impacts of new developments on VMT. There are also a number of screening criteria recommended by OPR that can be used to determine whether a project will have a less-than-significant impact. The screening criteria include projects that generate less than 110 net new trips, map-based screening, projects within a ½ mile of high-quality transit, affordable housing projects, and local serving retail. Since Santa Cruz County has a Regional Transportation Planning Authority and generally conducts transportation planning activities countywide, the county inclusive of the cities is considered a region.

In June of 2020, the County of Santa Cruz adopted a threshold of 15% below the existing countywide average per capita VMT levels for residential projects, 15% below the existing countywide average per employee VMT for office and other employee-based projects, no net increase in the countywide average VMT for retail projects, and no net increase in VMT for other projects. Based on the countywide travel demand model the current countywide average per capita VMT for residential uses is 10.2 miles. The current countywide per employee average VMT for the service sector (including office land uses) is 8.9 miles, for the agricultural sector is 15.4, for the industrial sector is 13.9, and for the public sector is 8.2. Therefore, the current VMT thresholds for land use projects are 8.7 miles per capita for residential projects. For employee-based land uses the current thresholds are: 7.6 miles per employee for office and services projects, 13.1 miles per employee for agricultural projects, 11.8 miles per employee for industrial projects, and 7 miles per employee for public sector land use projects. The threshold for retail projects and all other land uses is no net increase in VMT. For mixed-use projects, each land use is evaluated separately unless they are determined to be insignificant to the total VMT.

The project is located on a site that is currently vacant. Trips were calculated using the 10th Edition of ITE trip generation rates for land use #220 Mid Rise Apartments. The proposed land use consists of a 10-unit apartment complex, grouped into five two-story duet style

buildings, and associated site improvement. Based on ITE trip generation rates for multi-family dwelling units, the project will generate 67 vehicle trips as shown in Table 4: Trip Generation Table. Since the parcel was previously vacant, the net new number of trips remains 67 trips which is less than 110, and therefore can be presumed to be less than significant.

Table 4: Trip Generation Table

Land Use	ITE LU Code / Description	Sq.Ft. / Units	ITE Rate	Vehicle Trips
Former Land Use: Vacant Land	N/A	0	-	0
New Land Use: 10-unit Apartment Complex	220 / Multifamily Housing (Low-Rise)	10 Units	6.74	67
			Net Change	67

Using these screening maps, the project falls within an area that demonstrates VMT behavior that meets the County's threshold, and therefore impacts associated with this project can be presumed to be less than significant.

3. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* ☐ ☐ ☐ ☒

Discussion: The project consists of a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvements. No increase in hazards would occur from project design or from incompatible uses. Further, internal circulation within the project has been reviewed by Planning, Department of Public Works and the Central Fire Protection District to ensure that no hazards will be created by the layout of the project. The project would take access from Soquel Drive, which is a main arterial road, via Mattison Lane, a local street that meets all County standards. No impacts would occur with project implementation.

4. *Result in inadequate emergency access?* ☐ ☐ ☐ ☒

Discussion: The project's road access meets County standards and has been approved by the local fire agency.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

R. TRIBAL CULTURAL RESOURCES

1. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

A. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources Code section 5020.1(k), or*	☐	☐	☐	☒
B. *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 Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*	☐	☐	☐	☒

Discussion: The project proposes to establish a 10-unit apartment complex, grouped into five two-story duet style buildings, and associated site improvement. Section 21080.3.1(b) of the California Public Resources Code (AB 52) requires a lead agency formally notify a California Native American tribe that is traditionally and culturally affiliated within the geographic area of the discretionary project when formally requested. As of this writing, no California Native American tribes traditionally and culturally affiliated with the Santa Cruz County region have formally requested a consultation with the County of Santa Cruz (as Lead Agency under CEQA) regarding Tribal Cultural Resources. However, no Tribal Cultural Resources are known to occur in or near the project area. Therefore, no impact to the significance of a Tribal Cultural Resource is anticipated from project implementation.

S. UTILITIES AND SERVICE SYSTEMS

Would the project:

1. *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the*	☐	☐	☒	☐

construction or relocation of which could cause significant environmental effects?

Discussion:

Water

The project would connect to an existing municipal water supply. City of Santa Cruz Water Department has determined that, consistent with their Urban Water Management Plan and the Groundwater Sustainability Plan for the Santa Cruz Mid-County Groundwater Basin, adequate supplies are available to serve the project (Attachment 5), and no new facilities are required to serve the project. No impact would occur from project implementation. More information is provided under Question J5.

Wastewater

Municipal wastewater treatment facilities are available. However, currently there is a moratorium that limits the number of available new sewer connections in the area, due to the undersized sewer pipes within the Rodeo Gulch Basin. Santa Cruz County Board of Supervisors passed the Resolution No.05-18 on December 6, 2005 (Attachment 1) and adopted a moratorium on sewer connections due to the undersized trunklines within the Arana and Rodeo Gulch Basins. The County Sanitation District is actively working on upgrading the trunklines and currently awaiting to receive environmental clearances and bond financing. Construction of sewer improvements is anticipated to begin in the spring of 2022 and should be completed by the end of 2023.

The subject property is located within the Rodeo Gulch Sewer Basin and is therefore subject to the development restrictions of the Rodeo Gulch Moratorium which allows only four sanitary sewer connections per vacant lot. Therefore, the project will be constructed in two phases. In the first phase, only eight units are proposed, four on each of the two parcels, with the remaining two units to be developed, as a second phase once the Santa Cruz County Sanitation District has completed their proposed upgrades to the sanitary sewer pipelines in the Rodeo Gulch Basin.

Per Santa Cruz County Sanitation District Code 2020, section *7.04.405 Overcapacity and Environmentally at-Risk Sewer Mains, Part D*(https://sccsd.wpcomstaging.com/wp-content/uploads/2020/09/DISTRICT-CODE-Working-Copy-in-Process-Codified-2020.pdf), County of Santa Cruz Public Works has issued a conditional will serve letter (Attachment 6). The County Department of public Work, sanitation is actively working on improving the Rodeo Gulch Sewer Basin. The project is now awaiting the environmental clearances and bond financing. The construction is expected to begin in the spring of 2022 and is expected to take about two years. No new wastewater facilities are required to serve the project. No impact would occur from project implementation.

Stormwater

The drainage analysis for the proposed 10-unit apartment development on Mattison Lane, prepared by Ifland Engineers, dated March 2020 (Attachment 7). The County Department of Public Works Stormwater Management staff have reviewed the preliminary stormwater management report and civil plans. The proposed project includes a combined detention/biofiltration mitigation system. In order to reduce this potential impact to a less than significant level, the following conditions shall be adhered to:

1. This this project is considered a large project and shall comply the County Design Criteria (CDC) and provide all of the items detailed in Part 3 Section C.3, Section D and Appendix D. Provide a final Stormwater Management Report that is signed and stamped by the project engineer and includes all narrative, analysis, backup technical documentation and maintenance requirements for the final design. This report should include additional details and analysis for each mitigation facility that demonstrate compliance with the CDC and are consistent with the final plans. Analysis demonstrating compliance with drain times, orifice release, maintenance/clogging design, routing, and adequacy of off-site routing, etc. as well as the following:

   b) CDC Section D: Provide information as to how this project will meet section D. Source control measures identified for the project shall be included in the final SWM 25B.
   c) CDC Section C.3: The proposed detention facility should be sized based on proposed on and off site impervious areas only. The orifice and flow control structure shall take into account all areas that drain to the facility beyond impervious areas. Include provisions for contaminant screening for runoff entering the biofiltration/detention system (Section H.5).
   d) CDC Section C.3:The flood control (detention) and water quality (biofiltration) mitigations may be combined as proposed, however both requirements must be fully met. SCM-1 shall be sized so that the required detention volume is provided in storage beyond the required 4% biofiltration cross section (ex: additional rock storage, surface ponding, or a larger biofiltration foot print can be provided).
   e) CDC Section C.3: The biofiltration cross section detail shown in Section A-A on sheet C3.0 shall be updated so that the underdrain is located at the top of the gravel layer
   f) CDC Section C.3.j: Please provide a narrative that describes how the project meets this section. Please include each strategy in the site design or provide technical justification as to why it is not feasible. The strategy of not maximizing density is noted and can be included in the narrative along with consideration of the other required strategies. Pervious surfacing should be included in the final project design. The geotechnical report provided suggests that permeable pavements are

feasible on this site if recommendations 22-39 (on pages 11-12) are followed. Final plans shall be updated to include permeable pavement.

2. The proposed outlet from the biofiltration/detention pond should be moved as far away from the riparian area as possible. Please coordinate with the project geotechnical engineer to design an outfall that is spread out and set back as far as possible from the riparian area. Provide analysis demonstrating that the outlet meets Part 3 Section J.5 requirements for maximum velocities.

3. Provide final stormwater management plans that are adequately detailed for construction and that demonstrate compliance with the CDC. Design should include provisions for safe overflow, flow control sizing, capacity analysis, treatment, pollution prevention, provisions for avoiding/minimizing clogging, drain time and vector control assessment. Plans should clearly describe how runoff from all project areas (roof, hardscapes, landscapes, rear yards, etc.) will be routed and should include details such as: surface and invert elevations, slopes, surface details, flow control structures, clean-out facilities at pipe connections/grade/direction changes, materials, installation requirements, compaction/decompaction requirements, etc. Provide cross sections and details for the proposed rain gardens, pervious pavement, swales, etc.

4. CDC Part 3 Section C.3.h: All inlets on the site and in Mattison Lane shall be marked "No Dumping Drains to Ocean" or equivalent. These markings should be maintained by the property owner.

5. The proposed storm drain in Mattison Lane shall be the minimum required size and materials consistent with Part 3 Section J of the CDC. Provide analysis for the proposed storm drain system consistent with Figures SWM-6 and 7 in the CDC. Provide analysis for the existing/proposed swale at the low point in the Mattison Lane cul-de-sac demonstrating adequacy.

6. The site receives upstream, offsite drainage both from Mattison Lane and via Rodeo Gulch. Private easements for the proposed storm drain line and swale (from the cul-de-sac) from Mattison Lane shall be provided. Easement widths shall be adequate for maintenance, repair and replacement without impact to structures or other permanent facilities (see Part 3 Section E of the CDC). Language shall include restrictions to keep the easement areas free and clear of buildings and structures of any kind. The document shall acknowledge that the site does and will continue to receive upstream runoff (from both Mattison Lane and Rodeo Gulch) and that the property owner is responsible for the maintenance of the drainage pathways through the parcel and that the County and Flood Control District is not responsible for upstream runoff or for maintenance of the drainage pathway (see CDC Section G.3). Since this project is proposed on two separate parcels

the storm drain facilities (including SCM-1) proposed on the lower parcel shall include easements for use by the upper parcel. These shall be privately maintained.

7. Provide final landscape and architectural plans with surfacing, grading, and drainage information for review for consistency with the civil plans.

8. Recorded maintenance agreement for the maintenance of the stormwater management and mitigation facilities will be required. Since this project is proposed on two separate parcels it will need to be determined which single entity will be the point of contact for reporting and annual fee submittal Include a figure showing the project site, location of each stormwater mitigation facility and associated drainage area as an attachment to the maintenance agreement. Include in an attached table/checklist the detailed management activities, maintenance requirements, schedule, signs of system failure, maintenance intervals, and responsible party both in the recorded maintenance agreement as well as the final plans (this table/checklist shall be completed and included with the annual maintenance report sent in to the County). The maintenance agreement should also include the standard language provided in Fig. SWM-25B of the CDC and may include the language required for acknowledgement of the upstream runoff (see Comment No. 7 above). The agreement shall include a statement that no additional impervious areas beyond those approved will be allowed (ex: common pervious pathways shall remain pervious, no additional paving in private rear yards, etc.). If an HOA/CC&Rs are developed for the project these documents shall be consistent with and shall reference the SWM-25B maintenance agreement.

9. Provide a letter from the geotechnical engineer reviewing and approving the final stormwater management design. If the final plan includes infiltrative stormwater management facilities the geotechnical letter should confirm that the site soils encountered are consistent with the design infiltration rate used in the design.

10. Zone 5 fees will be assessed on the net increase in permitted impervious area following the Unified Fee Schedule in place at building permit issuance. The fees are currently $1.37 per square foot, and are subject to increase based on the amount applicable at permit issuance date. Reduced fees (50%) are assessed for semi-pervious surfacing without liners (such as gravel, base rock, paver blocks, porous pavement, etc.) to offset costs and encourage more extensive use of these materials. For credit for existing impervious area provide documentation that demonstrates the impervious area was installed with a previously approved permit.

11. Construction of the stormwater management facilities shall be inspected by the County inspector. Fees and holds will be assessed and placed on the building permits accordingly.

Electric Power

Pacific Gas and Electric Company (PG&E) provides power to existing and new developments in the Santa Cruz County area. As of 2018, residents and businesses in the County were automatically enrolled in MBCP's community choice energy program, which provides locally controlled, carbon-free electricity delivered on PGE's existing lines.

The proposed site is already served by electric power, but additional improvements are necessary to serve the site. However, no substantial environmental impacts will result from the additional improvements; impacts will be less than significant.

Natural Gas

PG&E serves the urbanized portions of Santa Cruz County with natural gas. The proposed site was previously developed. There is a gas line in the street that serves the surrounding homes and school. No new gas line extension will be needed. Additional improvements may be necessary to serve the site. However, no environmental impacts will result from the additional improvements; impacts will be less than significant.

Telecommunications

Telecommunications, including telephone, wireless telephone, internet, and cable, are provided by a variety of organizations. AT&T is the major telephone provider, and its subsidiary, DirectTV provides television and internet services. Cable television services in Santa Cruz County are provided by Charter Communications in Watsonville and Comcast in other areas of the county. Wireless services are also provided by AT&T, as well as other service providers, such as Verizon.

No improvements related to telecommunications are required, and there will be no impact.

12.	*Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*	☐	☐	☒	☐

Discussion: All the main aquifers in this County, the primary sources of the County's potable water, are in some degree of overdraft. This project is within the Santa Cruz Mid-County Groundwater Basin which is regulated under the Sustainable Groundwater Management Act. Overdraft is manifested in several ways including 1) declining groundwater levels, 2) degradation of water quality, 3) diminished stream base flow, and/or 4) seawater intrusion. To address this overdraft, the Santa Cruz Mid-County Groundwater Agency is working with the water supply agencies and the County to implement the approved Groundwater Sustainability Plan for the Basin which will bring the Basin into sustainability no later than the year 2040. More information is provided under Question J5.

The City of Santa Cruz Water Department receives 95% of their water from local surface water. Surface water supplies are inadequate during drought periods and will be further diminished as a result of the need to increase stream baseflows to restore habitat for endangered salmonid populations. In addition, the use of water resources is further constrained by various water quality issues. However, water supply projects by the Water Department to increase their water supply portfolio are anticipated in their Urban Water Management Plan.

The City of Santa Cruz Water Department has indicated that adequate water supplies are available to serve the project and has issued a will-serve letter for the project, subject to the payment of fees and charges in effect at the time of service (Attachment 5). The development would also be subject to the water conservation requirements in Chapter 7.69 (Water Conservation) and 13.13 (Water Conservation—Water Efficient Landscaping) of the County Code and the policies of section 7.18c (Water Conservation) of the General Plan. Therefore, existing water supplies would be sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would therefore be less than significant.

13.	*Result in 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?*	☐	☐	☐	☒

Discussion: The County of Santa Cruz Sanitation District has indicated that adequate capacity in the sewer collection system is available to serve the project and has issued a sewer service availability letter for the project, subject to the payment of fees and charges in effect at the time of service (Attachment 6).

Currently there is a moratorium that imposes restrictions on sewer connections due to the undersized sewer pipes within the Rodeo Gulch Basin. The subject property is located within the Rodeo Gulch Sewer Basin and is therefore subject to the development restrictions of the Rodeo Gulch Moratorium. Recognizing the sewer moratorium in the area and limitations on current development, the applicant is proposing a phased development. This would allow a limited number of development units at this time (eight units), and in the future, when the Santa Cruz County Sanitation District has completed the planned upgrades to the sanitary sewer pipelines in the Rodeo Gulch Basin, the remaining units (two units) would be developed. Therefore, existing wastewater collection/treatment capacity would be sufficient to serve the proposed development and no impact would occur from project implementation.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
14. *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*	☐	☐	☒	☐

Discussion: The project would not generate solid waste during the operational phase of the project. However, construction debris would be generated during demolition and construction, much of which would be recycled. The waste generated would not exceed local or state standards, or require additional landfills or recycling centers; therefore, impacts would be less than significant.

15. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*	☐	☐	☐	☒

Discussion: The project would comply with all federal, state, and local statutes and regulations related to solid waste disposal. No impact would occur.

T. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

1. *Substantially impair an adopted emergency response plan or emergency evacuation plan?*	☐	☐	☐	☒

Discussion: The project is not located in a State Responsibility Area, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area and will not conflict with emergency response or evacuation plans. Therefore, no impact would occur.

2. *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*	☐	☐	☒	☐

Discussion: The project is not located in a State Responsibility Areas, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. In addition, the project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency and is unlikely to exacerbate wildfire risks. Impacts would be less than significant.

3. *Require the installation or maintenance of associated infrastructure (such as roads,*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Discussion: The project is not located in a State Responsibility Areas, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. Improvements associated with the project are unlikely to exacerbate wildfire risks. Impacts would be less than significant.

4. *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*	☐	☐	☒	☐

Discussion: The project is not located within a State Responsibility Areas, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. Downslope and downstream impacts associated with wildfires are unlikely to result from the project. Regardless, the project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency. Impacts would be less than significant.

U. MANDATORY FINDINGS OF SIGNIFICANCE

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

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

considered in the response to each question in Section III (A through T) of this Initial Study. Mitigations were included to address potential impacts to Biotic Resources. As a result of this evaluation, there is no substantial evidence that significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

2. *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)?* ☐ ☐ ☒ ☐

Discussion: In addition to project specific impacts, this evaluation considered the project's potential for incremental effects that are cumulatively considerable. As a result of this evaluation, there were determined to be no potentially significant cumulative effects associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

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

Discussion: In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to specific questions in Section III (A through T). As a result of this evaluation, no potentially adverse effects to human beings associated with this project were identified. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

IV. REFERENCES USED IN THE COMPLETION OF THIS INITIAL STUDY

California Department of Conservation, 1980

Farmland Mapping and Monitoring Program Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance Santa Cruz County U.S. Department of Agriculture, Natural Resources Conservation Service, soil surveys for Santa Cruz County, California, August 1980.

California Department of Fish and Wildlife, 2019

California Natural Diversity Database SOQUEL USGS 7.5 minute quadrangle; queried November 29, 2021

CalFIRE, 2010

Santa Cruz County-San Mateo County Community Wildfire Protection Plan. May 2010.

Caltrans, 2018

California Public Road Data 2017: Statistical Information Derived from the Highway Performance Monitoring System. Released by the State of California Department of Transportation November 2018.

County of Santa Cruz, 1994

1994 General Plan and Local Coastal Program for the County of Santa Cruz, California. Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

County of Santa Cruz, 2013

County of Santa Cruz Climate Action Strategy. Approved by the Board of Supervisors on February 26, 2013.

County of Santa Cruz, 2015

County of Santa Cruz Local Hazard Mitigation Plan 2015-2020. Prepared by the County of Santa Cruz Office of Emergency Services.

DOF, 2018

E-5 Population and Housing Estimates for Cities, Counties and the State—January 1, 2011-2018. Released by the State of California Department of Finance May 2018.

Federal Transit Administration, 2006

Transit Noise and Vibration Impact Assessment Manual.

Federal Transit Administration, 2018

Transit Noise and Vibration Impact Assessment Manual. September 2018.

FEMA, 2012

Flood Insurance Rate Map 0351 Federal Emergency Management Agency. Effective on May 16, 2012.

MBUAPCD, 2008

Monterey Bay Unified Air Pollution Control District (MBUAPCD), CEQA Air Quality Guidelines. Prepared by the MBUAPCD, Adopted October 1995, Revised: February 1997, August 1998, December 1999, September 2000, September 2002, June 2004 and February 2008.

MBUAPCD, 2013a

Monterey Bay Unified Air Pollution Control District, NCCAB (NCCAB) Area Designations and Attainment Status – January 2013. Available online at http://www.mbuapcd.org/mbuapcd/pdf/Planning/Attainment_Status_January_2013_2.pdf

MBUAPCD, 2013b

Triennial Plan Revision 2009-2011. Monterey Bay Unified Air Pollution Control District. Adopted April 17, 2013.

OPR, 2018

"Technical Advisory on Evaluating Transportation Impacts in CEQA." Available online at http://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

This page intentionally left blank.

Attachment 1

Mitigation Monitoring and Reporting Program

This page intentionally left blank.

Attachments

App. No. 201208:
Mattison Lane Apartments

Attachment 1

BEFORE THE BOARD OF DIRECTORS
OF THE SANTA CRUZ COUNTY SANITATION DISTRICT
SANTA CRUZ COUNTY, CALIFORNIA

RESOLUTION NO. 05-18

On the motion of Director Beautz
duly seconded by Director Pirie
the following resolution is adopted:

RESOLUTION DECLARING THE ARANA AND RODEO GULCH SANITARY SEWER TRUNKLINES OVERCAPACITY AND/OR ENVIRONMENTALLY AT RISK

WHEREAS, the Board of Directors of the County Sanitation District held a public hearing on December 1, 2005, to determine whether the Arana Gulch and Rodeo Gulch sanitary sewer trunkline basins are at overcapacity and/or environmentally at risk; and

WHEREAS, pursuant to Section 7.04.405 of the Santa Cruz County District Code, the Board by a two-thirds vote may declare said trunklines as overcapacity and/or environmentally at risk, and

WHEREAS, the District's flow based model predicts that the Arana and Rodeo gulch trunklines would be at overcapacity and/or environmentally at risk during a 10 year rain storm event, and

WHEREAS, the accuracy of the District's computer flow model was confirmed by testing performed in the Noble Gulch basin; and

WHEREAS, the Arana and Rodeo Gulch basins are adjacent to and similar to the Noble Gulch basin; and

WHEREAS, your Board finds that excess connections to the Arana and Rodeo Gulch trunklines could cause the trunklines to surcharge and overflow; and

WHEREAS, based on this information, it is prudent at this time to declare that the Arana Gulch and Rodeo Gulch sanitary sewer trunkline basins are at overcapacity and/or environmentally at risk to ensure that said trunklines do not surcharge and overflow; and

WHEREAS, the District will be conducting additional detailed flow monitoring and analysis of these two trunklines during the Winter and Spring of 2005-06 in order to confirm their status as being at overcapacity and/or environmentally at risk; and

WHEREAS, the District will re-evaluate the status of the Arana Gulch and Rodeo Gulch sanitary sewer trunkline basins when it receives the additional data and analysis.

NOW, THEREFORE, the Board of Directors of the Santa Cruz County Sanitation District, after a public hearing, have found the Arana and Rodeo Gulch trunklines to be overcapacity and/or environmentally at risk.

BE IT FURTHER RESOLVED AND ORDERED that a maximum of four sanitary sewer connections per vacant lot or one thousand gallons per day discharge for commercial projects shall be allowed to connect to the Arana and Rodeo Gulch sanitary sewer trunklines. This shall take effect immediately to protect the public safety, health and welfare of all persons that may be affected by the lack of capacity.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Sanitation District this 6th day of December, 2005, by the following vote:

AYES: DIRECTORS BEAUTZ, PIRIE, and HARLAN
NOES: DIRECTORS NONE
ABSENT: DIRECTORS NONE

Stephanie L. Harlan
Chairperson of said Board

ATTEST: Lynn Sealy
Secretary of said Board

Approved as to Form:
Dana Garcia
District Counsel

copy to: County Planning Department

State of California)
) ss.
County of Santa Cruz)

I the undersigned Secretary of the Board of Directors of the Santa Cruz County Sanitation District, County of Santa Cruz, State of California, do hereby certify that the foregoing is a true and correct copy of an resolution passed and adopted by and entered in the Minutes of said Board.

In witness whereof, I have hereunto set my hand and affixed the seal of the said Board on Jan 3, 2006

Signed: Lynn Sealy

Attachment 2

County of Santa Cruz

PLANNING DEPARTMENT
701 Ocean Street, 4th floor, Santa Cruz, Ca 95060
(831) 454-2580 Fax: (831) 454-2131 Tdd: (831) 454-2123

October 19, 2021

Salvadore Rubino
c/o Jim Weaver
Pacific Rim Planning Group

Subject: Mattison Lane Residential Complex Biotic Report Review and Conditioned Approval
APN: 025-211-02, 025-211-07
Application #s: REV201079; 201208

Attachment 1. Biotic Reports
Attachment 2. Project Plans

Dear Mr. Weaver,

The Planning Department received and reviewed a Biotic Report, dated October 5, 2020 prepared by Biotic Resources Group for the Mattison Lane Residential Complex Project. An Arborist Report dated August 28, 2018, prepared by Maureen Hamb Professional Consulting Services and a Biological Constraints memo dated April 17, 2018 prepared by Olberding Environmental Inc., were also considered during this review. These reports are included as Attachment 1. The Biotic Report Review was required because of the potential for sensitive habitats and protected species on this parcel where development activities associated with construction of a new residential complex is proposed.

The proposed project involves development of a 10-unit residential complex on two adjacent vacant parcels. The ten units will be built as five separate two-story duet style buildings. The project will be constructed in two phases, with the first phase including all site improvements and construction of four duet style buildings (eight units). An area for the second phase will be set aside for potential future construction of one additional duet style building.

Project features include a sidewalk along Mattison Lane, 5 detached buildings, parking areas, internal pathways to reach the residential units, landscaping, a detention/retention pond, and a stormwater outfall. Project development will require grading and trenching to accommodate the residential development and construction of the storm drain system and may require construction of a sound wall along the Highway 1 Caltrans right of way (ROW). The project plans also include installation of a permanent split rail fence in the eastern portion of the property for protection of the riparian corridor. The Site Plan showing the overall project footprint is included in Attachment 2.

Baseline Environmental Conditions

The Study Area covered in the Biotic Report includes approximately 2.3 acres on two separate parcels: 025-211-02 and 025-211-07. The property is located within the County's urban services area. The Biotic Report identifies three community types in the study area: annual grassland, landscape tree and shrub groves, and mixed riparian woodland.

The annual grassland community is located throughout the central portion of the Study Area and has undergone regular disturbance through mowing and site maintenance for many years. This community is dominated by non-native grasses and forbs. A few young coyote brush (*Baccharis pilularis*), and several invasive jubata grass (*Cortederia jubata*) are also scattered throughout this disturbed grassland area.

Landscape tree and shrub groves were mapped along the chain link fence around the perimeter of the property abutting Mattison Lane and on the embankment of the Highway 1 ROW. Along Mattison Lane, the community is comprised of landscape trees and shrubs with an understory of non-native grasses and forbs. The Caltrans ROW includes a mixture of native and non-native trees, shrubs and invasive groundcovers, some of which overhang onto the subject property. Native coast live oaks are intermixed on this embankment with non-native trees.

Rodeo Gulch Creek, a perennial stream, crosses through the Study Area near the eastern property line. A wide band of riparian woodland associated with the Creek occurs in the eastern portion of the property. This community is dominated by an overstory of coast live oak, willow (*Salix* spp.), California bay (*Umbellularia californica*), and buckeye (*Aesculus californica*) and a dense understory of native and non-native shrubs and herbaceous species.

Analysis

Streams and their riparian corridors (as defined by Santa Cruz County Code Section 16.30.030) are granted special protections under the County's Sensitive Habitat Protection and Riparian Corridor and Wetlands Protection ordinances (Chapters 16.30 and 16.32). Lands extending 50 feet out from each side of a perennial stream, and lands containing a riparian woodland are considered Riparian Corridors. Development activities are prohibited within Riparian Corridors unless Riparian Exception Findings (SCCC 16.30.060) are met, and a Riparian Exception is approved by County Planning.

At the project site, Rodeo Creek meets the definition of an arroyo under County Code. Projects located on properties abutting an arroyo are subject to additional development buffers. A 50-foot buffer is required from the edge of this Riparian Corridor as defined in SCCC 16.30.040(B), and an additional 10-foot setback from the edge of the buffer is required for all structures.

All components of the proposed project including residential buildings, site improvements, detention/retention pond, and storm drain outfall are located outside of the arroyo buffer and construction setback. The 50-foot buffer and 10-foot construction setback are included in the project Plans (Attachment 2). The project proposes installation of a permanent split rail fence at the boundary of the 50-foot buffer to protect the arroyo from future disturbance. The project will not result in impacts to the Riparian Corridor.

No special-status plant species were identified in the study area during surveys conducted at the evident and identifiable period. No impacts to special-status plants are anticipated to result from the proposed Project.

The Project Impact Area is located primarily within non-native grassland. Some sparse trees and shrubs located in the area mapped as landscape tree and shrub groves along Mattison Lane will require removal as well as three dead/dying Monterey pines which were recommended for removal in the 2017 Arborist Report for risk management. Additionally, construction activities and permanent development are proposed within the dripline of existing oak trees located along the Caltrans ROW outside the chain link fence. Grading or trenching could cause direct mortality or decline of these trees after construction is complete. Recommendations included in the Arborist Report for proper root and canopy pruning must be adhered to.

The project includes a comprehensive landscape plan that shows many trees and shrubs planted throughout the parcel. Conditions are included below to protect native oak trees and compensate for any direct or indirect mortality that may result from project construction.

Trees, shrubs, and grassland in and adjacent to the study area provide potential nesting and foraging habitat for birds of prey and migratory birds. Birds of prey and migratory birds are offered protection under the California Fish and Game Code, and the Federal Migratory Bird Treaty Act (MBTA). Under the MBTA, 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" a migratory bird unless and except as permitted by regulations. Conditions have been included in the Biotic Report to protect nesting birds during project construction.

Avoidance of impacts to sensitive habitats was thoroughly considered in choosing the proposed development location. The completed project is not expected to create any permanent impediments to dispersal of wildlife. Landscaping activities associated with the project will result in a net increase in tree cover on the parcel.

Conclusion

There are sensitive habitat constraints on the project site associated with arroyo riparian woodland, oak trees, and habitat for nesting birds that must be considered prior to and during project implementation. Conditions have been included below to ensure that impacts to special-status species, their habitats, and other sensitive habitats will be *less than significant.*

The Conditions of Approval below shall be incorporated into all phases of development for this project and shall also apply to all future development activities engaged in on the property.

If you have any questions regarding this letter, please feel free to contact me by email or telephone at Juliette.Robinson@santacruzcounty.us or 831-454-3156.

