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
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **McClure Construction, Inc.**

APPLICATION NO.: **08-0394**

PARCEL NUMBER (APN): **030-112-05**

The Environmental Coordinator has reviewed the Initial Study for your application and made the following preliminary determination:

XX Negative Declaration
(Your project will not have a significant impact on the environment.)

XX Mitigations will be attached to the Negative Declaration.

_____ No mitigations will be attached.

_____ Environmental Impact Report
(Your project may have a significant effect on the environment. An EIR must be prepared to address the potential impacts.)

As part of the environmental review process required by the California Environmental Quality Act (CEQA), this is your opportunity to respond to the preliminary determination before it is finalized. Please contact Matt Johnston, Environmental Coordinator at (831) 454-3201, if you wish to comment on the preliminary determination. Written comments will be received until 5:00 p.m. on the last day of the review period.

Review Period Ends: **December 6, 2010**

Staff Planner: Samantha Haschert

Phone: **(831) 454-3214**

Date: **November 15, 2010**

NAME: Oil Can Henry's
APPLICATION: 08-0394
A.P.N: 030-112-05

NEGATIVE DECLARATION MITIGATIONS

1. In order to ensure all geotechnical, grading, erosion control and biotic requirements are in place, the applicant shall organize a pre-grading/pre-construction meeting to be held onsite with County Engineering and Environmental Planning Staff, project biologist, and the project team prior to any land disturbance.
2. In order to mitigate potential impacts from erosion, the following mitigation measures shall be implemented:
    a. Grading must commence by July 15th, in order to ensure completion of the grading and installation of erosion control in the riparian area by October 15th. If grading is not started by July 15th, the start of grading must wait until the following July 15th.
    b. If permanent drainage improvements are not installed prior to October 15th, temporary drainage measures must be implemented during the rainy season to control drainage onsite. The project civil engineer must review, approve and inspect all temporary drainage onsite and provide a letter to Environmental Planning stating that they have reviewed, approved and inspected all temporary drainage measures onsite.
    c. A Certified Professional in Erosion and Sediment Control (CPESC), or similarly qualified individual, must review and inspect all erosion control measures during the rainy season (October 15th -April 15th). The erosion control specialist must inspect the site every 2 weeks and submit inspection reports to Environmental Planning staff for review.

3. In order to mitigate the impacts to the riparian woodlands habitat, prior to issuance of the building permit that applicant shall submit to the Planning Department for review and approval a habitat restoration plan.
    a. The plan shall reflect the recommendations of the Resource Conservation District (Exhibit 7 of the initial study).
    b. The plan shall include a 5-year monitoring and maintenance plan.
    c. The plan shall include success criteria aimed at achieving eventual vegetative coverage below the break in slope.

4. In order to mitigate impacts of nighttime lighting on the adjacent riparian habitat, prior to issuance of a building permit, the applicant shall submit a lighting plan to the Planning Department for review and approval. The plan shall reflect that permanent outdoor lighting at the west end of the development shall be minimized and shall be shielded by fixture design or other means to minimize illumination of riparian habitat. Light sources that do not attract insects (e.g. yellow or sodium vapor bulbs) shall be used if outdoor lighting is necessary (e.g. security or handicap access structures).

County of Santa Cruz

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www.sccoplanning.com

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ENVIRONMENTAL REVIEW INITIAL STUDY

Date: November 8, 2010 **Application Number:** 08-0394

Staff Planner: Samantha Haschert

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: McClure Construction, Inc. **APN(s)**: 030-112-05

OWNER: McClure Construction, Inc. **SUPERVISORAL DISTRICT**: 1st (Leopold)

PROJECT LOCATION:

Property located on the southwest corner of the Soquel Drive and South Rodeo Gulch intersection.

SUMMARY PROJECT DESCRIPTION:

Proposal to construct a two bay, two story, lube/oil changing facility of about 2852 square feet on a vacant parcel. Requires a Commercial Development Permit, Preliminary Grading Review, a Riparian Exception to move 3243 cubic yards of illegal fill, restore the riparian area and construct within the 50-foot riparian buffer, Soils Report Review, and a Roadside/Roadway Exception.

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.

- ☒ Geology/Soils
- ☒ Hydrology/Water Supply/Water Quality
- ☐ Biological Resources
- ☐ Agriculture and Forestry Resources
- ☐ Mineral Resources
- ☒ Visual Resources & Aesthetics
- ☐ Cultural Resources
- ☐ Hazards & Hazardous Materials
- ☐ Transportation/Traffic
- ☐ Noise
- ☐ Air Quality
- ☐ Greenhouse Gas Emissions
- ☐ Public Services
- ☐ Recreation
- ☐ Utilities & Service Systems
- ☐ Land Use and Planning
- ☐ Population and Housing
- ☐ Mandatory Findings of Significance

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

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

NON-LOCAL APPROVALS

Other agencies that must issue permits or authorizations: None

DETERMINATION: (To be completed by the lead agency)
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.

_____ _____

Matthew Johnston
Environmental Coordinator

Date

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: 22,475 (per project plans)
Existing Land Use: Vacant
Vegetation: Flat portion (east) of site is bare; slope at west side of parcel consists of several native and non-native trees, ivy, and bushes associated with riparian habitat. Specific species are listed in the Resource Conservation District report (Attachment 8).
Slope in area affected by project: ☒ 0 - 30% (on eastern portion) ☒ 31 – 100% (on western portion)
Nearby Watercourse: Rodeo Creek Gulch
Distance To: 10 feet from west (rear) property line at closest point; approximately 95 feet from proposed development/site improvements.

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Water Supply Watershed: Not mapped

Groundwater Recharge: Mapped at west property line; no development proposed within mapped GR area.

Timber or Mineral: Not mapped

Agricultural Resource: Not mapped

Biologically Sensitive Habitat: Mapped for white-rayed pentachaeta and Zayante band-winged grasshopper; species or habitat not evident at site.

Fire Hazard: Not mapped

Floodplain: Mapped floodplain at western property line, outside of any proposed development.

Erosion: Not mapped; however, high potential for erosion determined by technical report reviews.

Landslide: Not mapped; development will not comprise the stability of the slope, as determined by geologic and geotechnical reports.

Liquefaction: Mapped low at eastern

Fault Zone: Not mapped

Scenic Corridor: Not mapped

Historic: Not mapped; no existing structures on site.

Archaeology: Mapped for resources; Reconnaissance completed on 10/14/08 did not reveal any evidence of cultural resources on the parcel. (Attachment 6)

Noise Constraint: None

Electric Power Lines: Joint poles with overhead services located at northeast and southeast corners of property; all new utilities to be underground.

Solar Access: Excellent; flat and not shaded in location of proposed development; south facing ridge on proposed structure.

Solar Orientation: Building has a south facing ridge and is oriented north-south.

Hazardous Materials: Hazardous materials and waste will be used, stored and generated on site; HazMat permit required prior to building permit issuance.

Other:

property line.

SERVICES

Fire Protection: Central Fire Protection Dist.
School District: Soquel Union Elementary & Santa Cruz High School
Sewage Disposal: Santa Cruz County Sanitation District
Drainage District: Zone 5
Project Access: South Rodeo Gulch Rd.
Water Supply: Santa Cruz City Water

PLANNING POLICIES

Zone District: C-4 (Commercial Services)
General Plan: Split designation; C-S (Service Commercial) at east portion & O-U (Urban Open Space) at western sloped portion.
Special Designation: None

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

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

The parcel is located in an urban area, adjacent to Soquel Drive to the north and South Rodeo Gulch Road to the east. Rodeo Creek Gulch is located at the west property line. The parcel to the northeast across the Soquel Drive - Rodeo Gulch Road intersection is developed with a furniture store, warehouse, and shop (Sweets in the Nude). Parcels to the east, across South Rodeo Gulch Road are zoned for Light Industrial Uses (M-1) but are developed with non-conforming single family dwellings. The south adjacent parcel is also zoned C-4 (Commercial Services) and is developed with commercial buildings for a variety of commercial uses.

Approximately 11,550 square feet on the eastern portion of the property (along South Rodeo Gulch Road) is currently flat and is the proposed building location for a drive-through oil change facility. Approximately 50 feet from the front property line on the north side of the parcel and approximately 100 feet from the front property line at the middle and south sides of the parcel, the grade drops steeply, at an approximately 70% slope, to the creek. The 50-foot riparian buffer and additional required 10 foot riparian setback result in an inadequate building area at the front portion of the parcel; therefore a Riparian Exception is required as a part of the permit to construct improvements within the buffer. The Riparian Exception will also address the removal of un-engineered fill and vegetation restoration within the riparian buffer.

PROJECT BACKGROUND:

Previous permit applications for construction on the parcel have been denied or withdrawn based on Planning Department staff concerns of geologic issues associated with the slope. Previous files indicate that the fill slope is the result of an illegal dump that occurred in the 1960's and that the slope includes organic and inorganic debris to a depth of 30 feet, which would be unstable and would likely settle and compact as a

result of the weight of any proposed development on the upper portion of the site. Concerns of structural damage associated with settlement, erosion impacts on the riparian area and creek, and slope stability were evaluated as a part of the current project review analysis and Planning Department engineering staff feels that these impacts can be appropriately mitigated, as further discussed in this document.

DETAILED PROJECT DESCRIPTION:

The proposal is to construct a 2,842 square foot building and site improvements to serve as a drive-through oil change facility. All construction and site improvements, with the exception of geologic mitigations and drainage improvements, would be constructed on the flat eastern portion of the parcel. The facility would be accessed from South Rodeo Gulch Road and the proposal includes all required design features for an Urban Local street including curb, gutter, sidewalk, and landscaping. The proposed roadway design does not include on street parking; however, this exception is supported by Department of Public Works Road Engineering staff in that wider travel lanes are appropriate for the resulting type and level of traffic.

The proposed two story structure would be a maximum of 28 feet in height and would include: a main level for vehicles to pull in, as well as an office, a bathroom, and a storage room; and a basement level to allow employees to service vehicles from below, a mechanical room and a bathroom/locker room.

The proposal includes seven (7) parking spaces, a trash enclosure and an accessible walkway from the public sidewalk to the structure.

No development is proposed on the sloped western portion of the property; however, the project includes flattening the existing embankment slope, lowering the building pad elevation, re-vegetation of the riparian area, and the removal of un-engineered fill at the toe of the slope.

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

III. ENVIRONMENTAL REVIEW CHECKLIST

A. GEOLOGY AND SOILS

Would the project:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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.	☐	☐	☒	☐

Discussion: The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone and County fault zone. No geologic evidence exists for the presence of active or potentially active fault, therefore, impacts from earthquake fault rupture are less than significant.

B. Strong seismic ground shaking?	☐	☐	☒	☐

Discussion: The project site is located in one of the most seismically active regions in the United States. Significant earthquakes have occurred in the Santa Cruz area and are believed to be associated with crustal movements along a system of sub-parallel fault zones that generally trend in a northwesterly direction.

The project site is not located within an Alquist-Priolo earthquake fault zone designated by the State of California.

Earthquake intensities vary throughout the area, depending upon numerous factors including the magnitude of earthquake, the distance of the site from the causative fault, and the type of materials underlying the site. *The Working Group on California* Earthquake Probabilities[1] estimates that Northern California has a 30-year probability of 93% for the occurrence of an M≥6.7 earthquake, and a 15% probability of an M≥7.5 earthquake. The nearby San Andreas Fault by itself has a 30-year probability of 21% of generating an M≥6.7 earthquake. Very strong ground shaking is likely to occur at the site during the anticipated lifetime of the project and, therefore, proper structural and foundation design is imperative. In addition to the San Andreas, other nearby fault systems capable of producing intense seismic shaking on this property include the San

[1] Working Group on California Earthquake Probabilities - Historic California Earthquake Catalog, [1] 2007 Working Group on California Earthquake Probabilities, 2008, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): U.S. Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203 [http://pubs.usgs.gov/of/2007/1437/].

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

Gregorio, Zayante, Sargent, Hayward, Butano, and Calaveras faults, and the Monterey and Corralitos fault complexes.

Constructions of structures and facilities on this site will be required to be constructed in conformance with the geotechnical investigation and the California Building Code, and therefore no adverse impact from seismic ground shaking is anticipated.

C. Seismic-related ground failure, including liquefaction? ☐ ☒ ☐ ☐

Discussion: The geotechnical investigation for the project (Redwood Geotechnical Engineering, dated July 2008) (Attachment 3.d) indicates that the existing slope below the proposed structures is unstable when subject to seismic shaking, and the alluvium at the base of the slope may be subject to liquefaction. However the applicant proposes to grade the slope to a more stable 2:1 (H:V) slope. The slope stability analysis by the project consultants (E.T. Easter, Inc., Redwood Geotechnical Engineering, Craig Harwood Consulting Engineering Geologist, and Cole R. McClure Consulting Engineering Geologist) (Attachment 3) indicates that a modified slope will be stable even when considering the shaking from a design earthquake. These reports have been accepted by the County's Engineering Geologist and Senior Civil Engineer. Grading of the slope to a 2:1 or flatter slope should reduce the potential for seismic-related ground failure to a less than significant level. Mitigation measures would require a pre-grading/pre-construction meeting to be held onsite with County Engineering and Environmental Planning Staff and the project team prior to any land disturbance to ensure less than significant impacts resulting from seismic ground shaking.

The geotechnical investigation by Redwood Engineering indicates that the potential for liquefaction is low.

D. Landslides? ☐ ☐ ☒ ☐

The potential for scour due to the creek at the bottom of the slope was evaluated by the consultants listed under Item C above, as well as Waterways Consulting. The Hydraulic Evaluation by Waterways Consulting dated September 28, 2009 (Attachment 3) indicates a maximum scour depth of 2.1 feet. The County's Engineering Geologist and Senior Civil Engineer have reviewed the plans and reports and do not expect the effect of scour to be a significant impact on the slope.

2. 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: See A.1.C above.

The geotechnical investigation for the project indicates that the site is underlain in

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

some areas by approximately 34 feet of unclassified loose fill consisting of significant amounts of concrete, metal, wood, and other debris. Some of these materials can deteriorate and others can consolidate or compact causing significant settlement. To reduce the affects of settlement of the fill on the proposed structure and parking lot, the geotechnical engineer has recommended that the structure be supported on drilled piers (ranging from 25 to 50 feet in depth) that penetrate into native soil below the unclassified fill. Supporting the structure on engineered drilled piers should reduce the potential for the structure to collapse, although the parking lot may still be affected by settlement.

In addition, the soils engineer has recommended that the site be sub-excavated at least 4 feet below all slabs and pavement areas to reduce the potential for subsidence to affect slabs and pavements.

The project is required to conform with the accepted geotechnical report's recommendations which reduce the impacts of soil instability to less than significant.

3.	Develop land with a slope exceeding 30%?	☐	☐	☒	☐

Discussion: There are slopes that exceed 30% on the property, however, no improvements other than grading and drainage are proposed on slopes in excess of 30%.

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

Discussion: The potential for erosion exists during the construction phase of the project due to the loose unclassified nature of the onsite soils; however, the property owner will be required to commence grading by July 15th, which provides adequate time to grade the slope and install erosion control prior to the winter season. Prior to approval of a grading or building permit, the project will be required to obtain Planning Department approval of an Erosion Control Plan which specifies detailed erosion and sedimentation control measures. The erosion control plan would be required to be prepared by a Certified Professional in Erosion and Sediment Control and include an erosion control blanket such as North American Green Bionet C125BN (or equal). The erosion control blanket would be required to be installed immediately after the slope is graded and prior to October 15th to reduce the short term potential for soils erosion to a less than significant level.

The plan would also be required to include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion which would reduce the long term potential for soil erosion to a less than significant level.

As with any project, control of drainage is essential to control erosion. The project would be conditioned to clean, monitor, and maintain all storm drains, v-ditches, drainage inlets, downspouts, gutters and dissipators at least annually prior to October 15th, to ensure that drainage is controlled as shown on the plans and not allowed to

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

flow over the top of the slope.

The following mitigation measures would be required to ensure that soil erosion or loss of topsoil as a result of the project is less than significant:

1) Grading must commence by July 15th, in order to ensure completion of the grading and installation of erosion control in the riparian area by October 15th. If grading is not started by July 15th, the start of grading must wait until the following July 15th.
2) If permanent drainage improvements are not installed prior to October 15th, temporary drainage measures must be implemented during the rainy season to control drainage onsite. The project civil engineer must review, approve and inspect all temporary drainage onsite and provide a letter to Environmental Planning stating that they have reviewed, approved and inspected all temporary drainage measures onsite.
3) A Certified Professional in Erosion and Sediment Control (CPESC), or similarly qualified individual, must review and inspect all erosion control measures during the rainy season (October 15th -April 15th). The erosion control specialist must inspect the site every 2 weeks and submit inspection reports to Environmental Planning staff for review.

5.	Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☒	☐

Discussion: The geotechnical report for the project did not identify any elevated risk associated with expansive soils therefore, there is no significant impact associated with expansive soils.

6.	Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems where sewers are not available?	☐	☐	☐	☒

Discussion: No septic systems are proposed, therefore there is no impact. 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.

7.	Result in coastal cliff erosion?	☐	☐	☐	☒

Discussion: The proposed project is not located in the vicinity of a coastal cliff or bluff; and therefore, would not contribute to coastal cliff erosion.

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

B. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY

Would the project:

1. Place development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, only the lower portion of the project site is located within the 100-year flood hazard area and no development, with the exception of grading and drainage improvements, would occur on this portion of the property; therefore, the impact would be less than significant.

2. Place structures within a 100-year flood hazard area which would impede or redirect flood flows?	☐	☐	☒	☐

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, only the lower portion of the project site lies within a 100-year flood hazard area and there are no structures proposed within this area of the project site.

3. Be inundated by a seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion: This is not applicable because the subject parcel is not located in the vicinity of an ocean bluff.

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

Discussion: A portion of the property is mapped as a primary groundwater recharge area, however, the project would obtain water from the City of Santa Cruz and would not rely on private well water. Although the project would increase water demand, the City of Santa Cruz Water Department has indicated that adequate supplies are available to serve the project (Attachment 7). Additionally, the parcel's topography and fill characteristics are not ideal for infiltration; therefore, the proposed storm water

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

management system would consists of hard piping runoff to a water quality treatment drain inlet and an outlet dissipater/detention basin at the toe of the slope; therefore the existing predevelopment groundwater recharge conditions would remain substantially similar post development and impacts to groundwater recharge would be less than significant.

5. Substantially degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).	☐	☐	☒	☐

Discussion: The project would not discharge runoff either directly or indirectly into a public or private water supply.

6. Degrade septic system functioning?	☐	☐	☒	☐

Discussion: The parcel is located in an urban area served by the County Sanitation Department; therefore, there are no septic systems in the near vicinity.

7. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site?	☐	☐	☒	☐

Discussion: The subject parcel is adjacent to Rodeo Creek Gulch, however, the proposed development would not substantially alter the existing drainage pattern of the site of area in that no development or improvements are proposed within the creek. Additionally, the proposed project would not result in flooding on or off site because the proposed drainage system includes a detention basin specifically sized to hold the additional runoff created by impervious surface associated with the new structure and site improvements and release amounts to the creek that will not create flooding. The Department of Public Works Drainage Section staff has reviewed and approved the proposed preliminary drainage plan and the applicant/property owner would be required to obtain final approval from DPW Drainage Section Staff prior to building permit issuance. A condition would also require the applicant/property owner to sign a maintenance agreement with the County to ensure that the drainage system remains functioning properly.

8. Create or contribute runoff water which would exceed the capacity of existing	☐	☐	☒	☐

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

or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?

Discussion: Drainage Calculations prepared by ET Easter, Inc. dated May 24, 2010 (on file with the County) have been reviewed for potential drainage impacts and accepted by the Department of Public Works (DPW) Drainage Section staff. The calculations show that there would not be a significant increase in runoff as a result of the development given that the proposed building site has been compacted over the years. The runoff rate from the property would be controlled through the implementation of a detention system DPW staff have determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

9.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐

Discussion: Refer to Section B.8.

10.	Otherwise substantially degrade water quality?	☐	☐	☒	☐

Discussion: A silt and grease trap, and a plan for maintenance, will be required to minimize the effects of urban pollutants. The proposed drainage system includes a water quality treatment drainage inlet at the top of the slope and a detention basin with an outlet dissipater at the toe of the slope. Contaminants produced, collected, or stored as a result of the commercial operation would be required to be disposed of in accordance with a Hazardous Materials Management Plan. The parking area associated with the project would incrementally contribute urban pollutants to the environment; however, the contribution would be minimal given the water filtration and treatment systems proposed as a part of the drainage system. Potential siltation from the proposed project would be addressed through implementation of erosion control measures discussed in Section A.4. The County Department of Environmental Health Services (EHS) has reviewed and approved the preliminary project plans and the applicant/property owner would be required to obtain final clearance from EHS prior to building permit issuance.

C. 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	☐	☒	☐	☐

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

special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service?

Discussion: In order to avoid impacts to special status bats, tree removal activities shall be limited to the months between November 1 and March 1, if feasible.

a. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for special status bats 3-4 weeks prior to site disturbance. If active roosts are present, roosting bats shall be excluded from trees to be removed prior to any disturbance. In trees to be retained, no disturbance zones, set by the biologist based on the particular species present, shall be fenced off around the subject tree to ensure other construction activities do not harm sensitive species.
b. The maternity roosting season for bats is March1 - July 3. Tree removal should be scheduled outside of the maternal roosting period if special status bats are present. Before any trees are removed during the maternal roosting season, a qualified biologist shall perform surveys. If maternal roosts are present, disturbance shall be avoided until roosts are unoccupied. The biologist shall be responsible for ensuring bat roosts are vacated.

In order to avoid impacts to raptors and migratory songbirds, tree removal activities shall be limited to the months between September 1 and February 1, if feasible.

a. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for raptor or migratory songbird nests 3-4 weeks prior to site disturbance.
b. If active raptor or migratory bird nests are found in trees to be retained, the biologist shall be required to be on site during any initial vegetation or ground disturbance activities (e.g. vegetation clearing, grading, excavation, tree pruning/removal) that could potentially impact listed species. The biologist shall be responsible for setting and maintaining the disturbance buffers from active nests during construction activities, and buffers and exclusionary measures shall be implemented only after consultation with CDFG.

If no active nests are present on the subject parcel, tree removal can proceed provided the mitigations in 1. above have been implemented.

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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
(e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				

Discussion: A substantial portion of the property is mapped as riparian habitat, specifically the slope which is proposed to be graded. The existing riparian vegetation located on the slope would be removed as a result of the proposed grading. In order to ensure that the riparian habitat is restored and enhanced, mitigation measures would require the applicant to submit a restoration plan for the slope which complies with the recommendations of the Resource Conservation District (Exhibit 7).

3. 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 or migratory wildlife nursery sites?	☐	☐	☒	☐

Discussion: The grading and drainage activities proposed on the fill slope adjacent to the riparian corridor would not interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site.

4. Produce nighttime lighting that would substantially illuminate wildlife habitats?	☐	☒	☐	☐

Discussion: Although the parcel is adjacent to a creek and within a riparian area, the property is located in an urbanized area and is also adjacent to existing residential development, commercial development, and Soquel Drive which currently generate nighttime lighting. In order to ensure that new lighting associated with the proposed project does not impact the creek and riparian area, a mitigation measure would require the applicant to submit a lighting plan which shall indicate that all lighting at the west side of the building site faces east towards South Rodeo Gulch or is low-illumination and would not impact the riparian area.

5. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

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

Discussion: There are no known wetlands in the project vicinity, therefore there is no impact.