Sincerely,

Juliette Robinson
Resource Planner IV, Biologist

CC: Leah MacCarter, Area Resource Planner
Shila Bagley, Project Planner
Matt Johnston, Environmental Coordinator

Conditions of Approval

In order to conduct development activities associated with application 201208 on APNs 025-211-02 and 025-211-07 the following conditions shall be adhered to:

1. Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor, Environmental Planning Staff, and the project biologist.
2. All recommended Avoidance, Minimization, and Mitigation Measures (Bio-1-Bio-4) outlined in Chapter 6 of the attached Biotic Report dated October 5, 2020, prepared by Biotic Resources Group shall be adhered to.
3. If a special-status animal is identified at any time prior to or during construction, work shall cease immediately in the vicinity of the individual. The animal shall either be allowed to move out of harm's way on its own or a qualified biologist shall move the animal out of harm's way to a safe relocation site.
4. Prior to construction, high visibility construction fencing or flagging as outlined in Bio-1 of the Biotic Report shall be installed, with the assistance of a qualified biologist, to indicate the limits of work and prevent inadvertent grading or other disturbance within the adjacent sensitive habitat. No work-related activity including equipment staging, vehicular access, and grading shall be allowed outside the limits of work.
5. Impacts to oak trees shall be avoided to the maximum extent possible. All recommended measures for protection of oak trees outlined in the attached Arborist Report dated August 28, 2018, prepared by Maureen Hamb Professional Consulting Service, shall be adhered to including proper root and canopy pruning. Trees to be retained shall be protected at or outside of the dripline if possible by a system of fencing and straw bale barricades. The exact locations of the protection measures shall be determined in the field with the assistance of a qualified arborist or biologist.
6. Excavation will likely expose structural roots of several mature coast live oak trees in the Caltrans ROW (including trees #7 and #12 as identified in the arborist report). Several other trees will require heavy canopy pruning to provide clearance for construction access.
7. To compensate for impacts to oak trees and other native trees and comply with Santa Cruz County General Plan Policy 5.1.12, the following conditions shall be adhered to:
    a. All native trees compromised through grading, trenching, or heavy pruning shall be compensated for by planting in-kind on site at a minimum 3:1 ratio.
    b. To compensate for impacts to trees #7 and #12, a minimum of six coast live oak trees (or equivalent native species available at local nurseries) shall be planted on site.

c. The species, size, and locations of all native tree plantings shall be included in the site-specific landscape plan and plant list. Native tree plantings shall be located in the 50-foot arroyo buffer (open grassy area between the split rail fence and the riparian woodland). All work associated with native tree plantings in this location must be completed by hand.

d. The site-specific landscape plan shall include a 3-year management plan for maintenance and monitoring of native tree planting areas to maintain minimum 80% survival at year 3. Replacement plants shall be installed as needed during the monitoring period to meet survival rates. Annual habitat monitoring reports shall be submitted to the County Environmental Coordinator by December 31 of each monitoring year.

8. Any seed mix used for erosion control purposes on temporarily impacted areas and exposed soils shall be limited to seeds of native species common to the surrounding habitat and/or sterile seeds.

By complying with these conditions, the project will result in *no significant impacts* to special status species and sensitive habitats and will improve habitat features present on site.

A copy of this biotic approval, including all attachments, should be submitted with any future permit applications.

MATTISON LANE
PROPOSED RESIDENTIAL COMPLEX
APN 025-211-02 & 07

BIOTIC REPORT

Updated
October 5, 2020

Biotic Resources Group

Biotic Assessments • Resource Management • Permitting

MATTISON LANE
PROPOSED RESIDENTIAL COMPLEX
APN 025-211-02 & 07

BIOTIC REPORT

Prepared for
Salvadore Rubino
c/o
Jim Weaver
Pacific Rim Planning Group

Prepared by

Kathleen Lyons
Biotic Resources Group

With

Garvin Hoefler
Wildlife Biologist

Updated
October 5, 2020

2551 S. Rodeo Gulch Road #12, Soquel California • (831) 476-4803 • brg@cruzio.com

MATTISON LANE
PROPOSED RESIDENTIAL COMPLEX
APN 025-211-02 & 07

BIOTIC REPORT

1.0 INTRODUCTION

A residential complex is proposed for a property near the terminus of Mattison Lane in the Soquel area of Santa Cruz County. The property encompasses approximately 2.3 acres on two parcels (APN 025-211-02 and 07). The property is located along the south side of Mattison Lane, just north of State Highway 1, yet south of Soquel Drive (Figure 1). The property is currently undeveloped. The property is irregularly shaped and extends easterly to include a portion of Rodeo Creek. The property is located within the County's urban services area.

The proposed project is an 8-unit complex, with vehicular entry from Mattison Lane. The configuration of the proposed subdivision is depicted on the *Site Plan, Mattison Lane* (Ifland Engineers, plans dated April 1, 2020, revision date of 10-2-20). Project features include a sidewalk along Mattison Lane, eight detached residential buildings, parking areas, an area designated for a future single-family dwelling, and a bioretention basin (with storm drain outfall). The storm drain outfall will empty onto a slope below the bioretention basin; the project does not include any work or construction of a storm drain outlet into Rodeo Creek. Project development will require grading to accommodate the residential development and construction of the bioretention basin. At the project site, Rodeo Creek meets the definition of an arroyo under County Code; therefore, the project is subject to a 50-foot riparian corridor setback and an additional 10-foot construction setback. The residential buildings, future building site and all parking, as well as the bioretention basin and storm drain outfall, will be located outside this County-designated riparian corridor setback.

The Biotic Resources Group assessed the biotic resources of the property. The focus of the assessment was to identify sensitive biotic resources within the project area and evaluate the proposed activities relative to such resources.

Specific tasks conducted for this study include:

- Characterize and map the major plant communities on the property;
- Identify sensitive biotic resources, including plant and wildlife species of concern, within areas proposed for development activities,
- Evaluate the potential effects of the proposed project on sensitive biotic resources and recommend measures to avoid or reduce such impacts.

Intended Use of this Report

The findings presented in this biological report are intended for the sole use of the property owner (Sal Rubino), his representatives, and Santa Cruz County in evaluating the proposed residential development project. The findings presented by the Biotic Resources Group in this report are for information purposes only; they are not intended to represent the interpretation of any State, Federal or County law or ordinance pertaining to permitting actions within sensitive habitat or endangered species. The interpretation of such laws and/or ordinances is the responsibility of the applicable governing body.

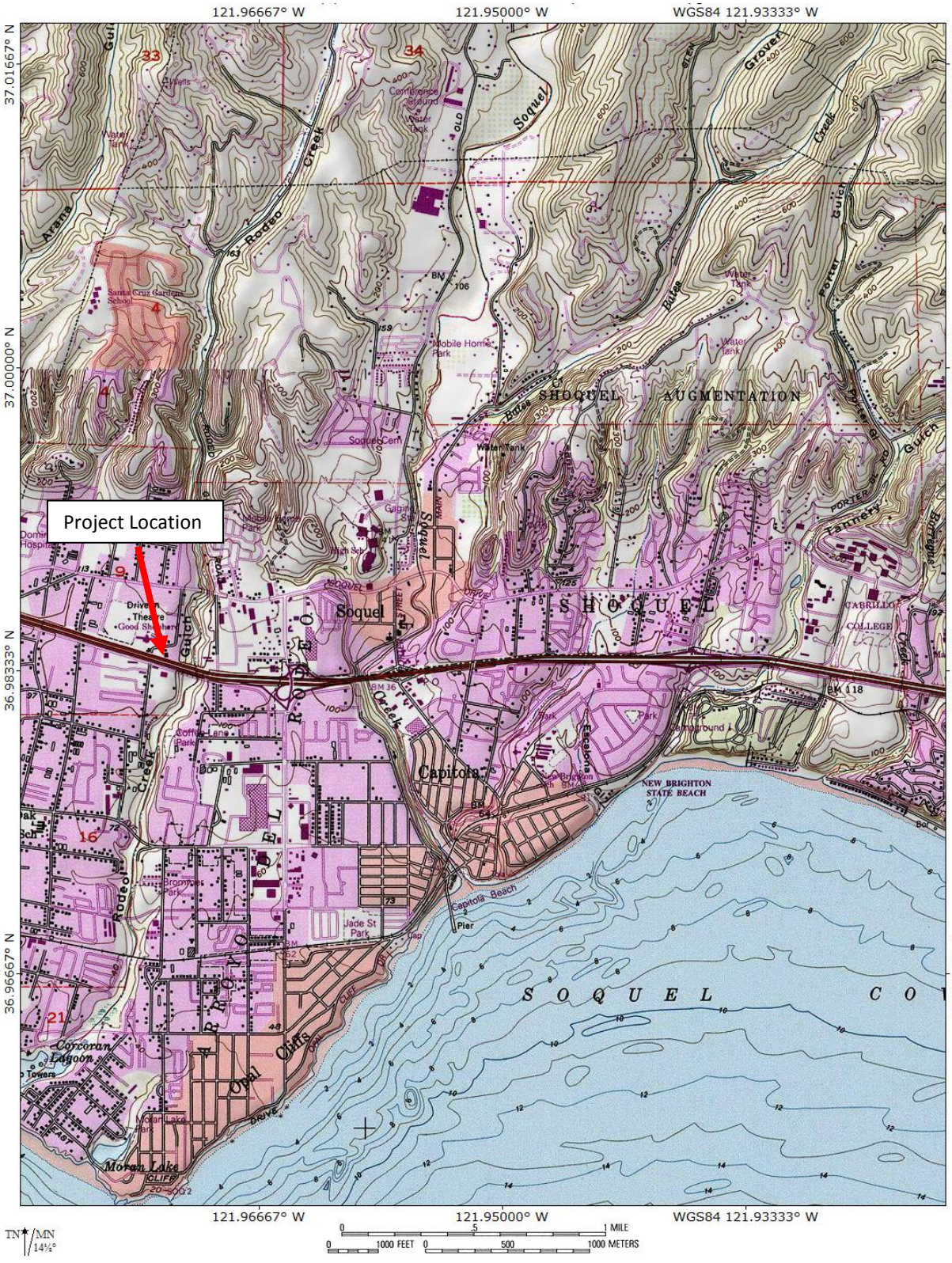


Figure 1. Project Location on USGS Soquel Topographic Map

2.0 METHODOLOGY

A survey to document site conditions and biotic resources on the property was conducted by Kathleen Lyons (plant ecologist) and Garvin Hoefler (wildlife biologist) in March and April 2017. Study methodology included field reconnaissance surveys, aerial photograph interpretation, and accessing electronic databases. Database searches were conducted; the California Natural Diversity Data Base (CNDDB) "RareFind" (2017) and the California Native Plant Society (CNPS) Rare Plant Electronic Inventory (2017) for the Soquel and surrounding quadrangles were accessed.

Prior to conducting the field surveys, a potential list of special status or sensitive species was reviewed, utilizing species recognized by California Department of Fish and Wildlife (CDFW), US Fish and Wildlife Service (USFWS), CNDDB, Bird SSC California, and Checklist of the Birds of Santa Cruz Co. CA. The proposed residential development area was walked and the riparian woodland was traversed from an existing path that reaches the creek corridor. The major plant community types on the property, based on the classification system developed by CNDDB's *California Terrestrial Natural Communities (*CDFG 2010) and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and as amended to reflect site conditions, were mapped during the field survey. Plant community types as recognized by CDFW were used to the greatest extent feasible, however, modifications to the classification system's nomenclature were made, as necessary, to accurately describe the sites resources, particularly for areas that the CDFG system provides no suitable classification. The plant communities were mapped onto the tentative map with topographic base (Figure 2). The *Jepson Manual* (2012) was the principal taxonomic reference used for the botanical work.

Wildlife Field Methods. To assess the presence/absence of either federally or California protected species of animals, or of any birds, the entire area was surveyed. Within the grassland, beginning in the larger more open area transects running from the east to the west were walked approximately 4 feet apart to maximize observations on both sides. The purpose of this effort was to flush any ground nesting birds, and thereby discover nests if any, and understand their present conditions. All small clumped species of plants were checked thoroughly as well. All the coyote brush bushes were investigated thoroughly. The smaller eastern portion bordered on the north by a wooden fence and on the south by a wire fence was walked in a stochastic fashion to discover any nests. Each stand of jubata grass was probed on all sides by a nearly 6-foot pole to determine the possibility of presence/absence of any nesting birds or the San Francisco Dusky-footed Wood Rat. These rats build their own rather elaborate nests and are opportunistic and might utilize the protection of the large mounds of jubata grass for shelter or as nest sites.

All the landscape trees along the northern fence were surveyed up and down their trunks, along all branches and into the canopies with the unaided eye and using binoculars in search of inactive or active nests, holes or cavities with any evidence of nesting, and the possible beginnings of nest construction by any birds that were present. The understory was scanned as well. The riparian habitat was searched in the same manner that was used for the landscape trees and included checking the small pools of water still available in the Rodeo Creek area with a net for any species of fish, amphibians, or turtles.

3.0 ENVIRONMENTAL SETTING

The Rubino-Mattison Lane property lies at the mid-portion of the geographic area known as the Central Coast Range and extends eastward to the San Francisco Bay Area Range. The property supports three plant community types: annual grassland, landscape tree and shrub groves, and mixed riparian woodland. Each vegetation type, its California vegetation code, and state ranking (rarity) are listed in Table 1. The location of these communities is depicted on Figure 2. The soils on the property are mapped as Elkhorn sandy loam, 2 to 9 percent slopes (133) (flat area adjacent to Mattison Lane) and Lompico-Felton complex, 30 to 50 percent

slopes (slopes and bed of Rodeo Creek) (143).

Table 1. Vegetation Types, Rubino- Mattison Lane Property

CaCode[1]	Vegetation Type	Plant Association	State Ranking[2]
42.026.22	Annual Grassland	Soft Chess/ Ripgut Brome/ Wild Oat – Filaree/ English Plantain – Coyote Brush/Jubata Grass	None
None	Landscape Trees and Shrub Groves	Monterey Pine/Oaks/Acacia/Coast Redwood– Cotoneaster/Pyracantha/ Coyote Brush	None
71.060.47	Mixed Riparian Woodland	Coast Live Oak/ Willow/California Bay – California Blackberry/Poison Oak	S4

[1] – California vegetation code as per CDFG (September, 2010); 2- Vegetation types are ranked between S1 and S5. For vegetation types with ranks of S1-S3, all associations within the type are considered to be highly imperiled.

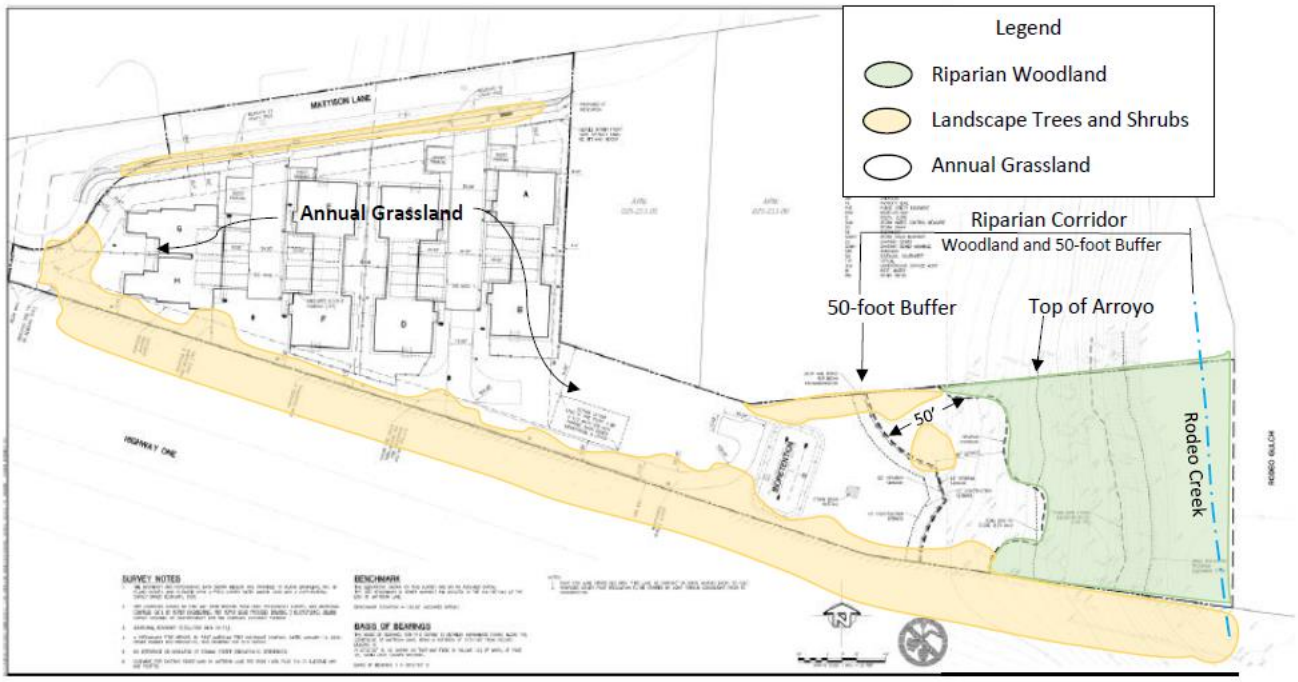


Figure 2. Existing Vegetation Types on Project Topographic Map/Site Plan

3.1 Annual Grassland

The majority of the property that abuts Mattison Lane supports annual grassland. The vegetation is co-dominated by non-native grasses and forbs typical to previously disturbed areas. During the March and April field visits the most prevalent vegetation was soft chess (*Bromus hordeaceus)*, ripgut brome (*Bromus diandrus)*, wild oat (*Avena sp.)*, English plantain (*Plantago lanceolata)*, and filaree (*erodium botrys)*. Also, observed, with less cover, were vetch (*Vicia sativa)*, fiddle dock (*Rumex acetosella)*, rose clover (*Trifolium hirtum)*, narrow-leaved clover (*Trifolium angustifolium)*, canary grass (*Phalaris sp.)*, and cat's ear (*Hypochaeris sp.)*. The grassland also supports scattered young coyote brush (*Baccharis pilularis)*, jubata grass (*Cortederia jubata)*, California blackberry (*Rubus ursinus)*, and California poppy (*Eschscholzia californica)*. The character of the grassland is depicted in Figure 3.

Wildlife Resources. Annual grasslands support a wide variety of wildlife. Many species of birds, such as Spotted Towhees, Song Sparrows, Dark-eyed Juncos, and White-crowned Sparrows choose such areas for nesting. Bird nests in these areas can be on the ground or in very low vegetation. These grasslands also

provide ideal habitat for many types of rodents such as mice and rats, and these in turn attract predators such as skunks and raccoons. The presence in these grasslands of many coyote brush bushes and the large arrays of jubata grass enhance the suitability of the area. Many rodent trails crisscrossed the grasslands. There were many small scraped areas – cuplike – but no evidence of usage such as might be in the case of ground nesting birds – just bare scrapes; most likely opportunistic digging by rodents, or skunks; skunk scat was encountered many times over the area. No birds were flushed during this search. No nests were seen in any of the coyote brush bushes. In probing the jubata grass mounds, most were found to be very solid under the overhanging leaves. On occasion, there would be an opening, but in none of these was there any evidence of use such as scat, tracks, and broken seeds/acorns. No evidence of woodrats was detected.

Figure 3. Annual Grassland Adjacent to Mattison Lane

3.2 Landscape Trees and Shrub Groves

The perimeter of the property near Mattison Lane and the Highway 1 right-of-way (ROW) supports planted landscape trees and shrubs. Plants growing along the chain link fence abutting Mattison Lane and the cul-de-sac include young coast live oaks (*Quercus agrifolia)*, cotoneaster (*Cotoneaster sp.)*, pyracantha (*Pyracantha sp.)*, young coast redwood (*Sequoia sempervirens)*, Monterey pine (*Pinus radiata)*, jubata grass, and a volunteer willow (*Salix lasiolepis)*.

The property abuts the Caltrans ROW. The Caltrans embankment has been planted/colonized by a mixture of native and non-native trees, shrubs and groundcover, some of which overhang onto the subject property. Native coast live oaks intermix with non-native (holly?) oaks (*Quercus sp.)* as well as coast redwood, pine, acacia (*Acacia sp.)*, myoporum (*Myoporum sp.)*, coyote brush, cotoneaster, and California blackberry. Non-native herbaceous species are also present, such as English ivy (*Hedera helix)*, and lily-of-the-valley (*Convallaria majalis).* Figure 4 depicts the character of landscape trees and shrubs along the southern property line (abutting Caltrans ROW).

Wildlife Resources. Nearly all species of trees offer many suitable areas for nesting birds. For example, as branches become smaller towards their ends the largest number of leaves occur, so they offer the perfect substrate for attaching small cup or domed nests sheltered among those leaves, and the presence of holes or cavities anywhere in a tree allow woodpeckers and others secure nesting sites. Closer to the trunks, larger branches can be supportive of nests suitable for hawks or crows. Any understory present offers nesting sites as well. There were no older nor new nests anywhere in the landscape trees. Of note, during a morning survey, besides more than 25 American Crows perched in one of the large Monterey

Pines in the far western end of the grassland, there were only seven other species of birds (composed of three sets of two each), totaling only 10 other individual birds. This low number indicates the property is not a preferred site for nesting birds, particularly since the survey was conducted when the nesting season was well underway. This site's close proximity to State Highway 1 as well as nearby residences and a school likely diminishes the presence of wildlife.

Figure 4. Landscape trees and shrubs along southern property line (abutting Caltrans ROW)

3.3 Mixed Riparian Woodland

The property supports a portion of Rodeo Creek. The creek supports a wide band of riparian woodland; this woodland occurs along the eastern property line and extends westward up the slope of the arroyo to the top of bank. The canopy of riparian trees extends outward from the top of bank, as depicted on Figures 2 and 5. The riparian woodland abuts tree plantings that occur on the Caltrans ROW embankment, as depicted in Figure 6.

The vegetation is co-dominated by coast live oak, willow (*Salix spp.)*, California bay (*Umbellularia californica)*, and buckeye (*Aesculus californica)*. The riparian woodland understory is dense with California blackberry (*Rubus ursinus)* and poison oak. Additional species include blue elderberry (*Sambucus mexicana)*, nightshade (*Solanum sp.)*, poison hemlock (*Conium maculatum)*, *Prunus sp.*, wild mustard (*Brassica sp.),* bedstraw (*Galium sp.)*, Italian thistle (*Carduus pycnocephalus)*, calla lily (*Zantedeschia aethiopica)*, and English ivy.

Wildlife Resources. Riparian habitat, while similar in some ways to other wooded areas are called this because of the proximity to water. Also, many of the resident trees and shrubs in riparian habitats are found only in or around this usually moist environment. This together with the fact that the understory is very dense, offer a diverse array of nesting opportunities for myriad species of birds such as warblers. For example, the Yellow Warbler nests only in riparian habitats. Vireos, some sparrows, hummingbirds, and chickadees can also be found here; however, there were no older nor new nests anywhere in or around the riparian woodland. With water, fishes such as the California roach and the Unarmored Three-spine Stickleback, as well as some species of salamanders, frogs, or turtles, can take advantage of the area; however, no frogs were seen along the banks of Rodeo Creek, no turtles were observed, and sweeping a net through the very low pools of water in the mostly dry creek found no species of fish. Figure 7 shows the creek channel.

Figure 5. Outer (western) edge of riparian woodland

Figure 6. View eastward into riparian woodland, showing trees growing in Caltrans ROW

Figure 7. View of Rodeo Creek, ponded areas in April 2017

4.0 REGULATED AND SENSITIVE HABITATS

4.1 Regulated Habitats

California Department of Fish and Wildlife (CDFW) is a trustee agency that has jurisdiction under Section 1600 et seq. of the CDFG Code. Under Sections 1600-1603 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake which supports fish or wildlife. Along watercourses, CDFW's jurisdictional limit typically extends to the top of bank or to the edge of riparian habitat if such habitat extends beyond top of bank (outer drip line), whichever is greater. Rodeo Creek on the subject property is within the regulatory jurisdiction of CDFW; CDFW jurisdiction extends to the top-of-bank or outer edge of riparian vegetation, whichever is greater. No work will occur in CDFW's regulatory jurisdiction.

Water quality in California is governed by the Porter-Cologne Water Quality Control Act and certification authority under Section 401 of the Clean Water Act, as administered by the Regional Water Quality Control Board (RWQCB). The Section 401 water quality certification program allows the State to ensure that activities requiring a Federal permit or license comply with State water quality standards. Water quality certification must be based on a finding that the proposed discharge will comply with water quality standards which are in the regional board's basin plans. The Porter-Cologne Act requires any person discharging waste or proposing to discharge waste in any region that could affect the quality of the waters of the state to file a report of waste discharge. The RWQCB issues a permit or waiver that includes implementing water quality control plans that take into account the beneficial uses to be protected. Waters of the State subject to RWQCB regulation extend to the top of bank, as well as isolated water/wetland features and saline waters. Should there be no Section 404 nexus (i.e., isolated feature not subject to USACE jurisdiction); a report of waste discharge (ROWD) should be filed with the RWQCB. The RWQCB interprets waste to include fill placed into water bodies. Rodeo Creek on the subject property is within the regulatory jurisdiction of RWQCB; RWQCB jurisdiction extends to the top-of-bank or

outer edge of riparian woodland, if greater. No work will occur in RWQCB's regulatory jurisdiction.

The US Army Corps of Engineers (USACE) regulates activities within waters of the United States pursuant to congressional acts: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (1977, as amended). Section 10 of the Rivers and Harbors Act requires a permit for any work in, over, or under navigable waters of the United States. Navigable waters are defined as those waters subject to the ebb and flow of the tide to the Mean High Water mark (tidal areas) or below the Ordinary High Water mark (freshwater areas). Rodeo Creek up to the Ordinary High Water Mark is within the regulatory jurisdiction of USACE. No work will occur within USACE's regulatory jurisdiction.

4.2 Sensitive Habitats

Sensitive habitats are defined by local, State, or Federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity (Santa Cruz County Code and CDFW). The riparian woodland of the subject property is considered sensitive under County Code. At the project site, Rodeo Creek meets the definition of an arroyo under County Code; therefore, the project is subject to a 50-foot riparian corridor setback. No structures are allowed within the riparian corridor and its setback area unless the County grants a riparian exception. The residential buildings, future building site and all parking areas, as well as the bioretention basin and its storm drain outfall will be located outside the 50-foot wide riparian corridor setback (and 10-foot construction setback).

CDFW classifies and ranks the State's natural communities to assist in the determining the level of rarity and imperilment. Vegetation types are ranked between S1 and S5. For vegetation types with ranks of S1-S3, all associations within the type are considered to be highly imperiled. If a vegetation alliance is ranked as S4 or S5, these alliances are generally considered common enough to not be of concern; however, it does not mean that certain associations contained within them are not rare (CDFG, 2007 and 2010). No plant community types on the subject property are ranked as sensitive (i.e., S1-S3) by CDFW.

5.0 SPECIAL STATUS SPECIES

5.1 Special Status Plants

The biotic review focused on special status plant species that are officially listed by the State and/or Federal government and CNPS List 1B. No special status plant species have been recorded for this property as per the CNDDB. The species evaluated for potential occurrence on the property, as per CNDDB records, are listed on Table 2.

Table 2. List of Special Status Plant Species with Potential to Occur at Rubino - Mattison Lane Property

Scientific Name	Common Name	Lifeform	Rare Plant Rank	CESA	FESA	Potential to Occur on Subject Property
Amsinckia lunaris	bent-flowered fiddleneck	annual herb	1B.2	None	None	Low, not observed
Arctostaphylos andersonii	Anderson's manzanita	perennial evergreen shrub	1B.2	None	None	Low, not observed
Arctostaphylos glutinosa	Schreiber's manzanita	perennial evergreen shrub	1B.2	None	None	Low, not observed
Arctostaphylos ohloneana	Ohlone manzanita	evergreen shrub	1B.1	None	None	Low, not observed
Arctostaphylos pajaroensis	Pajaro manzanita	perennial evergreen shrub	1B.1	None	None	Low, not observed
Arctostaphylos silvicola	Bonny Doon manzanita	perennial evergreen shrub	1B.2	None	None	Low, not observed
Arenaria paludicola	marsh sandwort	perennial stoloniferous herb	1B.1	CE	FE	Low, no suitable habitat
Calyptridium parryi var. hesseae	Santa Cruz Mountains pussypaws	annual herb	1B.1	None	None	Low, no suitable habitat
Campanula californica	swamp harebell	perennial rhizomatous herb	1B.2	None	None	Low, no suitable habitat
Carex saliniformis	deceiving sedge	perennial rhizomatous herb	1B.2	None	None	Low, no suitable habitat
Chorizanthe pungens var. hartwegiana	Ben Lomond spineflower	annual herb	1B.1	None	FE	Low, no suitable habitat
Chorizanthe robusta var. hartwegii	Scotts Valley spineflower	annual herb	1B.1	None	FE	Low, no suitable habitat
Chorizanthe robusta var. robusta	robust spineflower	annual herb	1B.1	None	FE	Low, no suitable habitat
Collinsia multicolor	San Francisco collinsia	annual herb	1B.2	None	None	Low, not observed
Dacryophyllum falcifolium	tear drop moss	herb	1B.3	None	None	Low, no suitable habitat
Eriogonum nudum var. decurrens	Ben Lomond buckwheat	perennial herb	1B.1	None	None	Low, no suitable habitat
Erysimum teretifolium	Santa Cruz wallflower	perennial herb	1B.1	CE	FE	Low, no suitable habitat
Fissidens pauperculus	minute pocket moss	moss	1B.2	None	None	Low, no suitable habitat
Grindelia hirsutula var. maritima	San Francisco gumplant	perennial herb	3.2	None	None	Low, not observed
Hoita strobilina	Loma Prieta hoita	perennial herb	1B.1	None	None	Low, no suitable habitat

Table 2. List of Special Status Plant Species with Potential to Occur at Rubino - Mattison Lane Property

Scientific Name	Common Name	Lifeform	Rare Plant Rank	CESA	FESA	Potential to Occur on Subject Property
Holocarpha macradenia	Santa Cruz tarplant	annual herb	1B.1	CE	FT	Low
Horkelia cuneata ssp. sericea	Kellogg's horkelia	perennial herb	1B.1	None	None	Low, not observed
Horkelia marinensis	Point Reyes horkelia	perennial herb	1B.2	None	None	Low, not observed
Lessingia micradenia var. glabrata	smooth lessingia	annual herb	1B.2	None	None	Low, no suitable habitat
Malacothamnus arcuatus	arcuate bush-mallow	perennial evergreen shrub	1B.2	None	None	Low, no suitable habitat
Microseris paludosa	marsh microseris	perennial herb	1B.2	None	None	Low, no suitable habitat
Monolopia gracilens	woodland woolythreads	annual herb	1B.2	None	None	Low, no suitable habitat
Pedicularis dudleyi	Dudley's lousewort	perennial herb	1B.2	CR	None	Low, no suitable habitat
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	perennial herb	1B.2	None	None	Low, no suitable habitat
Pentachaeta bellidiflora	white-rayed pentachaeta	annual herb	1B.1	CE	FE	Low
Piperia candida	white-flowered rein orchid	perennial herb	1B.2	None	None	Low, no suitable habitat
Plagiobothrys chorisianus var. chorisianus	Choris' popcorn-flower	annual herb	1B.2	None	None	Low, not observed
Plagiobothrys diffusus	San Francisco popcorn-flower	annual herb	1B.1	CE	None	Low, not observed
Polygonum hickmanii	Scotts Valley polygonum	annual herb	1B.1	CE	FE	Low, no suitable habitat
Rosa pinetorum	pine rose	perennial shrub	1B.2	None	None	Low, not observed
Silene verecunda ssp. verecunda	San Francisco campion	perennial herb	1B.2	None	None	Low, not observed
Stebbinsoseris decipiens	Santa Cruz microseris	annual herb	1B.2	None	None	Low, no suitable habitat
Trifolium buckwestiorum	Santa Cruz clover	annual herb	1B.1	None	None	Low, no suitable habitat

CNPS Status: List 1B: These plants (predominately endemic) are rare through their range and are currently vulnerable or have a high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDFG Code.

Of the special status plant species evaluated for their potential to occur on the property (see Table 2), only two species, have been documented in the greater project vicinity. The Santa Cruz tarplant (*Holocarpha macradenia)* is known from the Soquel Hills and from inland portions of Twin Lakes State Beach. These occurrences are located approximately one mile to the northeast and southwest of the subject property, respectively, where the species occupies coastal prairie grassland. Although the biotic review was conducted outside the blooming period of this species (typically blooms June-August), the potential presence of this species is considered low due to the compacted condition of the grassland soil and evidence of previous activities on the site (presence of gravels, etc.).

The Santa Cruz clover (*Trifolium buckwestiorum)* is known from the SeaCrest Development in Soquel. This occurrence is located approximately one mile to the northeast of the subject property, where the species occupies mesic areas in coastal prairie grassland. The biotic review was conducted within the blooming period of this species (typically blooms March - April). No individuals were observed during the March site visit and the potential presence of this species is considered low due to the compacted condition of the grassland and lack of mesic microhabitat conditions needed for the species growth.