6.	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. The project would require a riparian exception to construct within the riparian buffer and the findings for a riparian exception can be made based on site constraints associated with the steep slope, limited building area, and that the project would not impact the riparian corridor.

7.	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: There is no Habitat Conservation Plan or Natural Community Conservation Plan adopted for the subject property and the proposed project would not conflict with any other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

D. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of 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?	☐	☐	☐	☒

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

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?	☐	☐	☐	☒

Discussion: The project site is zoned C-4 (Commercial Services) 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 zoned C-4 (Commercial Services) which is not considered to be timberland and the site is not adjacent to land designated as Timber Resource, therefore, there is 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. 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 is located within an urbanized area. Neither the project site nor the surrounding area contains any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance

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

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 approximately 2 miles of the proposed project site. Therefore, no impacts are anticipated.

E. 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.

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 C-4 (Commercial Services), which is not an Extractive Use Zone (M-3) and it does not 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.

F. VISUAL RESOURCES AND AESTHETICS

Would the project:

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

Discussion: The project would not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

2.	Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

Discussion: The project site is not located along a County designated scenic road,

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

public viewshed area, scenic corridor, within a designated scenic resource area, or within a state scenic highway. Therefore, no impact is anticipated.

3.	Substantially degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridgeline?	☐	☐	☒	☐

Discussion: The project site, which is visible from the public street, is currently used to park vehicles and equipment and would benefit from the design, landscaping and other improvements associated with the development. The proposed project is designed and landscaped so as to fit into the existing urban setting.

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 create an minimal increase in night lighting, however, the proposed oil changing facility would only be open during regular business house and the greatest lighting impact would occur in the evening. The increase in night lighting would be similar in character to the lighting associated with the surrounding existing commercial uses (security lighting, landscape lighting, etc.) and the project site is at the corner of Soquel Drive and Rodeo Gulch Roads which is an intersection that is metered by a traffic light which currently creates unmitigated night lighting.

G. CULTURAL RESOURCES

Would the project:

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

Discussion: The property is currently vacant.

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

Discussion: Although the site is mapped for archeological resources, the current soils report and previous technical reviews indicate that the site consists of a variety of materials resulting from an illegal dump in the 1960's; therefore it is unlikely that archaeological resources would be present at the site within the fill. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of

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

excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

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

Discussion: Pursuant to Section 16.40.040 of the Santa Cruz County Code, 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 archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion: Refer to Sections G.2. and G.3.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

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

Discussion: The proposed use will likely collect, store, transport, use, and dispose of hazardous materials as a part of the facility's operations, however, the County Department of Environmental Health Services has reviewed and approved the preliminary project plans and a condition of approval would require the applicant/property owner to obtain a Hazardous Materials permit and to complete a Hazardous Materials Inspection prior to building permit issuance to ensure compliance with local regulations.

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	☐	☐	☒	☐

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

environment?

Discussion: There are no reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment in that the applicant/property owner would be required to obtain clearance from the County Environmental Health Services Department for the collection, storage, and handling of hazardous materials associated with the facility.

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 project site is located within about 100 feet of Good Shepard Catholic School (kindergarten through 8th grade), however, no hazardous substances will be emitted as a result of the project and all substances deemed hazardous by the County Environmental Health Services Department shall be handled, stored, collected, and disposed of as per the required Hazardous Materials Permit, therefore, there will be no significant impact on the school.

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 September 3, 2010 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code.

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 for people residing or working in the project area?	☐	☐	☐	☒

Discussion: The project site is not located within an airport land use plan area or within two miles of any public airport.

6.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

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

Discussion: The project site is not located with the vicinity of a private airport.

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

Discussion: The proposed project does not conflict with the County's adopted Emergency Management Plan (April 2002). Specific countywide evacuation routes are not designated in the Emergency Management Plan; rather, feasible routes are determined based on the outcome of particular events. Therefore, the portion of Soquel Drive adjacent to the subject property could perform as a potential evacuation route in an emergency event, however the resulting development would not obstruct any portion of the right of way and the project would be conditioned to require all construction vehicles and equipment to be parked completely on-site and outside of the public right of way.

8.	Expose people to electro-magnetic fields associated with electrical transmission lines?	☐	☐	☒	☐

Discussion: There are two existing power poles located at the parcel frontage and all new utilities would be placed underground, therefore, no persons would be exposed to electro-magnetic fields associated with electrical transmission lines.

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

Discussion: The project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency.

I. TRANSPORTATION/TRAFFIC

Would the project:

1.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system,	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				

Discussion: The project would create a small incremental increase in traffic on nearby roads and intersections. However, given the small number of new trips created by the project (estimated at 68 trip ends) this increase is less than significant. Further, the increase would not cause the Level of Service at any nearby intersection to drop below Level of Service D.

2. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

Discussion: The project site will not result in a change in air traffic patterns.

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

Discussion: The proposed project has been designed to reduce potential traffic hazards associated with the adjacent intersection. The proposed facility is a drive-through oil changing facility; therefore, motorists do not leave their vehicles during service. If two vehicles are receiving service, the facility is full and new vehicles would stack up behind the service doors to wait for an opening. To ensure that the impact of the facility on the adjacent intersection and on the existing level of traffic on South Rodeo Gulch Road is less than significant, the site has been designed to allow drivers to enter and exist the site at the driveway furthest from the intersection and exit at the driveway closest to the intersection, which provides enough room on-site and outside of the public right of way for vehicles to stack.

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

Discussion: The project's access is via South Rodeo Gulch Road and proposed improvements would require a Roadway exception for a lesser traveled way width than required by County Design standards. However, the reduction in roadway width from the required 36 feet to 32 feet is adequate to provide access for emergency vehicles and during construction, one lane would remain open at all times. The site has been designed to allow vehicles to stack completely on site while waiting for service, therefore, fire trucks, ambulances and other emergency vehicles would not be blocked from using the road at any time.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cause an increase in parking demand which cannot be accommodated by existing parking facilities?	☐	☐	☒	☐

Discussion: The project meets the code requirements for the required number of parking spaces and the new parking demand would be accommodated on site.

6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion: The proposed project would comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians.

7. Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the County General Plan for designated intersections, roads or highways?	☐	☐	☒	☐

Discussion: See response I-1 above.

J. NOISE

Would the project result in:

1. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Discussion: The project would create an incremental increase in the existing noise environment; however, this increase would be small and surrounding parcels are zoned for similar uses. The noises emitted from the project site would be similar in character to noise generated by the surrounding existing commercial uses.

2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒

Discussion: Groundborne vibration or noise is not expected to occur as a result of the project.

3. Exposure of persons to or generation of noise levels in excess of standards	☐	☐	☒	☐

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

established in the General Plan or noise ordinance, or applicable standards of other agencies?

Discussion: The project site and surrounding adjacent parcels are zoned for Commercial Services, which allows for a wide variety of commercial services that are primarily non-retail, outdoor services such as building material suppliers and auto repair. Per the County Noise Ordinance, manufacturing types of uses shall not exceed an exterior noise level of 70 dBL L_{DN} (day/night average noise level) and impulsive noise levels shall not exceed 65 dB during the day or 60 dB at night. The proposed project is not expected to exceed maximum General Plan noise levels in that services which create ambient noise would occur indoors within the basement of the structure and the facility would only be open during regular business hours, therefore, noise impacts would be less than significant.

4.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Discussion: Refer to Section J.3 above. Noise generated during construction would increase the ambient noise levels for adjoining areas. Construction would be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion: The project site is not located within an airport land use plan or within two miles of a public airport.

6.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion: The project site is not located in the vicinity of a private airstrip.

K. AIR QUALITY

Where available, the significance criteria established by the Monterey Bay Unified

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

Air Pollution Control District (MBUAPCD) may be relied upon to make the following determinations. Would the project:

1.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Discussion: The North Central Coast Air Basin does not meet state standards for ozone and particulate matter (PM_{10}). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NO_x]), and dust.

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

Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices, such as periodic watering, will be implemented during construction to reduce impacts to a less than significant level.

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

Discussion: The project would not conflict with or obstruct implementation of the regional air quality plan. See K-1 above.

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

Discussion: See K-1 above. The project will not result in a considerable net increase of any criteria pollutant.

4.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Discussion: The site shall be surrounded with construction fencing to block access to the site from the general public during construction.

5.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

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

Discussion: No objectionable odors will be emitted as a result of the project. Some objectionable odors associated with grading and construction may be emitted during the construction phase; however, these odors will be temporary and will not impact a substantial number of people.

L. 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 proposed project, like all development, would be responsible for an incremental increase in green house gas emissions by usage of fossil fuels during the site grading and construction. At this time, Santa Cruz County is in the process of developing a Climate Action Plan (CAP) intended to establish specific emission reduction goals and necessary actions to reduce greenhouse gas levels to pre-1990 levels as required under AB 32 legislation. Until the CAP is completed, there are no specific standards or criteria to apply to this project. All project construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment. As a result, impacts associated with the temporary increase in green house gas emissions are expected to be less than significant.

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 L-1 above. No impacts are anticipated.

M. PUBLIC SERVICES

Would the project:

1.	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:				

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks or other recreational activities?	☐	☐	☐	☒
e. Other public facilities; including the maintenance of roads?	☐	☐	☒	☐

***Discussion (a through e)*:** While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency 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.

N. 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?	☐	☐	☐	☒

***Discussion*:** The proposed project is a commercial use that would not increase the use of existing neighborhood or regional parks or other recreational facilities.

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*:** See response to N.1. above.

O. UTILITIES AND SERVICE SYSTEMS

Would the project:

1.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the	☐	☐	☒	☐

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

construction of which could cause significant environmental effects?

Discussion: Drainage analysis of the project (completed by E.T. Easter, Inc.) concluded that the geotechnical and geologic characteristics of the site do not support infiltration or sheet flow to the creek; therefore, the proposal includes the construction of a detention system (large diameter pipes) at the building site with metered release to a dissipater at the toe of the slope. Department of Public Works Drainage staff has reviewed the drainage information and has determined that the preliminary drainage system plans are feasible to handle the increase in drainage associated with the project (Attachment 4).

2.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Discussion: The project would connect to an existing municipal water supply. The City of Santa Cruz Water Department has determined that adequate supplies are available to serve the project (Attachment 7).

Municipal sewer service is available to serve the project, as reflected in the attached comments from the County Sanitation District (Attachment 4).

3.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Discussion: The project's wastewater flows would not violate any wastewater treatment standards.

4.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Discussion: See Section O.2 above.

5.	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	☐	☐	☒	☐

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

commitments?

Discussion: The project's wastewater flows would not violate any wastewater treatment standards of the Regional Water Quality Control Board because the applicant will be required to obtain final approval from the County Sanitation District prior to building permit issuance to ensure compliance with County and State requirements for wastewater treatment.

6.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Discussion: The Buena Vista Landfill is the closest landfill to the project site and it currently has sufficient capacity to accommodate the project's solid waste disposal needs. The project would make a one time contribution to the landfill as a result of construction. However, the property is currently vacant therefore no demolition is required and in order to mitigate the impacts of temporary construction debris to less than significant, a mitigation will require the applicant to submit a plan to recycle and/or reuse excess post-construction materials, for review and approval by Planning Staff prior to building permit issuance. Implementation of this mitigation will maximize recycling and reuse of construction materials and will minimize contributions to the landfill.

7.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion: Solid waste accumulation is anticipated to increase slightly as a result of a new commercial facility; however, daily trash accumulation of a small commercial business is minimal and is not anticipated to result in a breach of federal, state, or local statutes and regulations.

P. LAND USE AND PLANNING

Would the project:

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

Discussion: The proposed project does not conflict with any regulations or policies adopted for the purpose of avoiding or mitigating an environmental effect.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
2. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion: There is no habitat conservation plan or natural community conservation plan in effect on the subject property.

3. Physically divide an established community?	☐	☐	☐	☒

Discussion: The project would not include any element that would physically divide an established community.

Q. POPULATION AND HOUSING

Would the project:

1. Induce substantial 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 proposed project is designed at the intensity of development allowed by the General Plan and zoning designations for the parcel. 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.

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

Discussion: The proposed project would not displace any existing housing since the site is currently vacant.

3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion: The proposed project would not displace a substantial number of people since the site is currently vacant.

R. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Discussion: The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory were considered in the response to each question in Section III of this Initial Study. Resources that have been evaluated as significant would be potentially impacted by the project, particularly riparian resources associated with South Rodeo Gulch creek; however, mitigation measures have been included that clearly reduce these effects to a level below significance. These mitigation measures include required on-site preconstruction and pre-grading meetings with the project team and environmental planning staff, temporary drainage improvements, and restoration of the riparian area vegetation. The result of this evaluation is that there is no substantial evidence that, after mitigation, significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
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 projects potential for incremental effects that are cumulatively considerable. As a result of this evaluation, there were determined to be potentially significant cumulative effects related to erosion, drainage, and slope stability. However, mitigation measures have been included that clearly reduce these cumulative effects to a level below significanceAs a result, there is no substantial evidence that, after mitigation, there are cumulative effects associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	*Less than* Significant with Mitigation	Less than Significant Impact	No Impact
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. Geology and Soils. As a result of this evaluation, there were determined to be potentially significant effects to human beings related to slope stability; however, mitigation measures have been included that clearly reduce these effects to a level below significance. The property owner is proposing to grade the slope to a 2:1 or flatter slope, which, according to the project geotechnical and geologic engineers, should reduce the potential for seismic-related ground failure to a less than significant level. Mitigation measures would require a pre-grading/pre-construction meeting to be held onsite with County Engineering and Environmental Planning Staff and the project team prior to any land disturbance to ensure less than significant impacts resulting from seismic ground shaking and final approval of the grading and building plans from Environmental Planning Staff prior to building permit issuance. As a result of this evaluation, there is no substantial evidence that, after mitigation, there are adverse effects to human beings associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

IV. TECHNICAL REVIEW CHECKLIST

	REQUIRED	DATE COMPLETED
Agricultural Policy Advisory Commission (APAC) Review	Yes ☐ No ☒	
Archaeological Review	Yes ☒ No ☐	10/14/2008
Biotic Report/Assessment	Yes ☐ No ☒	
Geologic Hazards Assessment (GHA)	Yes ☐ No ☒	
Geologic Report	Yes ☒ No ☐	July 2009
Geophysical Survey	Yes ☒ No ☐	July 2009
Geotechnical (Soils) Reports	Yes ☒ No ☐	7/18/08 & 10/30/09
Riparian Pre-Site	Yes ☐ No ☒	
Septic Lot Check	Yes ☐ No ☒	
Hydraulic Evaluation	Yes ☒ No ☐	9/28/09
Slope Analysis	Yes ☒ No ☐	2/16/10

V. REFERENCES USED IN THE COMPLETION OF THIS ENVIRONMENTAL REVIEW INITIAL STUDY

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.

Working Group on California Earthquake Probabilities - Historic California Earthquake Catalog, 2007

Working Group on California Earthquake Probabilities, 2008

The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): U.S. Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203 [http://pubs.usgs.gov/of/2007/1437/].

VI. ATTACHMENTS

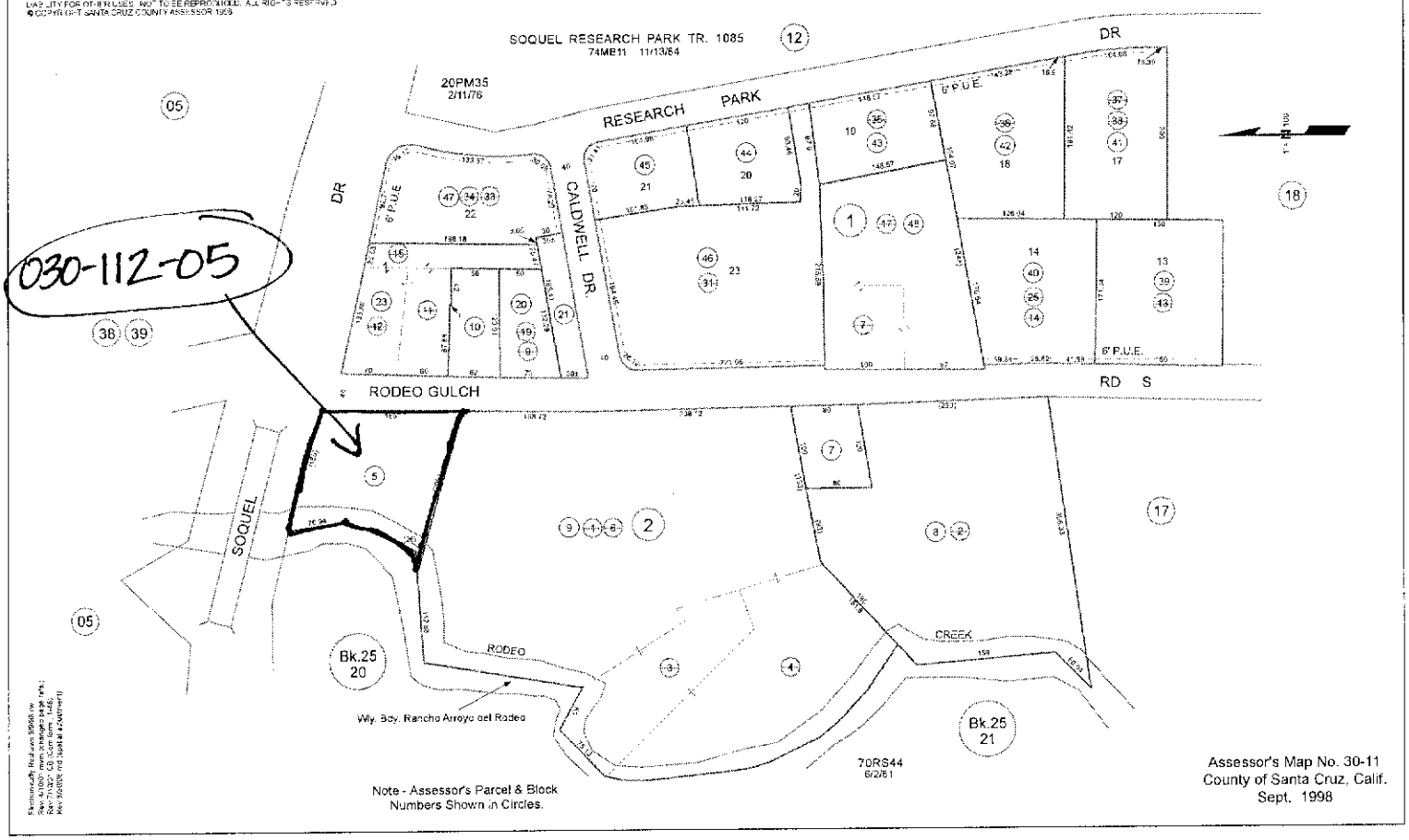
1. *Vicinity Map, Map of Zoning Districts; Map of General Plan Designations; and Assessors Parcel Map.*
2. *Project Plans* prepared by William C. Kempf Architect; civil drawings prepared by E.T. Easter, Inc.
3. *Combined Geologic and Geotechnical Reports,* compiled by E.T. Easter, Inc. dated February 26, 2010. *Partial reports provided; additional technical information on file with the County.
    a. *Addendum 2: Slope Analysis; Redwood Geotechnical Engineering, Inc. & Craig S. Harwood Consulting Engineering Geologist, Feb. 2010*
    b. *Addendum 4: Geophysical Report; William E. Black, July 2009*
    c. *Addendum 6: Geotechnical Project Plan Review and Supplemental Investigation; Redwood Geotechnical Engineering, Inc., Oct. 2009*
    d. *Addendum 7: Geotechnical Investigation; Redwood Geotechnical Engineering, Inc., July 2008*
    e. *Addendum 8: Hydraulic Evaluation; Waterways Consulting, Inc., September 28, 2009*
4. *Discretionary Application Comments*
5. *Archeological Reconnaissance Survey Letter*, prepared by The Santa Cruz Archaeological Society, dated October 14, 2008.
6. *Letter from City of Santa Cruz Water District*, dated October 8, 2010.
7. *Resource Conservation District Restoration Letter*, dated July 30, 2008.

FOR TAX PURPOSES ONLY

POR. RANCHO ARROYO DEL RODEO
SEC. 9, T.11S., R.1W., M.D.B. & M.