The site does not support suitable habitat for special status plant species and none were observed, or are predicted, to occur on the property.

5.2 Special Status Wildlife

Special status wildlife species include those listed, proposed or candidate species by either the Federal or the State resource agencies, as well as those identified as State species of special concern. In addition, all raptor nests are protected by Fish and Game Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Special status wildlife species were evaluated for their potential presence in the project area as described in Table 3 below. No special status wildlife species are expected to occur at this property. However, birds may nest in the trees.

Table 3. List of Special Status Wildlife Species with Potential to Occur at Rubino - Mattison Lane, Property

SPECIES	STATUS[1]	HABITAT	POTENTIAL OCCURRENCE ON SITE
Invertebrates			
Ohlone tiger beetle *Cicindela ohlone*	FE	Coastal terrace prairie with sparse vegetation and openings, Watsonville loam soils	No suitable habitat
Zayante band-winged grasshopper *Trimerotropis infantilis*	FE	Openings in sand hills parkland habitat with Zayante sandy soils	No suitable habitat
Monarch butterfly *(Danaus plexippus)*	*	Eucalyptus, acacia and pine trees groves provide winter habitat when they have adequate protection from wind and nearby source of water	None
Fishes			
Steelhead *Oncorhynchus mykiss*	FT	Perennial creeks and rivers with gravels for spawning.	None
Tidewater goby *(Eucyclogobius newberryi)*	FE, CSC	Coastal lagoons and associated creeks up to 1 mile inland	None

Table 3. List of Special Status Wildlife Species with Potential to Occur at Rubino - Mattison Lane, Property

SPECIES	STATUS[1]	HABITAT	POTENTIAL OCCURRENCE ON SITE
California Roach *(Lavinia symnmetricus)*	CSC	Intermittent creeks and isolated pools.	Unlikely
Unarmored Threespine Stickleback *(Gasterosteus aculeatus williamsoni)*	FE, CE	Small shaded pools and intermittent streams	Unlikely
Amphibians			
Santa Cruz long-toed salamander *(Ambystoma macrodactylum croceum)*	FE, SE	Ponds for breeding with water at least into June. Riparian, oak woodland, coastal scrub for upland habitat.	None
California red-legged frog *(Rana aurora draytonii)*	FT, CSC	Riparian, marshes, estuaries and ponds with still water at least into June.	Unlikely given the very restricted presence of water.
Foothill yellow-legged frog *(Rana boylii)*	CSC	Perennial creeks with cobble substrate for egg attachment.	None
Reptiles			
Western pond turtle *(Actinemys marmorata)*	CSC	Creeks and ponds with water of sufficient depth for escape cover, and structure for basking; grasslands or bare areas for nesting.	None
Birds			
Western burrowing owl *Athene cunicularia hypugea*	CSC	Nests and winters in grasslands with burrows and short vegetation	None
Willow Flycatcher *(Empidomax traillii)*	SE	Moist shrubbery areas often with standing water.	Unlikely
Loggerhead Shrike *(Lanius ludovicianus)*	CSC	Open grassy areas with small trees and shrub.	Unlikely.
Yellow warbler *(Dendroica petechia brewsteri)*	CSC	Nests in dense riparian with dense understory.	Possible
Tricolored blackbird *(Agelaius tricolor)*	CSC	Dense bulrush and/or cattail vegetation adjacent to freshwater marshes	None
Mammals			
Pallid bat *(Antrozous pallidus)*	CSC	Roosts in rock outcroppings, caves, hollow trees, mines, building and bridges; extremely sensitive to human disturbance.	None
San Francisco dusky-footed woodrat *(Neotoma fuscipes annectens)*	CSC	Woodlands including oaks, willow riparian, Eucalyptus	Unlikely

[1] Key to status

SE = State listed as endangered species
FE = Federally listed as endangered species
ST = State listed as threatened species
FT = Federally listed as threatened species
CSC = California species of special concern
* = Species of local concern under County LCP

6.0 PROJECT REVIEW AND RECOMMENDATIONS

6.1 Thresholds of Significance

The thresholds of significance presented in the CEQA Guidelines (updated December 2018) were used to evaluate project impacts and to determine if implementation of the proposed project would pose significant impacts to biological resources. For this analysis, significant impacts are those that substantially affect, either directly or through habitat modifications:

a) A species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS or NMFS;
b) Riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
c) State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or state habitat conservation plan.

6.2 Environmental Impacts, Mitigation Measures and Significance Determination for The Proposed Project

The proposed project was evaluated for potential direct and indirect impacts to biotic resources, as per the CEQA criteria presented above. Impacts to sensitive habitats/resources and/or special status species were considered potentially significant. A discussion of project features and determination of potential impacts, as per CEQA criteria (a) through (e) are presented below. The project site is not located in an area subject to a Habitat Conservation plan, Natural Community Conservation plan or other approved conservation plan, as be item (f), above.

a) **Riparian Woodland.** The riparian woodland, including the open water and aquatic resources in Rodeo Creek, is a sensitive and regulated habitat. Project within this resource requires implementation of avoidance and minimization measures and compensatory mitigation for unavoidable impacts. Residential development (buildings and parking lot) will be setback more than 150 feet from the County-designated riparian corridor (see Figure 2) (i.e., outside the required 50-foot riparian buffer). The bioretention basin and storm drain outfall will also be located outside the riparian corridor and 50-foot buffer. No riparian vegetation will be impacted by the project.

   Due to the close proximity of the residential units to the riparian area there may be demand for residents to use this undeveloped open space for recreation. As such, incompatible uses may occur within the 50-foot riparian setback area and adjacent riparian woodland. The following measure is identified to avoid or reduce potential direct or indirect impacts to the riparian woodland from the residential development.

   Recommended Measure BIO-1: The project shall implement standard erosion control BMP's and riparian habitat protection measures during the construction period to minimize impacts to Rodeo Creek, including:

a. Install plastic mesh fencing at the perimeter of the work area to prevent inadvertent impacts to the adjacent forest vegetation, creek channel, and injury to adjacent native trees. Protective fencing shall be in place prior to ground disturbances and removed once all construction is complete. During construction, no grading, construction or other work shall occur outside the designated limits of work.
b. Install perimeter silt fencing and construction area limit-of-work fencing.
c. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored outside the designated limits of work.
d. Hand tools shall be used to trim vegetation to the extent necessary to gain access to the work area. All removed material/vegetation shall be removed from the riparian corridor.
e. All staging of equipment and materials, and refueling of equipment, shall be located in existing roadways and parking areas. The contractor shall prepare and implement a fuel spill prevention and clean-up plan.

c) **State or Federally Protected Wetlands.** Rodeo Creek was found to support federal jurisdictional areas. Federal jurisdiction typically extends to the Ordinary High Water Mark of waterway; however, jurisdiction can also include adjacent wetlands (vegetated areas above OHWM). No work is proposed within federal or state waters.

d) **Migratory Birds.** Nesting birds may occur in the landscape trees, shrubs, and riparian vegetation to be removed as well as in woodland adjacent to the project site. Removal of trees and other vegetation for construction has the potential to kill or injure nesting birds, if any are present in the construction area. Noise from construction has the potential to cause abandonment by adult birds of chicks or eggs in areas of close proximity to construction. Because most nesting birds are protected by the Migratory Bird Treaty Act, measures are listed below to avoid potentially significant impacts if any are present during construction.

Recommended Measure BIO-2: To avoid impacting nesting birds, if present, schedule construction to occur outside the bird nesting season. In the central coast region, the nesting season can extend from February 1 to September 1; therefore, construction occurring from September 2 to January 31 would be outside the. If this is not practical, then have a qualified biologist conduct a preconstruction survey for nesting birds. The surveys shall be conducted no more than 15 days prior to beginning of construction or vegetation removal. If nesting birds are observed within or adjacent to the project area, the following protective measures shall be implemented: 1) a buffer zone with highly visible tape or fencing shall be established around the active bird nest and no construction shall take place within the buffer zone until the biologist confirms that all young have fledged the nest. 2) For raptors, the buffer zone shall be approximately 250 feet, and adjusted according to the topography and visual sight line that may affect the nesting birds. 3) For other resident and migrant bird species, the buffer zone shall be at least 50 feet around the nest. The biologist shall monitor the nest, and advise the applicant when all young have fledged the nest. The biologist shall prepare a report of nest survey results, nest monitoring (if any), and the dates when the nesting was completed, a report suitable for the applicant to submit to County and State resource agencies. If construction stops during the bird breeding season for more than 2 weeks, a new breeding bird survey should be conducted, as birds may establish new nests during that 2-week period and then these birds could be impacts (e.g., nest abandonment, loss of nestlings) when construction re-starts.

e) **Local Policies or Ordinances.** The County has a sensitive habitat ordinance that regulates vegetation removal and other impacts within such habitats. Within the riparian corridor (sensitive

habitat), trees adjacent to construction could be inadvertently impacts from construction activities (e.g., limb breakage, damage to tree trunks, etc.). In addition, human uses within and/or in close proximity to the riparian corridor can adversely affect native wildlife utilization of the habitat.

Recommended Measure BIO-3: Trees to be retained that are located adjacent to construction shall be protected during construction, as directed by an arborist. If inadvertent damage to trees occurs, a remediation program should be developed by the arborist and implemented; the measures shall be inspected by the County of Santa Cruz Planning Department and arborist to determine the success of the remedial measures.

Recommended Measure BIO-4: To reduce project impacts from potential encroachment into the County-designated riparian corridor (woodland and buffer), the applicant shall install a low split-rail type fence at the 50-foot riparian buffer line. The fence would protect the riparian corridor and 50-foot buffer from indirect impacts from facility users (i.e., trampling, deposition of debris, etc.). Active recreational activities, such as play structures or other play areas, as well as urban gardening, should not be allowed within the riparian corridor or 50-foot buffer. The landowner or homeowner's association should be responsible for monitoring and enforcing use restrictions within the riparian corridor and 50-foot buffer.

7.0 REFERENCES AND LITERATURE CITED

California Department of Fish and Game. 2017 and 2020. California Natural Diversity Data Base. Rarefind 5 Program, Natural Heritage Division, Sacramento, CA.

California Native Plant Society, 2017 and 2020. Electronic Rare Plant Inventory, Soquel and surrounding eight quadrangles.

Hickman, J. 1993. The Jepson Manual Higher Plants of California. Berkeley: University of California Press.

Jepson Manual 2012. The Jepson Manual – Vascular Plants of California

Maureen Hamb-WCISA Certified Arborist WE2280
Professional Consulting Services

TREE RESOURCE EVALUATION
PROJECT IMPACT ANALYSIS

Mattison Lane
APN 025-211-02 & 07

Prepared for
Salvadore Rubino
c/o
Jim Weaver
Pacific Rim Planning Group

August 28, 2017

849 Almar Ave. Suite C #319
Santa Cruz, CA 95060
email: maureenah@sbcglobal.net

Telephone: 831-763-6919
Fax: 831-763-7724
Mobile: 831-234-7735

ASSIGNMENT/SCOPE OF SERVICES

Plans for an apartment complex have been completed for a large undeveloped property located on Mattison Lane in Santa Cruz County (APN 025-211-02 & 07). The site is mainly a flat grassland with tree growth concentrated off the property within the Caltrans/Highway 1 right of way.

The site also has a mixed riparian woodland adjacent to a portion of Rodeo Creek at the eastern property line.

The property owner's representative, Jim Weaver of Pacific Rim Planning Group retained me to inspect and evaluate the trees to determine potential impacts or need for tree removal in preparation for development. To complete the analysis, I have completed the following:

- Review site plan prepared by Roper Engineering (April 2017).
- Locate number and map 33 trees growing adjacent to the proposed development.
- Identify trees as to species and utilize trunk diameters from the site plan to determine "Significant" status.
- Visually inspect each tree to evaluate health status, structural integrity and suitability for incorporation into the development project.
- Rate each tree as "good", "fair", or "poor" based on overall condition and species tolerances.
- Provide recommendations for tree removal/retention based on construction impacts or overall condition.

SUMMARY

I have completed a visual assessment of 33 trees growing on/adjacent to an undeveloped property located at the end of Mattison Lane in Santa Cruz County. Tree growth is concentrated around the southern and eastern perimeter of the property. The majority of the trees are growing within the Caltrans ROW behind a chain link property boundary fence.

The development plans propose the construction of 11 detached apartment buildings and associated parking (42 spaces).

Tree removal will be necessary to construct the site as proposed. Three Monterey pines growing at the western property boundary will require removal. One pine is standing dead, another has failed in the past and one is infested with Red Turpentine beetles and tree condition is poor. Tree removal is intended as risk management and is not related to development impacts.

TREE INVENTORY OVERVIEW

To complete the inventory and assessment of trees on this project site, I made several site visits over the last several months. For purposes of identification, the tree locations have been documented on the attached tree location plan. The inventory includes the following information for 33 trees growing adjacent to site changes:

Tree Number

Numbered tags have not been affixed to each tree trunk as the chain link fence did not allow for access. Each tree has been assigned a number on the site plan prepared by Roper Engineering.

Tree Species

The inventory indicates the "common" name for each tree. The botanical names of the trees in the project boundaries are listed here:

- Coast live oak (*Quercus agrifolia*)
- Monterey pine (*Pinus radiata*)
- Monterey cypress (*Hesperocyparis macrocarpa*)
- Acacia (*Acacia sp*)

Trunk Diameter

The diameter was determined using the site plan prepared by Roper Engineering as the trees were not accessible inside the fenced ROW.

Tree Health & Structure

Tree health and tree structure are evaluated separately. A "healthy" tree can be weakly structured and represent a risk; a well-structured tree can be "unhealthy" or in poor vigor.

Each tree is inspected to note vitality, growth rates and the presence of disease or decay. In addition, a structural analysis is completed to note weaknesses or defects that could indicate a risk.

Comments/Recommendations

A short summary of tree attributes and locations in relationship to proposed development are included in this portion of the inventory. In addition, any special treatment recommendations such as clearance pruning or root pruning are also included.

OBSERVATIONS

Site Description
The site is an undeveloped property of approximately 2.3 acres that borders the public road (Mattison Lane) to the north and the Highway 1 ROW to the south. A portion of Rodeo Creek is at the eastern end of the property.

The surroundings are a mix of residential and commercial properties including a private elementary school.

Tree Description
The trees are concentrated along the southern and eastern property edges. The Caltrans right of way has been densely planted with both native and non-native trees and shrubs. Young to semi-mature coast live oaks are the dominant species along the fence line. Other species that are intermixed include coast redwood, pine and acacia. The trees are generally in fair condition with suppressed canopies due to density.

A group of mature coast live oaks mixed with California bay laurel, buckeye and willow comprise the riparian woodland at the eastern end of the site. The mature oaks are in poor condition, canopies are thin with foliage concentrated in the treetops. Large diameter dead and decayed branching are visible throughout the canopies.

Several significant mature coast redwood, cypress and oaks are growing on adjacent residential properties on the northeast property boundary.

Oak Woodland Act
Public Resources code 2183.4 provides guidelines for determining impacts to oak woodlands proposed for conversion. This project site does not meet the criteria established by California Fish and Wildlife Department Code Section 1361. An oak woodland must have at least 10% oak canopy cover.

Construction Impacts
The impacts to trees on the site and within the ROW have been evaluated based on the development plans. Any underground drainage structures within the riparian woodland must be installed at least 15 feet from any tree in the zone.

In addition to the 11 separate apartment buildings and the associated parking areas the site will be graded and a drainage system that includes a retention/detention pond is proposed. The pond will be located approximately 50 feet from the County designated riparian zone.

A sound wall is proposed along a portion of the southern property boundary abutting the ROW. At least eight trees are within a few feet of the proposed wall. In addition, the canopies of several trees extend over the fence and into the development site.

The construction of the sound wall will require excavation along the property boundary to install the footing that will provide support. The young oaks (under 12 inches in trunk diameter) can tolerate encroachment into the root zone within four to six feet of the trunks. If roots one inch in diameter or larger are encountered during excavation they should be cleanly cut using pruners, loppers or a sawzall.

Two mature coast live oak trees (#7 and #12) are within a few feet of the wall. Excavation will likely expose structural roots. Proper root pruning as described above will be implemented to reduce the chance of root decay.

Several trees will require pruning (photo at right) to provide clearance for equipment and wall placement. The extent of canopy pruning will be evaluated once the specific plans for the wall have been provided.

The mature trees growing on the adjacent residential properties will not be impacted by the proposed development.

All retained trees will be protected by a system of fencing and straw bale barricades. The exact locations of the protection measures will be defined once the specifics of the sound wall plan has been evaluated.

Tree Removal

No tree removal will be required to develop the site as proposed. I have recommended the removal of the three mature Monterey pines growing at the western property boundary.

Tree #1 is standing dead, tree #2 is infested with Red Turpentine Beetles (*Dendroctonus valens*). At least 50% of the canopy is dead and the decline will continue due to the beetle infestation (photo at left). Tree #3 died at some point in the past and has since failed, a 10-foot section of the trunk still remains.

CONCLUSION

The apartment complex proposed for this undeveloped property can be completed with minor impacts to the existing trees. Three dead/dying Monterey pines will require removal to eliminate the risk associated with anticipated branch/stem failure.

The existing live trees will be retained and utilized for their current purpose, providing screening and buffering from Highway One. The trees in the riparian woodland will be retained, any underground drainage structures will avoid trees with an exclusion zone of at least 15 feet from the tree trunks.

Any questions regarding the trees on this site or the content of this report can be directed to my office.

Respectfully submitted,
Maureen Hamb- Certified Arborist WE2280

Mattison Lane
Tree Inventory

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
1	Monterey pine	24.4	poor	poor	Standing dead/Remove to eliminate risk
2	Monterey pine	44.6	poor	poor	In decline, infested with Red Turpentine beetles/Remove due to condition
3	Monterey pine	37.2	poor	poor	Previous whole tree failure, only lower trunk remains
4	coast live oak	7	fair	fair	Young tree growing in ROW, minor suppression due to dense surroundings. Several feet from proposed sound wall/Retain and protect
5	Monterey pine	10	fair	fair	Growing in ROW thinning lower canopy. Several feet from proposed sound wall. Retain and protect
6	coast live oak	11	fair	fair	Young tree growing in ROW, minor suppression due to dense surroundings. Several feet from proposed sound wall/Retain and protect

Mattison Lane
Tree Inventory

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
7	coast live oak	27	good	fair	Mature tree with broad canopy that extends from ROW into development site. Several feet from proposed sound wall/Retain and protect, may require proper root pruning for sound wall footing. Canopy pruning for clearance may be required
8	coast live oak	12	fair	fair	Growing in ROW thinning lower canopy. Several feet from proposed sound wall. Retain and protect
9	acacia	10	poor	poor	Leaning structure, thinning canopy. Within ROW approx. 8-10 feet from proposed sound wall/Retain for screening purposes
10	various	1 to 8	fair/poor	fair	Within ROW, various species of shrubs and small trees including pittosporum, acacia, small oaks cotoneaster coast redwood and pine/Retain for screening
11	coast live oak	8	fair	fair	Young tree growing in ROW, minor suppression due to dense surroundings. Several feet from proposed sound wall/Retain and protect
12	coast live oak	24	fair	fair	Mature tree with broad canopy that extends from ROW into development site. Several feet from proposed sound wall/Retain and protect, may require proper root pruning for sound wall footing. Canopy pruning for clearance may be required

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
13	coast live oak	15	fair	fair	Growing in ROW thinning lower canopy. Several feet from proposed sound wall. Retain and protect
14	coast live oak	16	fair	fair	Growing in ROW approx. 20' from proposed wall/No impacts anticipated
15	coast live oak	10	good	fair	Young tree growing in ROW, minor suppression due to dense surroundings. Several feet from proposed sound wall/Retain and protect
16	coast live oak	16	good	fair	Healthy with two main stems/No impacts anticipated
17	coast live oak	10	fair	fair	Young tree/No impacts anticipated
18	coast live oak	10	fair	fair	Young tree just outside ROW, minor canopy thinning. Growing at edge of proposed parking area/Impacts are high, tree removal may be necessary. Determinations can be made once site staking is in place.

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
19	coast live oak	10	fair	fair	Young tree portion of canopy extends into site/Construction impacts are not anticipated, minor canopy pruning may be required
20	coast live oak	11	fair	fair	Young tree portion of canopy extends into site/Construction impacts are not anticipated, minor canopy pruning may be required
21	coast live oak	24	good	fair	Mature tree with broad and spreading canopy. Growing outside the ROW/Impacts not anticipated, protect during construction
22	coast live oak	12	fair	fair	Young tree growing in ROW/Impacts not anticipated
23	coast live oak	9	fair	fair	Young tree growing in ROW/Impacts not anticipated
24	coast live oak	11	fair	fair	Young tree growing in ROW/Impacts not anticipated

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
25	coast live oak	16	good	fair	Growing in ROW, within 10 feet of grading proposed for the detention/retention pond/Protect with fencing and barricades
26	cypress	33.7 @ base	fair	fair	Mature tree with multiple large stems/Protect with fencing and barricades during construction
27	coast live oak	28	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk
28	coast live oak	24	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk
29	coast live oak	24	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk
30	coast live oak	18	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk

Tree #	Species	Diameter @ 54"	Health	Structure	Comments/Recommendations
31	coast live oak	12	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk
32	coast live oak	28	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk
33	coast live oak	24	poor	poor	Mature tree growing in suppressed environment. Canopy is thin and concentrated at the tree top. Large diameter dead and decayed branching. Component of riparian woodland/Retain and avoid impacts within 20 feet of trunk

OLBERDING ENVIRONMENTAL, INC.
Wetland Regulation and Permitting

April 17, 2018

Mr. Dave Guthridge
Light, Air & Space Construction
1701 Little Orchard Street
San Jose, California 95158

SUBJECT: Mattision Lane Property, Santa Cruz - CNDDB Database Query Results

Dear Mr. Guthridge:

On September 29, 2017, Olberding Environmental, Inc. conducted a field reconnaissance survey of the Mattison Lane Property (Property) for the purpose of identifying sensitive plant and wildlife species, sensitive habitats, and biological constraints potentially occurring on the Property. The Property surveyed is comprised of approximately 2.54 acres located in Santa Cruz County, California.

Results of the initial reconnaissance survey indicate that the Property was comprised of annual grassland, mixed oak woodland, and riparian woodland habitats. The Property also contains wetlands/waters that may be considered jurisdictional by the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The Property contains a perennial drainage (Rodeo Creek Gulch) that flows north to south, along the Property's eastern boundary. If any project related activities are to occur within these features an Army Corps of Engineers jurisdictional delineation would be required.

A query of the California Natural Diversity Database (CNDDB) showed that two special-status plant species have a moderate to low potential to occur on the Property. The white-rayed pentachaeta (*Pentachaeta bellidiflora*) was identified as having a potential to occur on the Property based on the presence of suitable habitat for this species and a non-specific CNDDB occurrence (#11) located within the vicinity of the Property described as "the vicinity of Santa Cruz" in the CNDDB occurrence. Suitable habitat for this plant species occurs throughout the western half of the Property within the annual grasslands, though the last CNDDB occurrence for this species was from 1933 and this species is possibly extirpated. Suitable habitat also exists on the Property for the Santa Cruz tarplant (*Holocarpha macradenia*) within the same annual grassland habitat. A CNDDB occurrence (#3) for Santa Cruz tarplant was recorded for a coastal terrace grassland near Soquel. There are also U.S. Fish and Wildlife Service Designated Critical Habitat units for the Santa Cruz Tarplant located approximately 0.6 miles north of the Property. Olberding Environmental recommends that a rare plant survey be conducted prior to any construction activities to document presence or absence of these species and to determine the need for mitigation.

A total of five bird species were identified to have a moderate to high potential to occur on the Property in a nesting or foraging capacity. The Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*) all have a moderate to high potential to occur in a nesting and/or foraging

3170 Crow Canyon Place, Suite 260 • San Ramon, CA 94583 • Office: (925) 866-2111 • Fax: (925) 866-2126 •
Email: Jeff@Olberdingenv.com

capacity on the Property within the mixed oak woodland and riparian woodland habitats. There is a non-specific CNDDB occurrence for yellow rail (#42) in the vicinity of the Property from 1905, but no suitable marsh habitat for yellow rail exists in the vicinity of the Property and this bird is not likely to occur. One of the birds listed above (red-tailed hawk) was observed foraging above the Property during the site visit. If project construction-related activities such as tree and vegetation removal or grading take place during the nesting season (February through August), preconstruction surveys for nesting passerine birds and raptors are recommended.

The CNDDB also listed one occurrence of California giant salamander (*Dicamptodon ensatus*) within a 2-mile radius of the Property, as well as two occurrences for western pond turtle (*Emys marmorata*), one foothill yellow-legged frog (*Rana boylii*) occurrence, one Ohlone tiger beetle (*Cicindela ohlone*) occurrence, one Zayante band-winged grasshopper (*Trimerotrpis infantilis*) occurrence, as well as occurrences for pallid (*Antrozous pallidus*) and Townsend's big eared bats (*Corynorhinus townsendii*).

Of these species, marginal habitat for California giant salamander, western pond turtle, and foothill yellow-legged frog may exist when water is present within Rodeo creek, though the creek was dry at the time of the field reconnaissance survey and the likelihood of these species being present is low. Suitable habitat does exist for roosting or foraging of pallid and Townsend's big eared bats, as well as other bat species, within the mixed oak, and riparian woodland habitats. A preconstruction acoustic bat surveys for potential roosting bats is recommended.

If you have any questions, please feel free to contact me at (925) 866-2111.

Sincerely,

Jeff Olberding
Regulatory Scientist

Figure 1: Riparian Habitat Map
Mattison Lane Property
Santa Cruz County, California

193 Blue Ravine Rd., Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Map Revision Date: 4/19/2018

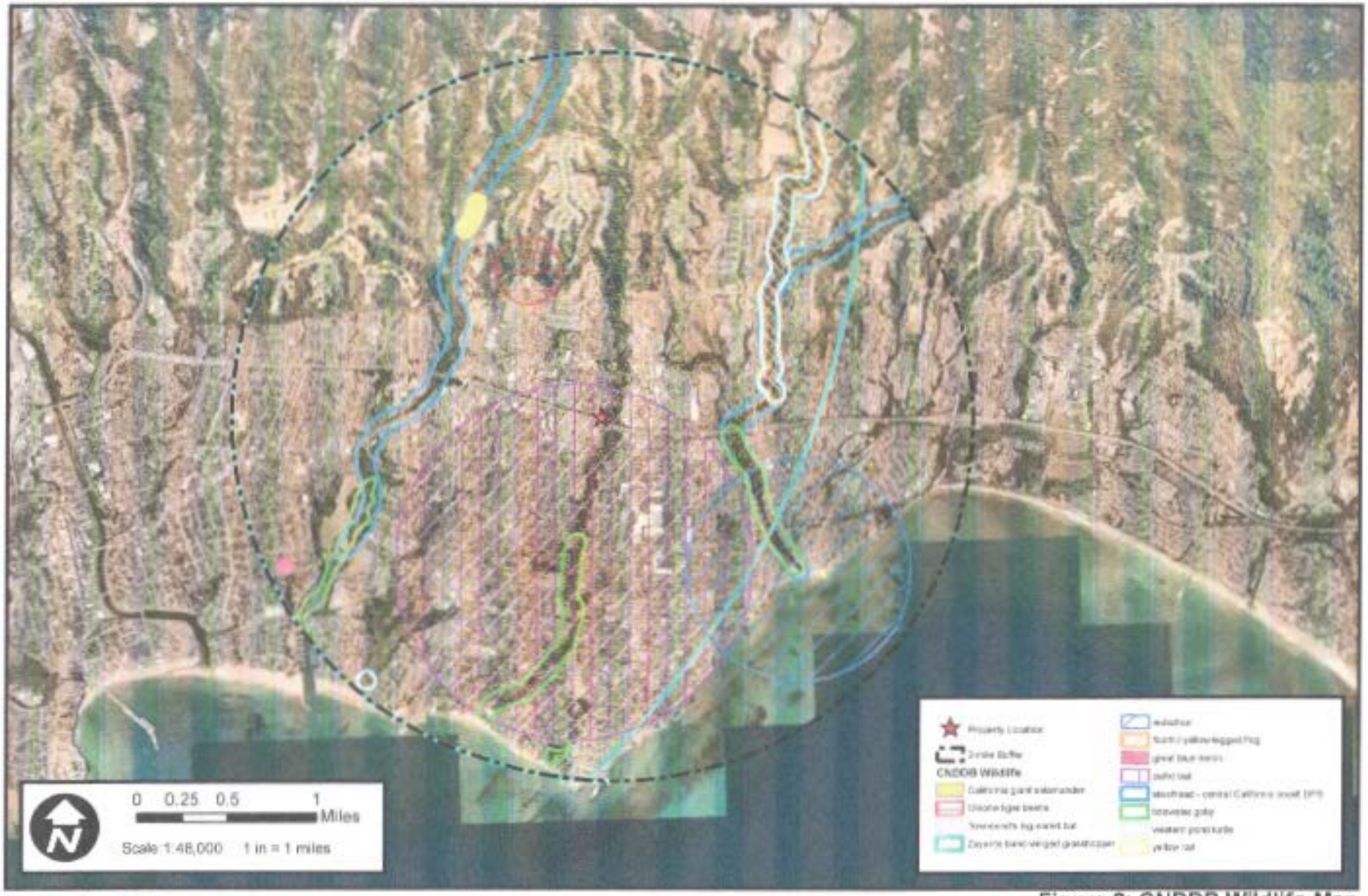


Figure 2: CNDDB Wildlife Map
Mattison Lane Property
Santa Cruz County, California

193 Blue Ravine Rd., Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Map Revision Date: 1/26/2018

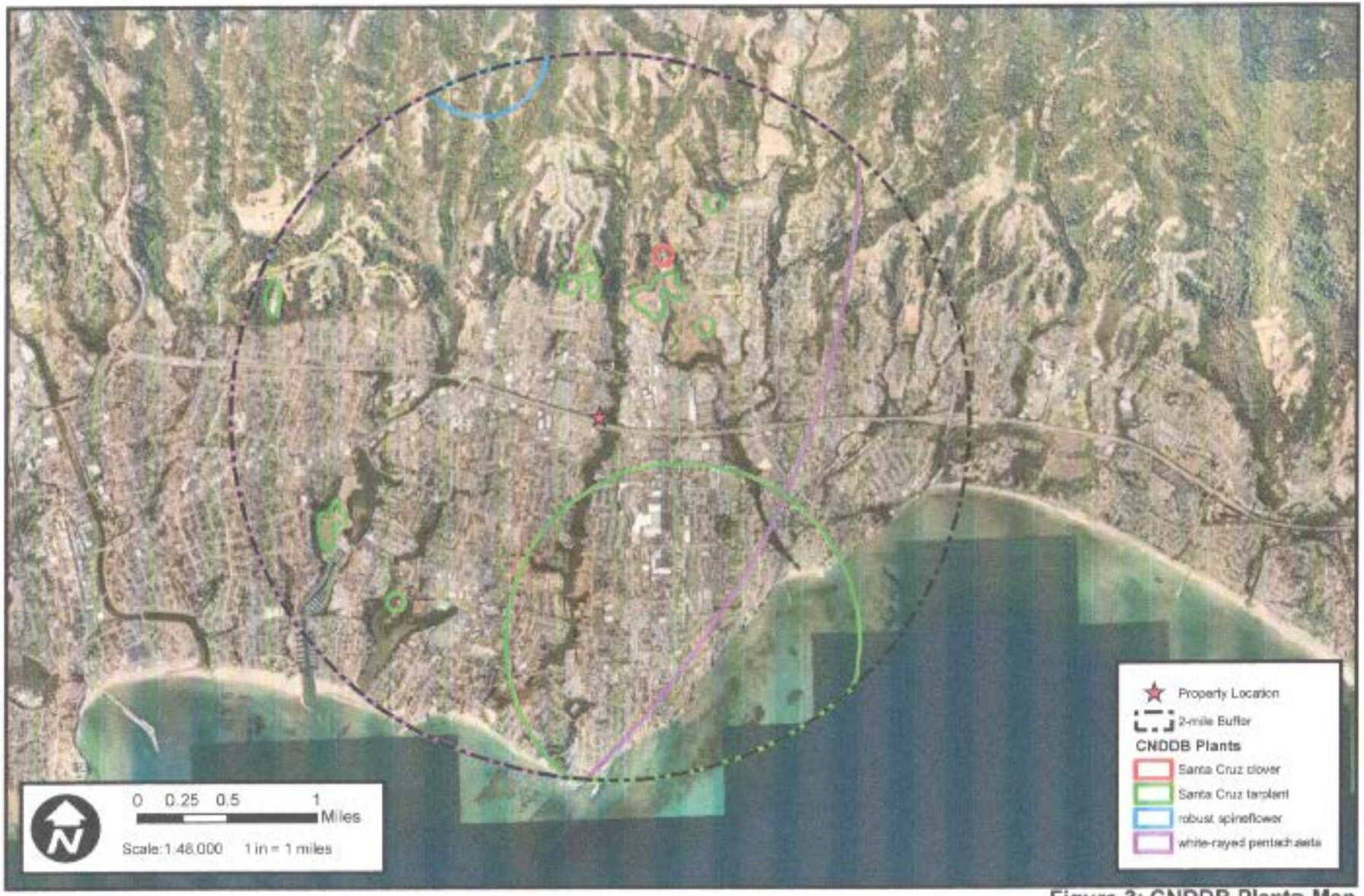
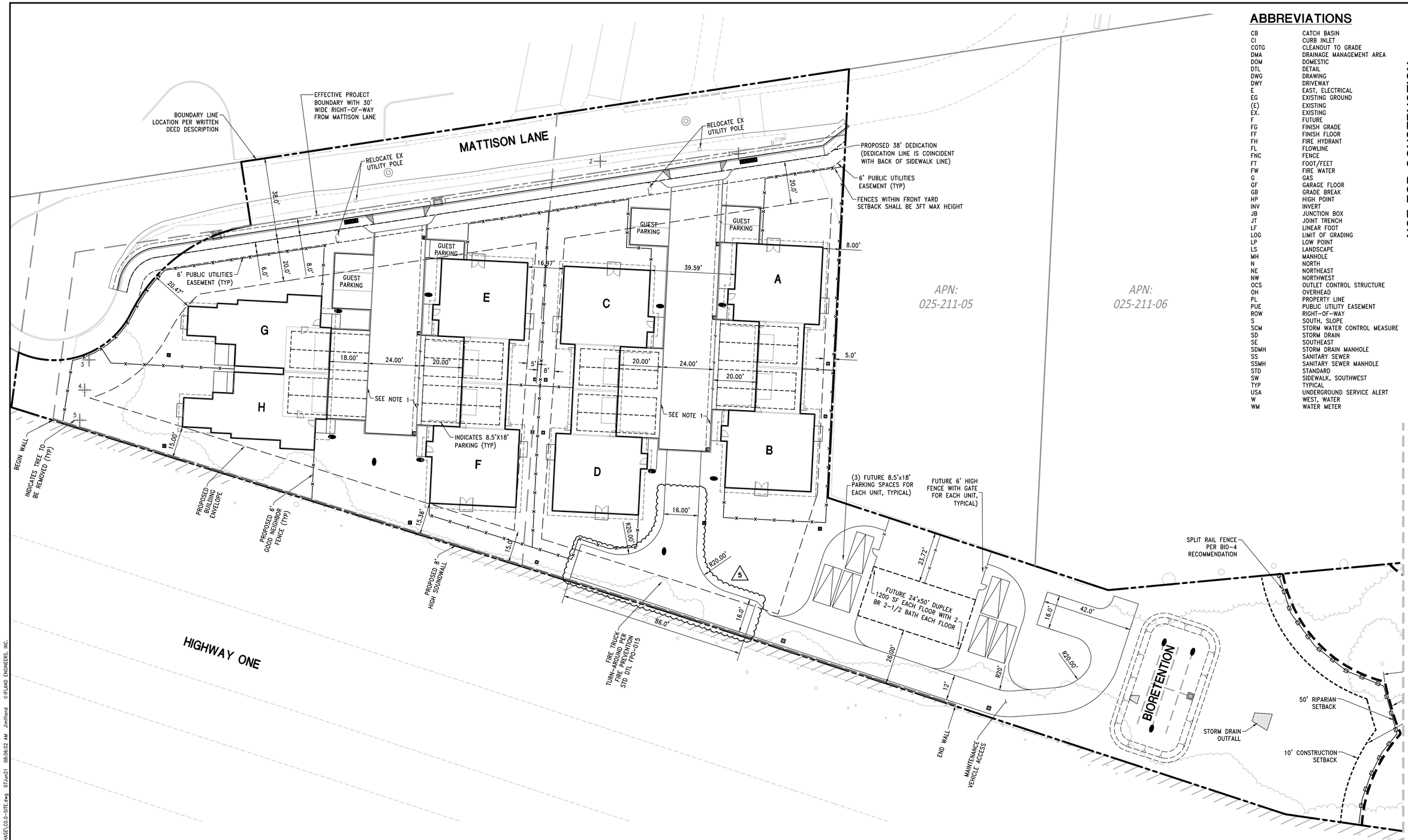


Figure 3: CNDDB Plants Map
Mattison Lane Property
Santa Cruz County, California

193 Blue Ravine Rd., Ste. 185
Folsom, CA 95630
Phone: (916) 985-1188

Map Revision Date: 1/26/2018



ABBREVIATIONS

CB	CATCH BASIN
CI	CURB INLET
COTG	CLEANOUT TO GRADE
DMA	DRAINAGE MANAGEMENT AREA
DOM	DOMESTIC
DTL	DETAIL
DWG	DRAWING
DWY	DRIVEWAY
E	EAST, ELECTRICAL
EG	EXISTING GROUND
(E)	EXISTING
EX.	EXISTING
F	FUTURE
FG	FINISH GRADE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOWLINE
FNC	FENCE
FT	FOOT/FEET
FW	FIRE WATER
G	GAS
GF	GARAGE FLOOR
GB	GRADE BREAK
HP	HIGH POINT
INV	INVERT
JB	JUNCTION BOX
JT	JOINT TRENCH
LF	LINEAR FOOT
LOG	LIMIT OF GRADING
LP	LOW POINT
LS	LANDSCAPE
MH	MANHOLE
N	NORTH
NE	NORTHEAST
NW	NORTHWEST
OCS	OUTLET CONTROL STRUCTURE
OH	OVERHEAD
PL	PROPERTY LINE
PUE	PUBLIC UTILITY EASEMENT
ROW	RIGHT-OF-WAY
S	SOUTH, SLOPE
SCM	STORM WATER CONTROL MEASURE
SD	STORM DRAIN
SE	SOUTHEAST
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
SW	SIDEWALK, SOUTHWEST
TYP	TYPICAL
USA	UNDERGROUND SERVICE ALERT
W	WEST, WATER
WM	WATER METER

SURVEY NOTES

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN HEREON WAS PROVIDED TO IFLAND ENGINEERS, INC. BY IFLAND SURVEY, AND IS BASED UPON A FIELD SURVEY DATED MARCH, 2005 AND A SUPPLEMENTAL SURVEY DATED FEBRUARY, 2020.
2. SITE CONTOURS SHOWN ON THIS MAP WERE DERIVED FROM 2005 TOPOGRAPHIC SURVEY, AND ADDITIONAL COMPILED DATA BY ROPER ENGINEERING, PER ROPER ACAD PROVIDED DRAWING (160.3PGP.DWG). IFLAND SURVEY ASSUMES NO RESPONSIBILITY FOR THE COMPLETE ACCURACY THEREOF.
3. ADDITIONAL BOUNDARY RESOLUTION DATA ON FILE.
4. A PRELIMINARY TITLE REPORT, BY FIRST AMERICAN TITLE INSURANCE COMPANY, DATED JANUARY 10, 2020, ORDER NUMBER NCS-998249-SC, WAS REVIEWED FOR THIS SURVEY.
5. NO REFERENCE OR INDICATION OF FORMAL STREET DEDICATION IS REFERENCED.
6. EASEMENT FOR EXISTING SEWER MAIN IN MATTISON LANE PER BOOK 1408, PAGE 314 IS ILLEGIBLE AND NOT PLOTTED.

BENCHMARK

THE ELEVATIONS SHOWN ON THIS SURVEY ARE ON AN ASSUMED DATUM.
THE SITE BENCHMARK IS SEWER MANHOLE RIM LOCATED IN THE CUL-DE-SAC AT THE END OF MATTISON LANE.

BENCHMARK ELEVATION = 120.82' (ASSUMED DATUM)

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF MATTISON LANE, BEING A ROTATION OF 01°01'48" FROM RECORD BEARING OF
N 07°22'30" W, AS SHOWN ON THAT MAP FILED IN VOLUME 122 OF MAPS, AT PAGE 22, SANTA CRUZ COUNTY RECORDS.

BASIS OF BEARINGS = N 08°24'18" E

NOTES

1. PAINT FIRE LANE STRIPE RED WITH "FIRE LANE NO PARKING" IN WHITE MARKED EVERY 30-FEET.
2. PROPOSED UTILITY POLE RELOCATION TO BE VERIFIED BY JOINT TRENCH CONSULTANT PRIOR TO CONSTRUCTION.
3. BUILDING PERMITS FOR THE INITIAL 8 UNITS WILL BE APPLIED FOR, ALL AT THE SAME TIME, UPON THE COMPLETION AND ACCEPTANCE OF THE FINAL CONSTRUCTION DOCUMENTS. CONSTRUCTION OF THE INITIAL 8 UNITS IS NOT ANTICIPATED TO BE PHASED.
4. BUILDING PERMITS FOR FUTURE UNITS AND PARKING WILL BE APPLIED FOR WITHIN TWO YEARS OF WHEN THE SEWER MORATORIUM IS LIFTED.

20' 0 10' 20' 40'
GRAPHIC SCALE: 1 INCH = 20 FEET

CALL BEFORE YOU DIG USA 811

NOT FOR CONSTRUCTION

REVISION	DATE
5	05/31/2021
4	04/12/2021
3	02/12/2021
2	12/02/2020
1	10/12/2020

IFLAND ENGINEERS
CIVIL ENGINEERING ■ LAND PLANNING ■ STRUCTURAL DESIGN
6300 SOQUEL AVE, SUITE 101
SANTA CRUZ, CA 95062
TEL (831) 426-3560
FAX (831) 426-1763
www.iflandengineers.com

PRELIMINARY SEE SHEET C1.1

SITE PLAN

MATTISON LANE

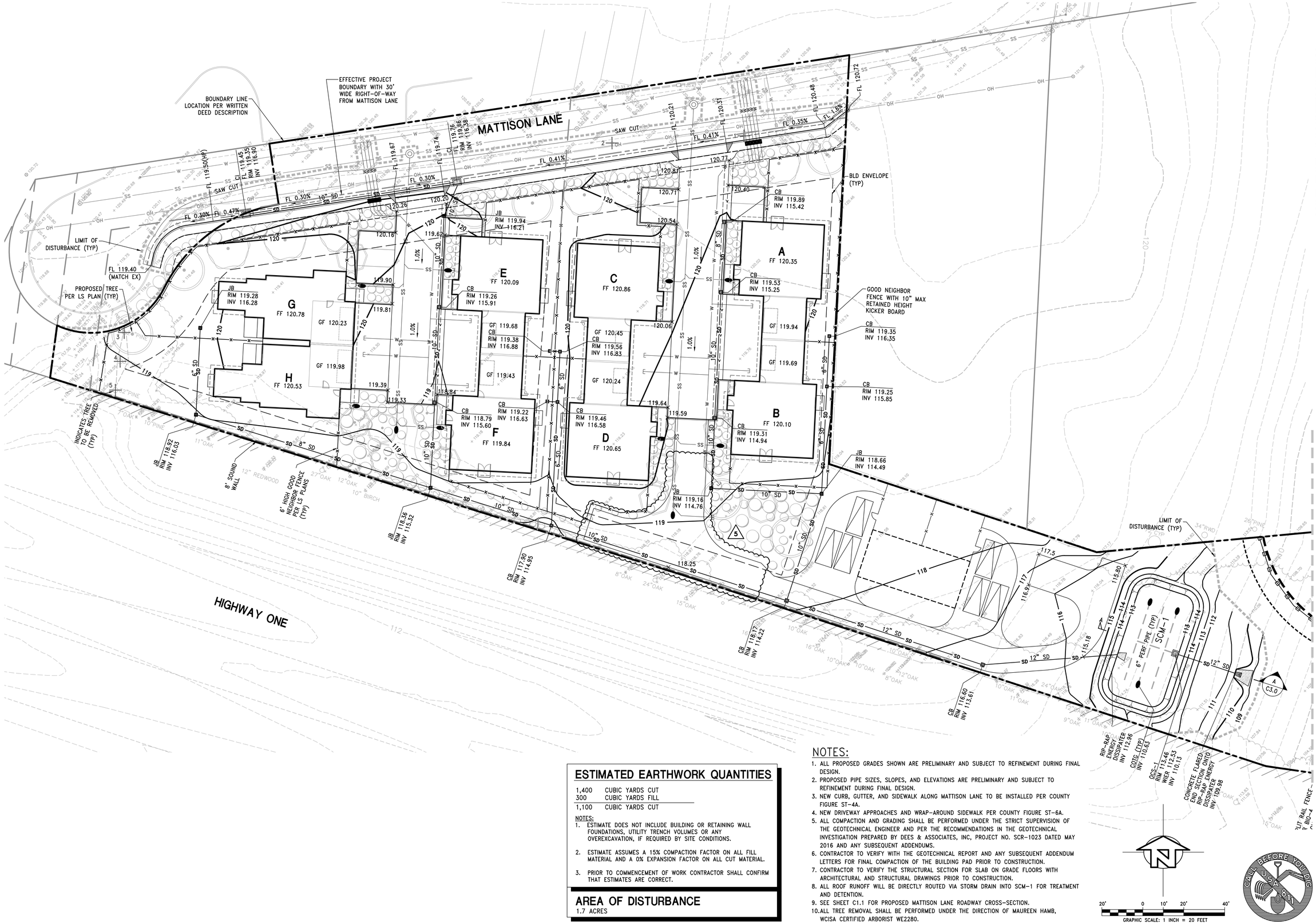
2740 MATTISON LANE, SANTA CRUZ, CALIFORNIA

APN 025-211-02 & 07
PLANNING

DRAWN GS
DESIGN GS
DATE 04/01/2020

SHEET C0.0

JOB NO. 20001



ESTIMATED EARTHWORK QUANTITIES

1,400	CUBIC YARDS CUT
300	CUBIC YARDS FILL
1,100	CUBIC YARDS CUT

NOTES:
1. ESTIMATE DOES NOT INCLUDE BUILDING OR RETAINING WALL FOUNDATIONS, UTILITY TRENCH VOLUMES OR ANY OVEREXCAVATION, IF REQUIRED BY SITE CONDITIONS.
2. ESTIMATE ASSUMES A 15% COMPACTION FACTOR ON ALL FILL MATERIAL AND A 0% EXPANSION FACTOR ON ALL CUT MATERIAL.
3. PRIOR TO COMMENCEMENT OF WORK CONTRACTOR SHALL CONFIRM THAT ESTIMATES ARE CORRECT.

AREA OF DISTURBANCE

1.7 ACRES

NOTES:

1. ALL PROPOSED GRADES SHOWN ARE PRELIMINARY AND SUBJECT TO REFINEMENT DURING FINAL DESIGN.
2. PROPOSED PIPE SIZES, SLOPES, AND ELEVATIONS ARE PRELIMINARY AND SUBJECT TO REFINEMENT DURING FINAL DESIGN.
3. NEW CURB, GUTTER, AND SIDEWALK ALONG MATTISON LANE TO BE INSTALLED PER COUNTY FIGURE ST-4A.
4. NEW DRIVEWAY APPROACHES AND WRAP-AROUND SIDEWALK PER COUNTY FIGURE ST-6A.
5. ALL COMPACTION AND GRADING SHALL BE PERFORMED UNDER THE STRICT SUPERVISION OF THE GEOTECHNICAL ENGINEER AND PER THE RECOMMENDATIONS IN THE GEOTECHNICAL INVESTIGATION PREPARED BY DEES & ASSOCIATES, INC, PROJECT NO. SCR-1023 DATED MAY 2016 AND ANY SUBSEQUENT ADDENDUMS.
6. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL REPORT AND ANY SUBSEQUENT ADDENDUM LETTERS FOR FINAL COMPACTION OF THE BUILDING PAD PRIOR TO CONSTRUCTION.
7. CONTRACTOR TO VERIFY THE STRUCTURAL SECTION FOR SLAB ON GRADE FLOORS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION.
8. ALL ROOF RUNOFF WILL BE DIRECTLY ROUTED VIA STORM DRAIN INTO SCM-1 FOR TREATMENT AND DETENTION.
9. SEE SHEET C1.1 FOR PROPOSED MATTISON LANE ROADWAY CROSS-SECTION.
10. ALL TREE REMOVAL SHALL BE PERFORMED UNDER THE DIRECTION OF MAUREEN HAMB, WCISA CERTIFIED ARBORIST WE2280.

NOT FOR CONSTRUCTION

	REVISION	DATE
5	REVISION - 5	05/31/2021
JAI	REVISION - 4	04/12/2021
JAI	REVISION - 3	02/12/2021
JAI	REVISION - 2	12/02/2020
GS	REVISION - 1	10/12/2020
BT		

IFLAND ENGINEERS
5300 SOQUEL AVE, SUITE 101
SANTA CRUZ, CA 95062
TEL 831 426-5600
FAX 831 426-1763
www.iflandengineers.com
CIVIL ENGINEERING ▪ LAND PLANNING ▪ STRUCTURAL DESIGN

PRELIMINARY

GRADING AND DRAINAGE PLAN

MATTISON LANE

2740 MATTISON LANE, SANTA CRUZ, CALIFORNIA

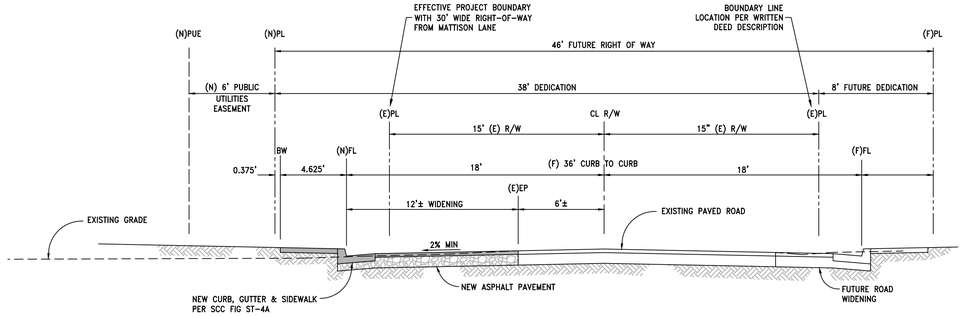
APN 025-211-02 & 07

PLANNING

DRAWN GS | DESIGN GS | DATE 04/01/2020

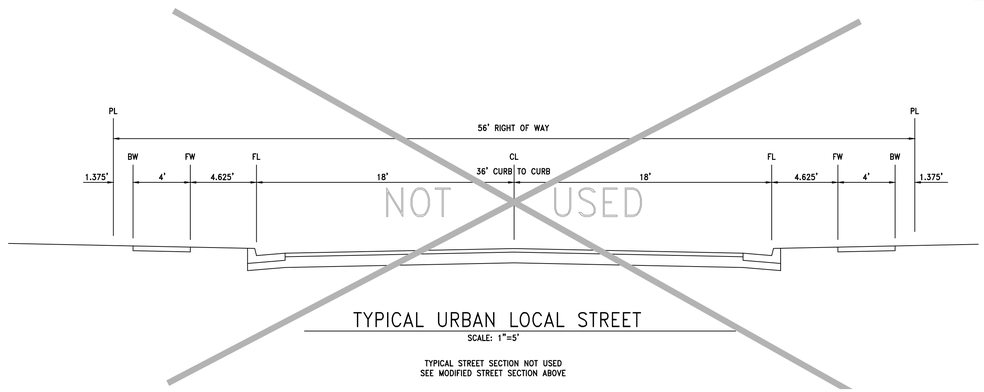
SHEET C1.0

JOB NO. 20001



PROPOSED MATTISON LANE SECTION

SCALE: 1"=5'



TYPICAL URBAN LOCAL STREET

SCALE: 1"=5'

TYPICAL STREET SECTION NOT USED
SEE MODIFIED STREET SECTION ABOVE

NOT FOR CONSTRUCTION

	REVISION	DATE
JAI	5	05/31/2021
JAI	4	04/12/2021
JAI	3	02/12/2021
JAI	2	12/02/2020
GS	1	10/12/2020
BY	REVISION	DATE

5300 SOQUEL AVE, SUITE 101
SANTA CRUZ, CA 95062
TEL (831) 426-9555
FAX (831) 426-1763
www.ifflandengineers.com
IFLAND ENGINEERS
CIVIL ENGINEERING ▪ LAND PLANNING ▪ STRUCTURAL DESIGN

PRELIMINARY

GRADING AND DRAINAGE PLAN

MATTISON LANE

2740 MATTISON LANE, SANTA CRUZ, CALIFORNIA

APN 025-211-02 & 07

PLANNING

DRAWN	DESIGN	DATE
GS	GS	04/01/2020

SHEET C1.1

JOB NO. 20001

20' 0 10' 20' 40'
GRAPHIC SCALE: 1 INCH = 20 FEET

CALL BEFORE YOU DIG USA 811

NOT FOR CONSTRUCTION

REVISION	DATE
5	05/01/2021
4	04/12/2021
3	02/12/2021
2	12/02/2020
1	10/12/2020

IFLAND ENGINEERS
5300 SOQUEL AVE, SUITE 101
SANTA CRUZ, CA 95062
TEL (831) 426-3560
FAX (831) 426-3703
www.iflandengineers.com
CIVIL ENGINEERING ▪ LAND PLANNING ▪ STRUCTURAL DESIGN

PRELIMINARY

UTILITY PLAN

MATTISON LANE

2740 MATTISON LANE, SANTA CRUZ, CALIFORNIA

APN 025-211-02 & 07

PLANNING

DRAWN GS | DESIGN GS | DATE 04/01/2020

SHEET C2.0

JOB NO. 20001

MATTISON LANE
EX 6" SS, S=0.004

EX 6" SS, S=0.0044

EX 8" CI

EX SSMH
RIM 121.42
INV 113.25 (SHELF)

EX SSMH
RIM 120.63
INV 114.5 (SHELF)

SSMH
RIM 120.93
INV 113.74

SSMH
RIM 120.19
INV 114.35

SSMH
RIM 120.80
INV 115.3 (SHELF)

CI
FL 119.45
RIM 119.35
INV 116.99

CL 119.76
RIM 119.66
INV 116.38

EX FH
#1062

UTILITY POLE TO BE RELOCATED AS SHOWN

EX OH WIRES TO BE REMOVED PER PLANS BY OTHERS

EX UTILITY POLE TO REMAIN

EX WM TO BE REMOVED

EX OH LINES TO BE ADJUSTED WITH NEW POLE LOCATIONS

EX UTILITY POLE TO REMAIN

PROPOSED TREE PER LS PLAN (TYP)

INDICATES TREE TO BE REMOVED (TYP)

W/DW PER SCWD DTL 4A (TYP)

6" PVC

4" SS LAT FIG SS-12 (TYP)

20LF-6" SS S=0.02

135LF-6" SS S=0.02

A
FF 120.35

B
FF 120.10

C
FF 120.86

D
FF 120.65

E
FF 120.09

F
FF 119.84

G
FF 120.78

H
FF 120.53

GF 119.94
GF 119.69
GF 120.45
GF 120.24
GF 119.68
GF 119.43
GF 120.23
GF 119.98

CB RIM 119.89 INV 115.42
CB RIM 119.53 INV 115.25
CB RIM 119.35 INV 116.35
CB RIM 119.25 INV 115.85
CB RIM 119.31 INV 114.94
CB RIM 119.26 INV 115.91
CB RIM 119.38 INV 116.88
CB RIM 119.56 INV 116.83
CB RIM 119.46 INV 116.58
CB RIM 118.79 INV 115.60
CB RIM 119.22 INV 116.63
JB RIM 119.94 INV 116.21
JB RIM 119.28 INV 116.28
JB RIM 118.66 INV 114.49
JB RIM 119.16 INV 114.76
JB RIM 118.92 INV 116.03
JB RIM 118.36 INV 115.32
CB RIM 117.90 INV 114.95
CB RIM 118.17 INV 114.22
CB RIM 116.60 INV 113.61
OGS-1 RIM 113.46 WIER 112.53 INV 110.13

COTG INV 117.05
COTG INV 117.76

PROPOSED FUTURE DUPLEX WILL REQUIRE SS PUMP

STUB FOR FUTURE UNIT CONNECTION

SCM-1

HIGHWAY ONE

FIRE FLOW DATA					
FLOW DATA PROVIDED BY CITY OF SANTA CRUZ WATER DEPARTMENT DATED 02/18/2020.					
HYDRANT #	STATIC PRESSURE (PSI)	RESIDUAL PRESSURE (PSI)	FLOW (GPM)	FLOW @ 20PSI (GMP)	TEST DATE
1062	66	60	1061	3187	03/22/2011

NOTES
1. ALL SEWER LATERALS SHALL BE INSTALLED WITH BACKFLOW DEVICES PER FIG. SS-14.
2. PROPOSED UTILITY POLE RELOCATION IS SHOWN FOR REFERENCE ONLY. REFER TO PLANS BY OTHERS FOR DESIGN INFORMATION.

20' 0 10' 20' 40'
GRAPHIC SCALE: 1 INCH = 20 FEET

CALL BEFORE YOU DIG USA 811

MATTISON LANE

HIGHWAY ONE

ARROWS INDICATE DIRECTION OF SURFACE RUNOFF (TYP)

FUTURE DUPLEX & PARKING

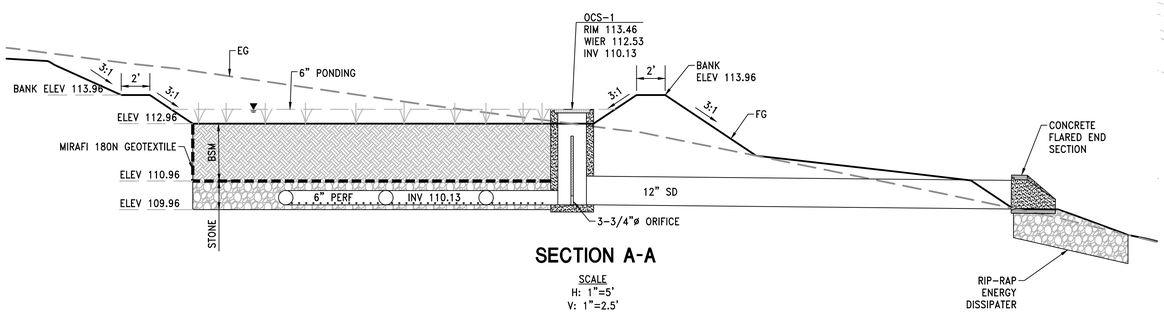
SCM-1

A
C3.0

5

SECTION A-A

SCALE
H: 1"=5'
V: 1"=2.5'



NOTES:

1. RUNOFF FROM EACH ROOF AREA TO BE PIPED INTO ADJACENT STORM STRUCTURES AND ROUTED TO SCM-1.
2. RUNOFF FROM PRIVATE DRIVE AISLES SHALL BE COLLECTED IN THE CONCRETE SWALES AND INTERMITTENT CATCH BASINS AND ROUTED TO SCM-1.
3. STORM WATER DISCHARGES FROM SCM-1 TO RODEO GULCH (APPROXIMATELY 228 FEET TO ELEVATION 62.0). A COMPREHENSIVE DOWNSTREAM ASSESSMENT WILL BE PERFORMED AT THE TIME OF CONSTRUCTION DOCUMENTS.