Tax Area Code
96-103

30-11



Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 30-11
County of Santa Cruz, Calif.
Sept. 1998

Location Map

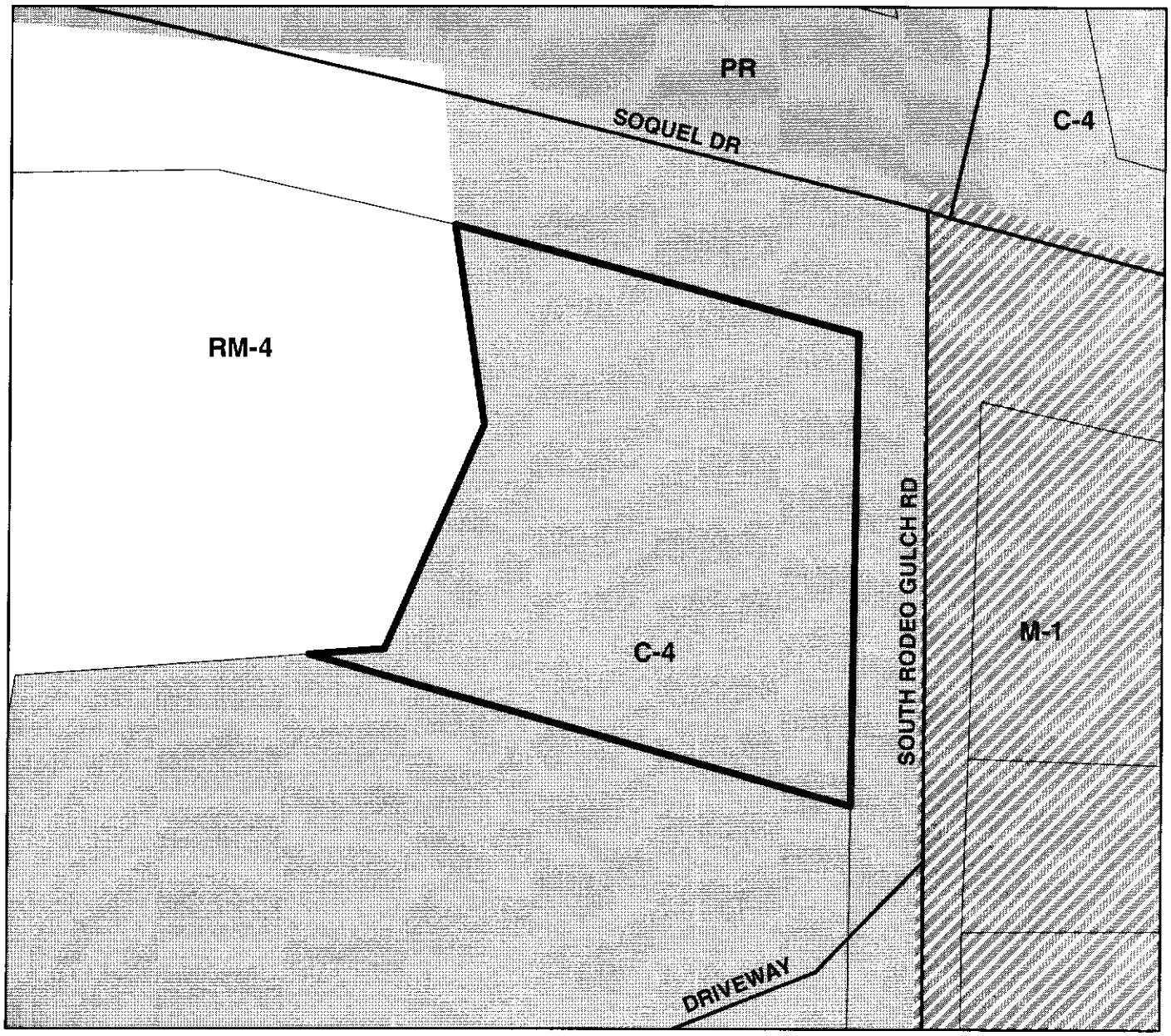
LEGEND

- APN: 030-112-05
- Assessors Parcels
- Streets

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
September 2008

Zoning Map



0 45 90 180 270 360 Feet

LEGEND

- APN: 030-112-05
- Assessors Parcels
- Streets
- COMMERCIAL-SERVICE
- PARK
- RESIDENTIAL-MULTI FAMILY
- LIGHT INDUSTRIAL

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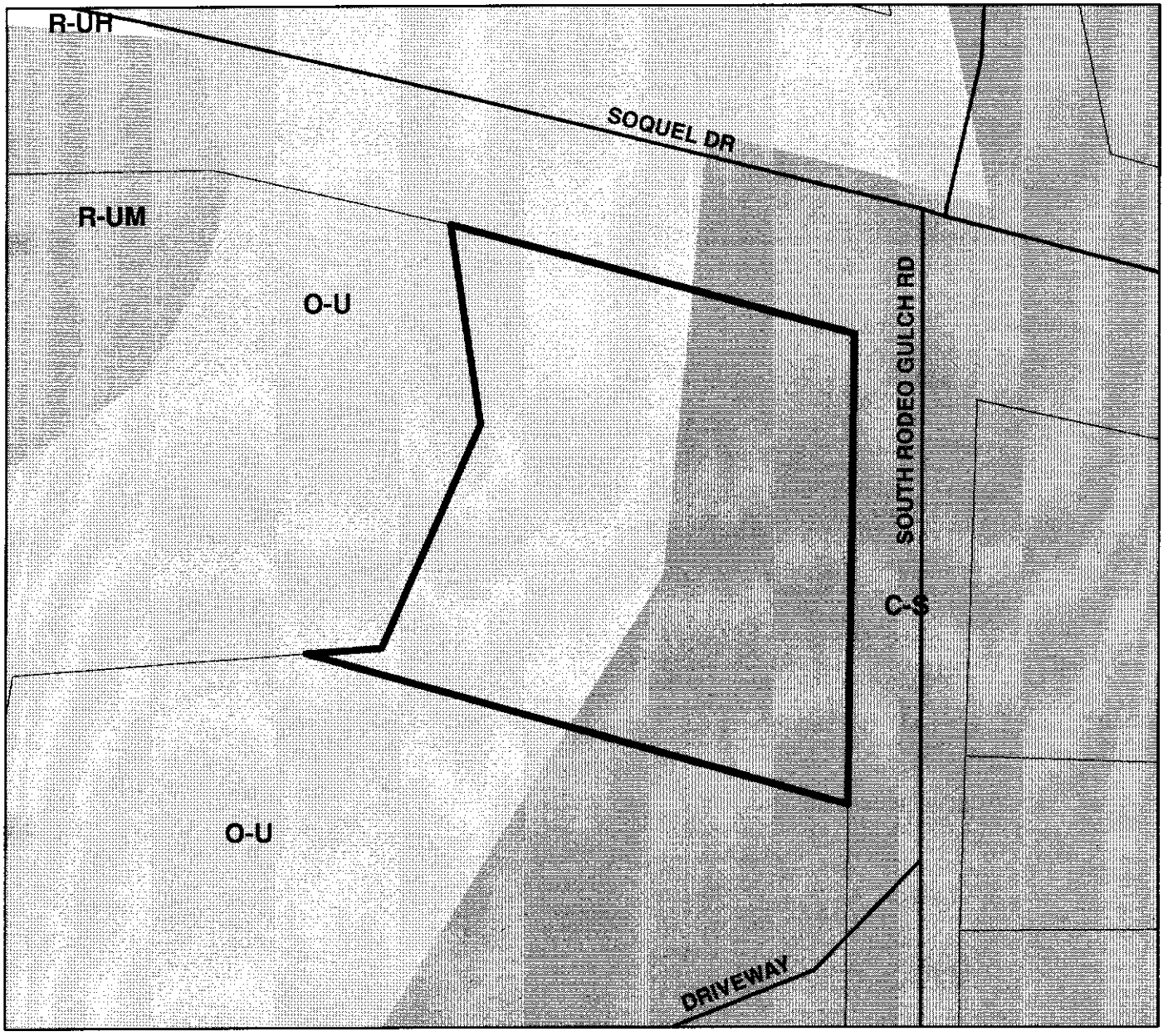
Map Created by
County of Santa Cruz
Planning Department
September 2008

General Plan Designation Map



0 45 90 180 270 360 Feet

LEGEND

- APN: 030-112-05
- Assessors Parcels
- Streets
- Urban Open Space
- Commercial-Service
- Residential - Urban Medium Density
- Residential - Urban High Density

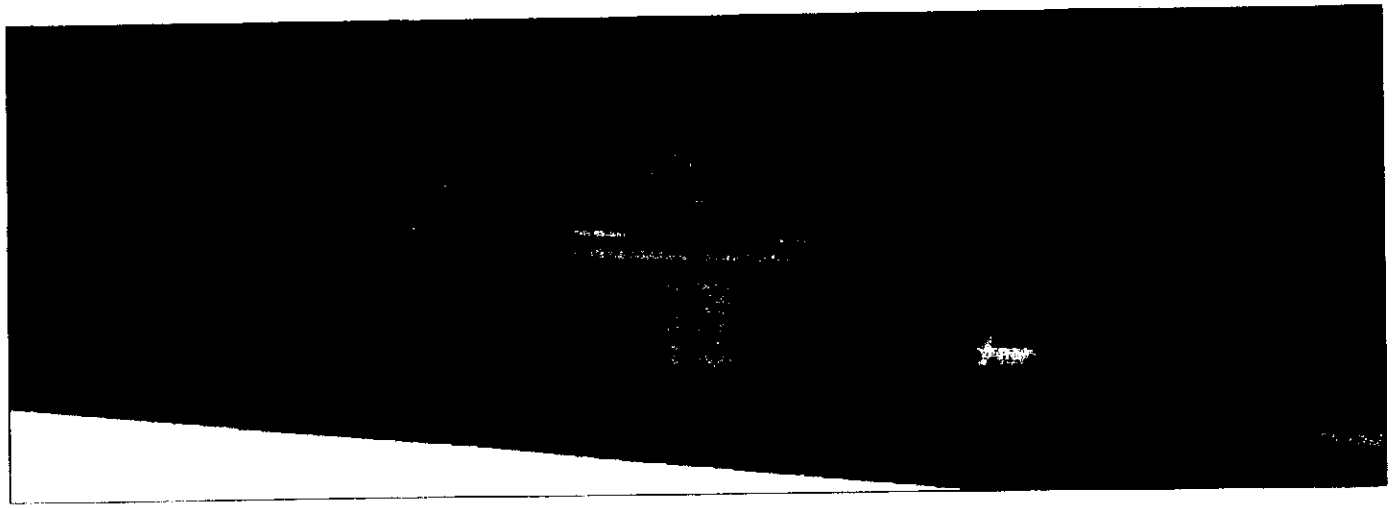
N
W E
S

Map Created by
County of Santa Cruz
Planning Department
September 2008

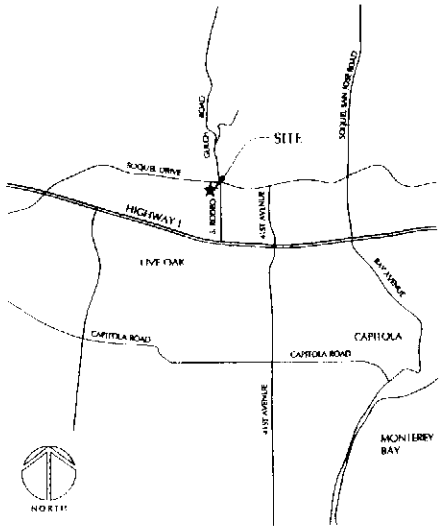
2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:

OIL CAN HENRY'S

RODEO GULCH & SOQUEL DRIVE, SOQUEL, CALIFORNIA



VICINITY MAP



GENERAL NOTES

1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING, MECHANICAL, ELECTRICAL AND PLUMBING CODES, STATE OF CALIFORNIA TITLE-24R REQUIREMENTS, AND ALL APPLICABLE CODES AND ORDINANCES. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND THE REQUIREMENTS OF THE REFERENCED STANDARDS OF THESE NOTES, THE PROVISIONS OF THE MORE STRINGENT SHALL GOVERN.
2. THE CONTRACTOR SHALL VERIFY ALL THE INFORMATION IN THE DRAWINGS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY PRIOR TO ORDERING MATERIALS OR COMMENCING WITH WORK. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL NOTIFY THE ARCHITECT IF THERE ARE ANY UNSURVEYED DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE THE WORK EXCEPT FOR ITEMS SHOWN AS N.I.C. (NOT IN CONTRACT). IF HIDDEN OR UNUSUAL SITUATIONS ARE ENCOUNTERED DURING CONSTRUCTION WHICH COULD NOT HAVE BEEN FORESEEN PRIOR TO CONSTRUCTION, NOTIFY THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL NOT ENCUMBER ANY PUBLIC OR PRIVATE PROPERTY OTHER THAN THE SITE WITHOUT ENCROACHMENT PERMITS OR WRITTEN PERMISSION FROM THE PROPERTY OWNERS.
5. THE CONTRACTOR SHALL PROVIDE FENCING, BARRICADES, WARNING SIGNS/SIGNALS OR OTHER PROTECTIVE MEASURES AS REQUIRED TO PROVIDE FOR THE PUBLIC'S SAFETY.
6. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL INSPECTIONS AND AT THE END OF THE WORK PROVIDE THE OWNER WITH ALL THE ORIGINAL SIGNED COMPLIMENTS FROM ANY INSPECTING ENTITY.
7. TYPICAL DETAILS AND NOTES SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. DIMENSIONS TAKE PRECEDENCE OVER SCALE SHOWN ON DRAWINGS. SCALING DRAWINGS TO DETERMINE DIMENSIONS IS NOT VALID.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE SHORING, BRACING, FORMWORK, ETC., AS REQUIRED TO PROTECT LIFE AND PROPERTY.
9. JOB COPIES OF THE BUILDING DRAWINGS & PERMITS SHALL BE ON-SITE DURING INSPECTIONS.
10. ALL EXTERIOR WOOD FRAMING DEEMED TO WEATHER, I.E. GIRDERS, BEAMS, JOISTS AND POSTS SHALL BE PRESSURE TREATED OR REDWOOD.

DEFERRED SUBMITTAL: FIRE SPRINKLER DRAWINGS

THE FIRE SPRINKLER SYSTEM SHALL BE PERFORMED AS A DESIGN/BUILD SUB-CONTRACT. THE SPRINKLER CONTRACTOR SHALL SECURE ALL PERMITS AS REQUIRED FOR THEIR SCOPE OF WORK AND THEY MUST BE LICENSED TO PERFORM THIS WORK.

PROJECT DATA

OWNER:	McCLURE CONSTRUCTION, INC DAVE McCLURE 160 WOODS COVE LANE SANTA CRUZ, CALIFORNIA 831.332-4064
PROJECT SITE:	SOUTHWEST CORNER OF RODEO GULCH AND SOQUEL DRIVE
ASSESSORS PARCEL NUMBER:	030-112-05
ZONING:	C-4
CONSTRUCTION TYPE:	TYPE V-A
OCCUPANCY:	GROUP F-1
REFERENCE CODE:	2007 CALIFORNIA BUILDING CODE, 2007 CMC, 2007 CPC, 2007 CFC, 2007 CALIFORNIA ELECTRICAL CODE, 2005 CALIFORNIA ENERGY CODE
PROJECT DESCRIPTION:	CONSTRUCTION OF A NEW 2 BAY LUBE AND OIL CHANGE FACILITY ON A VACANT PARCEL
FIRE SPRINKLERS:	YES DEFERRED SUBMITTAL
LOT AREA:	22,475 S.F.
BUILDING COVERAGE:	1,421 S.F. OR 6.3%
PROPOSED BUILDING:	BASEMENT FLOOR: 1,421 S.F. MAIN FLOOR: 1,421 S.F. TOTAL AREA: 2,842 S.F.
IMPERVIOUS AREA:	5,820 S.F. OR 25.9%

DRAWING INDEX

WILLIAM C. KEMPF
ARCHITECT
911 Center Street, Suite F
Santa Cruz, CA 95060
(831) 459-0551
billkempf@aol.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH & SOQUEL DRIVE, SOQUEL, CALIFORNIA
VICINITY MAP, PROJECT DATA, GENERAL NOTES

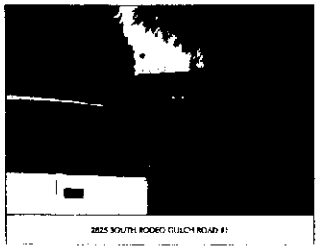
DRAWING DATE: AUGUST 20, 2008
CONSTRUCTION RELEASE:
CLIENT NAME: DAVE McCLURE
PROJECT NAME: RODEO GULCH & SOQUEL

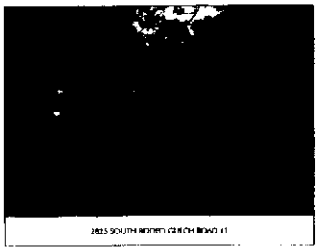
REVISIONS		
No.	DESCRIPTION	DATE
1	PLAN CHECK	10/14/09

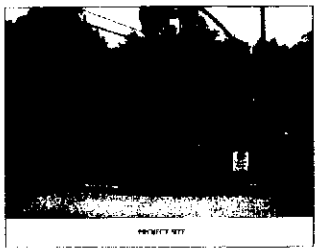
DISCLAIMER

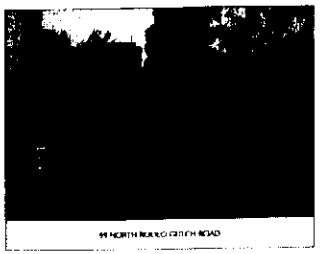
A0.01

NEIGHBORING PROPERTIES



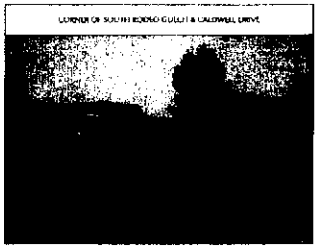


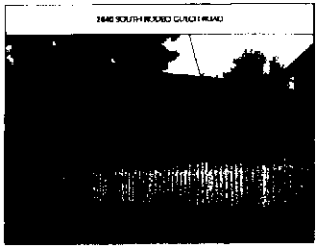


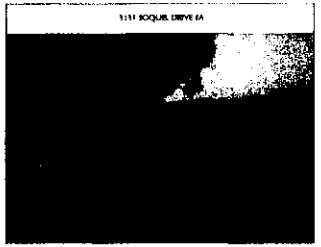


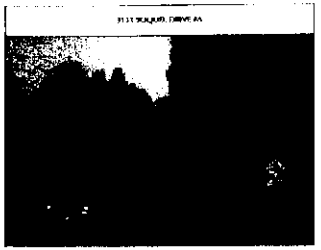
SITE

NORTH

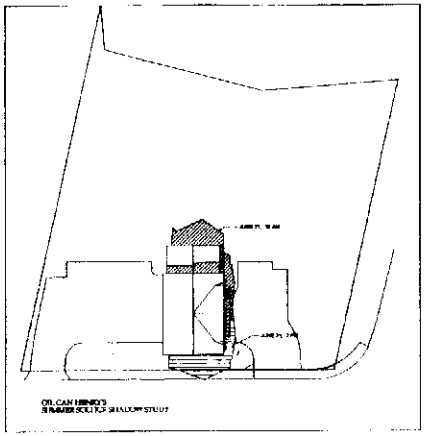


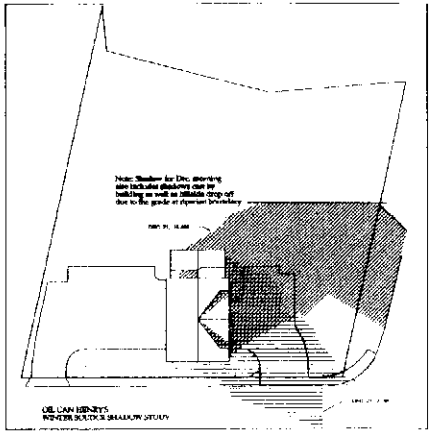






SHADOW STUDY PLANS





WILLIAM C. KEMPF
ARCHITECT
911 Center Street, Suite T
Santa Cruz, CA 95060
831-426-0911
www.wckempf.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:

OIL CAN HENRY'S

RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

NEIGHBORHOOD PHOTOS AND SHADOW PLANS

DRAWING DATE
AUGUST 20, 2008

CONSTRUCTION RELEASE

CLIENT NAME
DAVE McCLURE

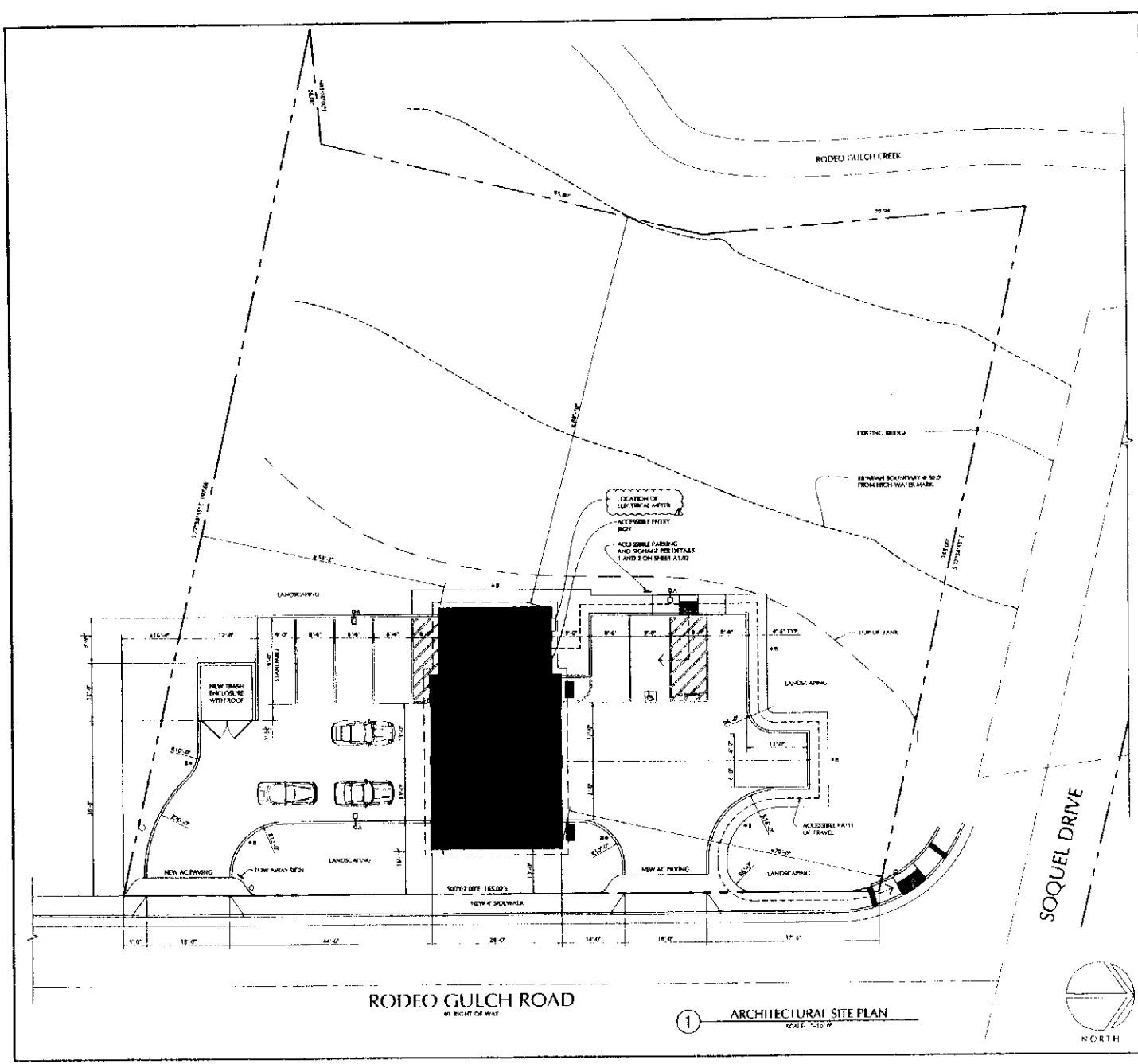
PROJECT NAME
RODEO GULCH & SOQUEL

REVISIONS

No.	DESCRIPTION	DATE

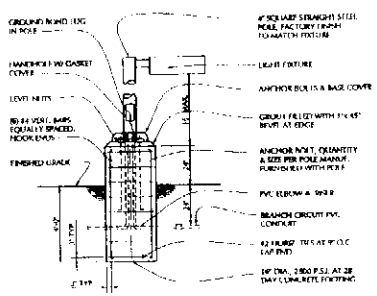
DISCLAIMER

A0.02

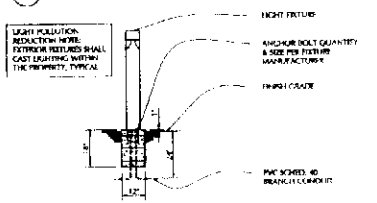


1 ARCHITECTURAL SITE PLAN
SCALE: 1"=10'-0"

EXTERIOR LIGHTING



2 LIGHTING FIXTURE TYPE A
SCALE: NO SCALE



3 LIGHTING FIXTURE TYPE B
SCALE: NO SCALE

ACCESSIBILITY NOTES

(A) ALL ACCESSIBILITY REQUIREMENTS SHOULD BE IN ACCORDANCE WITH THE 2007 C.B.C.