LEGEND

- ROOF AREA TO SCM-1
- HARDSCAPE AREA TO SCM-1
- EXISTING ROADWAY AC AREA TO SCM-1
- PROPOSED ROADWAY AC AREA TO SCM-1
- PROPOSED FUTURE IMPROVEMENTS
- DMA BOUNDARY

GRAPHIC SCALE: 1 INCH = 20 FEET

NOT FOR CONSTRUCTION

BY	REVISION	DATE
JAI	5 REVISION - 5	05/31/2021
JAI	REVISION - 4	04/12/2021
JAI	REVISION - 3	02/17/2021
JAI	REVISION - 2	12/02/2020
GS	REVISION - 1	10/12/2020

IFLAND ENGINEERS
6300 SOQUEL AVE, SUITE 101
SANTA CRUZ, CA 95062
TEL (831) 426-3560
FAX (831) 426-1763
www.iflandengineers.com
CIVIL ENGINEERING ▪ LAND PLANNING ▪ STRUCTURAL DESIGN

PRELIMINARY

STORMWATER CONTROL PLAN

MATTISON LANE

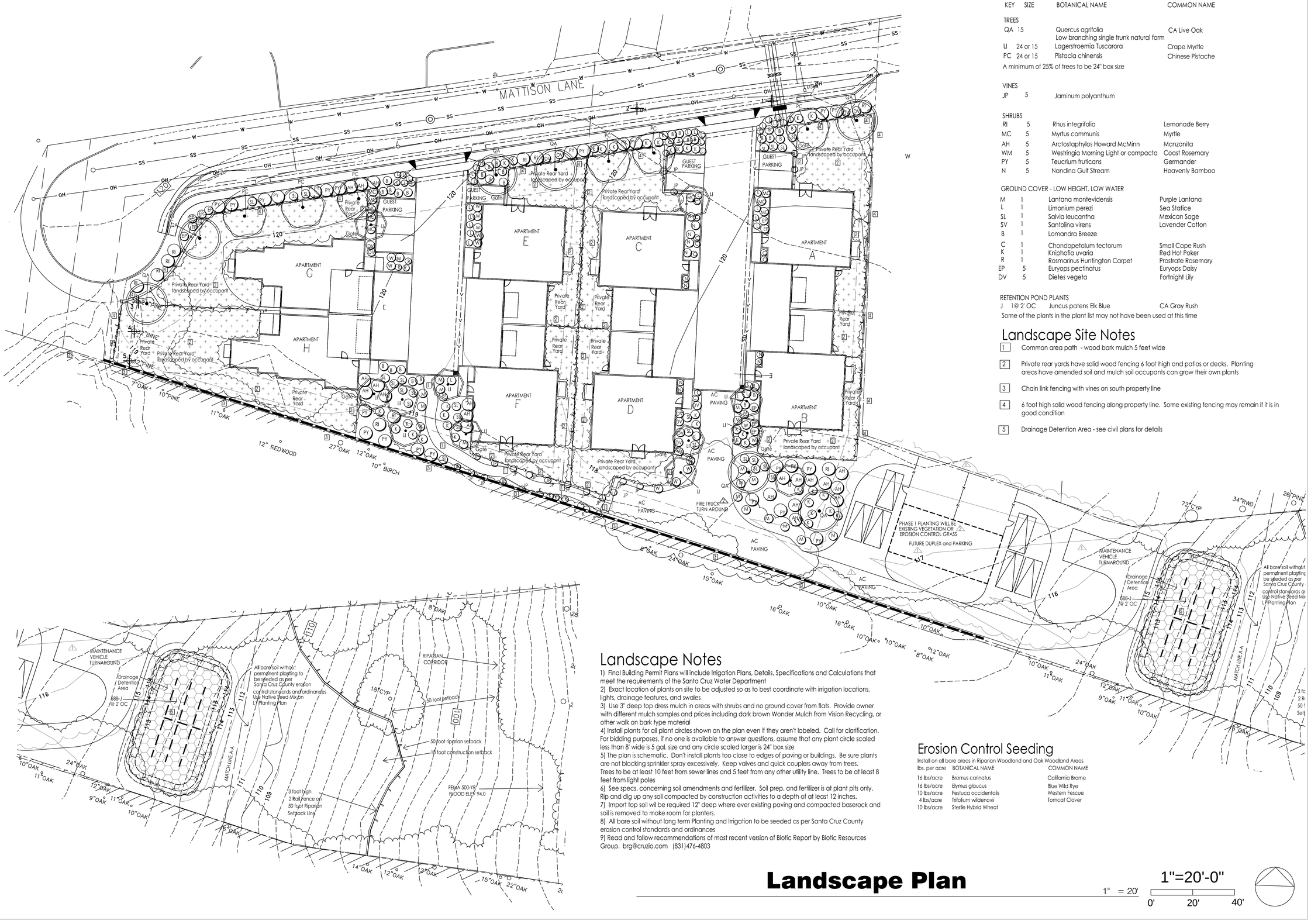
2740 MATTISON LANE, SANTA CRUZ, CALIFORNIA

APN 025-211-02 & 07
PLANNING

DRAWN GS
DESIGN GS
DATE 04/01/2020

SHEET C3.0

JOB NO. 20001



Plant List

KEY	SIZE	BOTANICAL NAME	COMMON NAME
TREES			
QA	15	Quercus agrifolia Low branching single trunk natural form	CA Live Oak
LI	24 or 15	Lagerstroemia Tuscarora	Crape Myrtle
PC	24 or 15	Pistacia chinensis	Chinese Pistache
A minimum of 25% of trees to be 24" box size			
VINES			
JP	5	Jaminum polyanthum	
SHRUBS			
RI	5	Rhus integrifolia	Lemonade Berry
MC	5	Myrtus communis	Myrtle
AH	5	Arctostaphylos Howard McMinn	Manzanita
WM	5	Westringia Morning Light or compacta	Coast Rosemary
PY	5	Teucrium fruticans	Germander
N	5	Nandina Gulf Stream	Heavenly Bamboo
GROUND COVER - LOW HEIGHT, LOW WATER			
M	1	Lantana montevidensis	Purple Lantana
L	1	Limonium perezi	Sea Statice
SL	1	Salvia leucantha	Mexican Sage
SV	1	Santolina virens	Lavender Cotton
B	1	Lomandra Breeze	
C	1	Chondopetalum tectorum	Small Cape Rush
K	1	Kniphofia uvaria	Red Hot Poker
R	1	Rosmarinus Huntington Carpet	Prostrate Rosemary
EP	5	Euryops pectinatus	Euryops Daisy
DV	5	Dietes vegeta	Fortnight Lily
RETENTION POND PLANTS			
J	1@ 2' OC	Juncus patens Elk Blue	CA Gray Rush

Some of the plants in the plant list may not have been used at this time

Landscape Site Notes

1. Common area path - wood bark mulch 5 feet wide
2. Private rear yards have solid wood fencing 6 foot high and patios or decks. Planting areas have amended soil and mulch soil occupants can grow their own plants
3. Chain link fencing with vines on south property line
4. 6 foot high solid wood fencing along property line. Some existing fencing may remain if it is in good condition
5. Drainage Detention Area - see civil plans for details

Landscape Notes

1) Final Building Permit Plans will include Irrigation Plans, Details, Specifications and Calculations that meet the requirements of the Santa Cruz Water Department
2) Exact location of plants on site to be adjusted so as to best coordinate with irrigation locations, lights, drainage features, and swales
3) Use 3" deep top dress mulch in areas with shrubs and no ground cover from flats. Provide owner with different mulch samples and prices including dark brown Wonder Mulch from Vision Recycling, or other walk on bark type material
4) Install plants for all plant circles shown on the plan even if they aren't labeled. Call for clarification. For bidding purposes, if no one is available to answer questions, assume that any plant circle scaled less than 8' wide is 5 gal. size and any circle scaled larger is 24" box size
5) The plan is schematic. Don't install plants too close to edges of paving or buildings. Be sure plants are not blocking sprinkler spray excessively. Keep valves and quick couplers away from trees. Trees to be at least 10 feet from sewer lines and 5 feet from any other utility line. Trees to be at least 8 feet from light poles
6) See specs, concerning soil amendments and fertilizer. Soil prep, and fertilizer is at plant pits only. Rip and dig up any soil compacted by construction activities to a depth of at least 12 inches.
7) Import top soil wil be required 12" deep where ever existing paving and compacted baserock and soil is removed to make room for planters.
8) All bare soil without long term Planting and Irrigation to be seeded as per Santa Cruz County erosion control standards and ordinances
9) Read and follow recommendations of most recent version of Biotic Report by Biotic Resources Group. brg@cruzio.com (831)476-4803

Erosion Control Seeding

Install on all bare areas in Riparian Woodland and Oak Woodland Areas

lbs. per acre	BOTANICAL NAME	COMMON NAME
16 lbs/acre	Bromus carinatus	California Brome
16 lbs/acre	Elymus glaucus	Blue Wild Rye
10 lbs/acre	Festuca occidentalis	Western Fescue
4 lbs/acre	Trifolium wildenovii	Tomcat Clover
10 lbs/acre	Sterile Hybrid Wheat	

Landscape Plan

1" = 20'

1"=20'-0"

0' 20' 40'

Gregory Lewis
Landscape
Architect
#2176
736 Park Way
Santa Cruz, CA 95065
(831) 359-0960
lewislandscape@sbcglobal.net

LICENSED LANDSCAPE ARCHITECT GREGORY LEWIS No. 2176 Greg Lewis 5/3/2022 5/3/21 STATE OF CALIFORNIA

Mattison Lane Apartments

for Sal Rubino

2740 Mattison Lane
Santa Cruz, California

APN: 025-211-02 & 07

Date: 10-12-20
Revisions:
1 04-12-21
2 05-31-21

Planting Plan

L1.00

Plant List

KEY	SIZE	BOTANICAL NAME	COMMON NAME
TREES			
QA	15	Quercus agrifolia Low branching single trunk natural form	CA Live Oak
LI	24 or 15	Lagerstroemia Tuscarora	Crape Myrtle
PC	24 or 15	Pistacia chinensis	Chinese Pistache
A minimum of 25% of trees to be 24" box size			
VINES			
JP	5	Jaminum polyanthum	
SHRUBS			
RI	5	Rhus integrifolia	Lemonade Berry
MC	5	Myrtus communis	Myrtle
AH	5	Arctostaphylos Howard McMinn	Manzanita
WM	5	Westringia Morning Light or compacta	Coast Rosemary
PY	5	Teucrium fruticans	Germander
N	5	Nandina Gulf Stream	Heavenly Bamboo
GROUND COVER - LOW HEIGHT, LOW WATER			
M	1	Lantana montevidensis	Purple Lantana
L	1	Limonium perezi	Sea Statice
SL	1	Salvia leucantha	Mexican Sage
SV	1	Santolina virens	Lavender Cotton
B	1	Lomandra Breeze	
C	1	Chondopetalum tectorum	Small Cape Rush
K	1	Kniphofia uvaria	Red Hot Poker
R	1	Rosmarinus Huntington Carpet	Prostrate Rosemary
EP	5	Euryops pectinatus	Euryops Daisy
DV	5	Dietes vegeta	Fortnight Lily
RETENTION POND PLANTS			
J	1@ 2' OC	Juncus patens Elk Blue	CA Gray Rush

Some of the plants in the plant list may not have been used at this time

Landscape Site Notes

1. Common area path - wood bark mulch 5 feet wide
2. Private rear yards have solid wood fencing 6 foot high and patios or decks. Planting areas have amended soil and mulch soil occupants can grow their own plants
3. Chain link fencing with vines on south property line
4. 6 foot high solid wood fencing along property line. Some existing fencing may remain if it is in good condition
5. Drainage Detention Area - see civil plans for details

Landscape Notes

1) Final Building Permit Plans will include Irrigation Plans, Details, Specifications and Calculations that meet the requirements of the Santa Cruz Water Department
2) Exact location of plants on site to be adjusted so as to best coordinate with irrigation locations, lights, drainage features, and swales
3) Use 3" deep top dress mulch in areas with shrubs and no ground cover from flats. Provide owner with different mulch samples and prices including dark brown Wonder Mulch from Vision Recycling, or other walk on bark type material
4) Install plants for all plant circles shown on the plan even if they aren't labeled. Call for clarification. For bidding purposes, if no one is available to answer questions, assume that any plant circle scaled less than 8' wide is 5 gal. size and any circle scaled larger is 24" box size
5) The plan is schematic. Don't install plants too close to edges of paving or buildings. Be sure plants are not blocking sprinkler spray excessively. Keep valves and quick couplers away from trees. Trees to be at least 10 feet from sewer lines and 5 feet from any other utility line. Trees to be at least 8 feet from light poles
6) See specs, concerning soil amendments and fertilizer. Soil prep, and fertilizer is at plant pits only. Rip and dig up any soil compacted by construction activities to a depth of at least 12 inches.
7) Import top soil wil be required 12" deep where ever existing paving and compacted baserock and soil is removed to make room for planters.
8) All bare soil without long term Planting and Irrigation to be seeded as per Santa Cruz County erosion control standards and ordinances
9) Read and follow recommendations of most recent version of Biotic Report by Biotic Resources Group. brg@cruzio.com (831)476-4803

Erosion Control Seeding

Install on all bare areas in Riparian Woodland and Oak Woodland Areas

lbs. per acre	BOTANICAL NAME	COMMON NAME
16 lbs/acre	Bromus carinatus	California Brome
16 lbs/acre	Elymus glaucus	Blue Wild Rye
10 lbs/acre	Festuca occidentalis	Western Fescue
4 lbs/acre	Trifolium wildenovii	Tomcat Clover
10 lbs/acre	Sterile Hybrid Wheat	

Landscape Plan - Phase 2

1" = 20'

1"=20'-0"

0' 20' 40'

Gregory Lewis
Landscape
Architect
#2176
736 Park Way
Santa Cruz, CA 95065
(831) 359-0960
lewislandscape@sbcglobal.net

LICENSED LANDSCAPE ARCHITECT GREGORY LEWIS No. 2176 Greg Lewis 5/3/2022 5/3/21 STATE OF CALIFORNIA

Mattison Lane Apartments

for Sal Rubino

2740 Mattison Lane
Santa Cruz, California

APN: 025-211-02 & 07

Date: 10-12-20
Revisions:
1 04-12-21
2 05-31-21

Planting Plan Phase 2

L1.0b

Attachment 3

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

Salvadore Rubino
1788 Campbell Ave
San Jose, CA 95065

November 4, 2020

Subject: Proposal to construct an 8-unit dwelling group consisting of four duplexes.
Archaeological report review and conditioned approval
APN 025-211-02 , Application REV201080

Dear Mr. Rubino,

The County of Santa Cruz Planning Department received and reviewed the Archaeological Report prepared by Holman and Associates, dated January 2019, for an 8-unit dwelling group consisting of four duplexes. This report was required due to the potential presences of archaeological resources within the proposed project area. Based on the submitted report findings the project site is unlikely to contain prehistoric or historic resources as no indications of significant cultural resources were found during the site reconnaissance. The following conditions will be included in the Residential Development Permit 201208.

A. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080 shall be observed.
B. The building permit application shall include condition A, above, and shall provide the contact information for the archaeologist of record.

If you have any questions regarding this letter, please call me at (831) 454-3164.

Sincerely,

DocuSigned by:
Leah MacCarter
B18EEB4C207E4ED...

Leah MacCarter
Resource Planner

Archaeological Records Search, Site Reconnaissance, and Subsurface Testing For Assessor's Parcels 025-211-02, and 025-211-07, Santa Cruz County, California

By
John Schlagheck, M.A., RPA
Associate Archaeologist

January 2019

Report Completed for
Pacific Rim Planning Group

Holman & Associates
Archaeological Consultants
3615 Folsom Street
San Francisco, CA 94110
415-550-7286

Notice of Confidential Information

This report contains cultural resource location information. Report distribution should be restricted to those with a need to know and should *not* include distribution for public comment. Cultural resources are a nonrenewable resource and their scientific and aesthetic value can be significantly degraded by disturbance that may result from the distribution of location information. The legal authority to restrict this information is in California Government Code 6254.1.

Introduction and Project Summary

In January 2019, this author completed an archaeological records search, site reconnaissance, and subsurface testing for a proposal to construct a housing development (Project) on two vacant parcels (2740 and 2750 Mattison Lane) totaling about two and a half acres of land (Project Area). The Project is located between the east/west segment of Mattison Lane and Highway 1 about 1,200 feet south of Soquel Drive in the unincorporated Live Oak area of Santa Cruz County, California. This research was authorized by the property owner Sal Rabino. The eastern portion of the Project Area is mapped for archaeological resources on resource maps maintained by the County.

The present work included four steps. The first was a records search of relevant records and maps maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University and other documentary sources. As the second step, this author conducted a pedestrian reconnaissance of all accessible land within the Project Area. The third step was subsurface presence/absence testing within the Project Area. This report and the recommendations below are the fourth step of this research.

The records search showed no archaeological resources have been recorded within or near the Project Area. The site reconnaissance and subsurface testing found no indication of potentially significant cultural resources. Given these results, the Project will likely have no effect on archaeological resources and this report makes no further recommendations regarding the discovery of cultural resources on the subject property.

A copy of this report will be submitted to the NWIC as required by the State.

Project Location and Legal Description

The Mattison Lane Housing Project Area is approximately two and a half acres of vacant suburban property in two parcels (2740 and 2750 Mattison Lane) located on the south side of the east/west segment of Mattison Lane and north of Highway 1 about 1,200 feet south of Soquel Drive in the unincorporated Live Oak area of Santa Cruz County, California. The Project Area has north frontage on Mattison Lane which trends north/south but doglegs to the west just north of the subject property. The property abuts Highway 1 on the south and Rodeo Gulch on the east, but is otherwise surrounded by suburban residential and institutional development. The property is contained on the United States Geological Survey (USGS) *Soquel* 7.5-minute topographic Quadrangle, a portion of which is reproduced here as Map 1 appended. The parcels are currently designated by Assessor's Parcel Numbers (APNs) 025-211-02 and 025-211-07.

Environmental Setting

The Project Area lies about 100 feet above sea level on the coastal terrace about two miles north of Monterey Bay and about 1,500 feet south of the foothills of the Santa Cruz Mountains. The land in this area gently slopes to the south toward the Bay and is traversed by numerous south flowing rivers, creeks, and small drainages. The closest of these drainages is Rodeo Gulch along the east boundary of the Project Area. Soquel Creek flows south to the Bay about 4,000 feet to the east. The San Lorenzo River lies about three miles west of the Project Area.

Brief Cultural History

Most radiocarbon dates obtained from prehistoric contexts in the Monterey Bay region suggest that permanent occupation of the region began about 5,000 to 6,000 years before present (YBP) While it is not entirely clear how population movements affected cultural continuity in the area, it is well established that hunting and gathering, or a combination of hunting and gathering and collecting, as described by Binford (1980), was the primary subsistence strategy used by the region's inhabitants up to the beginning of the Spanish colonial presence in 1769.

Moratto (1984) and Breschini and Haversat (2005), suggest the Ohlone, also called Costanoan, from the Spanish "costanos" for coast-dwellers, arrived in the region about 200 B.C., perhaps from the lower Sacramento Valley/Delta. Linguistically, the Ohlone were a language family in aboriginal times with many independent tribal groups that maintained autonomous territories and spoke related but dialectically distinct languages. According to Milliken (1995, 1999), three tribal groups had territories near the Project Area. These groups were the *Uypi* that controlled the area of present day Santa Cruz and the mouth of the San Lorenzo River, the *Sayanta* that controlled the area east of the San Lorenzo River to Aptos and north to include what are now Scotts Valley, Glenwood, and Laural, and the *Aptos* that controlled present day Aptos south to the Pajaro River. Habitation was likely semi-sedentary with seasonal camps often reflecting climate patterns and seasonal resource availability. Discussions of the Ohlone include Kroeber (1925), Levy (1978), Margolin (1978), and other sources.

From 1769 to 1776, three Spanish expeditions reconnoitering the region for colonization passed through the Central Coast. With the development of the Spanish Presidio at Monterey Bay and the Franciscan mission at Carmel in 1770-1771, and later the missions at Santa Clara (1777), Santa Cruz (1791), and San Juan Bautista (1797), aboriginal life changed profoundly for the Ohlone. The root cause of change was Spanish religious and political hegemony brought by the

Franciscan missionaries and enforcement of their assumed authority by the Spanish military. Religious conversion, adoption of farming practices, lethal illnesses, and intermarriage with other groups also contributed to the disintegration of tribal culture. Mission Santa Cruz dramatically affected the local Native population. The *Uypi* were the first Native American group to be completely absorbed, and by 1796, the *Uypi*, *Sayanta*, and *Aptos* people had all experienced significant absorption into the mission system (Milliken 1995, 1999).

One of three secular Spanish colonial settlements in Alta California, Villa de Branciforte, was established in 1797 about 2.5 miles west of the Project Area. Residents included retired Spanish soldiers and their families as well as immigrants from New Spain, or Mexico. The settlement did not prosper and was generally forgotten by the beginning of the American Period circa 1948 (Guest 1962; Clark 1986). Much like the Spanish missionaries at the Mission Santa Cruz, the residents of Villa Branciforte maintained cattle herds for a major portion of their livelihood, and it is likely that both the missionaries and the residents from the settlement utilized the general Project Area vicinity for ranching purposes to some degree.

Following Mexican independence from Spain in 1821 and secularization of the missions in 1834, Mexican and then Euro-American settlers divided large land holdings from the Mission Period into smaller farms and housing sites throughout the nineteenth century. In the late 19th century the Project Area vicinity would have been quite rural but with denser semi rural land use patterns beginning to develop as the City of Santa Cruz expanded from the southwest toward the foothills.

Early USGS maps (1912 and 1914) show that Mattison Lane has been in its current alignment near the Project Area since the early 20th century. The 1954 USGS 7.5-minute topographic map shows the development of Highway1 and two structures on the west portion of parcel 025-211-02 fronting Mattison Lane. County records indicate that the property was associated with the Santa Cruz Fruit Company operation, including an apple dehydrating facility and a warehouse structure, from the mid 1950s. The structure was removed by a permit issued in 2002. There is also indication that a house existed on the property, but the record of its removal was not found.

Records Search Results

On January 4, 2019, Charles Mikulik conducted a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University (NWIC File No. 18-1225). The records search showed that the Project Area has not been surveyed previously for cultural resources. No known archaeological sites are located within or near the subject property.

The closest prehistoric resources are located more than one half mile east and west of the Project Area on both sides of Highway 1. These resources include CA-SCR-168/H, a midden location with chert, obsidian, ground stone, and shell (Kind 2004a), and CA-SCR-200, a prehistoric site consisting of a sparse lithic scatter (Tamez and Gardner 1978; King 2004b). The closest recorded historical period resources are the route of Highway 1 within Santa Cruz County (Leach-Palm and Berg 1999, Mikkelsen et al. 2001), and CA-SCR-215H, a small historical period dump containing some artifacts associated with the late 19th century located more than one half mile west of the Project Area (King and Costello 2004).

Not unexpectedly, an expanded search radius to two miles shows clearly that most prehistoric sites fit a pattern of sites recorded at the Monterey Bay shoreline and above the banks of the

numerous watercourses that flow south over the coastal terrace to Monterey Bay from the Santa Cruz Mountains.

Project Area Reconnaissance

Methods

On January 14, 2019, this author conducted a pedestrian reconnaissance for archaeological resources on all accessible land within the Project Area. The survey was a general surface reconnaissance (King et al. 1973) that included careful inspection for prehistoric and historical period cultural materials as well as topographic indicators and soil characteristics that might be evidence of subsurface cultural materials. Where soil was partially exposed to inspection, a small hoe was used to increase soil visibility by removing light vegetation.

Results

The reconnaissance found no indication of prehistoric archaeological soils or historical period features on the surface and no evidence that suggests the presence of buried archaeological materials. The Project Area is relatively flat with a very gentle slope to the east near Rodeo Gulch. The property is undeveloped other than a perimeter fence. Ground cover consists of light to moderate vegetation including pompas grass and some mature trees. Visual access to the ground was very good for the purpose of the reconnaissance.

Soil in the Project Area is medium gray silt/clay mixed with imported materials such as crushed rock and gravel. The upper layer of soil is likely heavily disturbed native soil especially near Mattison Lane in the west portion of the parcel. Less disturbed soil appears to be present in the east portion of the parcel. Imported gravel and rock is also present along the west portion of the southern boundary of the Project Area near Highway 1 and may be related to the construction and maintenance of the highway.

The reconnaissance found no chert or other materials commonly used as raw material for prehistoric tool manufacture. Similarly, no other materials associated with use of the property during prehistoric times, such as marine shell, faunal remains, ground stone, or charcoal were observed. No historical period features were found. No bedrock was found in the Project Area.

Subsurface Testing

To confirm that modern disturbances to the surface have not altered or otherwise obscured archaeological deposits, three hand auger probes were dug during the site reconnaissance in the eastern portion of the Project Area that is mapped for archaeological resources on resource maps maintained by the County. The testing was conduced with an eight centimeter (cm) hand auger that removed about 10 cm of material in each lift. Excavated material was closely examined for evidence of buried cultural materials. All three probes were dug to a depth of 1 meter (3 feet).

The subsurface soil consisted of medium brown silty clay to about 30 cm below the surface (cmbs) and a light brown/orange silty clay below 30 cm. Some sandstone fragments were noted in Auger 3 beyond a depth of 60 cmbs.

The testing found no chert or other materials commonly used as raw material for prehistoric tool manufacture. Similarly, no other materials associated with use of the property during prehistoric

times, such as marine shell, faunal remains, ground stone, or charcoal were observed. No bedrock was encountered within the test depth. A complete auger record and a map of the test probe locations (Map 2) are appended to this report.

Recommendations

The results of the present investigation suggest the potential for encountering significant archaeological resources on the subject property as a result of the Project is very low. No further archaeological investigation regarding the discovery of cultural resources on the subject property is warranted. This report does not recommend monitoring during construction.

Because there is always some chance of finding buried cultural resources during construction, the following standard language, or the equivalent, should be included in any permits issued within the Project Area:

- If archaeological resources or human remains are accidentally discovered during construction, work shall be halted within 50 feet of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented. (Ref: Health and Safety Code Section 7050.5)
- If human remains are found at any time, there shall be no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the County Coroner has been notified. If the Coroner determines that the remains are Native American, the Native American Heritage Commission will be notified as required by law. The Commission will designate a Most Likely Descendant (MLD) who will be authorized to provide recommendations for management of the remains and any associated materials. (Ref: California Public Resources Code Section 5097.98; and Health and Safety Code Section 7050.5)

References

Binford, Lewis
1980 Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4-20.

Breschini, Gary S. and Trudy Haversat
2005 Radiocarbon Dating and Cultural Models on the Monterey Peninsula, California. *Pacific Coast Archaeological Society Quarterly* 38(1).

Clark, Donald Thomas
1986 Santa Cruz County Place Names. Santa Cruz County Historical Society.

Guest, Florian
1962 The Establishment of the Villa de Branciforte. *California Historical Quarterly.* XLI:29-50.

King, Thomas F., Michael J. Moratto, and Nelson N. Leonard III
1973 *Recommended Procedures for Archaeological Impact Evaluation*. Report prepared for the Society of California Archaeology and University of California at Los Angeles Archaeological Survey. Los Angeles.

King, J.
2004a Site Record for CA-SCR-168/H. On file (P-44-000170), Northwest Information Center. Sonoma State University.
2004b Site Record for CA-SCR-200. On file (P-44-000202), Northwest Information Center. Sonoma State University.

King, J and J. Costello
2004 Site Record for CA-SCR-215H. On file (P-44-000217), Northwest Information Center.

Kroeber, A. L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulleting 78.

Leach-Palm and J. Berg
1999 Site Record for CA-SCR-334II (Highway 1 within Santa Cruz County). On file (P-44-000406), Northwest Information Center, Sonoma State University.

Levy, R.
1978 Costanoan. *In* The Handbook of North American Indians. Pp 485-495. Smithsonian Institution: Washington.

Margolin, M.
1978 *The Ohlone Way*. Heyday: Berkeley.

Milliken, Randall T.
1995 *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*. Ballena Press, Menlo Park, CA.

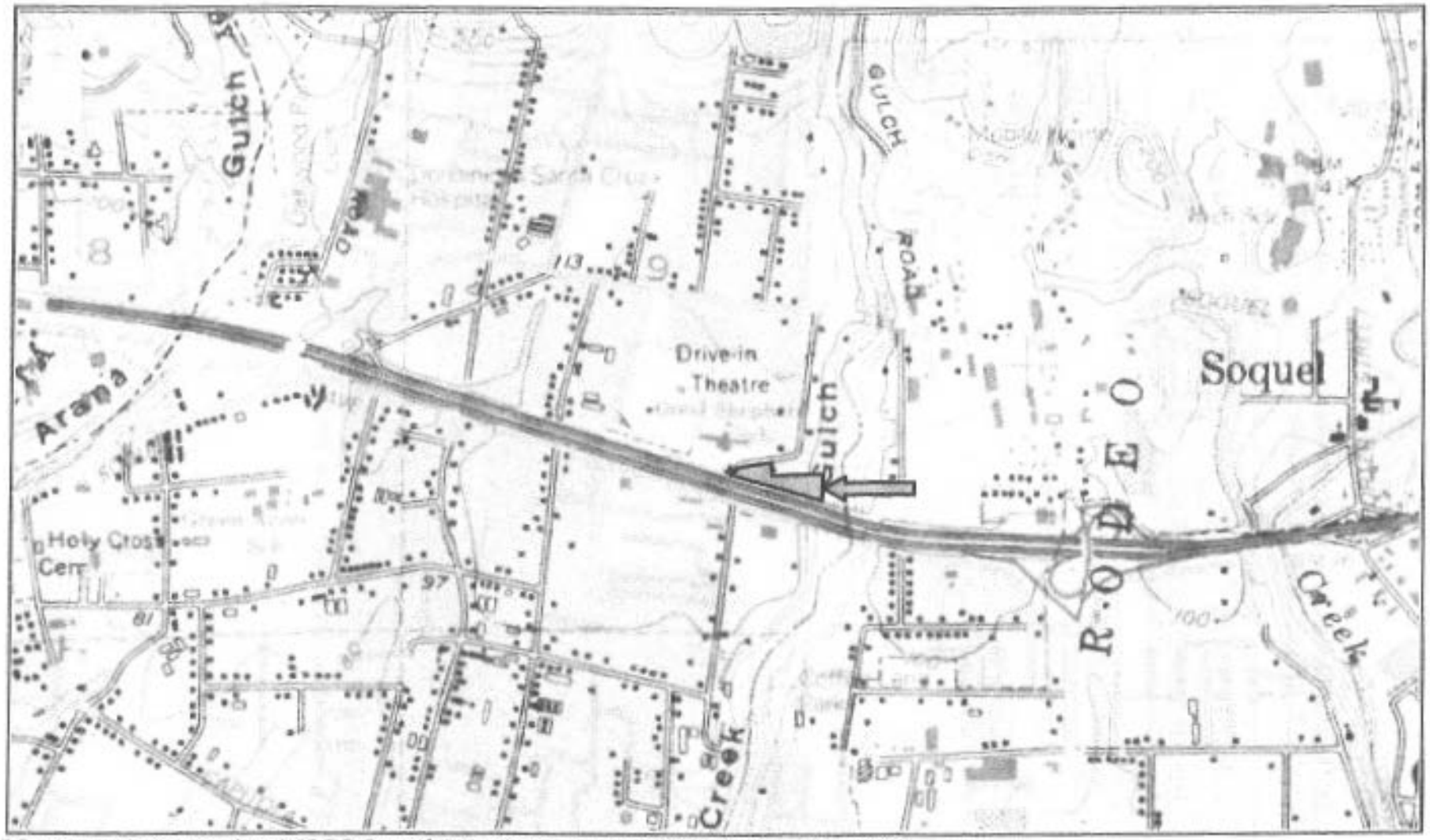
Mikkelsen, Patricia, Laura Leach-Palm, Jennifer Hatch, Elizabeth Kellenbach, and Jerome King
2001 *Cultural Resources Inventory of Caltrans District 5 Rural Highways, Santa Cruz County, California, Highways 1, 9, 17, 129, 152, and 236, Volume 1*. On File (S-038430), Northwest Information Center, Sonoma State University.

Moratto, Michael J.
1984 *California Archaeology*. Coyote Press, Salinas, CA.

Tamez, S. and D. Gardner
1978 Site Record for CA-SCR-200. On file (P-44-000202), Northwest Information Center.

United States Department of Interior, Geological Survey (USGS)
1912 Capitola CA. [Quadrangle]. Topographic Map, 15-minute series.
1914 Capitola CA. [Quadrangle]. Topographic Map, 15-minute series.
1954 Soquel CA. [Quadrangle]. Topographic Map, 7.5-minute series.
1968 Soquel CA. [Quadrangle]. Topographic Map, 7.5-minute series.
1980 Soquel CA. [Quadrangle]. Topographic Map, 7.5-minute series.
1994 Soquel CA. [Quadrangle]. Topographic Map, 7.5-minute series.

Project Area Location: Mattison Land 22-unit apartment complex (archaeological sensitivity shown in beige)
APNs: 025-211-02 and 025-211-07



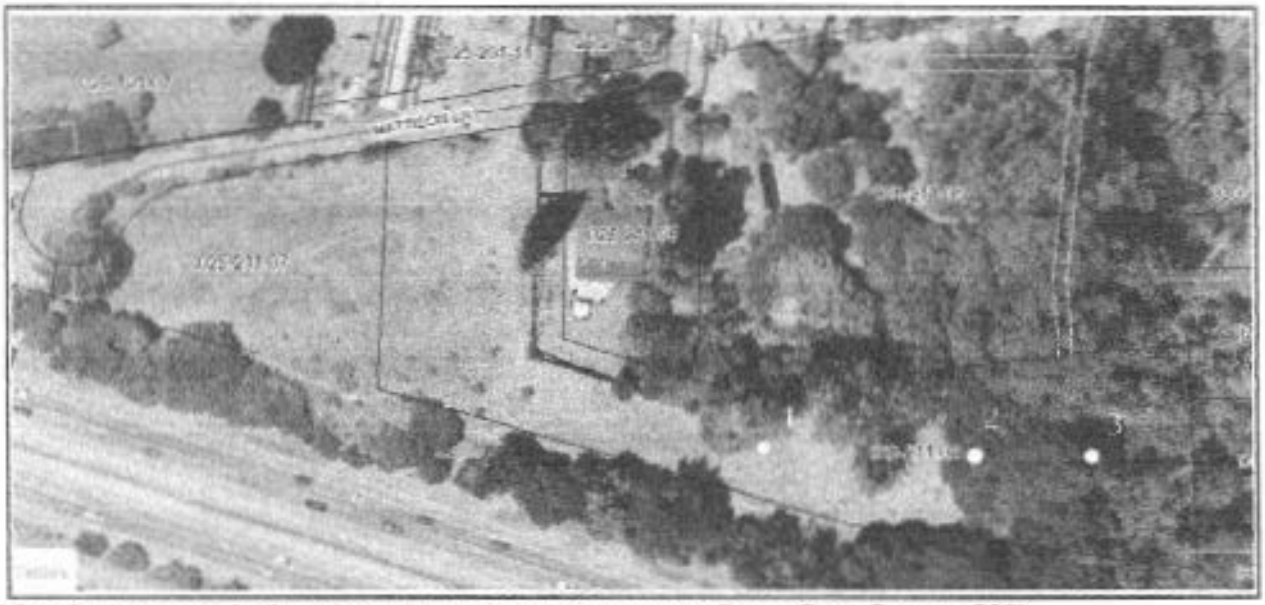
Map1: Project Location (USGS *Soquel* 7.5-minute topographic Quadrangle, 1994)

Auger Record

Project: Mattison Lane Housing Project Subsurface Testing
Recorder(s): John Schlagheck, RPA, Holman & Associates

Test Date: 1/14/19
Auger Size: 8 cm

Auger	Depth (cm)	Soil/Sediment	Cultural Materials
1	0-30	Fine, medium gray/brown silty clay	None
	30-100	Fine, light brown/orange silty clay (likely undisturbed native soil)	None
2	0-35	Fine, medium gray/brown silty clay	None
	35-100	Fine, light brown/orange silty clay (likely undisturbed native soil)	None
3	0-30	Fine, medium gray/brown silty clay	None
	30-100	Fine, light brown/orange silty clay with sandstone pebbles (likely undisturbed native soil)	None



Map 2: Auger probe locations (base photo/map source: Santa Cruz County GIS)

Attachment 4

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

19 October 2021

Salvatore Rubino, Trustee
1788 Campbell Avenue
San Jose, CA 95125-5507

Subject: Review of the Observation of Existing Drainage Conditions and Inspection for Evidence of Erosion letter report dated 18 October 2021; 2019 CBC Addendum to Geotechnical Investigation letter report dated 5 October 2021; and the Geotechnical Investigation for Proposed Apartment Complex report dated 25 May 2016 by Dees & Associates - Project No. SCR-1023

Project Site: 2740 Mattison Lane
APN 025-211-02 & 07
Application No. REV161126

Dear Mr. Rubino:

The purpose of this letter is to inform you that the Planning Department has accepted the subject reports and the following items shall be required:

1. All project design and construction shall comply with the recommendations of the reports.

2. Final plans shall reference the reports by titles, author, and dates. Final Plans should also include a statement that the project shall conform to the reports' recommendations.

3. After plans are prepared that are acceptable to all reviewing agencies, please submit a completed Soils (Geotechnical) Engineer Plan Review Form to Environmental Planning. The Consultants Plan Review Form (Form PLG-300) is available on the Planning Department's web page. The author of the soils report shall sign and stamp the completed form. Please note that the plan review form must reference the final plan set by last revision date.

Electronic copies of all forms required to be completed by the Geotechnical Engineer may be found on our website: www.sccoplanning.com, under "Environmental", "Geology & Soils", and "Assistance & Forms".

After building permit issuance the soils engineer *must remain involved with the project* during construction. Please review the Notice to Permits Holders (attached).

Our acceptance of the report is limited to its technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please note that this determination may be appealed within 14 calendar days of the date of service. Additional information regarding the appeals process may be found online at: http://www.sccoplanning.com/html/devrev/plnappeal_bldg.htm

If we may be of any further assistance, please contact the undersigned at (831) 454-3168 or rick.parks@santacruzcounty.us

Respectfully,

Rick Parks, GE 2603
Civil Engineer – Environmental Planning

Cc: Environmental Planning, Attn: Leah MacCarter
Planning Department, Attn: Shila Bagley
Dees & Associates, Attn: Rebecca Dees, GE
Primary Contact: Jim Weaver

Attachments: Notice to Permit Holders

NOTICE TO PERMIT HOLDERS WHEN A SOILS REPORT HAS BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer to be involved during construction. Several letters or reports are required to be submitted to the County at various times during construction. They are as follows:

1. **When a project has engineered fills and / or grading**, a letter from your soils engineer must be submitted to the Environmental Planning section of the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.

2. **Prior to placing concrete for foundations**, a letter from the soils engineer must be submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.

3. **At the completion of construction,** a *Soils (Geotechnical) Engineer Final Inspection Form* from your soils engineer is required to be submitted to Environmental Planning that includes copies of all observations and the tests the soils engineer has made during construction and is stamped and signed, certifying that the project was constructed in conformance with the recommendations of the soils report.

   If the *Final Inspection Form* identifies any portions of the project that were not observed by the soils engineer, you may be required to perform destructive testing in order for your permit to obtain a final inspection. The soils engineer then must complete and initial an *Exceptions Addendum Form* that certifies that the features not observed will not pose a life safety risk to occupants.

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770

October 5, 2021 Project No. SCR-1023

SAL RUBINO
1788 Campbell Avenue
San Jose, California 95125-55507

Subject: 2019 CBC Addendum to Geotechnical Investigation Dated 5 May 2016

Reference: Proposed Apartment Complex
2740 Mattison Lane, Santa Cruz
APN's 025-211-02 and 07
Santa Cruz County, California

Dear Mr. Rubino:

This letter provides addendum recommendations to update our report to the 2019 California Building Code. Updates to the original report are limited to revised seismic coefficients. The following ground motion parameters may be used in seismic design and were determined using the OSHPD Seismic Design Calculator and ASCE 7-16.

Design Parameter	ASCE 7-16
Site Class	D
Mapped Spectral Acceleration for Short Periods	Ss = 1.801 g
Mapped Spectral Acceleration for 1-second Period	S_1 = 0.694 g
5% Damped Spectral Response Acceleration for Short Period	S_{DS} = 1.2 g
5% Damped Spectral Response Acceleration for 1-Second Period	S_{D1} = null – See Section 11.4.8
Seismic Design Category	null – See Section 11.4.8
PGAm	0.831 g

Very truly yours,

Rebecca L Dees

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Copies: 1 to Addressee
1 to Pacific Rim Planning Group

GEOTECHNICAL INVESTIGATION
FOR
PROPOSED APARTMENT COMPLEX

2740 Mattison Lane
APN 025-211-02
Santa Cruz County, California

Prepared
For
SAL RUBINO
Santa Cruz, California

Prepared By
DEES & ASSOCIATES, INC.
Geotechnical Engineers
Project No. SCR-1023
MAY 2016

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax (831) 427-1794

May 25, 2016 Project No. SCR-1023

SAL RUBINO
1788 Campbell Avenue
San Jose, California 95125-5507

Subject: Geotechnical Investigation

Reference: Proposed Apartment Complex
2740 Mattison Lane, Santa Cruz
APN'S 025-211-02 and 07
Santa Cruz County, California

Dear Mr. Rubino:

As requested, we have completed a Geotechnical Investigation for the new apartment complex proposed at the referenced site. We understand the development will include one to four buildings with approximately 16 to 20 apartment units. The project will be located in the western portion of the combined parcel on nearly level ground.

The purpose of our investigation was to evaluate the soil conditions in the vicinity of the proposed improvements and provide geotechnical recommendations for the proposed development.

This report presents the results, conclusions and recommendations of our investigation. If you have any questions regarding this report, please call our office.

Very truly yours,

DEES & ASSOCIATES, INC.

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Copies: 4 to Addressee

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

Introduction

This report presents the results of our Geotechnical Investigation for the new apartment complex proposed at 2740 Mattison Lane in Santa Cruz County, California.

Purpose and Scope

The purpose of our investigation was to explore and evaluate surface and near surface soil conditions in the proposed building envelope and provide geotechnical recommendations for design and construction of the proposed improvements.

The specific scope of our services was as follows:

1. Site reconnaissance and review of available data in our files pertinent to the site and vicinity.

2. Exploration of subsurface conditions consisting of logging and sampling of five (5) exploratory test borings drilled 21.5 to 26.5 feet beneath the surface.

3. Laboratory testing of selected samples to evaluate the engineering properties of the subsoils.

4. Engineering analysis and evaluation of the resulting field and laboratory test data. Based on our findings, we have developed geotechnical design criteria for general site grading, foundations, concrete slabs-on-grade, pavements and general site drainage.

5. Preparation of this report presenting the results of our investigation.

Project Location and Description

The 2.6 acre combined parcel is located at the southern end of Mattison Lane on the north of Highway 1. See Figure 1. The majority of the parcel is flat to very gently sloping. The eastern portion of the site steepens to about 15 percent for about 250 feet then steeply slopes down to Rodeo Creek Gulch at about a 2:1 slope gradient. The level to gently sloping areas of the site are vegetated with grasses and the steep slope down to the creek is vegetated with trees and brush. See Figure 2.

The proposed building envelope is located on nearly level ground at the west end of the site, Figure 2. We understand the project is in the conceptual stage and an exact layout of the improvements has not been determined. Preliminary plans indicate the new apartment complex will consist of several detached two-story structures with associated driveways and parking areas.

Field Investigation

Subsurface conditions at the building site were explored on April 6, 2016, with five (5) exploratory borings. Borings were drilled with 6-inch diameter continuous flight augers advanced with truck-mounted drilling equipment. Our borings were drilled to depths of 21.5 feet to 26.5 feet. See Figures 4-8.The approximate locations of the exploratory borings are indicated on Figure 2.

The soils observed in the test borings were logged in the field and described in accordance with the Unified Soil Classification System (D2487 and D2488). See Figure 3. The Test Boring Logs denote subsurface conditions at the locations and times observed, and it is not warranted it is representative of subsurface conditions at other locations or times.

Representative soil samples were obtained from the exploratory borings at selected depths, or at major strata changes. These samples were recovered using the 3.0-inch O.D. Modified California Sampler (L) or the Standard Terzaghi Sampler (T). The penetration resistance blow counts for the (L) and (T) noted on the boring logs were obtained as the sampler was dynamically driven into the in situ soil. The process was performed by dropping a 140-pound hammer a 30-inch free fall distance and driving the sampler 6 to 18 inches and recording the number of blows for each 6-inch penetration interval. The blows recorded on the boring logs present the accumulated number of blows that were required to drive the last 12 inches. The blow counts for the large samples indicated on the logs have been converted to equivalent standard penetration test (SPT) values.

Laboratory Testing

The laboratory testing program was directed toward a determination of the physical and engineering properties of the soils underlying the site. Moisture content and dry densities were performed on representative soil samples to determine the consistency of the soil and the moisture variation throughout the explored soil profile. Atterberg Limits were determined on the surface soils to determine the soils relative shrink/swell potential. See Figure 9. Grain size analysis was performed to aid in soil classification. Direct shear analysis was performed to determine the shear strength parameters of the subsoils. See Figures 10 and 11. The results of all field and laboratory testing appear on the "Logs of Test Borings", opposite the sample tested.

Subsurface Soil Conditions

The Santa Cruz County Geologic Map indicates the site is underlain by terrace deposits over the Purisima Formation. The western portion of the site where the proposed building envelope is located is underlain by "Lowest emergent coastal terrace deposits (Pleistocene)," which are described as "semi-consolidated, generally well-sorted sand with a few thin, relatively continuous layers of gravel. Thickness variable; maximum approximately 40 [feet]." The steep slope descending to Rodeo Creek Gulch on the eastern edge of the site is mapped as being the Purisima Formation and Alluvial Deposits are mapped along the base of the gulch.

Our borings encountered terrace deposits to at least a depth of 18 feet. The soils below 18 feet may be the weathered horizon of the Purisima Formation but this was not confirmed.

The soils generally consisted of 1 to 3 feet of soft/ loose fine sandy silt/silty sand over a 7 to 15 feet thick layer of firm to stiff sandy silt and sandy clay over medium dense to very dense fine sand with thin gravel lenses to the base of our borings. The silts and clays have a low expansion potential (PI = 4 and 13).

The underlying soils are classified as a "Site Class D" for structures with a fundamental period greater than 0.5 seconds.

Groundwater

A thin zone of perched groundwater was encountered in Borings 4 and 5 at 10 feet and 9 feet below grade, respectively and a groundwater table was encountered in Borings 1 and 4 at 24 feet and 18 feet below grade, respectively.

The Test Boring Logs denote groundwater conditions at the locations and times observed, and it is not warranted it is representative of groundwater conditions at other locations or times. Groundwater levels can vary due to seasonal variations and other factors not evident during our investigation.

Seismicity

The project site is located in a seismically active region and several active and potentially active faults are located in the vicinity of the site. The following is a general discussion of seismicity in the project area. A more detailed discussion of faulting and seismicity is beyond the scope of our services.

The site is located near the Zayante-Vergeles Fault Zone, the San Andreas Fault Zone, the offshore San Gregorio Fault Zone and the offshore Monterey Bay-Tularcitos Fault Zone. The San Andreas Fault is the largest and most active of the faults in the site vicinity. However, each fault is considered capable of generating moderate to severe ground shaking. It is reasonable to assume that the proposed development will be subject to at least one moderate to severe earthquake from one of the faults during the next fifty years.

	San Andreas Fault	Zayante-Vergeles Fault	San Gregorio Fault	Monterey Bay-Tularcitos Fault
Distance Miles	8.5	5.5	12.5	9.3
Direction	NE	NE	WSW	WSW

Structures designed according to the 2013 California Building Code may use the following parameters in their analysis. The following ground motion parameters may be used in seismic design and were determined using the USGS Ground Motion

Parameter Calculator.

Ss	S1	SMs	SM1	SDs	SD1
1.500 g	0.600 g	1.500 g	0.900 g	1.000 g	0.600 g

PGAm	0.501 g
Seismic Design Category (SDC)	D

Liquefaction

Liquefaction occurs when saturated fine grained sands, silts and sensitive clays are subject to shaking during an earthquake and the water pressure within the pores builds up leading to loss of strength. There is a low potential for liquefaction to affect the proposed development due to the density and consistency of the subsoils.

Landsliding

The proposed site improvements will be located in the western area of the site at least 300 feet from the steep slope that descends to Rodeo Creek Gulch and at least 50 feet from the 6 to 8 foot high cutslope along Highway 1 to the south. Based on the distance to nearby slopes, there is a very low potential for landslides to affect the proposed improvements.

DISCUSSIONS AND CONCLUSIONS

Based on the results of our investigation, the apartment complex proposed at the site is feasible provided the recommendations presented in this report are incorporated into the design and construction of the proposed improvements.

Primary geotechnical concerns for the project include providing firm uniform support for foundations, slabs and pavements, controlling site drainage and designing structures to resist strong seismic shaking.

The top 1 to 3 feet of soil is loose and compressible under the proposed building loads. To provide firm uniform support for structures, the top 3 feet of soil should be compacted to accommodate shallow spread footings or the structures can be supported on deepened footings that penetrate the loose soil. Footing depths of 1.5 to 3.5 feet should be anticipated if using deepened footings. If fill is used to raise grade, footing depths may be deeper than 3.5 feet depending on the thickness of fill placed.

If foundations will be supported on engineered fill, the zone of compaction should extend at least 5 feet beyond the edges of the foundations and at least 18 inches below the base of the foundation.

At a minimum, the top 12 inches of subgrade should be compacted below interior and exterior concrete slabs-on-grade and pavements. The zone of compaction should extend 1 foot beyond the edges of the slabs and pavements.

Controlling site drainage will be important to the proposed improvements and the slopes below the improvements. Concentrated runoff from improvements should not be allowed to pond or flow adjacent to foundations, slabs or pavements. Concentrated runoff may be dispersed in landscape areas, percolated back into the soil well away from steep slopes or discharged into off-site storm drain facilities.

Structures should be designed to resist strong seismic shaking. Structures designed in accordance with current seismic design requirements should react well to seismic shaking.

RECOMMENDATIONS

The following recommendations should be used as guidelines for preparing project plans and specifications:

General Site Grading

1. The geotechnical engineer should be notified **at least four days** prior to any grading or foundation excavating so the work in the field can be coordinated with the grading contractor and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the geotechnical engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. The following grading recommendations are based on the assumption that final grades will not vary more than 3 feet from existing grades.

3. All organic materials shall be stripped from any areas to receive engineered fill, foundations, slabs or pavements. The exact depth of stripping should be determined in the field during grading but is anticipated to be on the order of 3 to 4 inches. Organically contaminated soils may be stockpiled and used in landscape areas.

4. Where fill is planned to raise grade below exterior slabs and pavements, areas to receive engineered fill should be scarified 6 inches, moisture conditioned to about 2 percent over optimum moisture content and compacted to at least 90 percent relative compaction. At a minimum, the top 12 inches of subgrade should be compacted below interior and exterior concrete slabs-on-grade and pavements. The zone of compaction should extend 1 foot beyond the edges of the slabs and pavements.

5. Where fill is planned to raise grade below structures that will be supported on engineered fill, the top 1 to 3 feet of existing loose soil should be removed and replaced as engineered fill before placing any new fill

6. For foundations embedded into engineered fill, the top 3 feet of loose soil within 5 feet of foundations should be removed and replaced as compacted engineered fill. Where the loose soil is less than 3 feet thick the engineered fill should extend at least 18 inches below the base of the foundation to create uniform support.

7. The on-site soils are suitable for use as engineered fill. Soils used for engineered fill should be granular, have a Plasticity Index less than 15, be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches. We estimate the existing loose soils will have about 10 to 15 percent shrinkage when compacted.

8. Engineered fill should be moisture conditioned to about 1 to 2 percent over optimum moisture content, placed in thin lifts less than 8-inches in loose thickness and compacted to at least 90 percent relative compaction.

9. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-00.

10. The upper 8 inches of subgrade and the aggregate base sections below concrete or asphalt pavements should be compacted to at least 95 percent relative compaction.

11. Engineered fill should be observed and tested by our firm. At a minimum, in-place density tests should be performed as follows: one test for every 12 inches of fill below structures, one test for every 500 square feet for relatively thin fill sections and one test whenever there is a definite suspicion of a change in the quality of moisture control or effectiveness in compaction.

12. After the earthwork operations have been completed and the geotechnical engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the geotechnical engineer.

Concrete Slabs-on-Grade

13. At a minimum, the top 12 inches of subgrade should be compacted below interior and exterior concrete slabs-on-grade and pavements. The zone of compaction should extend 1 foot beyond the edges of the slabs and pavements.

14. For driveway slabs the upper 8 inches of subgrade soil should be compacted to at least 95 percent relative compaction. The aggregate base below all concrete pavements should be moisture conditioned and compacted to at least 95 percent relative compaction prior to placing concrete or asphalt paving materials.

15. All concrete slabs-on-grade can be expected to suffer some cracking and movement. However, thickened exterior edges, a well prepared subgrade including pre-moistening prior to pouring concrete, adequately spaced expansion joints and good workmanship should reduce cracking and movement.

16. Dees & Associates, Inc. are not experts in the field of moisture proofing and vapor barriers. In areas where floor wetness would be undesirable, an expert, experienced with moisture transmission and vapor barriers should be consulted. At a minimum, a blanket of 4 inches of free-draining gravel should be placed beneath the floor slab to act as a capillary break. In order to minimize vapor transmission, an impermeable membrane should be placed over the gravel.

Asphalt Pavements

17. At a minimum, the top 12 inches of subgrade should be compacted below asphalt pavements. The zone of compaction should extend 1 foot beyond the edge of the pavement.

18. The top 8 inches of pavement subgrade should be compacted to at least 95 percent relative compaction.

19. The pavement section should consist of at least 3.0 inches of asphalt concrete over at least 6 inches of Class II aggregate base, or as specified by your designer.

20. The aggregate base below all pavements should be moisture conditioned and compacted to at least 95 percent relative compaction prior to placing concrete or asphalt paving materials.

21. Only quality materials of the type and minimum thickness specified should be used. Baserock (R=78 minimum) should meet CalTrans Standard Specifications for Class II Untreated Aggregate Base. Subbase (R=50 minimum) if specified should meet CalTrans Standard Specifications for Class II Untreated Aggregate Subbase.

Pervious Pavements

22. Pervious concrete or permeable paver pavements may be used at the site to aid in storm water management.

23. The slope of soil subgrade below pervious pavement sections should be as flat as possible (less than 2 percent longitudinal slope) to enable even distribution and infiltration of storm water. If pervious pavements are proposed on slopes steeper than 2 percent and percolation or storage of collected storm water is desired, check dams should be placed along the subgrade surface to create storage basins so the water has enough time to percolate into the soil.

24. Any compaction of the subgrade soils will reduce the infiltration rate. Therefore, we recommend compacting the subgrade soil to between 90 and 93 percent relative compaction instead of the usual 95 percent compaction below permeable pavements designed to infiltrate water back into the soil. If the compacted area exceeds the upper limit of compaction, the area should be scarified and re-compacted.

25. Permeable concrete pavements should be at least 6 inches thick and underlain by at least 8 inches of Class 4 Aggregate Base, or as specified by your designer.

26. Permeable paver pavements should be underlain by at least 5 inches of ASTM No. 57 or Class 3 permeable material over at least 8 inches of Class 4 Aggregate Base, or as specified by your designer. A 1.5 to 2 inch layer of No. 8 aggregate may be used as a bedding material under the pavers.

27. The gravel reservoir below the pavement should be confined along the edges to prevent gravel from coming out from under the pavement.

28. A concrete curb should be used between pervious pavements and asphalt pavements to prevent water in the gravel reservoir from flowing into the subgrade below the asphalt. The concrete curb should extend at least 1 inch below the base of the gravel reservoir.

29. A concrete curb should be used along the edges of pervious pavements that are located upslope of and within 15 feet of residential foundations to prevent water in the gravel reservoir from flowing towards the residence. The concrete curb should extend at least 1 inch below the base of the gravel reservoir.

30. If the gravel below pervious pavements is designed to store water, the area within 15 feet of buildings should have an impermeable liner (15 mil minimum) to restrict infiltration into the soil near foundations. The impermeable liner should be extended up the side of the concrete curb to the top of the gravel reservoir. To reduce the potential for water to flow under the membrane, a 4 inch deep trench should be excavated along the other edges of the membrane, the membrane should be turned down into the trench then the trench should be backfilled with native soil tamped in place.

31. Pervious pavements are generally not designed to infiltrate and store all water from all storms. Therefore, an outlet or overflow path should be provided to discharge excess water.

32. The property owner should clearly understand the unique maintenance responsibilities inherent with permeable pavements. Pervious pavements require routine and long-term maintenance to maintain the pavements hydrologic functions. The voids in the pavement need to be kept clear of dirt and debris and activities such as sanding that would clog the pavement should be avoided. The pavement should never be sealed. Planted areas adjacent to pervious pavements should be well maintained to prevent soil washout onto the pavement. If the pavement becomes clogged the surface should be cleaned.

33. If the pavement is installed prior to completion of the project, the pavement should be protected from dirt, fine particles, excessive dust or any other activity that would clog or reduce the effectiveness of the pavement during the construction operations.

Utility Trenches

34. Utility trenches placed parallel to structures should not extend within an imaginary 1.5:1 (horizontal to vertical) plane projected downward from the bottom edge of the adjacent footing.

35. Trenches may be backfilled with compacted engineered fill placed in accordance with the grading section of this report. The backfill material should not be jetted in place.

36. The portion of utility trenches that extend beneath foundations should be sealed with 2-sack sand slurry (or equivalent) to prevent subsurface seepage from flowing under buildings.

Earthwork Construction Considerations

37. At the time of our study, moisture contents of the surface and near-surface native soils ranged from about 11 percent to 22 percent. Based on these moisture contents, some moisture conditioning will likely be needed for the project if grading is performed in the spring or early summer months. The soils moisture contents may need to be dried by aeration or chemically or wetted to achieve the required moisture content range.

38. Upon completion of grading, care should be taken to maintain the subgrade moisture content prior to construction of floor slabs. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and re-compacted prior to floor slab and pavement construction.

39. We recommend the earthwork portion of this project be completed during extended periods of dry weather if possible. If earthwork is completed during the wet season (typically October through May) it may be necessary to take extra precautionary measures to protect subgrade soils. Wet season earthwork may require additional mitigative measures beyond that which would be expected during the drier summer and fall months. This could include diversion of surface runoff around exposed soils and draining of ponded water on the site. Once subgrades are established, it may be necessary to protect the exposed subgrade soils from construction traffic.

Foundations

40. Spread footings embedded into firm native soil or engineered fill may be used to support structures, but not a combination of both.

41. Footings embedded into native soil should penetrate any existing fill or loose topsoil.

42. If footings are embedded into engineered fill, there should be at least 18 inches of engineered fill below all foundation elements.

43. If concrete slab-on-grade foundations are used, the slab should be supported with deepened footings embedded into firm soil or the top 3 feet of soil below the slab should be compacted.

Spread Footing Foundations Embedded into Engineered Fill

44. Conventional spread footings embedded into engineered fill may be used to support structures. Footings embedded into engineered fill should have at least 18 inches of engineered fill below the base of the footings.

45. Footings should be a minimum of 12 inches deep and 12 inches wide for one story structures and 18 inches deep and 15 inches wide for two story structures. The depth of foundations should be measured from the lowest adjacent grade.

46. Footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 1.5:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

47. Foundations designed in accordance with the above may be designed using an allowable bearing capacity of 2,500 psf. The allowable bearing capacity may be increased by 1/3 for short term seismic and wind loads.

48. Total and differential settlements under the proposed light building loads are anticipated to be less than 1 inch and 1/2 inch respectively.

49. Lateral load resistance for structures supported on footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.30 is considered applicable. Where footings are poured neat against engineered fill a passive lateral earth pressure of 350 pcf may be used. The top 12 inches of soil should be neglected in passive design.

50. The foundation trenches should be kept moist and thoroughly cleaned of slough and loose materials prior to pouring concrete.

51. Prior to placing concrete, foundation excavations should be observed by the soils engineer.

Spread Footing Foundations Embedded into Native Soil

52. Deepened spread footings embedded at least 6 inches into firm native soil may be used to support structures. Firm native soil was encountered 1 to 3 feet below existing grades. If fill is used to raise grade, the depth to firm soil may be deeper than 1 to 3 feet depending in the thickness of fill placed.

53. Footings should be a minimum of 18 inches deep and 12 inches wide for one story structures and 18 inches deep and 15 inches wide for two story structures. The depth of foundations should be measured from the lowest adjacent grade.

54. Footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 2:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

55. Foundations designed in accordance with the above may be designed using an allowable bearing capacity of 2,000 psf. The allowable bearing capacity may be increased by 1/3 for short term seismic and wind loads.

56. Total and differential settlements under the proposed light building loads are anticipated to be less than 1 inch and 1/2 inch respectively.

57. Lateral load resistance for structures supported on footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.25 is considered applicable. Where footings are poured neat against engineered fill a passive lateral earth pressure of 250 pcf may be used. The top 12 inches of soil should be neglected in passive design.

58. The foundation trenches should be kept moist and thoroughly cleaned of slough or loose materials prior to pouring concrete.

59. Prior to placing concrete, foundation excavations should be observed by the soils engineer.

Site Drainage

60. Controlling surface and subsurface runoff is important to the performance of the project.

61. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations or other improvements. Where bare soil or pervious surfaces are located next to the foundation, the ground surface within 10 feet of the structure should be sloped at least 5 percent away from the foundation. Where impervious surfaces are used within 10 feet of the foundation, the impervious surface within 10 feet of the structure should be sloped at least 2 percent away from the foundation. Swales should be used to collect and remove surface runoff where the ground cannot be sloped the full 10 foot width away from the structure. Swales should be sloped at least 2 percent towards the discharge point. The structure may need to be raised to allow these gradients to be achieved.

62. Full roof gutters should be placed around the eaves of the structure. Discharge from the roof gutters should be conveyed away from the downspouts and discharged in a controlled manner.

63. Splash blocks may be used where sufficient gradients are provided adjacent to building foundations and where runoff water can be safely directed to suitable areas to percolate back into the soil.

64. Concentrated runoff can be dispersed on site in a controlled manner. Concentrated runoff can be dispersed on site using well placed splash blocks, surface swales, bio-retention swales and basins or retention pits/trenches.

65. Retention facilities should be located at least 10 feet from foundations and be set back at least 125 feet from the top edge of the steep slope that descends to Rodeo Creek Gulch. A drainage setback line is indicated ion Figure 2.

Plan Review, Construction Observation, and Testing

66. Dees & Associates, Inc. should be provided the opportunity for a general review of the final project plans prior to construction to evaluate if our geotechnical recommendations have been properly interpreted and implemented. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. Dees & Associates, Inc. also requests the opportunity to observe and test grading operations and foundation excavations at the site. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the time, our firm should be notified so that supplemental recommendations can be given.

2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans, and that the necessary steps are taken to ensure that the Contractors and Subcontractors carry out such recommendations in the field. The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. No other warranty expressed or implied is made.

3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, this report should not be relied upon after a period of three years without being reviewed by a soil engineer.