(B) ALL ACCESSIBLE PATHS SHALL HAVE A 5% MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL, 2% MAX CROSS SLOPE, 1/2" MAXIMUM ABRUPT CHANGE IN ELEVATION AND A MINIMUM WIDTH OF 48"

(C) ALL ACCESSIBLE DOOR THRESHOLDS SHALL BE 1/2" MAXIMUM

(D) 36" WIDE CONTINUOUS DETECTABLE WARNINGS SHALL BE PROVIDED WHERE AN ACCESSIBLE PATH CROSSES OR ADJOINS A VEHICULAR WAY OR POTENTIAL HAZARD

(E) THE ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED WITH AN INTERNATIONAL SYMBOL OF ACCESSIBILITY PER C.B.C. 1117B.5. INCLUDE ADDITIONAL DIRECTIONAL SIGNAGE ALONG THE EAST SIDE OF THE BUILDING FROM THE ACCESSIBLE PARKING SPACE

WILLIAM C. KEMPF
ARCHITECT
111 Cooper Street, Suite F
Santa Cruz, CA 95060
831.459.0551
bill@wckempf.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH & SOQUEL DRIVE, SOQUEL, CALIFORNIA

ARCHITECTURAL SITE PLAN

DRAWING DATE:
AUGUST 20, 2009
CONSTRUCTION RELEASE:

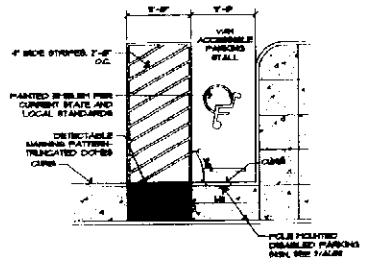
CLIENT NAME:
DAVE MCCLURE

PROJECT NAME:
RODEO GULCH & SOQUEL

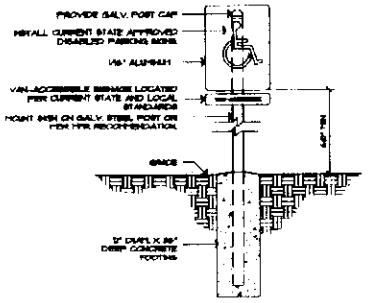
REVISIONS		
NO.	DESCRIPTION	DATE
1	PLAN CHECK	10/9/09
2	REVISE SITE	10/21/09

DISCLAIMER

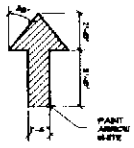
A1.01



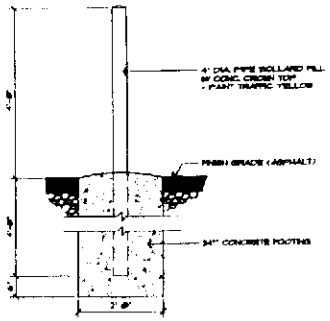
1 ACCESSIBLE PARKING STRIPING



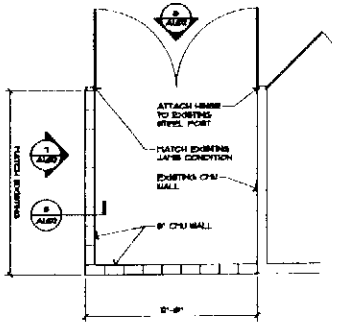
2 HANDICAP SIGN



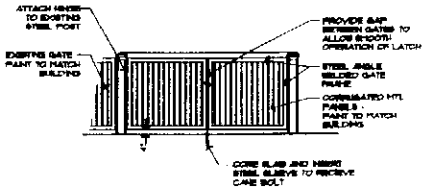
3 TRAFFIC ARROW



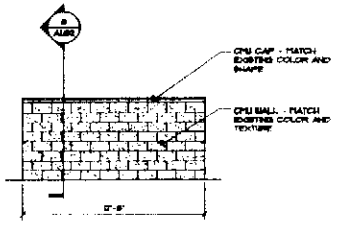
4 BOLLARD



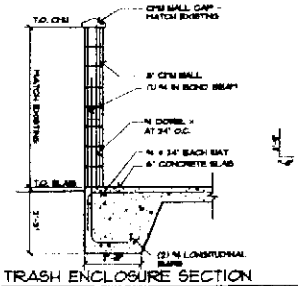
5 TRASH ENCLOSURE - PLAN



6 TRASH ENCLOSURE - FRONT ELEVATION



7 TRASH ENCLOSURE - SIDE ELEVATION



8 TRASH ENCLOSURE SECTION

WILLIAM C. KEMPF
ARCHITECT
911 Center Street, Suite F
Santa Cruz, CA 95060
831 459-0981
www.wckempf.com

3 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:

OIL CAN HENRY'S

RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

SITE DETAILS

DRAWING DATE:
AUGUST 20, 2008

CONSTRUCTION RELEASE

CLIENT NAME:
DAVE McGUIRE

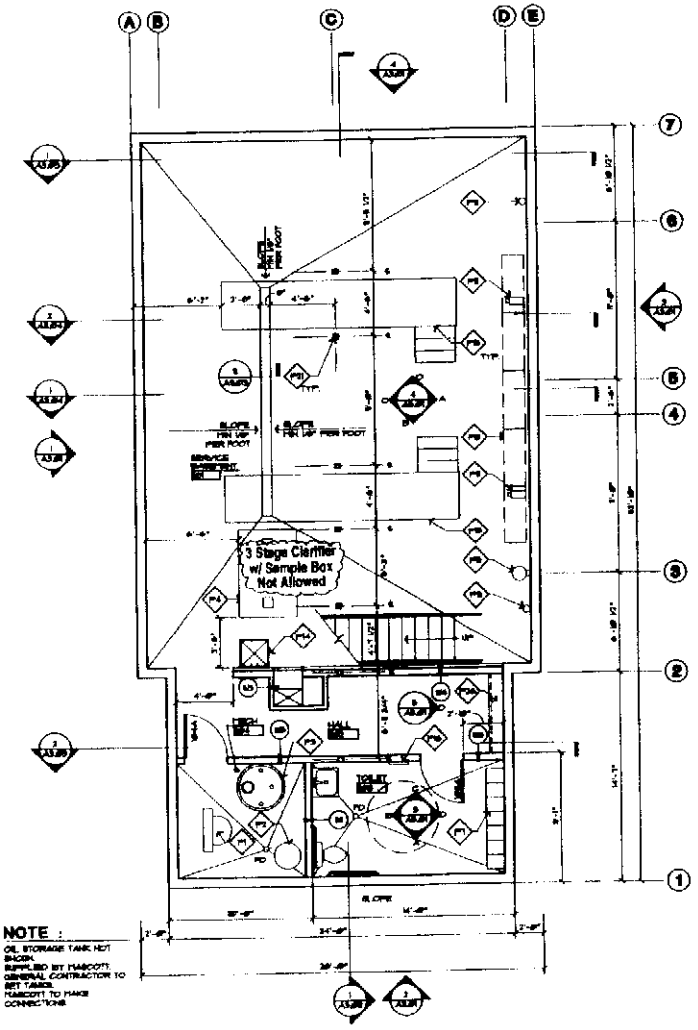
PROJECT NAME:
RODEO GULCH & SOQUEL

REVISIONS

No.	DESCRIPTION	DATE

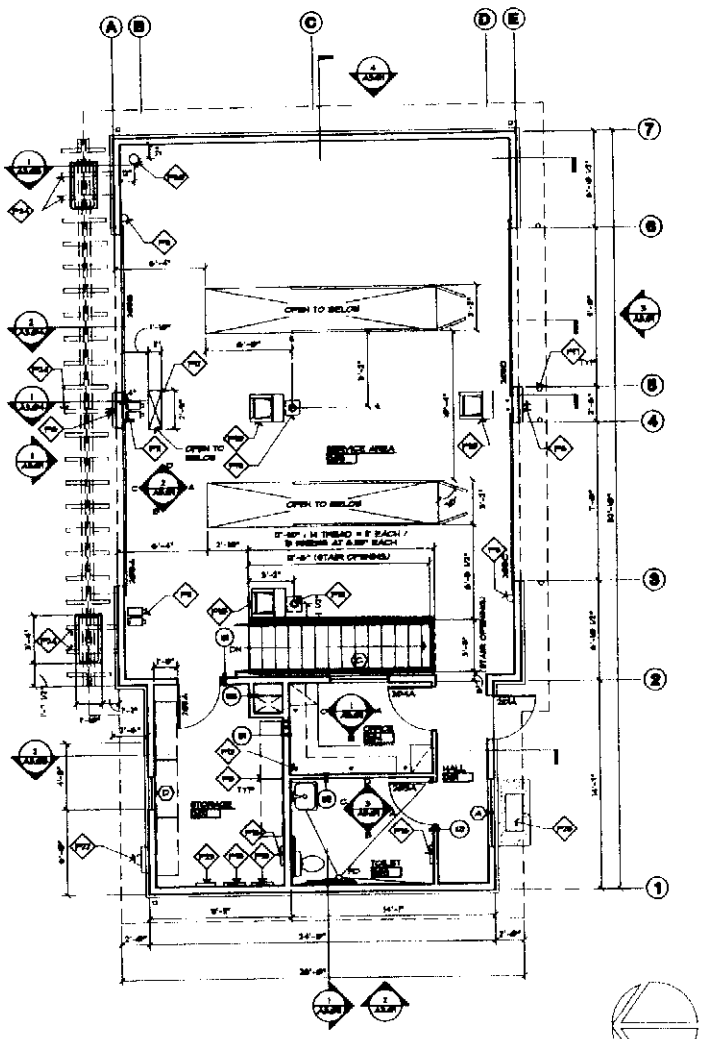
DISCLAIMER

A1.02



NOTE :
OIL STORAGE TANK NOT SHOWN.
SUPPLIED BY HANCOTT.
GENERAL CONTRACTOR TO SET TANKS.
HANCOTT TO MAKE CONNECTIONS

1 BASEMENT FLOOR PLAN



2 MAIN FLOOR PLAN

1. COMPRESSOR - SUPPLIED AND INSTALLED BY HANCOTT EQUIPMENT COMPANY, COORDINATE WITH THE OWNER FOR ADDITIONAL RECEPTACLE LOCATIONS
2. WATER HEATER
3. SUMP PUMP / SEWAGE EJECTOR
4. OIL WATER SEPARATOR AND STOP FLOW VALVE - SEE 3/A5.05
5. EYE WASH STATION
6. HOSE BIB
7. LOCKERS - BY OWNER
8. STORAGE RACK - BY OWNER
9. FIRE EXTINGUISHER - WALL MOUNTED AT 48" ABOVE FINISHED FLOOR (U. BOULEVARD ROSEVILLE) PER LAW. CHEMICAL TYPE (ABC PREFD) POINT WITH MANUFACTURER'S STANDARD MOUNTING BRACKET
10. POINT OF SALE SYSTEM - COORDINATE WITH OWNER, POWER BY OWNER
11. VIDEO CAMERA - COORDINATE WITH OWNER
12. SUPPLY FLUID HOSE RACK - BY OWNER
13. COUNTER GROMMET - 3" DIAMETER PROVIDE COVER, TYPICAL OF (5) COORDINATE LOCATION WITH INTERIOR ELEVATIONS
14. MOP SINK
15. CATWALK PLATFORM - GENERAL CONTRACTOR TO PURCHASE FROM HANCOTT EQUIPMENT COMPANY, INSTALL AND PAINT, COORDINATE WITH OWNER
16. ELECTRIC HEATER
17. BOLLARD - SEE 4/A5.05
18. ELECTRICAL PANEL
19. MONITOR POST BY CONTRACTOR - SEE 9/A5.05 & 1/A5.07
20. WASTE OIL PORT - SEE 8/A5.05
21. 4" THICK STEEL COLUMN / FOOTING
22. ELECTRIC METER
23. TELEPHONE BOARD
24. SPACE TRELLIS PUBLIN BACK TO BLD. TYP. OF (5) LOCATIONS, SEE DETAIL 3/A5.05
25. CONDENSING UNIT - SEE MECHANICAL
26. WOD AND SHELF

KN KEYED NOTES

WT WALL TYPES

1. UNLESS NOTED OTHERWISE, ALL FLOOR PLAN DIMENSIONS ARE MEASURED FROM
   A. FACE OF STUD
   B. FACE OF CONCRETE
   C. CENTER OF OPENING
   D. CENTER OF COLUMN/COLUMN LINE
2. COORDINATE AND VERIFY ROUGH OPENING DIMENSIONS AND REQUIREMENTS FOR WINDOW OPENINGS, DOORS, TOILET ROOM ACCESSORIES, CABINETRY, APPLIANCES, FIXTURES AND ALL SIMILAR ITEMS
3. PROVIDE BLOCKING OR BACKING AT ALL
   A. WALL MOUNTED FIXTURES
   B. GRAB BARS AND ACCESSORIES
   C. FUTURE GRAB BARS AND ACCESSORIES
   D. EQUIPMENT
   E. CABINETRY/CASEWORK
4. SEE FINISH SCHEDULE AND REFLECTED CEILING PLANS FOR ADDITIONAL ITEMS NOT SHOWN.
5. PROVIDE ACCESS PANELS IN WALLS WHERE REQUIRED FOR PLUMBING, MECHANICAL AND ELECTRICAL EQUIPMENT AND APPURTENANCES WHO, ARCH, MEP - INSERT PROPOSED LOCATIONS TO ARCHITECT FOR REVIEW PRIOR TO INSTALLATION
6. SEE A6/A5 FOR WINDOW, DOOR AND FINISH SCHEDULES

GN GENERAL NOTES

WILLIAM C. KEMPF
ARCHITECT
911 Center Street, Suite I
Santa Cruz, Ca 95060
831 419-6851
www.wckempf.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

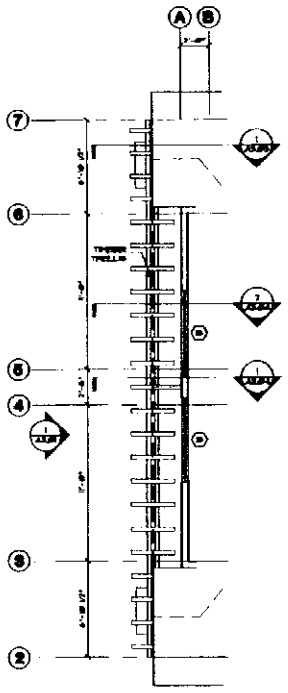
BASEMENT PLAN & MAIN LEVEL FLOOR PLANS

DRAWING DATE:
AUGUST 20, 2008
CONSTRUCTION RELEASE:
CLIENT NAME:
DAVE McCLURE
PROJECT NAME:
RODEO GULCH & SOQUEL

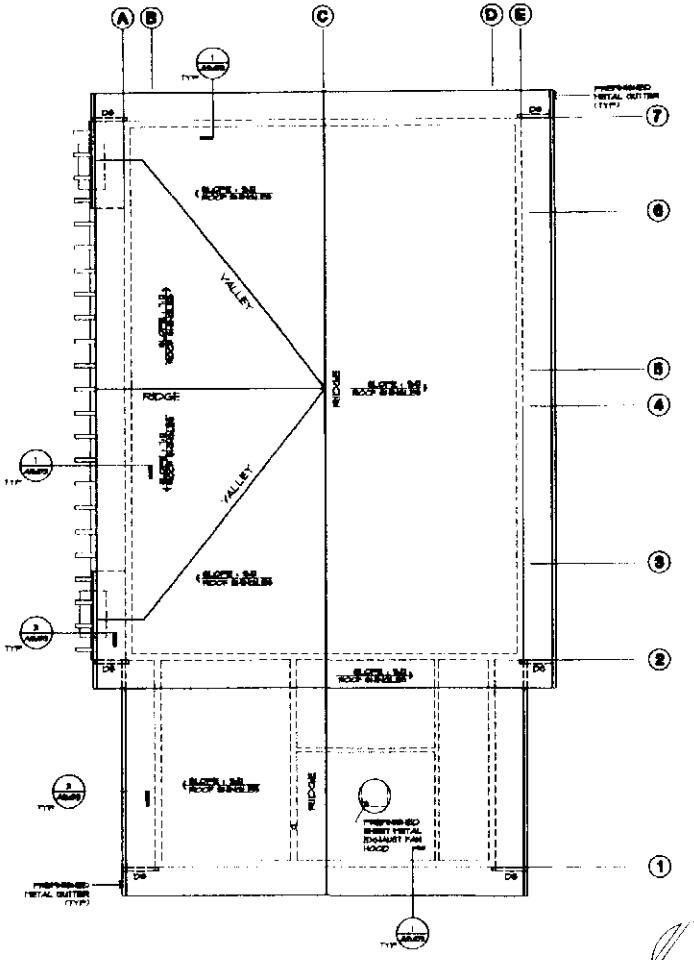
NO.	DESCRIPTION	DATE

DISCLAIMER

A2.01



1 CLERESTORY PLAN



2 ROOF PLAN

WILLIAM E. KEMPF
ARCHITECT

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA
CLERESTORY AND ROOF PLANS

DRAWING DATE:
AUGUST 20, 2008
CONSTRUCTION RE/PAR

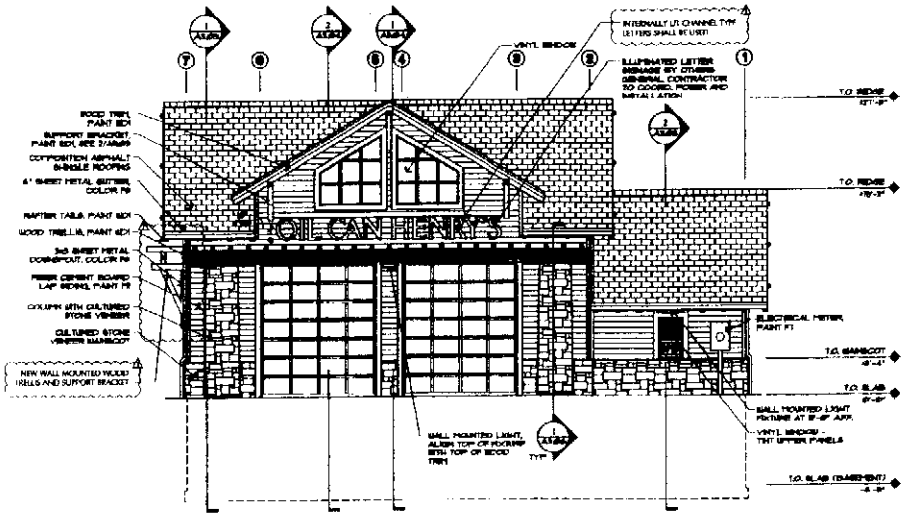
CLIENT NAME:
DAVE McCLURE

PROJECT NAME:
RODEO GULCH & SOQUEL

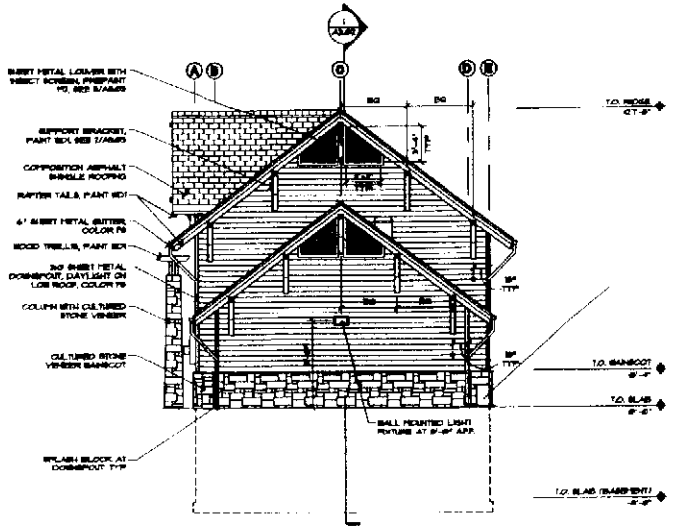
REVISIONS

No.	DESCRIPTION	DATE

A2.02



1 NORTH ELEVATION



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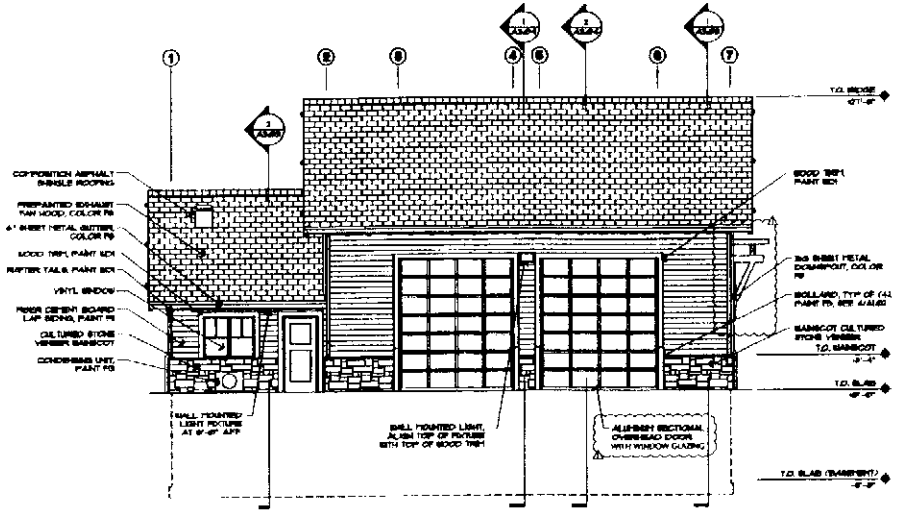
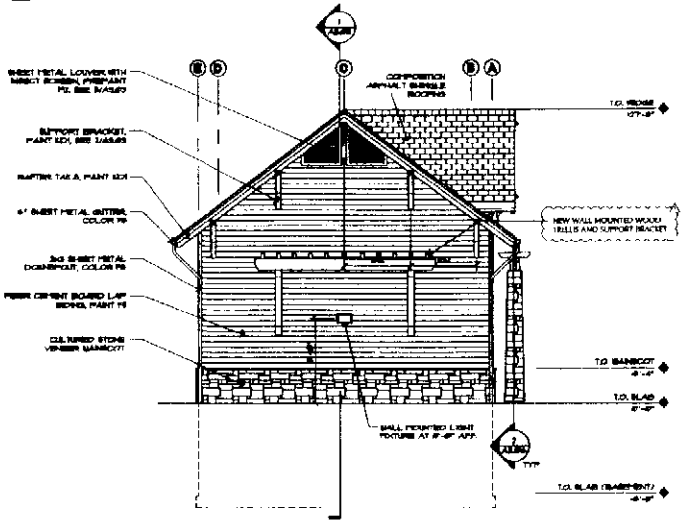
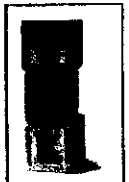


3 SOUTH ELEVATION



4 EAST ELEVATION



WILLIAM C. KEMP
ARCHITECT

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
SODEO GULCH AND SOQUEL DRIVE SOQUEL, CALIFORNIA
EXTERIOR ELEVATIONS

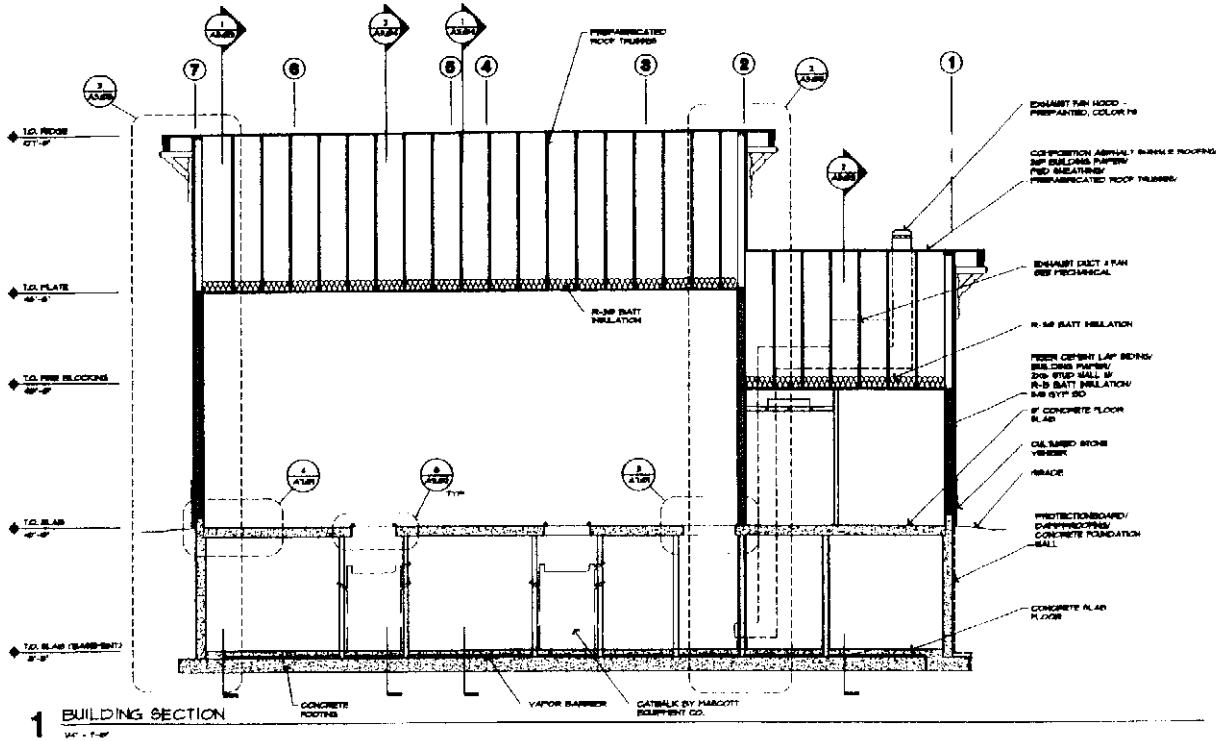
DRAWING DATE:
AUGUST 20, 2008
CONSTRUCTION RELEASE:
CLIENT NAME:
DAVE McCLURE
PROJECT NAME:
RODEO GULCH & SOQUEL

REVISIONS

NO.	DESCRIPTION	DATE
A	PLAN CHECK	09/16/08

DISCLAIMER

A3.01



1 BUILDING SECTION

WILLIAM C. KEMPF
ARCHITECT
111 Center Street, Suite F
Santa Cruz, Ca 95060
831 459-9991
www.wckempf.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

BUILDING SECTIONS

DRAWING DATE
AUGUST 30, 2008

CONSTRUCTION BREAK

CLIENT NAME
DAVE McCLURE

PROJECT NAME
RODEO GULCH & SOQUEL

REVISIONS

NO.	DESCRIPTION	DATE

DISCLAIMER

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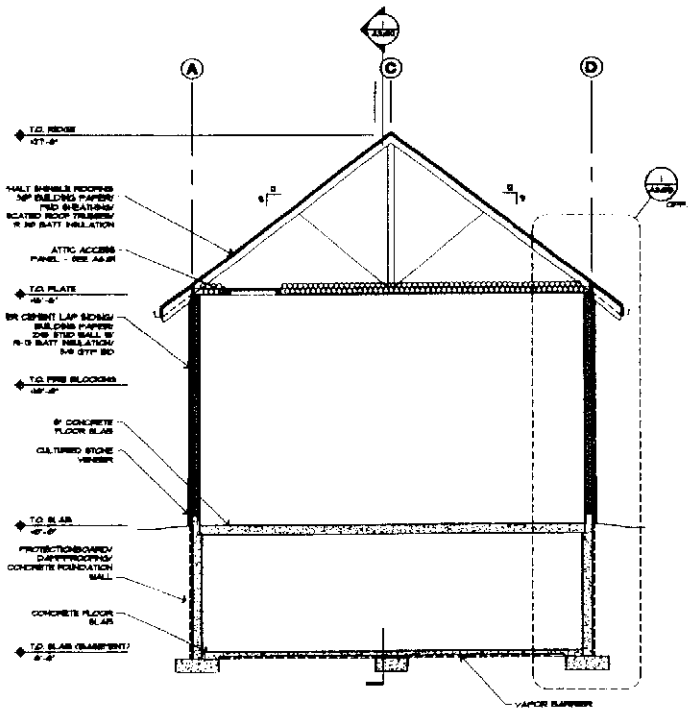

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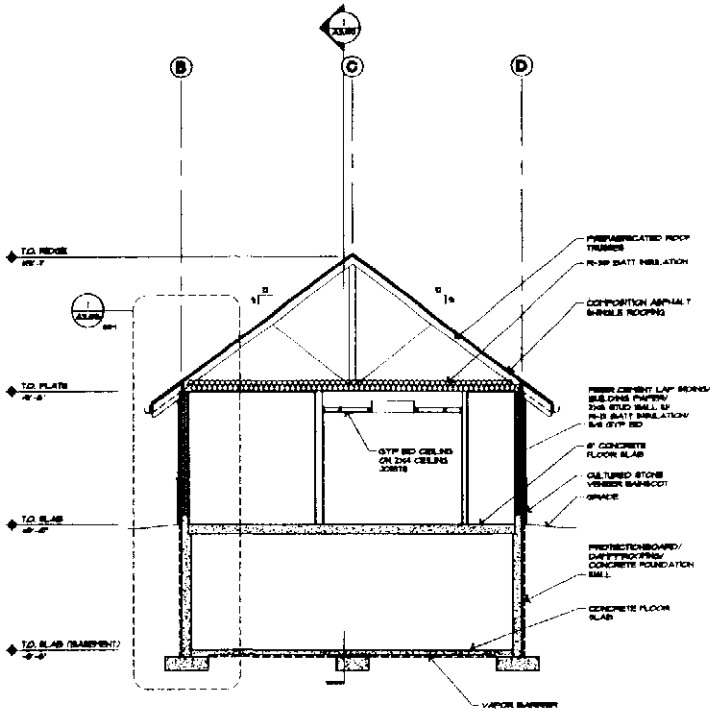


2 BUILDING SECTION

WILLIAM C. KEMPF
ARCHITECT
911 Center Street, Suite 1
Santa Cruz, CA 95060
831 459-9951
www.wckempf.com

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

BUILDING SECTIONS

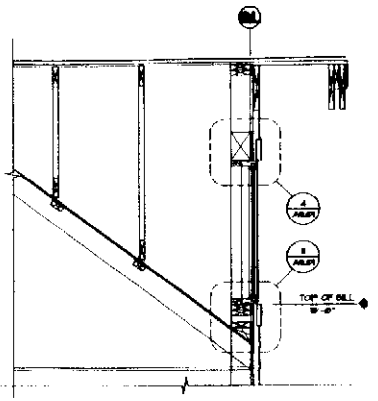
DRAWING DATE
AUGUST 30, 2008
CONSTRUCTION RELEASE
CLIENT NAME
DAVE McLURE
PROJECT NAME
RODEO GULCH & SOQUEL

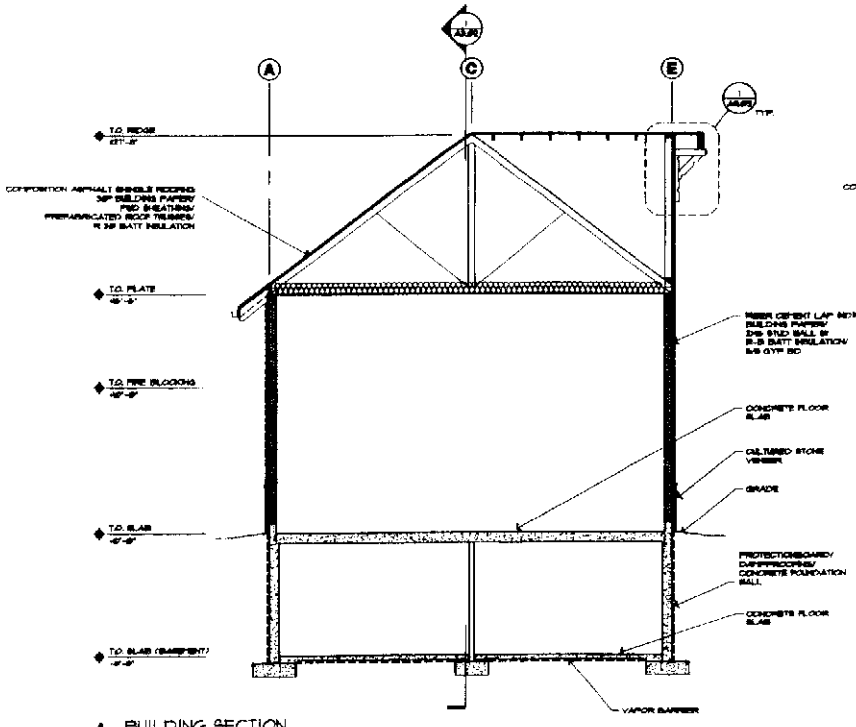
REVISIONS

No.	DESCRIPTION	DATE

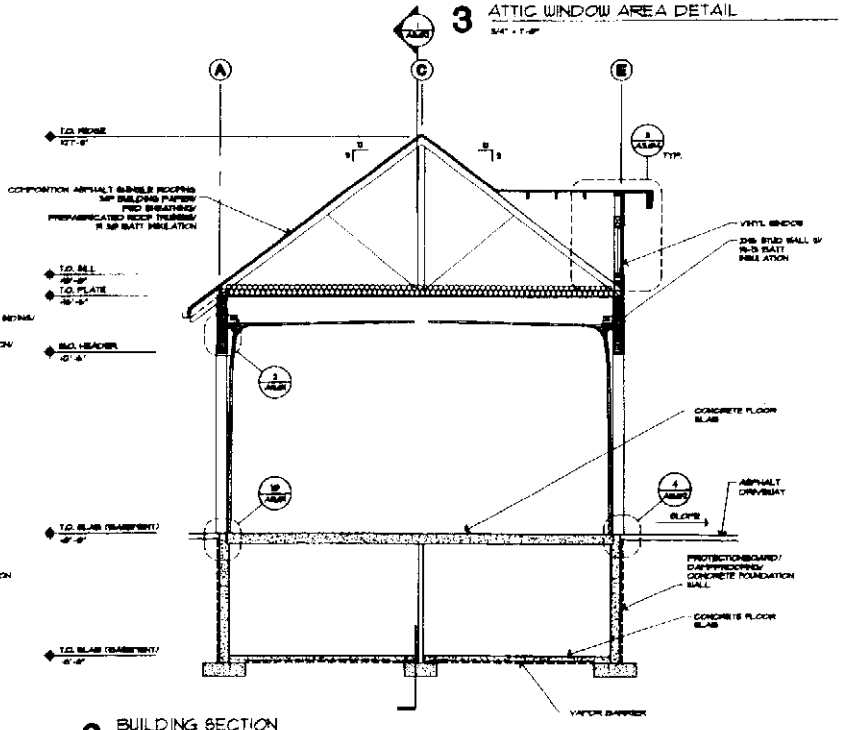
DISCLAIMER

A3.03





1 BUILDING SECTION



2 BUILDING SECTION

3 ATTIC WINDOW AREA DETAIL

WILLIAM C. KEMPF
ARCHITECT

2 BAY CRAFTSMEN STYLE LUBE FACILITY FOR:

OIL CAN HENRY'S

RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA

BUILDING SECTIONS

DRAWING DATE:
AUGUST 30, 2006

CONSTRUCTION BY BASE:

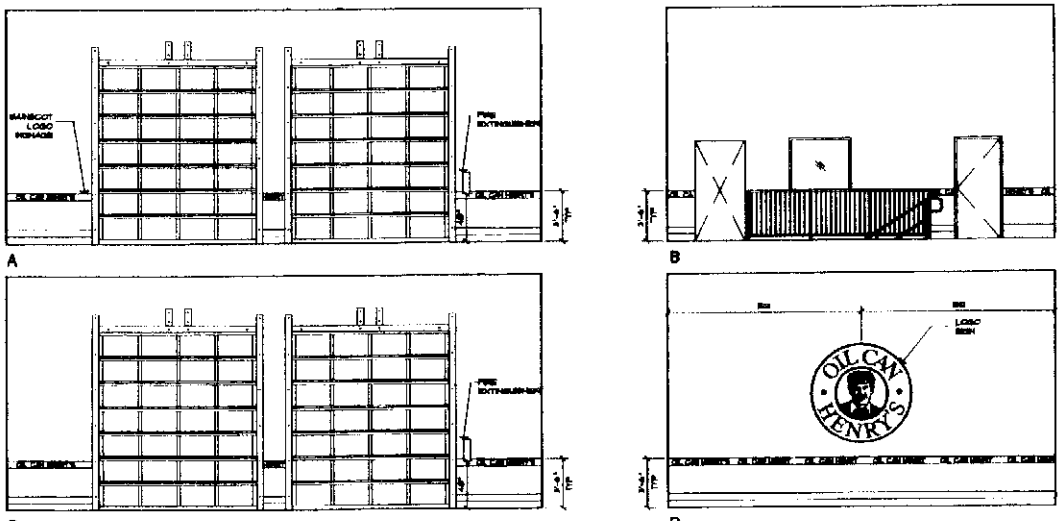
CLIENT NAME:
DAVE MCGUIRE

PROJECT NAME:
RODEO GULCH & SOQUEL

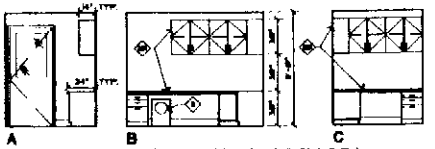
REVISIONS

NO.	DESCRIPTION	DATE

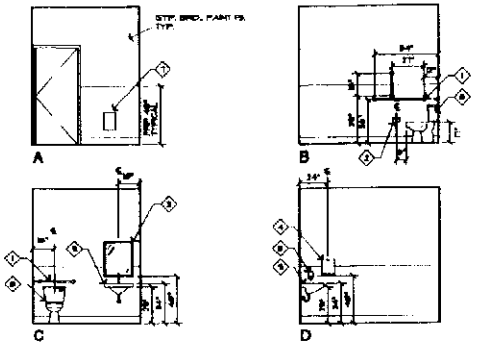
A3.04



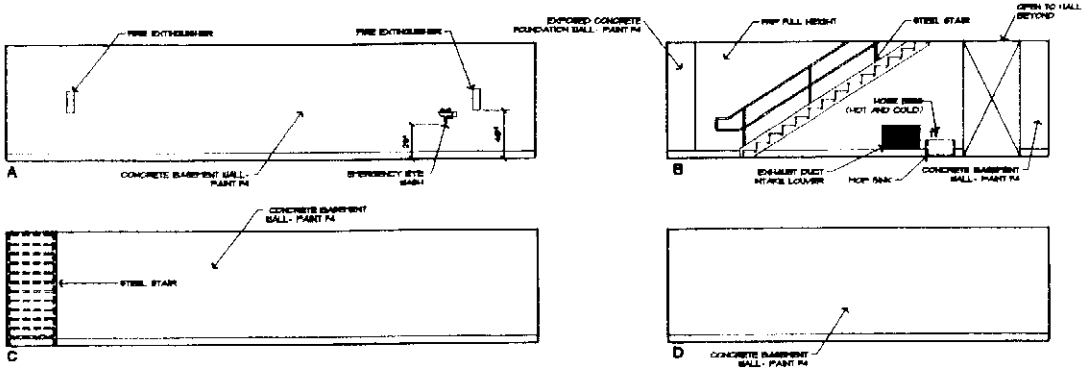
2 INTERIOR ELEVATION : SERVICE AREA ROOM 205



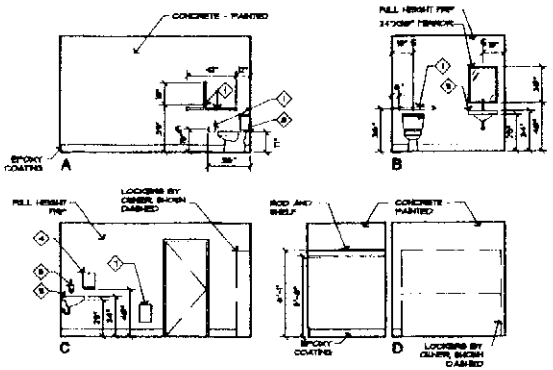
1 INTERIOR ELEVATION : OFFICE ROOM 204



3 INTERIOR ELEVATION : TOILET ROOM 202



4 INTERIOR ELEVATION : SERVICE BASEMENT ROOM 101



5 INTERIOR ELEVATION : TOILET RM 103 & HALL RM 102

KN KEYED NOTES

1. 1 1/2" DIA STAINLESS STEEL GRAB BAR (ANSI HT. 33" FFF) 18GU BOBRICK 18-6806 STAINLESS STEEL, SATIN FINISH W/ CONCEALED MOUNTING
2. TOILET PAPER DISPENSER BOBRICK 18-2888
3. 1/4" POLISHED PLATE GLASS MIRROR W/ 1/2" TRIM BOBRICK 1668 24X36 #1 STAINLESS STEEL, SATIN FINISH W/ SS PIANO 3 1/2" x 36"H
4. PAPER TOWEL DISPENSER, BOBRICK 18-262 #1 STAINLESS STEEL, SATIN FINISH SURFACE MOUNTED
5. SOAP / DETERGENT DISPENSER BOBRICK 18-48
6. WATER HEATER
7. ELECTRIC HEATER
8. TOILET
9. LAVATORY - PROVIDE INSULATION KIT ON PIPING BELOW LAVATORY
10. OFFICE COUNTER, DRAWERS AND CABINETS (W/ LOCKS) VERIFY DESIGN W/ OWNER. LAMINATE L
11. SAFE BY OWNER
12. ELECTRICAL PANELS - COORDINATE WITH ELECTRICAL DRAWINGS

WILLIAM C. KEMPF ARCHITECT
911 Cedar Street, Suite F
Santa Cruz, Ca 95060
831.469.0951
www.wckempf.com

2 BAY CRAFTSMAN STYLE LUBE FACILITY FOR:
OIL CAN HENRY'S
RODEO GULCH AND SOQUEL DRIVE, SOQUEL, CALIFORNIA
INTERIOR ELEVATIONS

DRAWING DATE: AUGUST 30, 2008
CONSTRUCTION RELEASE
CLIENT NAME: DAVE MCCLURE
PROJECT NAME: RODEO GULCH & SOQUEL

REVISIONS

No.	DESCRIPTION	DATE

A5.01

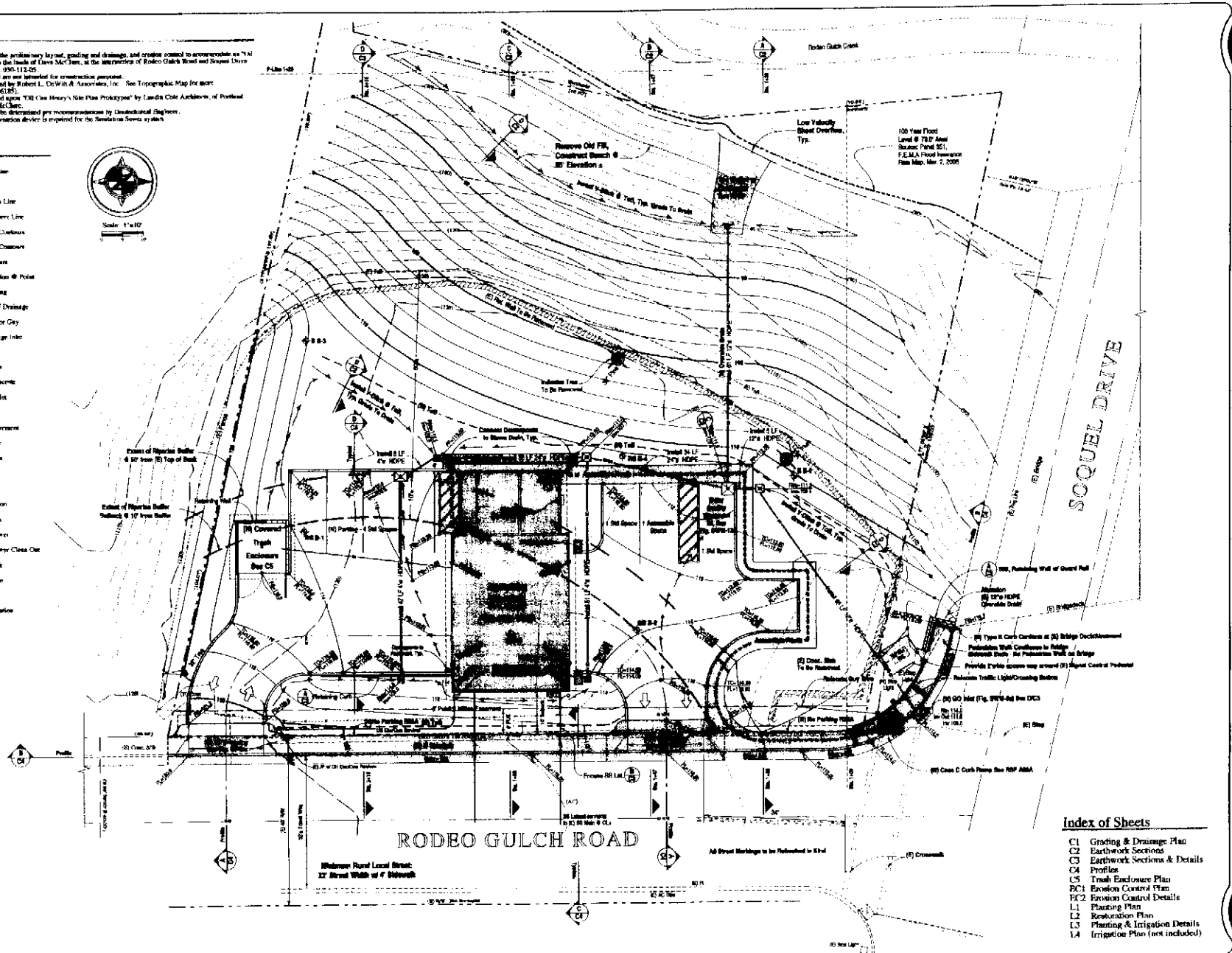
Notes

1. These drawings (9 sheets) show the preliminary layout, grading and drainage, and erosion control to accommodate an "Oil Can Henry's" service building on the lands of Dave McClure, at the intersection of Rodeo Gulch Road and Soquel Drive in Santa Cruz, California. A.P.N. 030-112-05.
2. These plans are preliminary, and are not intended for construction purposes.
3. Topographic information provided by Robert L. DeWitt & Associates, Inc. See Topographic Map for more information (DeWitt Project: R06185).
4. Preliminary building layout based upon "Oil Can Henry's Site Plan Prototypes" by Lauckin Cole Architects, of Portland Oregon, and sketches by Dave McClure.
5. Detention/infiltration method to be determined per recommendations by Geotechnical Engineer.
6. Sewer overflow or backflow prevention device is required for the Sewerage Sewer system.