APPENDIX A

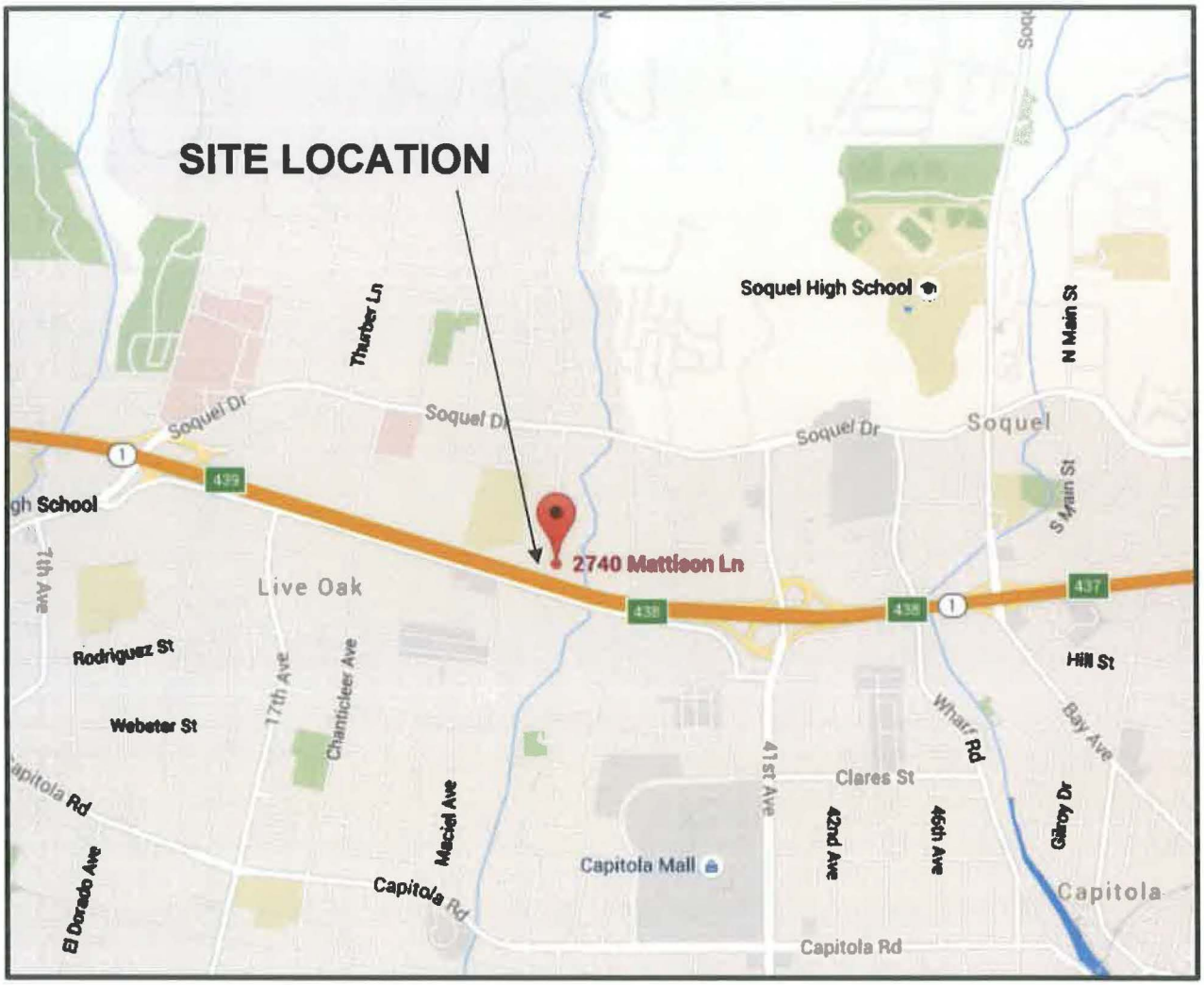
Site Vicinity Map

Boring Site Plan

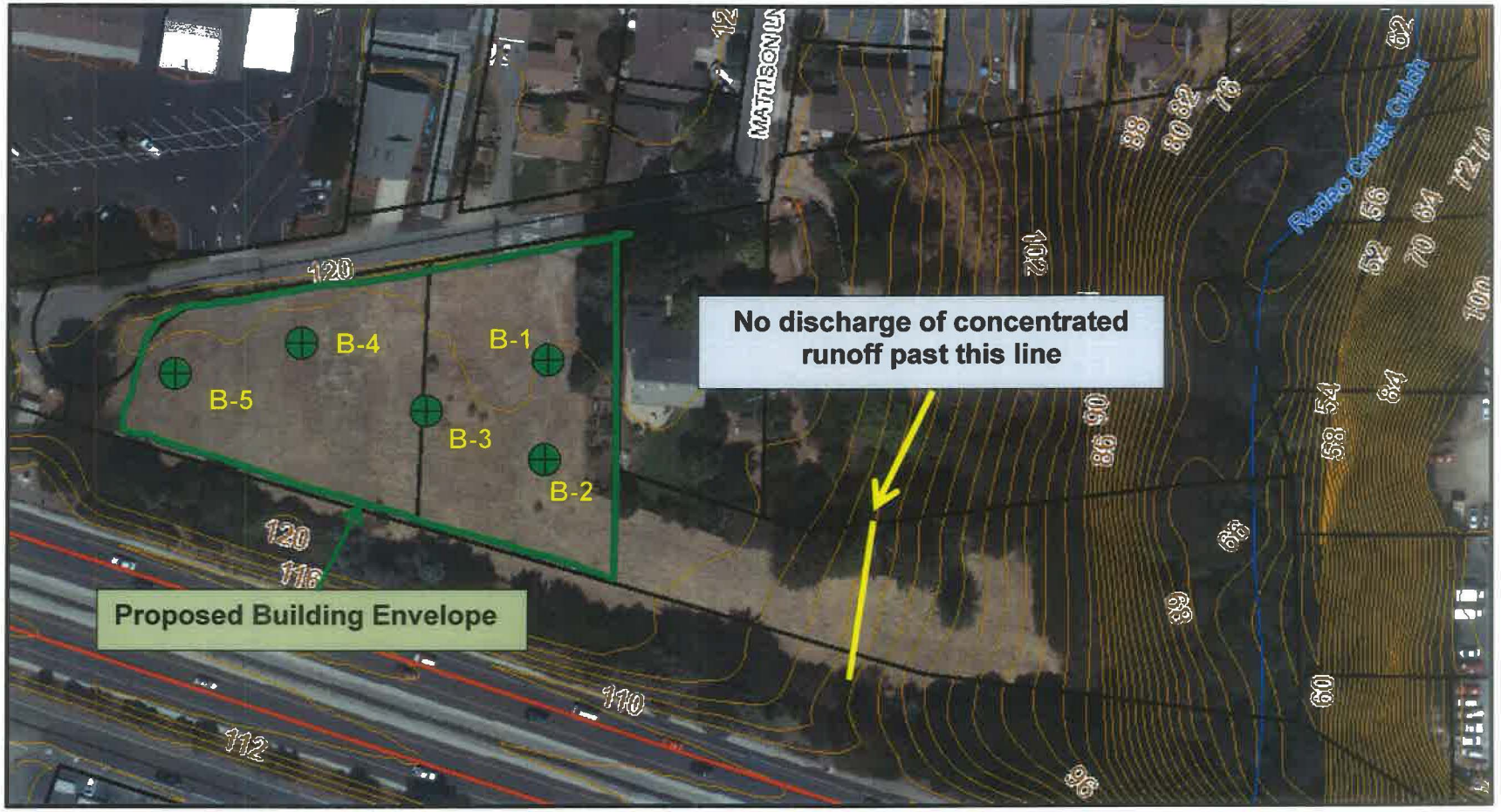
Unified Soil Classification System

Logs of Test Borings

Laboratory Test Results



SITE VICINITY MAP	Figure 1



BORING SITE PLAN	Figure 2

THE UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS* MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS (< 5% FINES)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate particle sizes	
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for GW	
		GRAVELS WITH FINES (>12% FINES)	GM	Silty gravels, gravel-sand-silt mixtures	Non plastic fines or fines with low plasticity Atterberg limits below "A" line or PI < 4	Above "A" line with 4 < PI < 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	Plastic fines Atterberg limits above "A" line with PI > 7	
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS (<5% FINES)	SW	Well-graded sands, gravelly sands, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate sizes missing	
			SP	Poorly graded sands, gravelly sands, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for SW	
		SANDS WITH FINES (>12% FINES)	SM	Silty sands, sand-silt mixtures	Non plastic fines or fines with low plasticity Atterberg limits below "A" line or PI < 4	Limits plotting in hatched zone with 4 < PI < 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Plastic fines Atterberg limits above "A" line with PI > 7	
FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	SILTS AND CLAYS (LIQUID LIMIT < 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	SILTS AND CLAYS (LIQUID LIMIT > 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			CH	Inorganic clays of medium to high plasticity, organic silts		
			OH	Organic clays of medium to high plasticity, organic silts		

*Gravels and sands with 5% to 12 % fines are borderline cases requiring use of dual symbols.

RELATIVE DENSITY OF SANDS AND GRAVELS

DESCRIPTION	BLOW / FT**
VERY LOOSE	0 – 4
LOOSE	4 – 10
MEDIUM DENSE	10 – 30
DENSE	30 – 50
VERY DENSE	OVER 50

CONSISTENCY OF SILTS AND CLAYS

DESCRIPTION	BLOWS / FT**
VERY SOFT	0 – 2
SOFT	2 – 4
FIRM	4 – 8
STIFF	8 – 16
VERY STIFF	16 – 32
HARD	OVER 32

**Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. 12 vertical inches.

Figure 3

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 1

DEPTH (FEET)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE (%) IN-SITU	MOISTURE (%) SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1					10								
2	1-1-1 L		Dark brown fine Sandy SILT / Silty SAND with granitic gravels to 1 inch, damp, loose	ML/ SM	9								
3	1-2 T				5 3 2	7		11.3				44.9	
4			Orange brown Sandy CLAY / SILT, damp, firm		6	8		23.9					
5				CL/ ML	9								
6	1-3-1 L				12 16	14							
7					8								
8	1-4 T		Orange brown Sandy SILT (low plasticity), damp/moist, stiff		6 6	12		32.7					
9				ML									
10					5								
11	1-5 T		Brown Sandy SILT, damp, stiff		5 5	10		34.3					
12													
13			Contact Estimated										
14													
15					5								
16	1-6 T		Olive brown fine SAND, moist, medium dense, with gravel lens at 16 feet.	SP	9 15	24		23.9					
17													
18													
19			Contact Estimated										
20					22								
21	1-7 T		Orange brown gravelly SAND, damp, very dense	SW	21 30	51		12.9					
22													
23													
24			▼ Groundwater at 24 feet										
25					6								
26	1-8 T		Yellow brown lean CLAY, moist, stiff Olive brown fine SAND, moist, medium dense	CL SP	9 11	20		32.0					
27													
28			Boring terminated at 26.5 feet. Groundwater table at 24 feet.										
29													
30													
31													
32													
33													

DEES & ASSOCIATES, INC
501 MISSION ST., STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

Figure 4

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED:4-6-16 BORING TYPE: 6 " Solid Stem BORING NO: 2

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	2-1-1 L	Dark brown fine Sandy SILT / Silty SAND, damp, loose	SM	3 8								
2				14	11	112.9	17.9	19.8	232.7	30.6		
3	2-2 T	Mottled orange brown Sandy CLAY/SILT with small rounded gravels, damp, very stiff		10 12								
4				12	24		24.5					4.0
5	2-3 T	Orange brown Sandy CLAY/SILT with lenses of clayey sand, moist, firm	ML/ CL	3 3								
6				3	6		31.7					
7												
8												
9		Contact Estimated										
10	2-4-2 L	Orange brown Clayey SAND with small rounded and subangular gravels, damp, medium dense	SC	7 15								
11				18	17	101.5	22.9					
12	2-5 T	Olive brown orange CLAY with sand, moist, very stiff		9 11								
13				13	24							
14	2-6-1 L		CL	9 11								
15	2-7 T			17	14	100.0	26.1					
16		Orange brown fine SAND with clay, damp, dense	SP-SC	13 16 17	33							
17												
18												
19		Gravel lens at approximately 18 feet										
20	2-8 T	Orange brown SAND with Gravel, damp, very dense	SW	17 24								
21				33	57		11.6					
22		Boring terminated at 21.5 feet No groundwater table										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

Figure 5

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 3

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	3-1-1 L	Dark brown Silty SAND / Sandy SILT, damp, loose	SM/ ML	9								
2		Mottled orange brown lean Clayey SAND / Sandy lean CLAY, damp, medium dense	SC/ CL	11 13	12	109.6	18.8	20.4	778.1	23.2		
3	3-2 T			6 9								
4		Mottled orange brown Sandy SILT, damp, very stiff	ML	10	19		30.7					
5	3-3 T	Brown Clayey fine SAND, damp, dense		12 13								
6			SC	17	30		32.3					
7												
8		Grey Sandy CLAY at 8 feet										
9		Contact Estimated										
10	3-4 T			7 7								
11		Grey brown mottled Sandy CLAY, moist, very stiff	CL	9	16		23.4					
12												
13												
14												
15												
16	3-5 T			9 9								
17		Orange brown Clayey SAND with gravel, damp, medium dense	SC	16	25							
18		Gravel lens at approximately 18 feet										
19												
20		Orange brown SAND with gravel, damp, dense		24 21								
21	3-6 T		SW	20	41		10.9					
22		Boring terminated at 21.5 feet. No groundwater table.										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

Figure 6

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 4

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	4-1-1 L	Dark brown Silty SAND / fine Sandy SILT, damp	SM/ ML	6 6 18	12							
2												
3	4-2 T	Mottled orange Sandy SILT/ CLAY, damp, stiff		6 5 9	14		25.7				60.3	
4												
5	4-3 T	Mottled orange Sandy SILT/ CLAY, damp, firm	ML/ CL	3 3 3	6		30.5					
6												
7												
8												
9												
10		▼ Perched water at 10 feet										
11	4-4 T	Light brown fine Sandy SILT, moist, firm/stiff		4 4 4	8		29.6					
12												
13			ML									
14												
15												
16	4-5 T			9 6 6	12		27.5					
17		Orange brown CLAY, damp, stiff	CL									
18												
19		▼ Groundwater at 18 feet										
20		Orange brown SAND with Gravel, damp, dense	SW	17 15 25	40							
21	4-6 T											
22		Boring terminated at 21.5 feet. Groundwater table at 18 feet. Perched water at 10 feet.										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

Figure 7

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 5

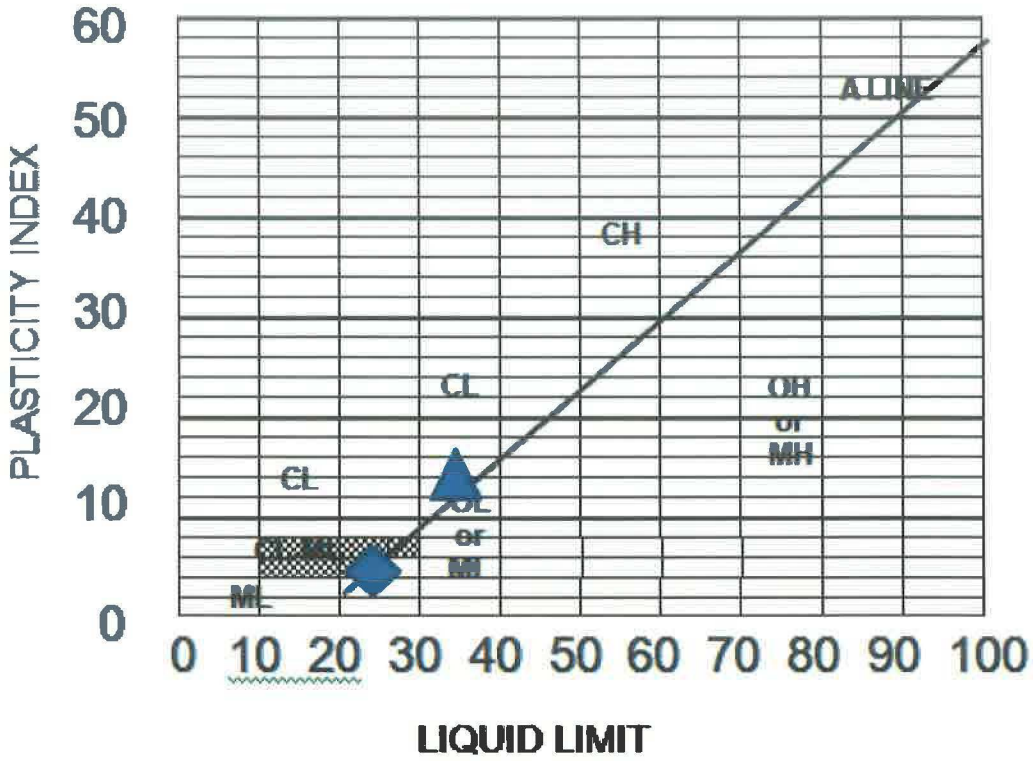
DEPTH (FEET)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1			Brown fine Sandy SILT / CLAY, damp	SM/ ML									
2	5-1-1 L				5 6								
3	5-2 T		Orange brown Sandy SILT / CLAY, damp, stiff		17 5 6	12	97.2	22.1				55.9	
4					6	12							
5				CL/ ML									
6	5-3 T		Orange brown Sandy SILT / CLAY, damp/moist		n/a n/a								
7					n/a	n/a		30.0					13.2
8			▼ Perched water at 9 feet										
9	5-4-1 L				5								
10			Orange brown Sandy SILT / CLAY, damp/moist, firm		6								
11	5-5 T		Mottled orange greyish brown lean CLAY, moist, stiff		6 5	6							
12				CL	7 7	14		25.9					
13													
14			Contact Estimated										
15	5-6 T			SC	9								
16			Brown fine SAND with Clay, damp, medium dense,		9 10	19		23.2					
17													
18			Gravel lens at approximately 18 feet.										
19													
20	5-7 T		Orange brown SAND with gravel, wet, very dense	SW	16 32								
21					50/5"	92		15.7					
22													
23													
24													
25				SW	20								
26	5-8 T		Orange brown SAND with gravel, damp, very dense		37 40	77		12.7					
27													
28			Boring terminated at 26.5 feet										
29			No groundwater table										
30			Perched water at 9 feet										
31			Note: no blowcounts for sample 5-3										
32													
33													

DEES & ASSOCIATES, INC
501 MISSION ST., STE 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

Figure 8



MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
CH	Inorganic clays of medium to high plasticity, organic silts, fat clays	CL	Inorganic clays of low to medium plasticity, gravelly clay sandy clays, silty clays, lean clays
OH	Organic clays of medium to high plasticity, organic silts	OL	Organic silts and organic silty clays of low plasticity
Pt	Peat and other highly organic soils		

PLASTICITY DATA

SYMBOL	SAMPLE NO.	DEPTH (FEET)	IN-SITU MOISTURE CONTENT (%)	LIQUID LIMIT (%	PLASTIC LIMIT (%	PLASTICITY INDEX (%)	LIQUIDITY INDEX (W-PL)/(LL PL)	UNIFIED SOIL CLASSIFICATION SYMBOL
◆	2-2	3	24.5	25.5	21.5	4.0	0.75	CL-ML
▲	5-3	5.5	30.0	35.6	22.4	13.2	0.58	CL/ML

Figure 9

Direct Shear Data	
Shear Stress (PSF)	Normal Pressure (PSF)
1000	825
2000	1525
4000	2353.1
8000	4962.5

Results	
Phi (degrees)	Cohesion (PSF)
30.2	232.7

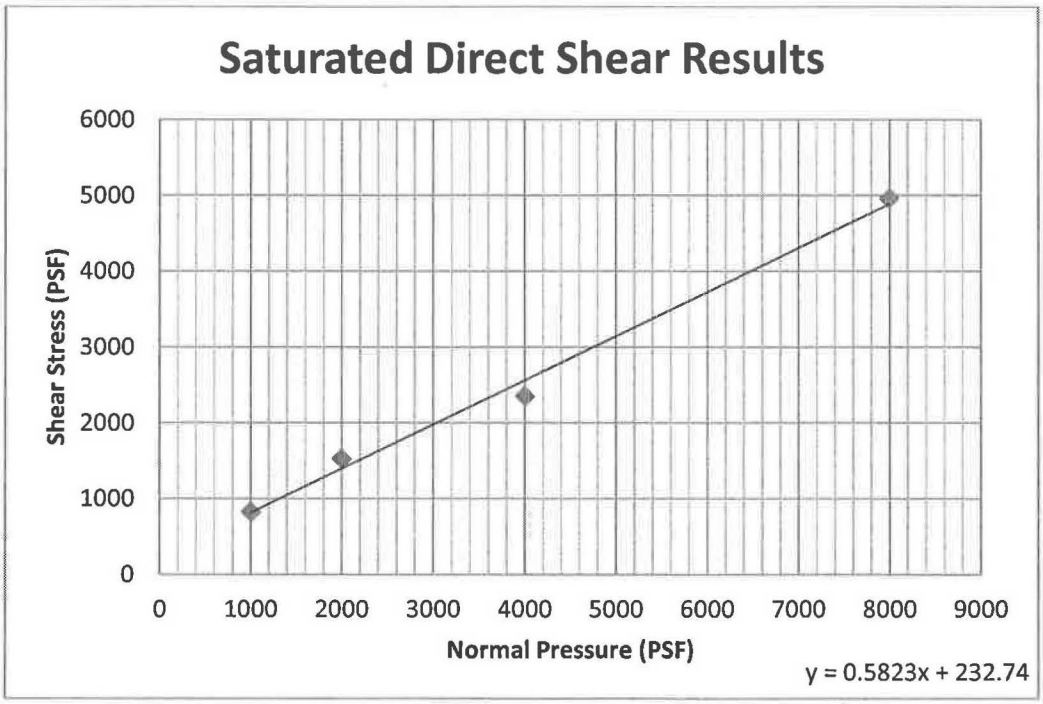


Figure 10

Direct Shear Data	
Shear Stress (PSF)	Normal Pressure (PSF)
1000	1087.5
2000	1753.1
4000	2371.9
8000	4581.3

Results	
Phi (degrees)	Cohesion (PSF)
26.0	621.7

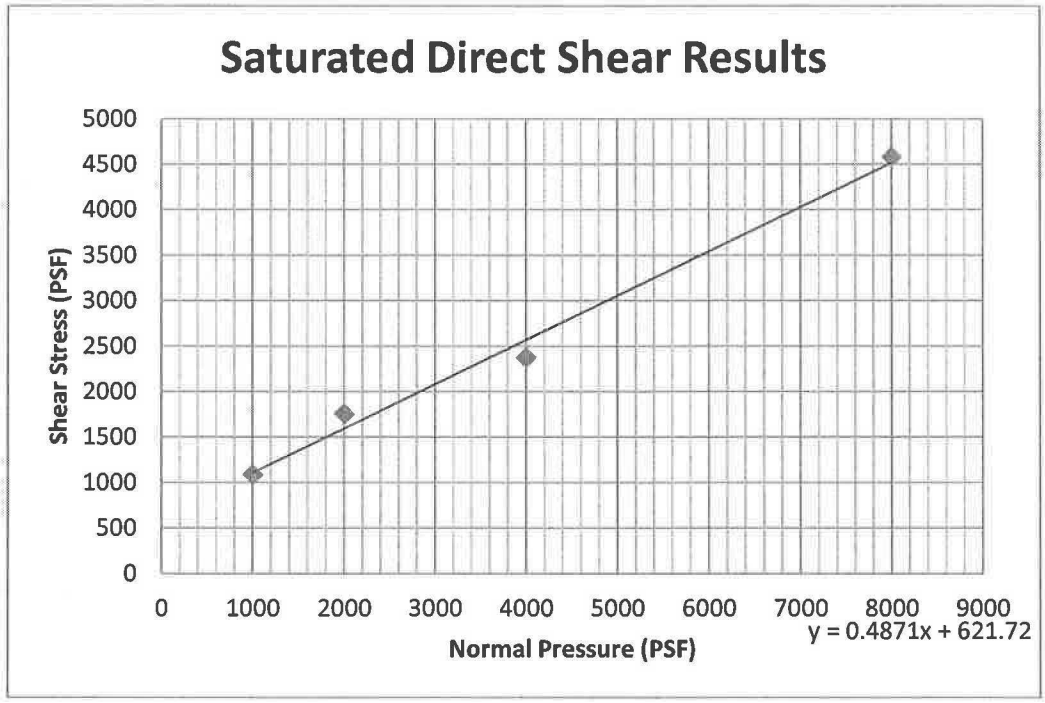


Figure 11

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770

October 18, 2021 Project No. SCR-1023

SAL RUBINO
1788 Campbell Avenue
San Jose, California 95125

Subject:Erosion

Reference: Proposed Apartment Complex
2740 Mattison Lane
APN'S 025-211-02 and 07
Santa Cruz County, California

Dear Mr. Rubino:

I went out to the site today to observe the existing drainage conditions and look for evidence of erosion. The majority of the site had been mowed and the grass was only a few inches high. The vegetation was still mostly intact along the rear drainage ravine. Site drainage is by sheet flow into the drainage valley east of the site.

I walked the proposed building area then down to graded bench just above the base of the drainage and there were no signs of erosion on the property. There is a potential for some erosion to occur where a low spot in the graded bench concentrates runoff, but there was no erosion at that location at this time.

The proposed drainage system will collect runoff and meter the runoff onto a gentle slope east of the proposed improvements. The gentle slope continues over one hundred feet past the proposed discharge area before the slope steepens along the edges of the drainage. There is a low potential for erosion to occur from the proposed drainage system as long as the drainage outlet is armored.

DEES & ASSOCIATES, INC.

Rebecca L Dees

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Copies: 1 to Addressee
1 to Jim Weaver; Pacific Rim Planning Group

Attachment 5

WATER DEPARTMENT
212 Locust Street, Suite C Santa Cruz CA 95060 Phone (831) 420-5200 Fax (831) 420-5201

November 9, 2021

Jim Weaver
Pacific Rim Plan Group
206 Morrissey Blvd.
Santa Cruz, CA 95062

Re: PROPOSED DEVLOPMENT (APARTMENT COMPLEX) ON VACANT LOT AT 2740 MATTISON LANE; APN 025-211-07

Dear Mr. Weaver:

This letter is to advise you that the subject parcels are located within the service area of the Santa Cruz Water Department and potable water is currently available for normal domestic use and fire protection. Service will be provided to the subject lots upon payment of the fees and charges in effect at the time of service application and upon completion of the installation, at developer expense, of any water mains, service connections, fire hydrants and other facilities required for the development under the rules and regulations of the Santa Cruz Water Department. The development will also be subject to the City's Landscape Water Conservation requirements.

At the present time:

- the required water system improvements are undetermined at this time; and
- financial arrangements have not been made to the satisfaction of the City to guarantee payment of all unpaid claims.

This letter will remain in effect for a period of two years from the above date. It should be noted, however, that the City Council may elect to declare a moratorium on new service connections due to drought conditions or other water emergency. Such a declaration would supersede this statement of water availability.

If you have any questions regarding service requirements, please call the Engineering Division at (831) 420-5210. If you have questions regarding landscape water conservation requirements, please contact the Water Conservation Office at (831) 420-5230.

Sincerely,

Heidi Luckenbach
Interim Water Director

HL/CO
Cc: SCWD Engineering

Attachment 6

SANTA CRUZ COUNTY SANITATION DISTRICT

701 OCEAN STREET, SUITE 410 · SANTA CRUZ, CA · 95060-4073
(831) 454-2160 · FAX (831) 454-2089 · TDD: (831) 454-2123 · WWW.SCCSD.US
MATT MACHADO, DISTRICT ENGINEER

OCTOBER 18, 2021

JIM WEAVER
RUBINO ENTERPRISES
44 SOUTHBRIDGE
CARBONDALE, CO 81623

SUBJECT:	SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT
APN:	025-211-02 & 025-211-07
PARCEL ADDRESS:	2740 MATTISON LN.
PROJECT DESCRIPTION:	NEW 10-UNIT DWELLING UNIT, PROPOSED AS TWO PHASES WITH FIRST PHASE BEING 8-UNITS CONSISTING OF (4) DUPLEXES AND SECOND PHASE BEING 2-UNITS OF (1) DUPLEX

Dear Mr. Jim Weaver and Rubino Enterprises:

The District has received your inquiry regarding sewer service availability for the subject parcel(s). Sewer service is conditionally available on Mattison Lane for the subject development with the following restrictions as outlined below.

This parcel is located in the Rodeo Basin Sewer moratorium area. The moratorium restrictions for this basin are being met with the proposed phased development. Phase 1 of the proposed development complies with the Rodeo Gulch Moratorium restrictions, limiting developments to no more than 8-units and is approved. Due to downstream restrictions, Phase 2 shall not be allowed until after the Rodeo Basin Sewer moratorium has been lifted by the Santa Cruz County Sanitation District (SCCSD). Note, however, that downstream sewer requirements will again be evaluated at time of Planning Permit review, at which time the District reserves the right to add or modify downstream sewer requirements.

This notice is valid for one year from the date of this letter. If, after this time frame, this project has not yet received approval from the Planning Department, then this determination of availability will be considered to have expired. If that occurs or is likely to occur prior to an upcoming submittal or public hearing, please call us ahead of time for a new letter. At that time, we can evaluate the then proposed use, improvements, and downstream capacity, and provide a new letter.

Also, for your reference, we have attached a list of common items required during the review of sanitation projects. Thank you for your inquiry. If you have any questions, please call Forrest Revere at (831) 454-2160.

Yours truly,

MATT MACHADO
District Engineer

By: DocuSigned by:
528D647137C44D4...
Ashleigh Trujillo
Sanitation Engineer

FR/arg:21-145.docx
Attachment

Common Items Required During the Review of Sanitation Projects

What to show on the drawings: When you begin the design process, please show:

On the plot/site/utility plan:

1. Location of any **existing** on-site sewer lateral(s), clean-out(s), and connection(s) to existing public sewer on the site (plot) plan.

2. Location of any **proposed** on-site sewer lateral(s), clean-out(s), and connection(s) to existing public sewer on the site (plot) plan.

   Place a note, *"Existing" or "(E)"*,on each existing item that is to be removed.
   Place a note, *"To be removed"*, on each existing item that is to be removed.
   Place a note, *"New" or "(N)"*, on each item that is to be new.

On a floor plan:

1. All plumbing fixtures both existing and new (label *"(E)"* or "*(N)*") on a floor plan of the entire building. Completely describe all plumbing fixtures according to table T-702.1 of the California Plumbing Code.

(Sanitation District Code sections 7.04.040 and 7.04.430)

Design and Construction Standards
The project sewer design and connection of the project to the Santa Cruz County Sanitation District system will be required to conform to the County of Santa Cruz Design Criteria (CDC) Part 4, Sanitary Sewer Design, February 2017 edition. Reference for County Design Criteria:
http://www.dpw.co.santa-cruz.ca.us/Portals/19/pdfs/Design%20Crit/DESIGNCRITERIA.pdf

New Connection
If the proposed plans will involve one or more new sewer connections, we must issue a new sewer connection permit for each new connection. The final connection charges can be determined only after the District and, as needed, other Department of Public Works divisions have reviewed and approved the final engineered sewer improvement plans. (Sanitation District Code section 7.04.410)

Non-residential water use
Provide to the District a written estimate the amount of domestic water (average gallons per day) that will be used on this parcel after it is fully developed. You may need to engage an engineer or other knowledgeable person to provide an accurate estimate. This information will be used in the determination of both fees and waste pretreatment requirements. Connection permits can only be issued after these requirements are determined. (Sanitation District Code section 5.04.100)

Backflow prevention device
A backflow preventive device may be required. While this determination is often made "in the field" at the time of installation, if you are engaging a surveyor, civil engineer, or knowledgeable contractor, there is nothing to prevent you from making that determination while in the design process. (Sanitation District Code section 7.04.100 and 7.04.375.A.4)

Attachment 7

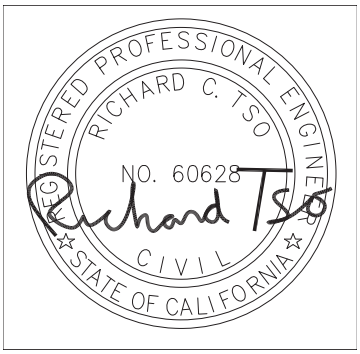
Preliminary
Stormwater Report

For

SAL RUBINO
1788 Campbell Avenue
San Jose, CA 95125

2740 MATTISON LANE
Santa Cruz, California
APN: 025-211-02 & -07

By: Greg Stein, EIT #25234
Reviewed By: Richard Tso, RCE #60628



MARCH, 2020

Job # 20001

IFLAND ENGINEERS
Civil Engineering ■ Structural Design ■ Land Development

5300 Soquel Avenue Suite 101
Santa Cruz, CA 95062
(831) 426-5313 FAX (831) 426-1763
www.iflandengineers.com

Existing Site Conditions

The existing site conditions are represented on the Preliminary Grading Plan on sheet C1.0. The project site is vacant with the exception of a few trees along the boundary lines. The development site is relatively level with drainage towards the southeast. The eastern portion of the property, which will remain undeveloped, slopes down to Rodeo Creek.

Upstream Runoff

The site receives half of the street runoff from Mattison Lane. Otherwise no other upstream drainage in intercepted by the project site. See sheet C3.0 for how Mattison Lane drainage is captured and conveyed through the project site.

Downstream Runoff

Runoff from the development site currently runs towards Highway One, then to Rodeo Creek. With the construction of the new sound wall and drainage improvements, drainage will be directed to Rodeo Creek through the subject parcel after passing through a bioretention/detention pond. The discharge from SCM-1 to Rodeo Creek occurs approximately 228 feet up-slope of the creek. A comprehensive downstream assessment will be performed at the time of construction documents.

Minimizing Impervious Surfaces

The proposed density is low for the parcel size given the current sewer moratorium which limits the number of connections possible from the site to eight, thus providing large areas of open space and undeveloped land. Impervious surfaces are minimized by not maximizing the project density.

On-Site Retention

Given the findings of a Percolation Study conducted by Dees and Associates, onsite retention is considered infeasible. Bioretention facilities are proposed with a minimum size of 4% of the new impervious areas for stormwater quality treatment.

On-Site Detention

A bioretention/detention pond is proposed and shown on sheets C1.0, with details shown on C3.0. Appendix B shows the detention sizing calculations.

APPENDIX A
THRESHOLD FORM

Appendix A - Project Information & Threshold Determination Form

COUNTY OF SANTA CRUZ DEPARTMENT OF Public WORKS

STORMWATER CONTROL PLAN (SWP) - Project Information & Threshold Determination Form

Completion of this form shall be used as guidance by the applicant

All projects shall maintain pre-development runoff rates & patterns

For any questions on this form, please contact DPW Stormwater Management at 831-454-2160.

PROJECT&CONTACTINFORMATION

2740 Mattison Lane, Santa Cruz *Project Street Address*	*Building Permit No. / Discretionary Application*
David Guthridge *Property Owner's/Representative Name*	*Project Name (Alias)* N/A
025-211-02 & -07 *Assessor's Parcel No (APN)*	*Property Owner/Representative's Firm* 408-640-2899
Richard Tso *Applicant's Name (i.e. design professional)*	*Property Owner/Representative's Phone No.* Ifland Engineers, Inc.
Flood Control District *Flood Control District (if applicable):*	*Applicant's Firm Name* 650-417-1652 *Applicant's Phone No.*

PROJECT DESCRIPTION

Lot Coverage	Actual		Adjusted	
A. Total lot size:	111,287	sq.ft.		
B. Existing Permitted Impervious Area:	4,529	sq.ft.		
C. Replaced permitted impervious area:	0	sq.ft.		
D. Replaced permitted semi-impervious* area:	0	sq.ft.	0	sq.ft.
D. Total proposed self-treating area:	0	sq.ft.		
E. Proposed impervious area:	34,076	sq.ft.		
F. Proposed semi-impervious* area:	0	sq.ft.	0	sq.ft.