Legend

- Boundary Line
- Fence
- Storm Drain Line
- Sanitary Sewer Line
- Existing 1' Contours
- Existing 5' Contours
- New Contours
- New Elevation @ Point
- New Building
- Direction of Drainage
- JP w/ Anchor Guy
- New Drainage Inlet
- Tree
- (+) Brewed Data
- AC Asphalt Concrete
- DI Drainage Inlet
- (E) Existing
- EP Edge of Pavement
- FF Finish Floor
- FG Finish Grade
- FL Flow Line
- (N) New
- RIM Rim Elevation
- SD Storm Drain
- SS Sanitary Sewer
- SSCO Sanitary Sewer Clean Out
- ToB Top of Bank
- ToS Toe of Slope
- TYP Typical
- Boring Location

Scale: 1"=10'



Index of Sheets

REGISTERED PROFESSIONAL ENGINEER — ERIC T. TASTER — No. C 56007 Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA

E. T. Easter, Inc.
Civil Engineering & Surveying Consultants
P.O. Box 7626, Santa Cruz, California 95061
(831) 425-7611 Fx. (831) 423-5320

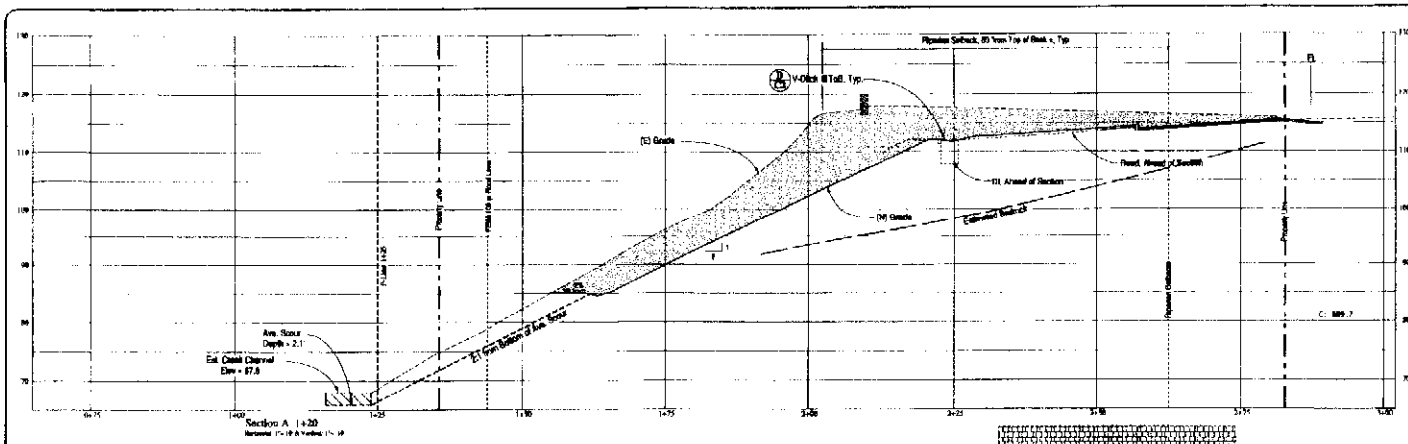
Improvements to A.P.No. 030-112-05

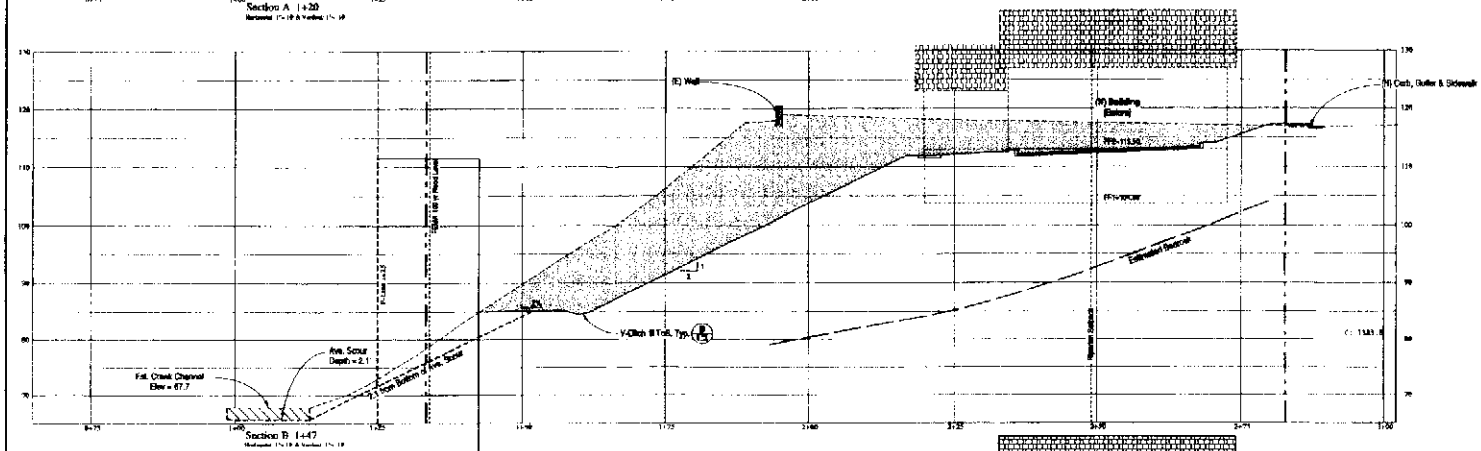
McClure Construction, Inc.
160 Woods Cove Lane
Santa Cruz, California 95060

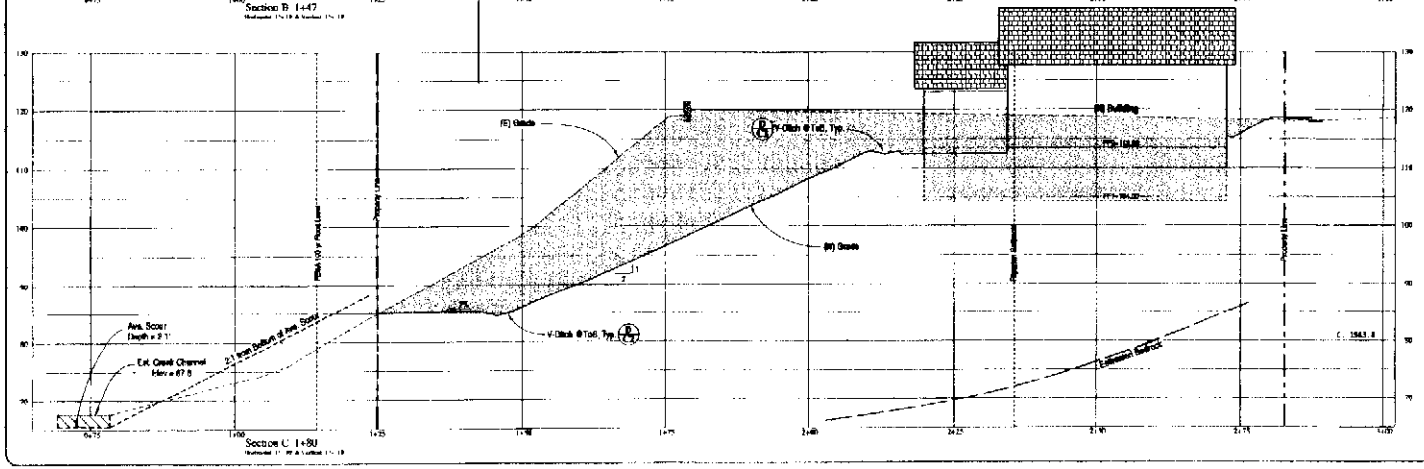
Grading & Drainage Plan

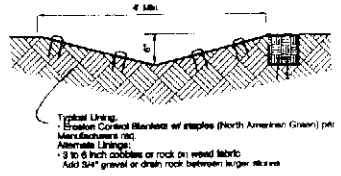
SCALE: 1" = 10' | DRAWN: ETE/MT
DATE: May 2008
REVISION: 09/11/08 Address to Owner
JOB NO.: 08023

Sheet C1 of 11 Sheets





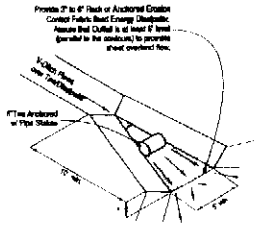


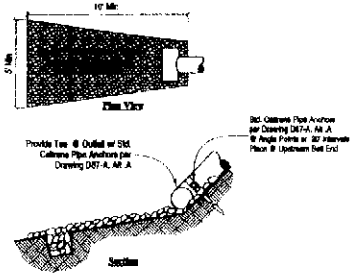


Typical V-Ditch

Scale: nts

D / C2





Tee Outlet / Energy Dissipator Detail

Scale: nts

E / C2

REGISTERED PROFESSIONAL ENGINEER — ERIC TIONNAR EASTERLY — No. C 59907 Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA

E. T. Easterly, Inc.

Improvements to APNs: 026-112-05

McClure Construction, Inc.
148 Woods Cove Lane
Santa Cruz, California 95060

Earthwork Sections

SCALE: 1" = 10'

DATE: May 2008

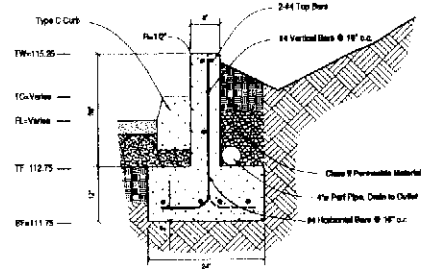
DRAWN: ETE/MJ

© 2008 E.T. Easterly, Inc.

JOB NO.: 08021

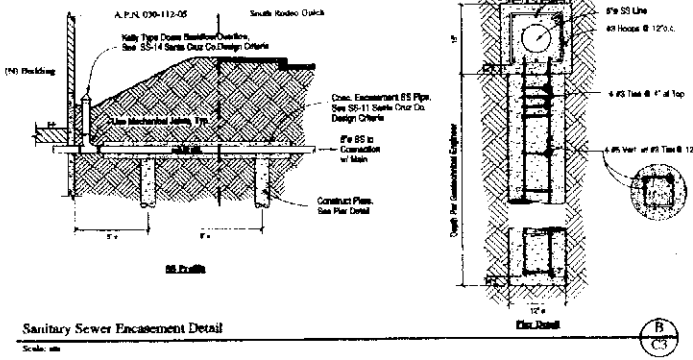
REVISION: 05-24-10: Release to Owner

Sheet C2 of 11 Sheets



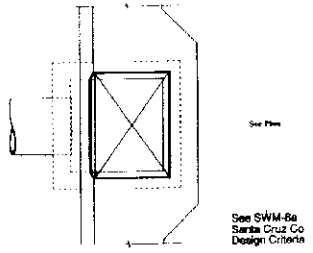
Retaining Curb Detail

A / C3

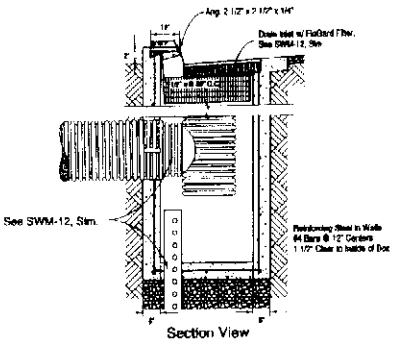


Sanitary Sewer Encasement Detail

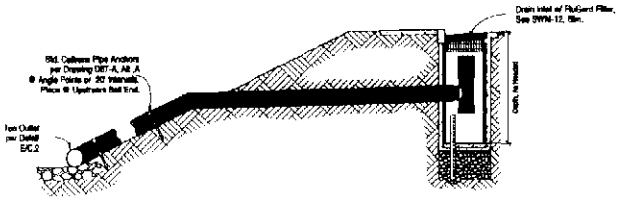
B / C3



Plan View



Section View

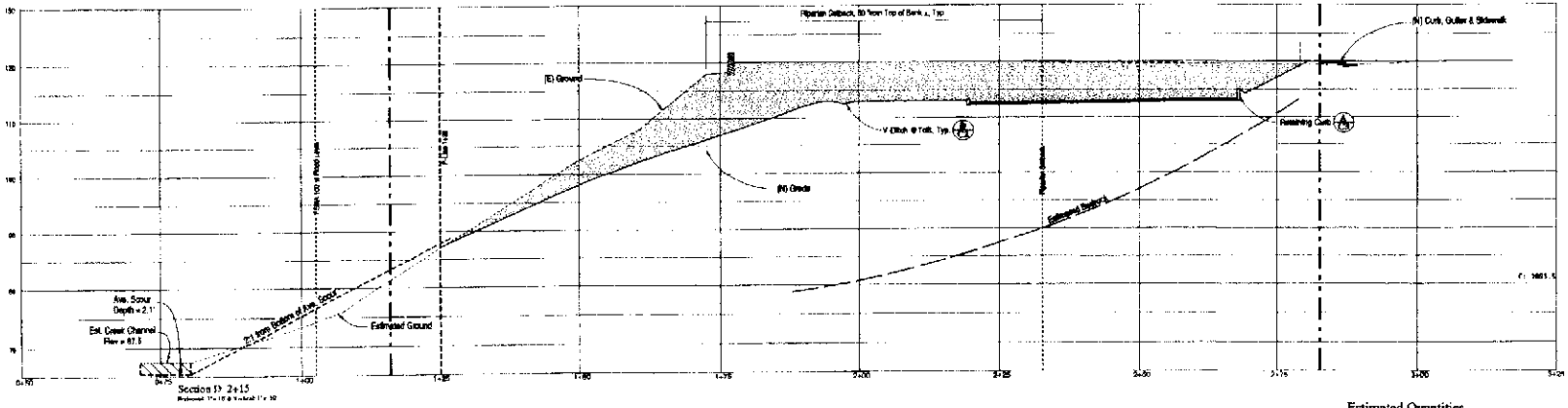


Water Quality Treatment / Overside Drain Detail

C / C3

GO Inlet w/ Water Quality Treatment Unit

D / C3



5895 yds

Estimated Quantities

Cut	6,014 cu. yds.
Fill	0cu. yds
Total	Cut 6,014cu.yds

* Note: quantities shown are preliminary estimates and are subject to change

Earthwork Sections

Scale: as shown

E / C3

E. T. Easter, Inc.
Land Surveying / Planning
2621 Soquel Avenue, Santa Cruz, California 95062
P.O. Box 1621, Santa Cruz, California 95061
(831) 425-1611 Fx. (831) 425-8235

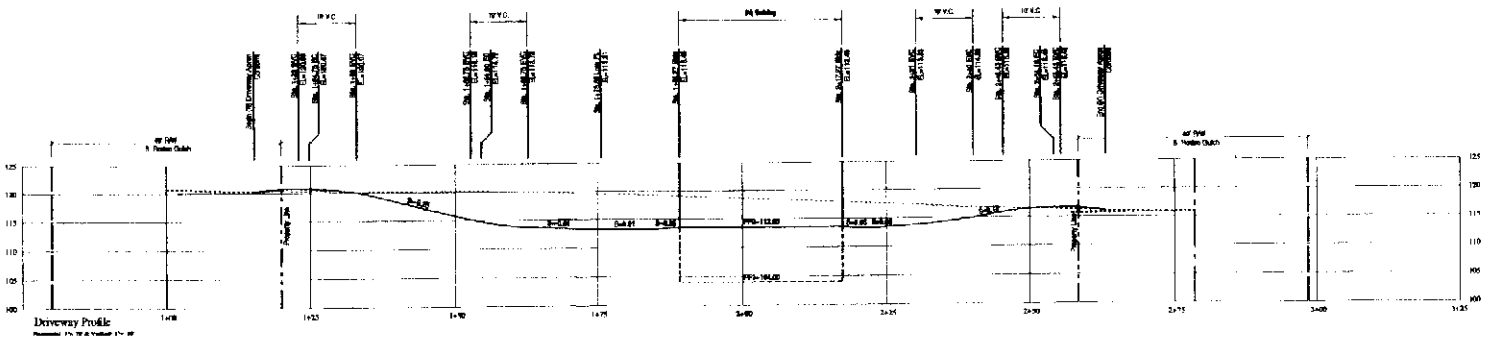
Improvements to APNs. 030-112-05

McClure Construction, Inc.
1148 Woods Cove Lane
Santa Cruz, California 95062

Earthwork Sections & Details

SCALE: 1" = 10'
DATE: May 2008
DRAWN: B.H.Leal
Check: E.T. Easter Inc.
JOB NO: 08021
REVISION: 05-14-08 Relative to Owner

Sheet
C3
of 11 Sheets

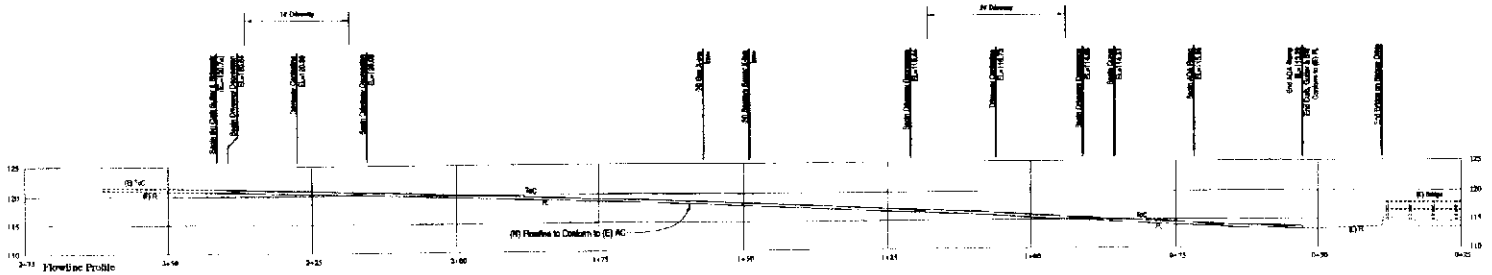


Driveway Profile

Driveway Profile

Scale: as shown

A
C4

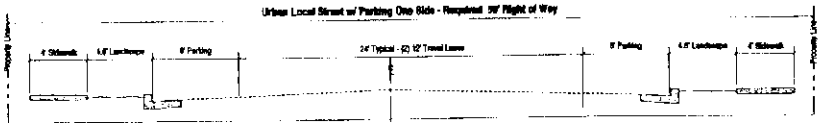


Flowline Profile

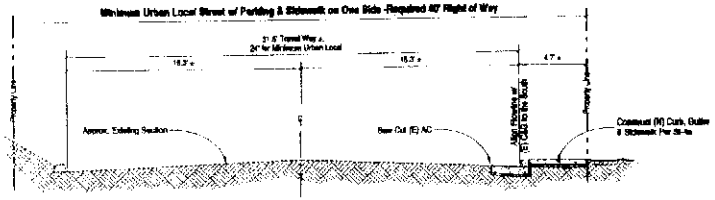
South Rodeo Gulch / Soquel Drive Profile

Scale: as shown

B
C4



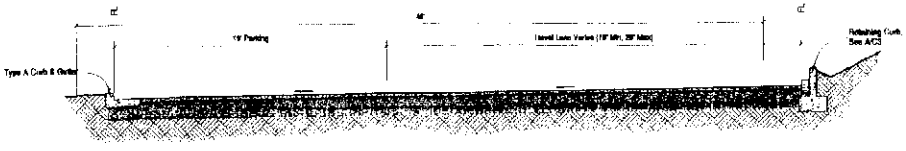
Typical Urban Local Street Section for Comparison



Typical South Rodeo Gulch Section in 40' Right of Way - Minimum Urban Local Street (Requires Exception)

Scale: as shown

C
C4



Minimum Pavement Section
3" Asphalt Concrete on prime coat on
7" thick Compacted Class II Aggregate Base Rock on
8" Subgrade Compacted to 95% R.C. per Geotechnical Engineer.

Typical Driveway Section

Scale: 1/4" = 1'

D
C4

REGISTERED PROFESSIONAL ENGINEER
ERIC THOMAS EASTER
No. C 58007
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

E. T. Easter, Inc.
engineering surveying planning
P.O. Box 1665 Santa Cruz, California 95061
(831) 425-7841 FX (831) 425-8397

Improvements to APNs. 038-112-05

McClure Construction, Inc.
168 Woods Cove Lane
Santa Cruz, California 95060

Profiles

SCALE: 1" = 10'
DATE: May 2008
DRAWN: ET Easter
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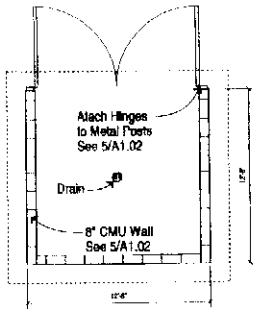
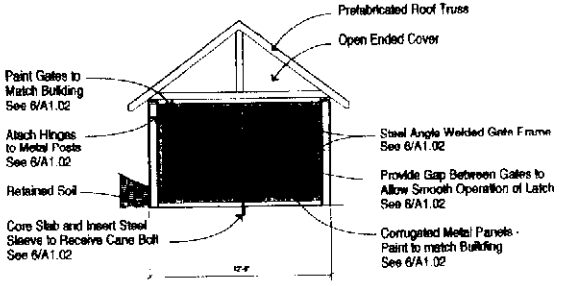
JOB NO: 28021
REVISION: 05.24.10: Release to Owner

Sheet
C4
of 11 Sheets



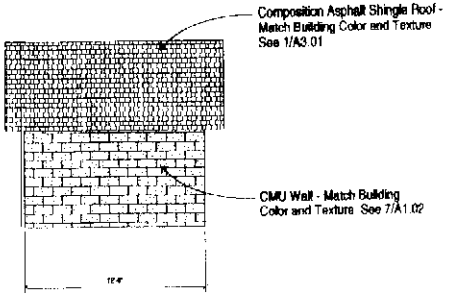
Covered Trash Enclosure - Plan

A / C5



Covered Trash Enclosure East Elevation

B / C5



Covered Trash Enclosure - North Elevation

C / C5

E. T. Eaner, Inc.
Engineering Surveying
P.O. Box 1933, Santa Cruz, California 95061
(831) 425-7821 FAX (831) 425-8235

Improvements to A.P.No. 026-112-05

McClure Construction, Inc.
148 Woods Cove Lane
Santa Cruz, California 95060

Trash Enclosure Plan

SCALE: 1/4" = 1'-0" | DRAWN: RJF & TmH
DATE: May 2008 | © 2008 E.T. Eaner, Inc.
JOB NO: 0822 | REVISION: 05.Jul.08: Balance to Owner

Sheet
C5
of 11 Sheets

Erosion Control Notes

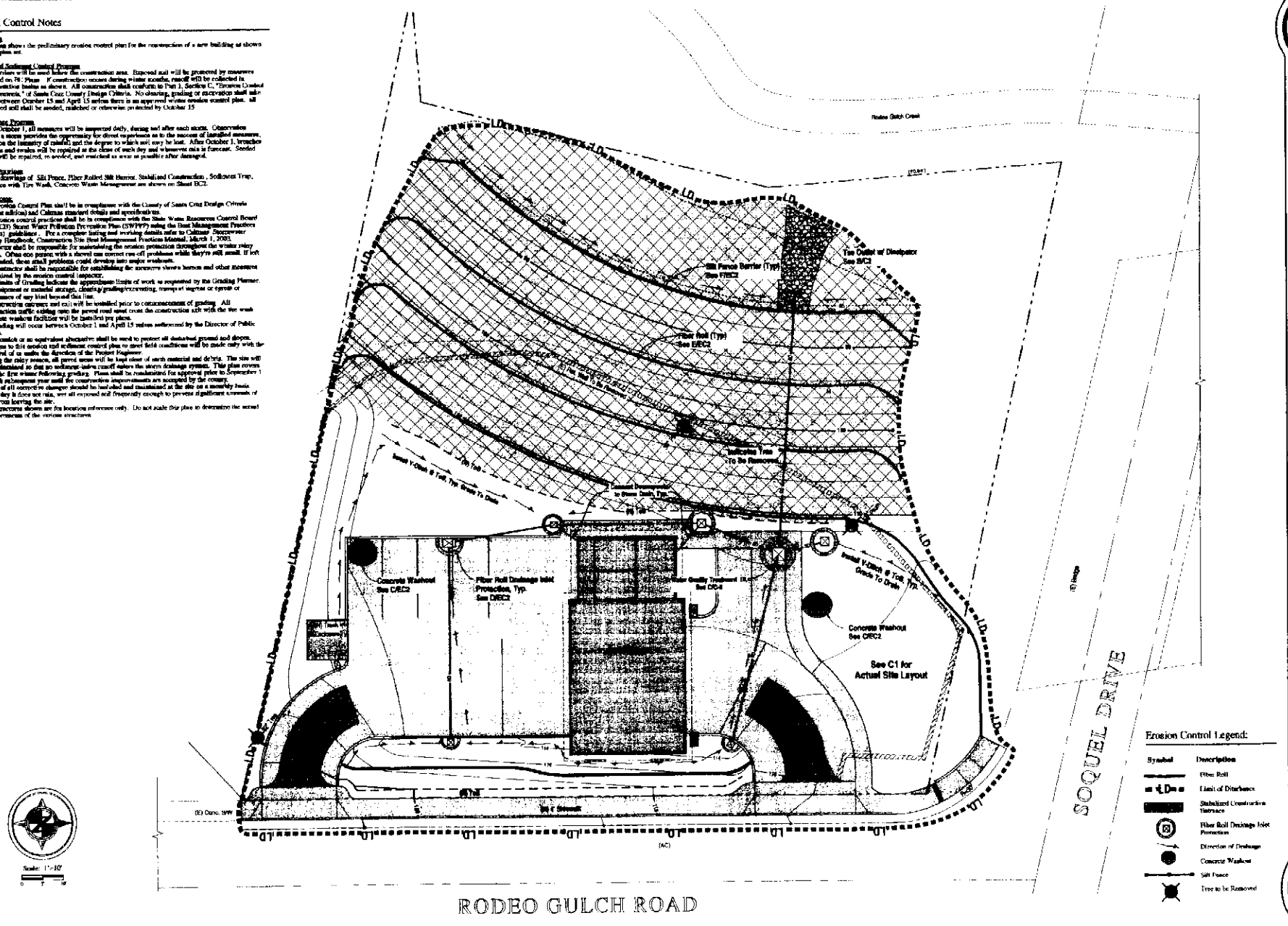
Description
This plan shows the preliminary erosion control plan for the construction of a new building as shown in this plans set.

Erosion and Sediment Control Program
Silt Barriers will be used below the construction area. Exposed soil will be protected by measures outlined on Pl. Plans. If construction occurs during winter months, runoff will be collected in sedimentation basins as shown. All construction shall conform to Part 3, Section C, "Erosion Control Requirements," of Santa Cruz County Design Criteria. No clearing, grading or excavation shall take place between October 15 and April 15 unless there is an approved winter erosion control plan. All disturbed soil shall be seeded, mulched or otherwise protected by October 15

Maintenance Program
After October 1, all measures will be inspected daily, during and after each storm. Observations during a storm provides the opportunity for direct experience as to the success of installed measures, based on the intensity of rainfall and the degree to which soil may be lost. After October 1, breaches in dikes and swales will be repaired at the close of each day and whenever rain is forecast. Seeded areas will be repaired, re-seeded, and mulched as soon as possible after damaged.

Detailed Drawings
Detail drawings of Silt Fence, Fiber Rolled Silt Barrier, Stabilized Construction, Sediment Trap, Entrance with Tire Wash, Concrete Waste Management are shown on Sheet EC2.

General Notes
1. The Erosion Control Plan shall be in compliance with the County of Santa Cruz Design Criteria (current addition) and Caltrans standard details and specifications.
2. The erosion control practices shall be in compliance with the State Water Resources Control Board (SWRCB) Storm Water Pollution Prevention Plan (SWPPP) using the Best Management Practices (BMP's) guidelines . For a complete listing and working details refer to Caltrans' Stormwater Quality Handbook, Construction Site Best Management Practices Manual, March 1, 2003.
3. Contractor shall be responsible for maintaining the erosion protection throughout the winter rainy season. Often one person with a shovel can correct run-off problems while they're still small. If left unattended, these small problems could develop into major washouts.
4. The contractor shall be responsible for establishing the necessary sleeves harness and other measures as requested by the erosion control inspector.
5. The Limits of Grading indicate the approximate limits of work as requested by the Grading Planner. No equipment or material storage, clearing/grading/excavating, transport ingress or egress or disturbance of any kind beyond this line.
6. A construction entrance and exit will be installed prior to commencement of grading. All construction traffic exiting onto the paved road must cross the construction exit with the tire wash
7. Concrete washout facilities will be built/feed per plans.
8. No grading will occur between October 1 and April 15 unless authorized by the Director of Public Works.
9. Hydromulch or an equivalent alternative shall be used to protect all disturbed ground and slopes.
10. Changes to this erosion and sediment control plan to meet field conditions will be made only with the approval of or under the direction of the Project Engineer.
11. During the rainy season, all paved areas will be kept clear of earth material and debris. The site will be maintained so that no sediment-laden runoff enters the storm drainage system. This plan covers only the first winter following grading. Plans shall be resubmitted for approval prior to September 1 of each subsequent year until the construction improvements are accepted by the county.
12. A log of all corrective changes should be maintained and maintained at the site on a monthly basis.
13. Each day it does not rain, wet all exposed soil frequently enough to prevent significant amounts of dust from leaving the site.
14. The structures shown are for location reference only. Do not scale this plan to determine the actual measurements of the various structures.



Scale: 1"=10'

Erosion Control Legend:

Symbol	Description
	Fiber Roll
	Limit of Disturbance
	Stabilized Construction Entrance
	Fiber Roll Drainage Inlet Protection
	Direction of Drainage
	Concrete Washout
	Silt Fence
	Tree to be Removed

REGISTERED PROFESSIONAL ENGINEER — ERIC THOMAS EASTER — No. C 58827 — Exp. 6/30/11 — CIVIL — STATE OF CALIFORNIA

E. T. Easter, Inc.
Civil Engineering & Land Surveying
P.O. Box 1502, Santa Cruz, CA 95061
(831) 425-1611 FAX (831) 423-8209

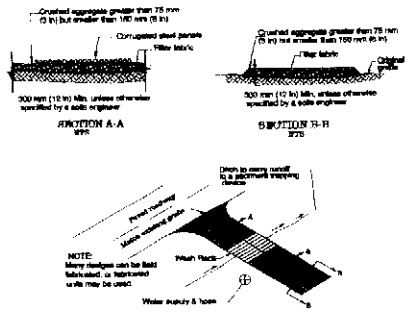
Improvements to APN: 026-112-05

McClure Construction, Inc.
144 Woods Cove Lane,
Santa Cruz, California 95060

Erosion Control Plan

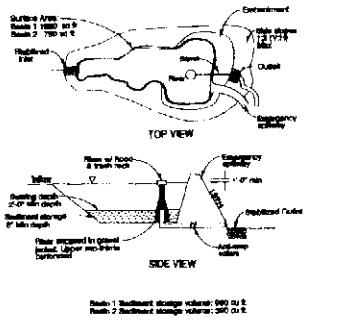
SCALE: 1" = 10' | DRAWN: ET & Staff
DATE: May 2008 | CHECKED: E.T. Easter Inc
JOB NO.: 08021 | REVISION: 05.24.10; Address w/ Owner

Sheet
EC1
of 11 Sheets



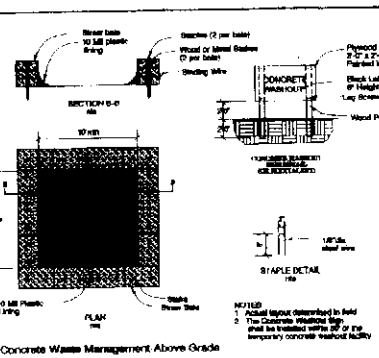
Stabilized Construction Entrance w/ Tire Wash

A EC1

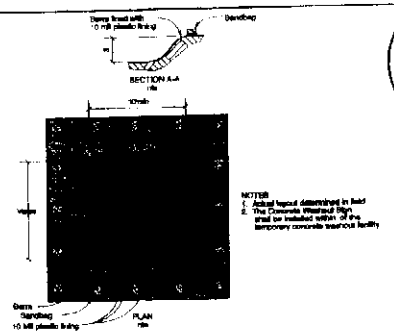


Sediment Basin

B EC2

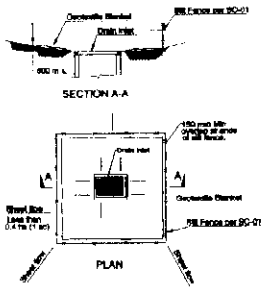


Concrete Waste Management Above Grade

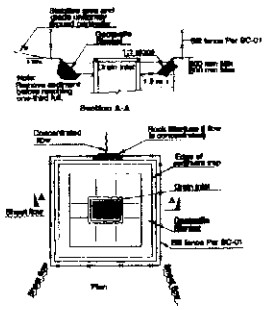


Concrete Waste Management-Below Grade

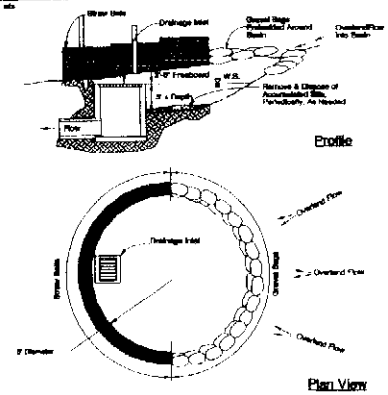
C EC2



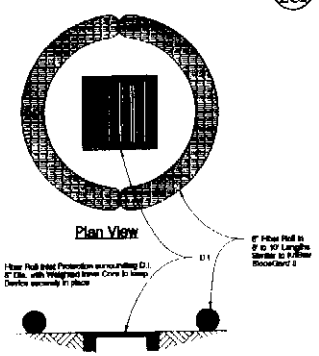
Storm Drain Inlet Protection Type 1



Storm Drain Inlet Protection Type 2



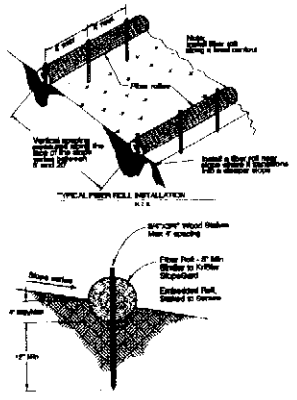
Storm Drain Inlet Protection Type 3



Storm Drain Inlet Protection Type 4

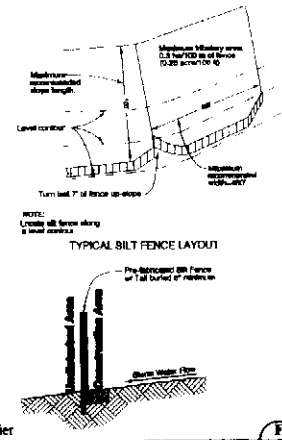
D EC2

Storm Drain Inlet Protection For Erosion Control



Typical Fiber Roll Silt Barrier

E EC2



Silt Fence Barrier

F EC2

REGISTERED PROFESSIONAL ENGINEER
ERIC THOMAS BARKER
No. C 66007
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

E. T. Barker, Inc.
Consulting Civil Engineering
P.O. Box 7555, Santa Cruz, California 95061
(831) 423-7601 Fx. (831) 423-8350

Improvements to APNs. 026-113-08

McClure Construction, Inc.
148 Woods Cove Lane
Santa Cruz, California 95060

Erosion Control Details

SCALE: 1" = 10'
DATE: May 2008
DRAWN: Staff
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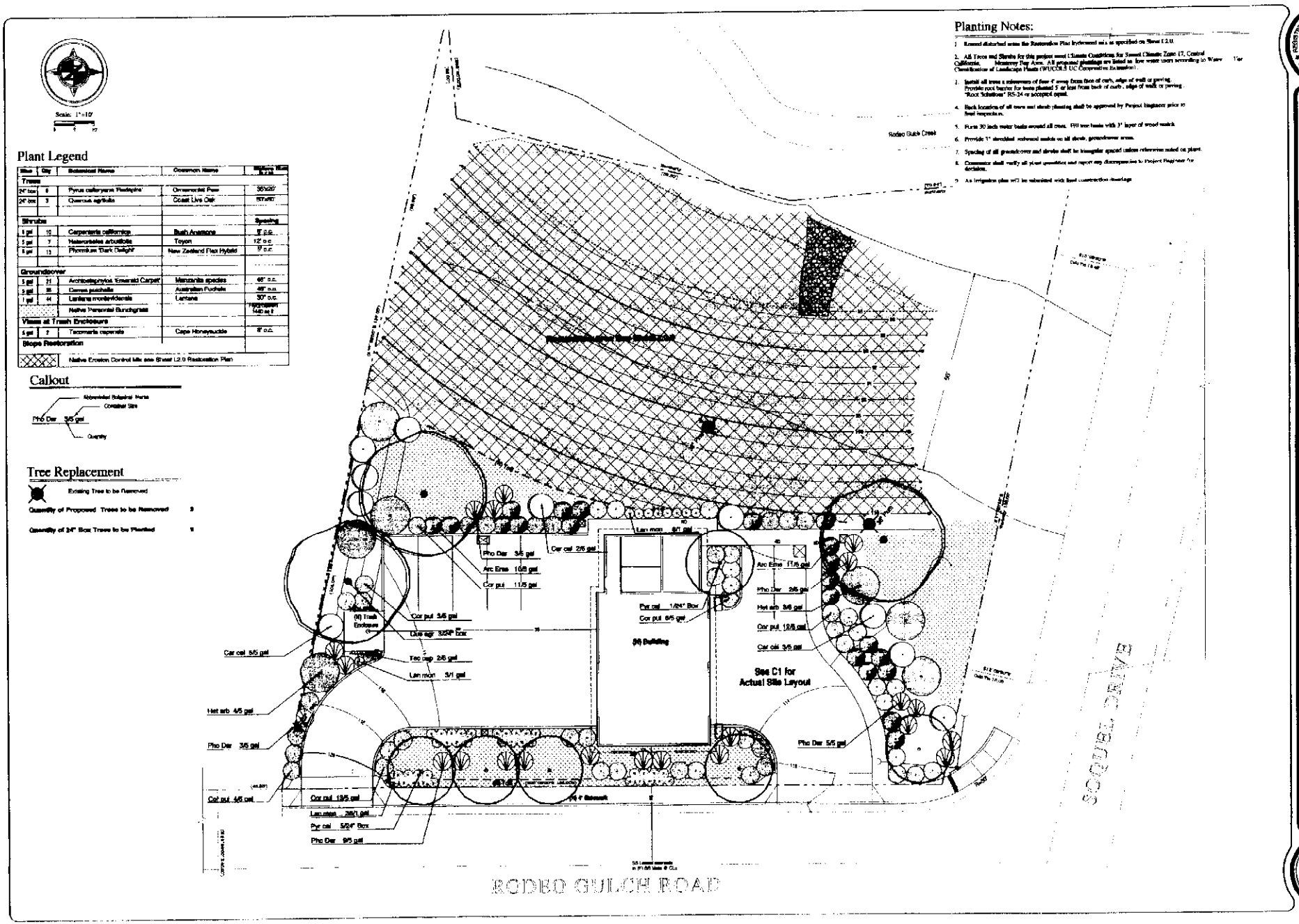
JOB NO.: 08021
REVISION: 05-24-10: Revision to Owner

Sheet
EC2
of 11 Sheets


Planting Notes:
1. Remove disturbed areas the Restoration Plan hydroseed mix as specified on Sheet L2.0.
2. All Trees and Shrubs for this project meet Climate Conditions for Sunset Climate Zone 17, Central California. Monterey Bay Area. All proposed plantings are listed as low water users according to Water Use Classification of Landscape Plants (WUCOLS UC Cooperative Extension).
3. Install all trees a minimum of four 4' away from face of curb, edge of wall or paving. Provide root barrier for trees planted 5' or less from back of curb, edge of wall or paving. "Root Solutions" RS-24 or accepted equal.
4. Stake location of all trees and shrub planting shall be approved by Project Engineer prior to final inspection.
5. Form 30 inch water basin around all trees. Fill tree basin with 3" layer of wood mulch.
6. Provide 3" shredded redwood mulch on all shrub, groundcover areas.
7. Spacing of all groundcover and shrubs shall be triangular spaced unless otherwise noted on plans.
8. Contractor shall verify all plant quantities and report any discrepancies to Project Engineer for decision.
9. An irrigation plan will be submitted with final construction drawings.
Scale: 1" = 10'
Plant Legend
Trees
Shrubs
Groundcover
Vines at Trash Enclosure
Slope Restoration
Native Erosion Control Mix see Sheet L2.0 Restoration Plan
Callout
Quantity
Tree Replacement
Existing Tree to be Removed
Quantity of Proposed Trees to be Removed 9
Quantity of 24" Box Trees to be Planted 9
Rodeo Gulch Creek
Hydroseed Low Profile Mix
(6) Trash Enclosure
(6) Building
See C1 for Actual Site Layout
Eaves Above
RODEO GULCH ROAD
E. T. Baxter, Inc.
Improvements to APNs: 030-112-48
McClure Construction, Inc.
Planting Plan
SCALE: 1" = 10'
DATE: May 2008
DRAWN: BB & Bdc
JOB NO: 19021
REVISION: 05.24.10: Release to Owner
Sheet L1
of 11 Sheets

STRAW MULCH BMP SS-6

DEFINITION AND PURPOSE

Straw mulch consists of placing a uniform layer of straw and incorporating it into the soil with a studded roller or anchoring it with a stabilizing emulsion. [illegible]

STANDARDS AND SPECIFICATIONS

1. Straw shall be derived from wheat, rice, or barley.
2. All materials shall conform to Standard Specifications Sections 20-2.06, 20-2.07 and 20-2.11.
3. A tackifier is the preferred method for anchoring straw mulch to the soil on slopes.
4. Crimping, punch roller-type rollers, or track-walking may also be used to incorporate straw mulch into the soil on slopes. Track walking shall only be used where other methods are impractical.
5. Avoid placing straw onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.
6. Straw mulch with tackifier shall not be applied during or immediately before rainfall.

APPLICATION PROCEDURES

1. Apply loose straw at a minimum rate of 4,000 kg/ha (4,000 lb/ac), or as indicated in the project's special provisions, either by machine or by hand distribution.
2. If stabilizing emulsion will be used to anchor the straw mulch in lieu of incorporation, roughen embankment or fill areas by rolling with a crimping or punching-type roller or by track walking before placing the straw mulch. Track walking should only be used where rolling is impractical.
3. The straw mulch must be evenly distributed on the soil surface.
4. Anchor the mulch in place by using a tackifier or by "punching" it into the soil mechanically (incorporating).
5. A tackifier acts to glue the straw fibers together and to the soil surface. The tackifier shall be selected based on longevity and ability to hold the fibers in place.
6. A tackifier is typically applied at a rate of 140 kg/ha (125 lb/ac). In windy conditions, the rates are typically 200 kg/ha (178 lb/ac).
7. Methods for holding the straw mulch in place depend upon the slope steepness, accessibility, soil conditions and longevity. If the selected method is incorporation of straw mulch into the soil, then do as follows:
8. Applying and incorporating straw shall follow the requirements in Standard Specifications Section 20-2.06.
9. On small areas, a spade or shovel can be used.
10. On slopes with soils, which are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife-blade roller or a straight bladed coulter, known commercially as a "crimper."
11. On small areas and/or steep slopes, straw can also be held in place using plastic netting or jute. The netting shall be held in place using 11 gauge wire staples, geotextile pins or wooden stakes. Refer to BMP SS-7, "Geotextiles, Plastic Covers and Erosion Control Blankets/Mats."

MAINTENANCE AND INSPECTION

1. The key consideration in Maintenance and Inspection is that the straw needs to last long enough to achieve erosion control objectives.
2. Maintain an unbroken, temporary mulched ground cover while DSAs are non-active. Repair any damaged ground cover and re-mulch exposed areas.
3. Reapplication of straw mulch and tackifier may be required by the Resident Engineer (RE) to maintain effective soil stabilization over disturbed areas and slopes.
4. After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

GEOTEXTILES, MATS, PLASTIC COVERS AND EROSION CONTROL BLANKETS BMP SS-7

DEFINITION AND PURPOSE

This BMP involves the placement of geotextiles, mats, plastic covers, or erosion control blankets to stabilize disturbed soil areas and protect soils from erosion by wind or water.

STANDARDS AND SPECIFICATIONS

Material Selection

There are many types of erosion control blankets and mats, and selection of the appropriate type shall be based on the specific type of application and site conditions. Selection(s) made by the Contractor must be approved by the Resident Engineer (RE); certification of compliance shall be in accordance with Standard Specifications Section 6-1.07.

Geotextiles
Erosion Control Blankets/Mats
Plastic Cover

SITE PREPARATION

1. Proper site preparation is essential to ensure complete contact of the blanket or matting with the soil.
2. Grade and shape the area of installation.
3. Remove all rocks, clods, vegetation or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
4. Prepare seedbed by loosening 50 mm (2 in) to 75 mm (3 in) of topsoil.

ANCHORING

1. U-shaped wire staples, metal geotextile stake pins or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
2. Staples shall be made of 3.05 mm (0.12 inch) steel wire and shall be U-shaped with 200 mm (8 inch) legs and 50 mm (2 inch) crown.
3. Metal stake pins shall be 5 mm (0.188 in) diameter steel with a 40 mm (1.5 in) steel washer at the head of the pin.
4. Wire staples and metal stakes shall be driven flush to the soil surface.
5. All anchors shall be 150 mm (6 in) to 450 mm (18 in) long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.

INSTALLATION OF SLOPES

Installation shall be in accordance with the manufacturer's recommendations. In general, these will be as follows:

1. Begin at the top of the slope and anchor the blanket in a 150 mm (6 in) deep by 150 mm (6 in) wide trench. Backfill trench and tamp earth firmly.
2. Unroll blanket downslope in the direction of water flow.
3. Overlap the edges of adjacent parallel rolls 50 mm (2 in) to 75 mm (3 in) and staple every 1 m (3 ft).
4. When blankets must be spliced, place blankets end over end (shingle style) with 150 mm (6 in) overlap. Staple through overlapped area, approximately 300 mm (12 in) apart.
5. Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
6. Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples shall be placed down the center and staggered with the staples placed along the edges. Steep slopes, 1:1 (V:H) to 1:2 (V:H), require a minimum of [illegible] staples/m² ([illegible] staples/yd²). Moderate slopes, 1:2 (V:H) to 1:3 (V:H), require a minimum of [illegible] staples/m² ([illegible] staples/yd²). Gentle slopes require a minimum of 1 staple/m² (1 staple/yd²).

TEMPORARY SOIL STABILIZATION REMOVAL

When no longer required for the work, temporary soil stabilization shall become the property of the Contractor. Temporary soil stabilization removed from the site of the work shall be disposed of outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 7-1.13. If approved by the RE, the contractor may leave the temporary soil stabilization in place.

MAINTENANCE AND INSPECTION

Areas treated with temporary soil stabilization shall be inspected as specified in the special provisions. Areas treated with temporary soil stabilization shall be maintained to provide adequate erosion control. Temporary soil stabilization shall be reapplied or replaced on exposed soils when area becomes exposed or exhibits visible erosion.

1. All blankets and mats shall be inspected periodically after installation.
2. Installation shall be inspected after significant rain storms to check for erosion and undermining. Any failures shall be repaired immediately.
3. If washout or breakage occurs, reinstall the material after repairing the damage to the slope or channel.

FIBER ROLLS BMP SE-5 :

DEFINITION AND PURPOSE

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for inlet protection and as check dams under certain situations.

STANDARDS AND SPECIFICATIONS

Fiber Roll Materials

Fiber rolls shall be either:

a. Prefabricated rolls.
b. Rolled tubes of erosion control blanket.

Assembly of Field Rolled Fiber Roll

1. Roll length of erosion control blanket into a tube of minimum 200 mm (8 in) diameter.
2. Bind roll at each end and every 1.2 m (4 ft) along length of roll with jute-type twine.

Installation

Fiber rolls should be placed on a level contour in a shallow trench with a maximum depth of 2 inches to 4 inches. The fiber roll should be staked at each end and at regular intervals along its length with a maximum distance of 4 ft. between stakes. If more than one fiber roll is placed in a row, the ends of the adjoining rolls should be tightly abutted together and not overlapped.