Total replaced impervious & semi-impervious area: 0 sq.ft.

Total proposed impervious & semi- impervious area: 0 sq.ft.

Project Threshold Classification: 38,605 sq.ft.

- [ ] Small Project (less than 500 sq.ft. created and/or replaced) - Use *Appendix B 'Small Project Submittal Requirements'* for submittal requirement guidance.
- [ ] Medium Project (more than 500 sq.ft. but less than 5,000 sq.ft. created and/or replaced) - Use *Appendix C 'Medium Project Submittal Requirements'* for submittal requirement guidance.
- [X] Large Project (more than 5,000 sq.ft. created and/or replaced OR 50% increase in permitted impervious area**) - Use *Appendix D 'Large Project Submittal Requirements'* for submittal requirement guidance.

Application is part of a phased project OR master plan?	Yes [ ] No [X]
Application will maintain pre-development runoff patterns?	Yes [X] No [ ]
Application is unable to comply with Part 3 of the Design Criteria requirements & is electing to request a waiver(s) Please provide a brief description (below):	Yes [ ] No [X]

Form will apply a 50% credit for semi-impervious areas as final count. Applicant shall not apply the credit.

** Projects that add more than 50% impervious area coverage are required to mitigate the entire site.*

***Disclaimer: Permit review is based the information provided, additional clarification may be required for undisclosed/unidentified areas. Unaccounted areas may reclassify the project threshold.*

For SCC DPW Use Only:
Received: _____ Reviewed: _____ [ ] Not Approved [ ] Approved

APPENDIX B
DETENTION CALCULATIONS

DMA-1 AREA BREAKDOWN	
	AREA
PROPOSED ROOF	15034 SF
PROPOSED HARDSCAPE (ON-SITE)	12961 SF
PROPOSED HARDSCAPE (OFF-SITE)	6081 SF
EXISTING HARDSCAPE (OFF-SITE)	4529 SF
TOTAL IMPERVIOUS AREA TO SCM-1	38605 SF
4% OF PROPOSED IMPERVIOUS AREA	1544 SF
PROVIDED SCM AREA	1565 SF
TOTAL IMPERVIOUS AREA FOR DETENTION CALC	40170 SF

PROJECT: 2740 Mattison Lane - APN: 025-211-02 & -07 **Calc by:** GS **Date:** 3/12/2020

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD

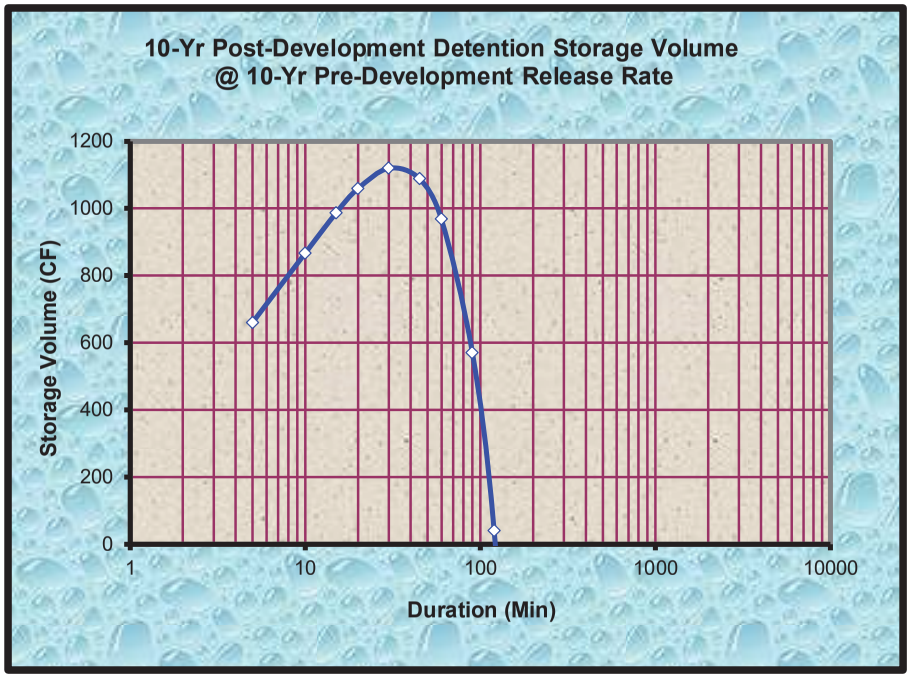
Data Entry: PRESS TAB & ENTER DESIGN VALUES SS Ver: 1.0

Site Location P60 Isopleth:	1.50		Fig. SWM-2 in County Design Criteria
Rational Coefficients Cpre:	0.37		See note # 2
Cpost:	0.90		See note # 2
Impervious Area:	40170	ft^2	See note # 2 and # 4

STRUCTURE DIMENSIONS FOR DETENTION

1120	ft^3 storage volume calculated			
100	% void space assumed			
1120	ft^3 excavated volume needed			
Structure	Length	Width*	Depth*	*For pipe, use the square
Ratios	1.00	1.00	1.00	root of the sectional area
Dimen. (ft)	**10.38**	**10.38**	**10.38**	

10 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	10 - Year Intensity (in/hr)	10 - Yr. Release Qpre (cfs)	10 - Year Qpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.26	0.088	0.215	-0.397	-42878
1200	0.28	0.096	0.232	-0.380	-34176
960	0.31	0.105	0.255	-0.357	-25681
720	0.34	0.119	0.288	-0.324	-17472
480	0.41	0.141	0.343	-0.269	-9701
360	0.46	0.159	0.387	-0.225	-6076
240	0.55	0.189	0.460	-0.152	-2744
180	0.62	0.213	0.519	-0.093	-1253
120	0.74	0.253	0.617	0.005	41
90	0.83	0.286	0.697	0.085	570
60	0.99	0.340	0.827	0.215	968
45	1.12	0.384	0.934	0.322	1088
30	1.33	0.456	1.110	0.498	**1120**
20	1.57	0.542	1.318	0.706	1059
15	1.78	**0.612**	1.489	0.877	986
10	2.11	0.727	1.768	1.156	867
5	2.83	0.975	**2.372**	1.760	660



Notes & Limitations on Use:

1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
2) Required detention volume determinations shall be based on all net new impervious area both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

DETENTION SYSTEM SUMMARY

IMPERVIOUS AREA FOR DETENTION CALC[3]=	40170 SF
REQUIRED DETENTION VOLUME=	1120 CF
10-YR RELEASE RATE=	0.612 CFS

PROPOSED DETENTION SYSTEM SUMMARY:

LENGTH	28.0 FT		
WIDTH	57.0 FT		
SCM AREA[1]	1565 SF		
		POROSITY	PROVIDED VOLUME
PONDING DEPTH	0.5 FT	1.00	783 CF
BIOSOIL DEPTH	2 FT	0.25	783 CF
DETENTION STONE DEPTH	0.83 FT	0.40	520 CF
	TOTAL PROVIDED VOLUME=		2085 CF
	DETENTION DEPTH[2]=		2.4 FT

NOTES

1- AREA ACCOUNTS FOR 6' RADIUS CORNERS ON SCM FOOTPRINT

2- DEPTH MEASURED FROM PERF OUTLET PIPE UPWARDS

3- FOOTPRINT OF SCM CONSIDERED IMPERVIOUS

ORIFICE SIZING (OCS #1)

PREDEVELOPMENT DISCHARGE RATE (FT^3/S)	0.612
DISCHARGE COEFFICIENT	0.61
HEADWATER DEPTH (FT)	2.4
TAILWATER DEPTH (FT)	0
ORIFICE AREA (IN^2)	11.69
ORIFICE DIAMETER (IN)	3.86
VELOCITY (FT/S)	7.54
FINAL ORIFICE DIAMETER – NEAREST 1/8TH (IN)	3 3/4
A ACTUAL (IN2)	0.077
Q max =	0.578

APPENDIX C
PERCOLATION RATE STUDY

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A, Santa Cruz, CA 95060

Phone: 831 427-1770
Fax: 831 427-1794

May 27, 2016 Project No. SCR-1023

SAL RUBINO
1788 Campbell Avenue
San Jose, California 95125

Subject: Percolation Test Results

Reference: Proposed Apartment Complex
2740 Mattison Lane
APN'S 025-211-02 and 07
Santa Cruz County, California

Dear Mr. Rubino:

This report presents a summary of our percolation test results for the referenced site. The site is located at 2740 Mattison Lane in Santa Cruz, California, Figure 1. On-site retention is being considered for handling storm runoff from the proposed improvements. To aid in determining the size of the proposed retentions structures, six (6) percolation tests were performed around the project site to determine the infiltration rate of the subsoils. The attached Boring Site Plan, Figure 1, depicts the approximate location of the percolation test holes. Our firm also drilled five (5) geotechnical test borings around the site. The five geotechnical borings were logged and are attached.

Our scope of work included; installation of six (6) percolation test holes 4 to 14 feet in depth, a 4-hour falling head percolation test, engineering analysis and preparation of this report.

Upon removal of all loose soil from the 6-inch diameter borings, 2 inches of pre-washed pea gravel was placed at their bottoms. The test holes were fitted with 3-inch diameter, slotted, PVC pipe and the annulus was packed with pre-washed pea gravel. The percolation hole was pre-saturated with water twenty-four hours prior to testing. The percolation tests were performed by filling the holes with water and measuring the drop in water level every 30 minutes for a period of 4 hours. Our raw field data was adjusted to account for the presence of a gravel and pipe in the hole and the surface area being tested. Our field data and calculations are attached.

The results of our percolation test indicate the top 6 to 8 feet has an average infiltration rate of 0.05 inches per hour, the soils from 8 to 15 feet have an average percolation rate of 0.01 inches per hour. The soils below 15 feet are sandier and probably have a higher infiltration rate but groundwater was encountered 18 feet below grade which prohibits the use of deep retention facilities.

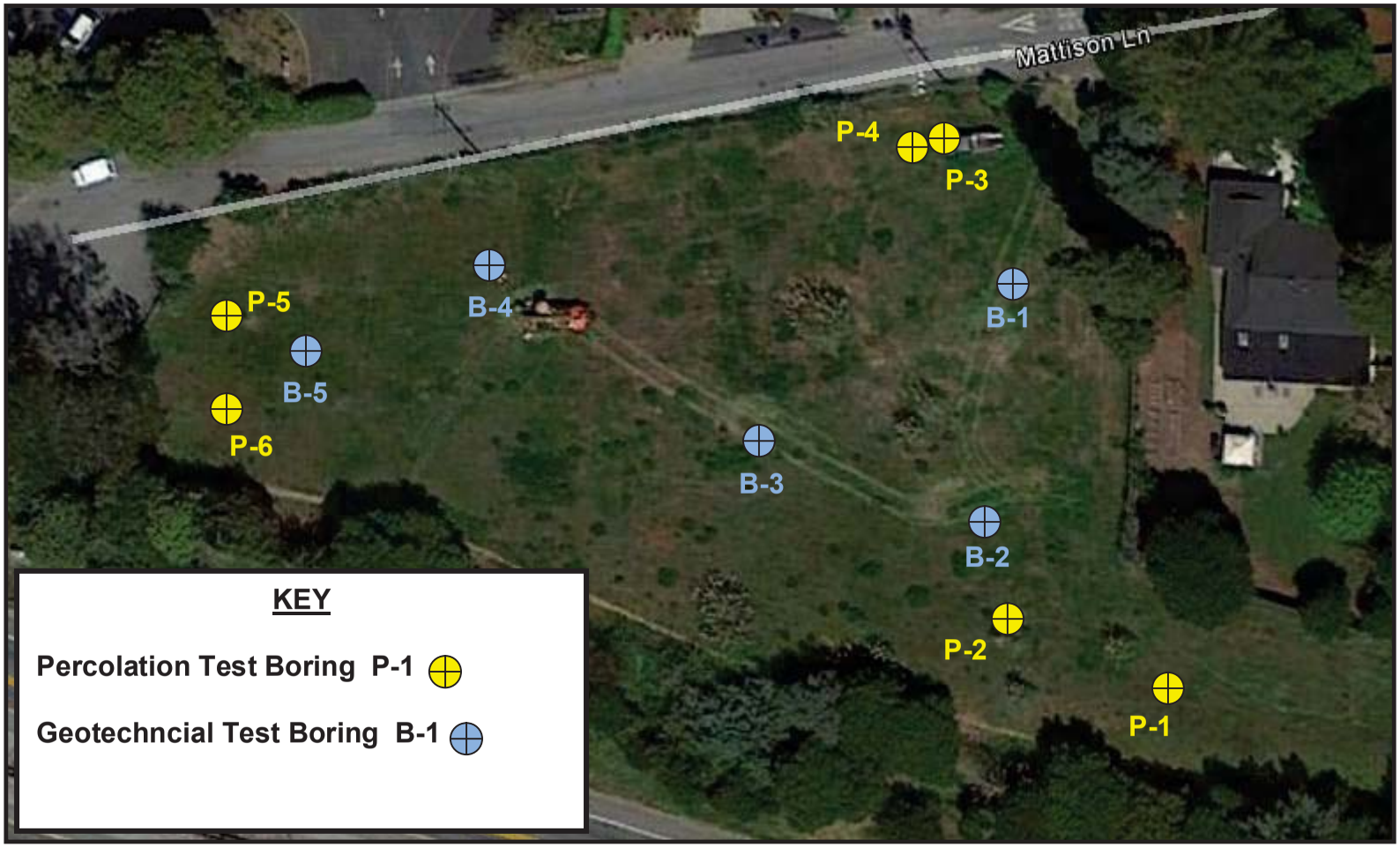
Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A, Santa Cruz, CA 95060
Phone: 831 427-1770
Fax: 831 427-1794

DEES & ASSOCIATES, INC.

Rebecca L. (Dees) Boyd
Geotechnical Engineer
G.E. 2623

Attachments

Copies: 1 to Addressee
3 to Jim Weaver; Pacific Rim Planning Group


Mattison Ln
P-4
P-3
P-5
B-4
B-1
B-5
P-6
B-3
B-2
P-2
P-1
KEY
Percolation Test Boring P-1
Geotechncial Test Boring B-1

THE UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS* MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	**GRAVELS** MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS (< 5% FINES)	**GW**	Well-graded gravels, gravel-sand mixtures, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate particle sizes	
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for GW	
		GRAVELS WITH FINES (>12% FINES)	**GM**	Silty gravels, gravel-sand-silt mixtures	Non plastic fines or fines with low plasticity Atterberg limits below "A" line or PI < 4	Above "A" line with 4 < PI < 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	Plastic fines Atterberg limits above "A" line with PI > 7	
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS (<5% FINES)	**SW**	Well-graded sands, gravelly sands, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate sizes missing	
			SP	Poorly graded sands, gravelly sands, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for SW	
		SANDS WITH FINES (>12% FINES)	**SM**	Silty sands, sand-silt mixtures	Non plastic fines or fines with low plasticity Atterberg limits below "A" line or PI < 4	Limits plotting in hatched zone with 4 < PI < 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Plastic fines Atterberg limits above "A" line with PI > 7	
FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	SILTS AND CLAYS (LIQUID LIMIT < 50)		**ML**	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	SILTS AND CLAYS (LIQUID LIMIT > 50)		**MH**	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			CH	Inorganic clays of medium to high plasticity, organic silts		
			OH	Organic clays of medium to high plasticity, organic silts		

*Gravels and sands with 5% to 12 % fines are borderline cases requiring use of dual symbols.

RELATIVE DENSITY OF SANDS AND GRAVELS

DESCRIPTION	BLOW / FT**
VERY LOOSE	0 – 4
LOOSE	4 – 10
MEDIUM DENSE	10 – 30
DENSE	30 – 50
VERY DENSE	OVER 50

CONSISTENCY OF SILTS AND CLAYS

DESCRIPTION	BLOWS / FT**
VERY SOFT	0 – 2
SOFT	2 – 4
FIRM	4 – 8
STIFF	8 – 16
VERY STIFF	16 – 32
HARD	OVER 32

**Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. 12 vertical inches.

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 1

DEPTH (FEET)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE (%) IN-SITU	MOISTURE (%) SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1					10								
2	1-1-1 L		Dark brown fine Sandy SILT / Silty SAND with granitic gravels to 1 inch, damp, loose	ML/ SM	9 5	7		11.3				44.9	
3	1-2 T				3 2								
4			Orange brown Sandy CLAY / SILT, damp, firm		6	8		23.9					
5				CL/ ML	9								
6	1-3-1 L				12 16	14							
7					8								
8	1-4 T		Orange brown Sandy SILT (low plasticity), damp/moist, stiff		6 6	12		32.7					
9				ML									
10					5								
11	1-5 T		Brown Sandy SILT, damp, stiff		5 5	10		34.3					
12													
13			Contact Estimated										
14													
15					5								
16	1-6 T		Olive brown fine SAND, moist, medium dense, with gravel lens at 16 feet.	SP	9 15	24		23.9					
17													
18													
19			Contact Estimated										
20					22								
21	1-7 T		Orange brown gravelly SAND, damp, very dense	SW	21 30	51		12.9					
22													
23													
24			▼ Groundwater at 24 feet										
25					6								
26	1-8 T		Yellow brown lean CLAY, moist, stiff	CL	9								
			Olive brown fine SAND, moist, medium dense	SP	11	20		32.0					
27			Boring terminated at 26.5 feet. Groundwater table at 24 feet.										
28													
29													
30													
31													
32													
33													

DEES & ASSOCIATES, INC
501 MISSION ST., STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6 " Solid Stem BORING NO: 2

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1		Dark brown fine Sandy SILT / Silty SAND, damp, loose	SM	3 8								
2	2-1-1 L			14	11	112.9	17.9	19.8	232.7	30.6		
3	2-2 T	Mottled orange brown Sandy CLAY/SILT with small rounded gravels, damp, very stiff		10 12 12	24		24.5					4.0
4			ML/ CL									
5	2-3 T	Orange brown Sandy CLAY/SILT with lenses of clayey sand, moist, firm		3 3 3	6		31.7					
6												
7												
8												
9		Contact Estimated										
10	2-4-2 L	Orange brown Clayey SAND with small rounded and subangular gravels, damp, medium dense	SC	7 15 18	17	101.5	22.9					
11												
12	2-5 T	Olive brown orange CLAY with sand, moist, very stiff		9 11 13	24							
13												
14	2-6-1 L		CL	9 11 17	14	100.0	26.1					
15	2-7 T			13 16 17	33							
16		Orange brown fine SAND with clay, damp, dense	SP-SC									
17												
18												
19		Gravel lens at approximately 18 feet										
20			SW	17 24								
21	2-8 T	Orange brown SAND with Gravel, damp, very dense		33	57		11.6					
22		Boring terminated at 21.5 feet No groundwater table										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 3

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	3-1-1 L	Dark brown Silty SAND / Sandy SILT, damp, loose	SM/ ML	9								
2		Mottled orange brown lean Clayey SAND / Sandy lean CLAY, damp, medium dense	SC/ CL	11 13	12	109.6	18.8	20.4	778.1	23.2		
3	3-2 T			6 9								
4		Mottled orange brown Sandy SILT, damp, very stiff	ML	10	19		30.7					
5												
6	3-3 T	Brown Clayey fine SAND, damp, dense	SC	12 13 17	30		32.3					
7												
8		Grey Sandy CLAY at 8 feet										
9		Contact Estimated										
10	3-4 T			7 7								
11		Grey brown mottled Sandy CLAY, moist, very stiff	CL	9	16		23.4					
12												
13												
14												
15												
16	3-5 T			9 9								
17		Orange brown Clayey SAND with gravel, damp, medium dense	SC	16	25							
18		Gravel lens at approximately 18 feet										
19												
20		Orange brown SAND with gravel, damp, dense		24 21								
21	3-6 T		SW	20	41		10.9					
22		Boring terminated at 21.5 feet. No groundwater table.										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 4

DEPTH (FEET)	SAMPLE NO.	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	4-1-1 L	Dark brown Silty SAND / fine Sandy SILT, damp	SM/ ML	6 6 18	12							
2												
3	4-2 T	Mottled orange Sandy SILT / CLAY, damp, stiff		6 5 9	14		25.7				60.3	
4												
5	4-3 T	Mottled orange Sandy SILT / CLAY, damp, firm	ML/ CL	3 3 3	6		30.5					
6												
7												
8												
9												
10		▼ Perched water at 10 feet										
11	4-4 T	Light brown fine Sandy SILT, moist, firm/stiff		4 4 4	8		29.6					
12												
13			ML									
14												
15												
16	4-5 T			9 6 6	12		27.5					
17		Orange brown CLAY, damp, stiff	CL									
18		▼ Groundwater at 18 feet										
19												
20	4-6 T	Orange brown SAND with Gravel, damp, dense	SW	17 15 25	40							
21												
22		Boring terminated at 21.5 feet. Groundwater table at 18 feet. Perched water at 10 feet.										
23												
24												
25												
26												

DEES & ASSOCIATES, INC
501 MISSION ST. STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

TEST BORING LOGS

LOGGED BY: MH DATE DRILLED: 4-6-16 BORING TYPE: 6" Solid Stem BORING NO: 5

DEPTH (FEET)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	FIELD BLOW/ COUNT	SPT BLOW/ COUNT*	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1			Brown fine Sandy SILT / CLAY, damp	SM/ ML	5								
2	5-1-1 L				6								
3	5-2 T		Orange brown Sandy SILT / CLAY, damp, stiff		17	12	97.2	22.1				55.9	
4					5								
5					6								
6	5-3 T		Orange brown Sandy SILT / CLAY, damp/moist	CL/ ML	6	12							
7					n/a								
8					n/a								
9			▼ Perched water at 9 feet		n/a	n/a		30.0					13.2
10	5-4-1 L		Orange brown Sandy SILT / CLAY, damp/moist, firm		5								
11	5-5 T		Mottled orange greyish brown lean CLAY, moist, stiff	CL	6	6							
12					5								
13					7								
14					7	14		25.9					
15			Contact Estimated										
16	5-6 T		Brown fine SAND with Clay, damp, medium dense,	SC	9								
17					9								
18					10	19		23.2					
19			Gravel lens at approximately 18 feet.										
20													
21	5-7 T		Orange brown SAND with gravel, wet, very dense	SW	16								
22					32								
23					50/5"	92		15.7					
24													
25				SW	20								
26	5-8 T		Orange brown SAND with gravel, damp, very dense		37								
27					40	77		12.7					
28			Boring terminated at 26.5 feet										
29			No groundwater table										
30			Perched water at 9 feet										
31			Note: no blowcounts for sample 5-3										
32													
33													

DEES & ASSOCIATES, INC
501 MISSION ST., STE. 8A
SANTA CRUZ, CA 95060
Ph: (831) 427-1770 Fax: (831) 427-1794

Project No. SCR-1023

* Blow count converted
L = Field Blow Count/2

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**
Project Name:	2740 Mattison Ln	**Falling Head** ☒
Date:	4/11/16	**Constant Head** ☐
Performed By:	CL, JR	
Test No:	1	

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Design Infiltration Rate (Q/A)
0.060 in/hr

Measured Flow in Field (in/hr)	2.6
Depth of Infiltration Zone (ft)	2.8

Volume of water infiltrated in 1 hour (cf/hr)	0.023
Surface area of infiltration zone (sf)	4.645

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, et alia
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-1

Boring depth at time of test (ft)	4.0
Insert Pipe Protrusion	1.2
Height to top of insert pipe (ft)	5.17
Water depth at start of test (ft)	3.4
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
---	1.8	11:45 AM	---	---	Design
1.8	---	12:43 PM	58	0.000	---
2.0	---	1:12 PM	29	6.2	---
2.1	---	1:40 PM	28	2.1	2.1
2.3	---	2:10 PM	30	4.0	4.0
2.4	---	2:40 PM	30	4.0	4.0
2.5	---	3:10 PM	30	2.0	2.0
2.6	---	3:40 PM	30	2.0	2.0
2.7	---	4:10 PM	30	2.0	2.0
2.8	---	4:40 PM	30	2.0	2.0
Avg. Reading					
2.33				Average	2.59

Average Height of Water** (ft)	2.8

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**	
Project Name:	2740 Mattison Ln	**Falling Head**	☒
Date:	4/11/16	**Constant Head**	☐
Performed By:	CL, JR		
Test No:	2		

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Measured Flow in Field (in/hr)	0.6
Depth of Infiltration Zone (ft)	8.0

Design Infiltration Rate (Q/A)
0.005 in/hr

Volume of water infiltrated in 1 hour (cf/hr)	0.005
Surface area of infiltration zone (sf)	12.742

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, et alia
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-2

Boring depth at time of test (ft)	14.3
Inset Pipe Protrusion (ft)	0.8
Height to top of insert pipe (ft)	15.00
Water depth at start of test (ft)	12.3
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
---	2.7	12:00 PM	---	---	Design
6.8	---	12:45 PM	45	65.333	---
6.9	---	1:14 PM	29	4.1	---
7.0	---	1:42 PM	28	2.1	2.1
7.0	---	2:10 PM	28	0.0	0.0
7.1	---	2:41 PM	31	1.9	1.9
7.1	---	3:11 PM	30	0.0	0.0
7.1	---	3:41 PM	30	0.0	0.0
7.1	---	4:11 PM	30	0.0	0.0
7.1	---	4:41 PM	30	0.0	0.0
7.01				Average	0.58

Average Height of Water** (ft)	8.0

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**	
Project Name:	2740 Mattison Ln	**Falling Head**	☒
Date:	4/11/16	**Constant Head**	☐
Performed By:	CL/JR		
Test No:	3		

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Measured Flow in Field (in/hr)	2.3
Depth of Infiltration Zone (ft)	8.3

Design Infiltration Rate (Q/A)

0.019 in/hr

Volume of water infiltrated in 1 hour (cf/hr)	0.021
Surface area of infiltration zone (sf)	13.149

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, JR
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-3

Boring depth at time of test (ft)	9.0
Insert Pipe Protrusion (ft)	1.0
Height to top of insert pipe (ft)	10.00
Water depth at start of test (ft)	8.7
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
---	1.3	12:20 PM	---	---	Design
1.3	---	12:48 PM	28	0.000	---
1.5	---	1:15 PM	27	4.4	---
1.6	---	1:43 PM	28	2.1	2.1
1.7	---	2:14 PM	31	1.9	1.9
1.8	---	2:42 PM	28	4.3	4.3
1.9	---	3:12 PM	30	2.0	2.0
1.9	---	3:42 PM	30	0.0	0.0
2.0	---	4:12 PM	30	2.0	2.0
2.2	---	4:42 PM	30	4.0	4.0
1.77				Average	2.34

Average Height of Water** (ft)	8.2

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**	
Project Name:	2740 Mattison Ln	**Falling Head**	☒
Date:	4/11/16	**Constant Head**	☐
Performed By:	CL, JR		
Test No:	4		

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Measured Flow in Field (in/hr)	0.3
Depth of Infiltration Zone (ft)	8.3

Volume of water infiltrated in 1 hour (cf/hr)	0.003
Surface area of infiltration zone (sf)	13.265

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Design Infiltration Rate (Q/A)
0.002 in/hr

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, et alia
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-4

Boring depth at time of test (ft)	14.0
Insert Pipe Protrusion (ft)	1.0
Height to top of insert pipe (ft)	15.00
Water depth at start of test (ft)	11.7
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
---	3.3	12:30 PM	---	---	Design
6.7	---	12:51 PM	21	114.286	---
6.7	---	1:16 PM	25	0.0	---
6.7	---	1:45 PM	29	0.0	0.0
6.7	---	2:16 PM	31	0.0	0.0
6.7	---	2:43 PM	27	0.0	0.0
6.7	---	3:13 PM	30	0.0	0.0
6.7	---	3:43 PM	30	0.0	0.0
6.7	---	4:13 PM	30	0.0	0.0
6.8	---	4:43 PM	30	2.0	2.0
Avg. Reading:					
6.68				Average	0.29

Average Height of Water** (ft)	8.3

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**	
Project Name:	2740 Mattison Ln	**Falling Head**	☒
Date:	4/11/16	**Constant Head**	☐
Performed By:	CL, JR		
Test No:	5		

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Design Infiltration Rate (Q/A)
0.042 in/hr

Measured Flow in Field (in/hr)	2.0
Depth of Infiltration Zone (ft)	3.3

Volume of water infiltrated in 1 hour (cf/hr)	0.018
Surface area of infiltration zone (sf)	5.313

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, et alia
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-5

Boring depth at time of test (ft)	3.8
Insert Pipe Protrusion (ft)	1.2
Height to top of insert pipe (ft)	5.00
Water depth at start of test (ft)	3.7
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
---	1.33	12:30 PM	---	---	Design
1.33	---	12:53 PM	23	0.000	---
1.50	---	1:18 PM	25	4.8	---
1.58	---	1:46 PM	28	2.1	2.1
1.67	---	2:18 PM	32	1.9	1.9
1.75	---	2:44 PM	26	2.3	2.3
1.83	---	3:14 PM	30	2.0	2.0
1.92	---	3:44 PM	30	2.0	2.0
2.00	---	4:14 PM	30	2.0	2.0
2.08	---	4:44 PM	30	2.0	2.0
Avg. Reading:					
1.74				Average	2.05

Average Height of Water** (ft)	3.3

PERCOLATION RATE CALCULATIONS

Project No.	SCR-1023	**Percolation Test Method**	
Project Name:	2740 Mattison Ln	**Falling Head**	☒
Date:	4/11/16	**Constant Head**	☐
Performed By:	CL, JR		
Test No:	6		

Boring Diameter (inches)	6
Diameter of Insert Pipe (inches)	3
Void Ratio of Annulus Fill	0.4

Design Infiltration Rate (Q/A)
0.000 in/hr

Measured Flow in Field (in/hr)	0.0
Depth of Infiltration Zone (ft)	2.6

Volume of water infiltrated in 1 hour (cf/hr)	0.000
Surface area of infiltration zone (sf)	4.208

Volume of water infiltrated in 1 hour	
Depth of Infiltration Zone	
Height of Water at Start of Test	
Height of Water at End of Test	

Area of boring (sf)	0.196
Area of insert pipe (sf)	0.049
Area of Annulus (sf)	0.147
Volume of voids (cf)	0.059
Volume per foot (cf)	0.108

PERCOLATION TEST FIELD DATA

Test Performed by:	CL, et alia
Project Name:	Mattison
Project No.	SCR-1023
Date of Test:	4/7/2016

P-6

Boring depth at time of test (ft)	9.3
Insert Pipe Protrusion (ft)	0.8
Height to top of insert pipe (ft)	10.00
Water depth at start of test (ft)	3.0
Tape correction for depth (ft)	0.0
Diameter of Boring (in)	6.0
Diameter of Insert Pipe (in)	3.0
Material used to infill annulus	Pea Gravel
Void ratio of annulus fill material	0.4

Reading	Reading (ft)	Refilled* to (ft)	Time	time (m)	in/hr	in/hr.
1	---	7.0	12:40 PM	---	---	Design
2	7.0	---	12:56 PM	16	0.000	---
3	7.5	---	1:19 PM	23	15.7	---
4	7.5	---	1:47 PM	28	0.0	0.0
5	7.5	---	2:20 PM	33	0.0	0.0
6	7.5	---	2:45 PM	25	0.0	0.0
7	7.5	---	3:16 PM	31	0.0	0.0
8	7.5	---	3:46 PM	30	0.0	0.0
9	7.5	---	4:16 PM	30	0.0	0.0
10	7.5	---	4:46 PM	30	0.0	0.0
11						
12						
13						
14						
15						
16						
	Avg. Reading:					
	7.44				Average	0.00

Average Height of Water** (ft)	2.6