Vertical Spacing

When used to create slower water lenses on a slope, the vertical spacing of the fiber rolls must be determined by the inclination and length of the slope. For slopes 1:2 (V:H) and steeper and 50 ft. and greater, fiber rolls shall be placed at intervals no greater than 20 ft. For slopes between 1:20 (V:H) and 1:2 and 100 ft. and greater, fiber rolls shall be placed at intervals no greater than 50 ft.

Sediment Control

Fiber rolls are acceptable for use as sediment control and may be used in conjunction with other soil stabilization methods (soil binders, mulches, etc.) and other sediment controls.

MAINTENANCE AND INSPECTION

1. Repair or replace split, torn, unraveling, or slumping fiber rolls.
2. Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
3. Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
4. Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.

RESTORATION NOTES

1.0 GENERAL REQUIREMENTS

1.1 Design the project to fit the topographic and hydrologic features of the site. It is important to minimize grading of or near steep slopes.

1.2 All erosion control and soil conservation activities shall be performed in accordance with the erosion control requirements established by the County of Santa Cruz.

1.3 During construction, never store cut and fill material where it may wash into streams or drainageways. Keep all culverts and drainage facilities free of silt and debris. Keep emergency erosion control materials such as straw mulch, erosion control blankets and sandbags on-site and install them at the end of each day during the winter rainy season as necessary.

1.4 No area shall be left denuded for a period longer than 14 days except for that portion of the site in which work will be continuous beyond 14 days.

1.5 All erosion control and sediment control measures are to be placed prior to or as the first step in grading. First areas to be cleared are to be those required for perimeter controls.

1.6 All temporary earth berms, diversions and sediment control dams are to be mulched and seeded for temporary vegetative cover immediately after grading. Straw or hay mulch is required. The same applies to all soil stockpiles.

1.7 Re-vegetate and protect exposed soils by October 15. Use appropriate groundcover seed mixes and/or straw mulch for temporary cover. Plant permanent vegetation to include native and drought tolerant plants. Seeding and re-vegetation may require special soil preparation, fertilizing, temporary irrigation and mulching.

1.8 Any disturbed area not covered by Note 1.7 above and not paved, sodded or built upon by October 15, or disturbed after that date, is to be mulched with hay or straw mulch at the rate two tons per acre and over-seeded (immediately). All slopes over 30% will be seeded and covered by an erosion control blanket. The erosion control blanket shall be anchored and placed in a manner which conforms to the grade and does not concentrate runoff to one location or allow for piping of runoff under the blanket.

1.9 At the completion of the construction project and authorization by the project manager, all temporary siltation and erosion controls shall be removed and all disturbed areas shall be stabilized.

1.10 No area shall be left denuded for a period longer than 14 calendar days unless authorized by the project manager, engineer, landscape architect, or restoration ecologist. Bare soil areas will be revegetated and have erosion control measures installed prior to October 15th during the year of construction.

1.11 Both long term and interim material storage and staging areas shall be established to store construction and vegetation materials. The storage areas shall be placed in locations remote from water ways, drainage courses and other sensitive habitats. The storage areas shall be setup to provide secondary containment of hazardous materials stored on the property and control runoff from these areas utilizing temporary berms and/or silt corrals. The areas shall also be fenced.

2.0 EROSION CONTROL MEASURES

2.1 PRE CONSTRUCTION MEETING

An on-site meeting between the contractor and an erosion control specialist or the project engineer shall occur prior to commencement of work to review project and planned erosion control measures. The erosion control specialist or engineer shall be present as needed during erosion control installation and shall respond to calls from contractor as necessary during any winter operations.

2.2 SITE PREPARATION

Exposed soil areas shall be graded and shaped prior to erosion control installation. All rocks, clods, vegetation or other debris shall be removed and slopes raked on the contour to smooth soil surface.

2.3 TEMPORARY SEEDING

The following seed mix shall be hand broadcast and incorporated over all disturbed slopes.
Bromus carinatus, Leymus triticoides, Hordeum brachyantherum, Festuca rubra trumping Deschampsia caespitosa
Consult with manufacturer for recommended application rate.

2.4 EROSION CONTROL BLANKETS

- A. All exposed soil surfaces with slopes over 30% shall be covered with an erosion control blanket, North American Green S150BN or equivalent from another manufacturer. The erosion control blanket shall extend from the top to bottom of slope.
- B. The erosion control blanket shall be anchored at the top of slope, with staples, in a 6"x6" trench that is backfilled with soil and tamped firmly.
- C. Unroll blanket downslope in the direction of water flow. The edges of adjacent parallel rolls must overlap 2-3 inches and stapled every 3 feet. Lay blankets loosely to maintain consistent contact with soil. Do not stretch blanket.
- D. Blankets shall be stapled with minimum 11 gauge staples 6-12 inches in length in order to have sufficient ground penetration to resist pullout. Longer staples may be needed for loose soils. Staples shall be placed along the center and staggered with the staples placed on the edges. Minimum spacing is one staple per 3' o.c.
- E. Erosion control blankets shall be inspected periodically during the rainy season and each year prior to October 15 for erosion, undermining and breakage (see maintenance guidelines below). Any damage shall be repaired immediately.

2.5 MULCHING

- A. All slopes less than 30% shall be covered with 4 to 6 inches of straw mulch after temporary erosion control seeding.
- B. Obtain clean wheat, barley, oat or rice straw in order to prevent the spread of noxious weeds. Avoid moldy, compacted straw because it tends to clump and is not evenly distributed.
- C. The straw shall be evenly distributed by hand or machine to the desired depth and should cover the exposed area to a uniform depth.
- D. Approximately one bale (80 lb) of straw covers 1000 sf adequately.
- E. The soil should be barely visible through the straw mulch.
- F. On steep or high wind sites, straw may be anchored to keep it from blowing away.
- G. Tracking with machinery on sandy soil provides…

2.6 STRAW WATTLES

- A. The entire perimeter of construction site shall be enclosed with a straw roll (wattle). Hand dig a shallow trench across the slope on contour to place roll in. Trench shall be deep enough to accommodate one-third to one-half the thickness of the roll.
- B. Install the rolls parallel to the slope contour. Make sure no gaps exist between the softened straw wattle.
- C. Use a straight bar to drive holes through the wattle. Install 18" stakes every four feet apart through the wattle. Leave approximately 1 to 2 inches of stake exposed above the roll.
- D. Turn end of straw roll up hill to prevent runoff from going around the roll.
- E. Inspect the straw rolls and the slopes after significant storms. Make sure the rolls are in contact with the soil. Repair any rills or gullies promptly. Reseed or replant vegetation if necessary until slope is stabilized.
- F. Runoff must not be allowed to run under or around roll.

2.7 OTHER PROVISIONS

- A. Contractor, erosion control specialist and/or engineer shall monitor all disturbed areas prior to and immediately following any rains, and shall adjust blankets, mulch, straw rolls and other measures to ensure no sediment leaves the site.
- B. If construction occurs between October 15 and April 1st, exposed soil shall be protected from erosion at all times. The perimeter straw rolls shall be maintained intact. In addition, temporary berms will be installed at the edge of the construction zone to prevent sediment from entering adjacent areas. Straw bales shall be stockpiled on site to allow contractor to cover mulch to all exposed slopes if rainfall is predicted within 24 hours.
- C. Upon completion of construction, all temporary seeded slopes and remaining exposed surfaces shall be permanently revegetated per the landscape plan.
- D. The Contractor or Contractor's representative shall monitor erosion control on disturbed areas for a period of one year to ensure measures are successful. Monitoring will take place during the fall dry season and after each significant rainfall event. Contractor will immediately notify erosion control specialist or project engineer of any problems.

3.0 RESTORATION PLAN

3.1 RESTORATION ECOLOGIST

A restoration ecologist or botanist shall be on-site at the beginning of construction to identify species to be removed and native species to be protected.

3.2 RIPARIAN VEGETATION PROTECTION AND EXOTICS REMOVAL

- A. Work areas shall be delineated by temporary fencing to minimize intrusion by construction staging or activities into native plant communities beyond what is necessary to perform the project.
- B. All trees to remain within the disturbance area shall be flagged in advance of any disturbance.
- C. All non native understory vegetation in the construction zone and immediate vicinity of the project site shall be removed. These species include English ivy, German ivy, Himalayan blackberry, vinca, pampas grass and French broom. To minimize disturbance, hand removal shall be used.

3.3 RESTORATION PLAN

- A. All native riparian trees and understory vegetation removed shall be replanted on a minimum 3:1 (three planted for one lost).
- B. Erosion control measures shall be provide (see Sheet EC1.0 Erosion Control Plan) after construction, however the erosion control blanket, wattling and temporary erosion control seeding shall not be relied upon beyond the two to three year lifespan of the blanket.
- C. Native species shall be planted on all areas disturbed by construction, including any temporary access roads and lower bank slopes presently unvegetated due to bank erosion or scour.
- D. Unvegetated spaces between native plants shall be interplanted with riparian cuttings or native container species, as deemed necessary by the restoration ecologist.
- E. The revegetation species shall include plants native to the project site or vicinity.
  1. Tree species shall include: Coast Live Oak and or White Alder.
     Each native tree removed shall be replaced with three of the same species.
  2. Understory species may include: California blackberry, Stinging nettle and may include the following native perennial grass mix:

Bromus carinatus	Coastal Brome
Leymus triticoides	Native Creeping Wild Rye
Hordeum brachyantherum	California Barley
Leymus glaucus	Blue Wild Rye

- F. Optimum installation period for container plants is October 1 thru November 15. Optimum installation period for willow cuttings is December 15 thru February.
- G. All container installed plants shall be irrigated for three years after planting during the spring summer dry period. Irrigation shall occur at least twice each week, but may need to be adjusted for climatic conditions.
- H. A native plant revegetation specialist shall perform inspections during plant installation and quarterly during the first year after installation. Annual inspection is recommended during the second and third year.

3.4 REVEGETATION MAINTENANCE

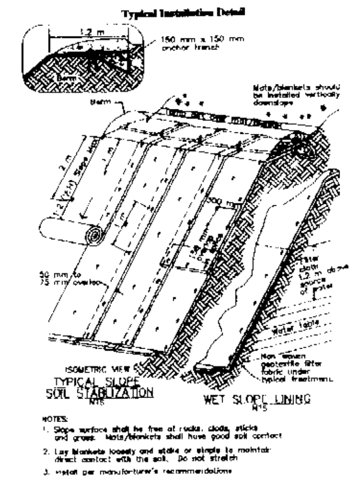
- A. Revegetation maintenance program is recommended for a period of at least three years after completion of plant installation. Specific maintenance tasks include:
  1. Continued routine maintenance of any irrigation system
  2. Remove any trash or debris that may hinder vegetation establishment
  3. Inspect erosion control blanket
  4. Review low bank plantings for damage or removal from creek scour
  5. Review plantings for herbivore damage and add screens as necessary
  6. Remove any invasive non-native vegetation
  7. Maintain complete notes of maintenance activities and dates

References

1. Restoration Plan and Notes prepared by others. Information provided by McClure Construction

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

SS-7



NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations.

Caltrans Storm Water Quality Handbooks
Construction Site Best Management Practices Manual
March 1, 2003

Section 3
Geotextiles, Mats, Plastic Covers and EC Blankets SS-7
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Typical Erosion Control Blanket

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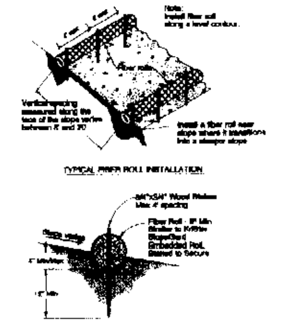


Typical Fiber Roll Silt Barrier

Scale: nts

No. C 58807
Exp. 6/30/11
CIVIL
ERIC THOMAS EASTER

E. T. Easter, Inc.
engineering • surveying • planning
P.O.Box 7028, Santa Cruz, California 95061
(831) 425-7651 Fx. (831) 425-XXXX

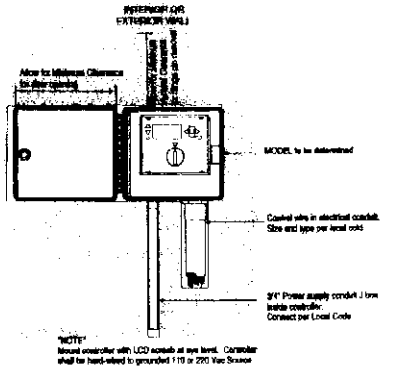
Improvements to APNs. 038-112-05

McClure Construction, Inc.
160 Woods Cove Lane
Santa Cruz, California 95060

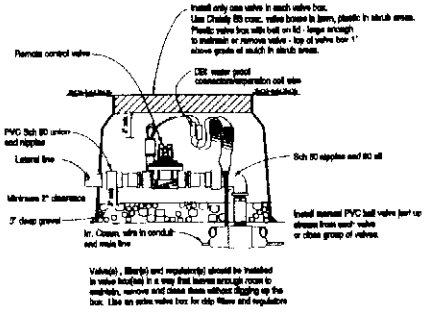
Restoration Plan

SCALE:	DATE: May 2008	DRAWN: EtE & LmE © 2008, E.T. Easter, Inc.
JOB NO: 08021	REVISION: 05.24.10: Release to Owner	

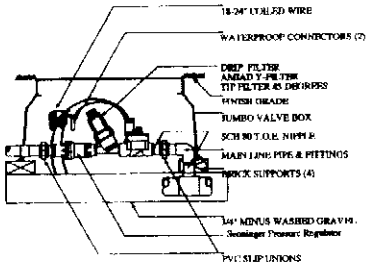
Sheet
L2
of 11 Sheets



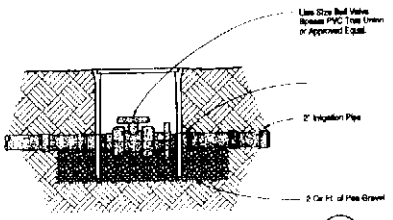
Irrigation Controller — A L3.0



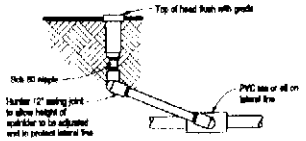
Remote Control Valve — B L3.0



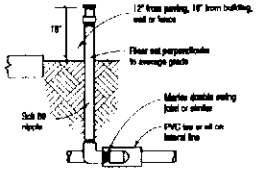
Remote Control Drip Valve — C L3.0



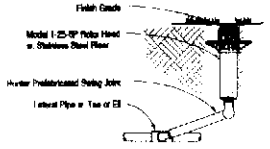
Ball Valve — D L3.0



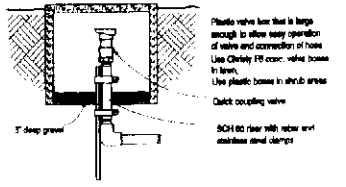
Pop Up Sprinkler — E L3.0



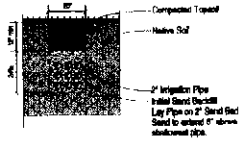
Shrub Head on Riser — F L3.0



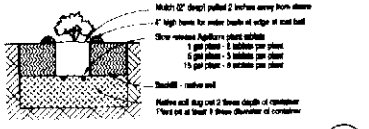
Pop Up Rotor — G L3.0



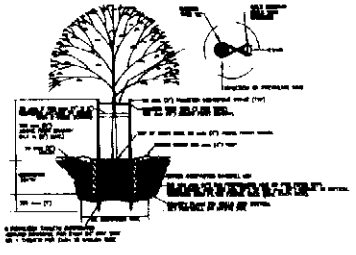
Quick Coupling Valve Below Grade — H L3.0



Trench Sections — I L3.0



Shrub Planting — J L3.0



Tree Planting — K L3.0

REGISTERED PROFESSIONAL ENGINEER
ERIC THOMAS EASTER
No. C 58697
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

E.T. Easter, Inc.
P.O. Box 1625, Santa Cruz, CA 95061
(831) 425-1651 Fx: (831) 425-2201

Improvements to APNs: 026-112-05

McClure Construction, Inc.
164 Wood Drive Lane
Santa Cruz, California 95060

Planting & Irrigation Details

SCALE: as DATE: May 2008 DRAWN: EE/ KT/ MS

JOB NO.: 0802 REVISION: 05.24.10: Relocate to Owner

Sheet L3 of 11 Sheets

E.T. Easter, Inc.
civil engineering • structural design • surveying • planning

Eric T. Easter Civil Engineer, C 58907
P.O. Box 7629 Santa Cruz, California 95061
(831) 425-7651 Fx: (831)425-8205

Combined Geologic and Geotechnical Reports

prepared for

McClure Construction, Inc.

Environmental Planning Response by Kent Elder & Joseph Hanna
Based upon 12.28.10, E.T. Easter letter for Application 08-0394

File No. 08021
February 26, 2010

Table of Contents

E.T. Easter, Inc.
civil engineering • structural design • surveying • planning

Eric T. Easter Civil Engineer, C 58907
P.O. Box 7629 Santa Cruz, California 95061
(831) 425-7651 Fx: (831)425-8205

File No. 08021
February 26, 2010

Samantha Haschert
Santa Cruz County Planning Department

Re: **Addendum 1:** Response to 12.28.10, E.T. Easter Letter **for Application 08-0394**
Concerns expressed in the Environmental Planning Response: (Kent Elder & Joseph Hanna).

Ms. Haschert,
This response is to the letter received January 19, 2010 via email prepared by Kent Edler and Joe Hanna attached herewith as Addendum 1. As we have discussed, the environmental planning aspect of this project is the major issue and should be resolved prior to responding to the other items in your letter. We take no exception to the other items in your letter and will pursue completion as soon as we have reached a mutually satisfactory resolution of the referenced item.

Towards the effort of resolution, I spoke with Mr. Edler regarding the intent of the environmental planning response and understood that three major issues were related to the preparation of the Riparian Exception. They are the slope stability analysis, substantiation of the values used for analysis and possible additional scour analysis if the slope is not isolated from the scour of the creek. This submittal is provided to further clarify those issues.

In reviewing the data provided to date, it appears that the submittals have not been consistent and easily accessible to the reviewer. This submittal compiles all information collected to date and organizes it is relation to the referenced response. The following items are included in this submittal:

A. Comments and clarifications by E.T. Easter, P.E., principal engineer for this project.
B. Geologic Review by Cole McClure, C.E.G.
C. Addendum 1 Environmental Planning Response: (Kent Elder & Joseph Hanna)
D. Addendum 2 Redwood Geotechnical Slope Analysis 1959SCR, dated February 16, 2010.
E. Addendum 3 Site History narrative by Pete Locatelli.
F. Addendum 4 Geophysical report prepared by Mr. William Black, PGp No. 843.
G. Addendum 5 Mr. McClure's Curriculum Vitae.
H. Addendum 6 Redwood Geotechnical Supplemental Report 1959SCR, dated October 30, 2009
I. Addendum 7 Redwood Geotechnical Report 1959SCR, dated July 18, 2008
J. Addendum 8 Waterways Consulting Hydraulic Evaluation, dated September 28, 2009

A. Comments and Clarifications by E.T. Easter:
The following items are based upon the comments in Addendum 1 and additional clarifications thereof:

1. The purpose of my letter dated December 28, 2009 was to provide a working document to assure that the issues for concern were addressed. In the future, it would be of greater value if comments were framed in the context of a design team effort, which is my assumption of the purpose of the environmental review.

2. Refer to the response by Mr. McClure.

3. Refer to the response by Mr. McClure. Based upon all of the data collated, the slope appears to be stable and exceeds the County Code requirements using all methods of analysis.

4. The introduction of surficial failure is based upon conversations with another Geotechnical Engineering colleague of Mr. Rafferty who has experience with this type of project. The slope analysis figure 3 indicates a surficial model of failure resulting in a factor of safety of 2.72. We have also provided a bench at the lowest point of the site that is the last point of our control of the slope. Regarding potential for scour, we assume our hydrologic report is complete and was prepared according to the County requirements. See Addendum 7.

5. Regarding the method of analysis, I spoke with a colleague who I consult with for small (less than 100 acres) landfill management Geotechnical Engineering regarding the appropriate method of determining the proper cohesion for unknown fill. At best, unknown fill requires the application of engineering judgment as opposed to purely quantitative data analysis. In general, the values indicated in the boring logs justify the use of a cohesion intercept equal to 1000psf, however since there was some question we reduced the cohesion intercept to 25% of the measured strength, equal to 250psf for the new models submitted in the supplemental slope analysis Addendum 2. Please refer to the conclusion.

6. It is clear from our conversation that adaptive management was not taken in the context that we envisioned. Our intent was to suggest that adaptive management is a solution to the unknown minor issues such as localized repair of the slope if problems start to develop. Most failures observed over the last thirty years are catastrophic because minor problems are not repaired as they develop. This method is similar to the storm drainage maintenance required by the governing agency to assure that catastrophic failure does not occur. We propose a similar means of protection for the slopes and open areas of this site.

7. We are submitting this report to consolidate all reports prepared for this site to date. Please refer to the conclusion.

8. The nature of our experience is as we stated, however, we accept your opinion. Several additional studies have been prepared. All of the studies conclude that the site has remained stable for the last thirty years and meet the current county guidelines.

In conclusion, this site is difficult to fit into the normal process of approval. Given that all of the easy sites were developed years ago these remaining sites require a combination of methods to assure that the concerns of the owner, engineers, and governing agencies are all considered in the final improvement scheme. As mentioned above, the best improvement scheme requires that all members of the design team balance their respective concerns.

The improvements include construction of a small commercial building and a parking lot.

- Commercial building is to be founded on piers to assure the building provides life safety design performance and does not surcharge the existing or proposed slope.
- Parking area is to be built on an engineered fill to provide a mat foundation thereby distributing the soil pressure over greater area than conventional pavement sections.
- Existing slope is to be cut back to reduce the active pressure and provide additional safety factors for stability.

- Bench at the toe of slope is provided to reduce the potential of slope failure into the adjacent watercourse.
- Revegetation plan will provide a higher quality riparian environment than currently exists and will also provide improved slope protection.

All testing indicates that the site is stable in its current condition and is improved significantly by the proposed improvements. In its current condition, the site is not providing any of the above environmental improvements. The site requires the design team to compile quantitative data that includes significant exploration of subsurface materials using geotechnical and geophysical tests and temper the results with the application of engineering judgment.

Please contact me if you have any questions.

Respectfully,

Eric Easter

Cole R. McClure **Consulting Engineering Geologist**

1091 Porto Marino Drive, San Carlos, CA 94070 Certified Engineering Geologist No. 783
Registered Geologist No. 2687

Ms. Samantha Haschert
Santa Cruz County Planning Department

Re: **Addendum 1:** Response to 12.28.10, E.T. Easter Letter
Concerns expressed in the Environmental Planning Response:
(Kent Elder & Joseph Hanna).

Regarding the concern of slope stability Paragraphs 2 and 3:

2. *All parties agreed at the meeting that there were two components of slope stability concern on this site: surficial and deeper (or rotational).*

3. *We discussed that the information submitted to date by Redwood Geotechnical Engineering addressed only rotational stability for a final slope configuration that is not the one proposed on the plans. Our obvious response is that the Geotechnical Engineer must analyze the project configuration both from a surficial stability and rotational standpoint. As we indicated at the meeting the safety factor for these analysis must meet County Code: 1.5 for static conditions, and 1.2 for analysis considering earthquake shaking. Our understanding is that the surficial analysis must consider adverse moisture conditions as these are typically what cause surficial stability concerns.*

See Addendum 2: attached letter from Joseph Rafferty, dated February 16, 2010, and the analysis provided by Joseph Rafferty/Craig Harwood. The two components, namely surficial and deeper (rotational) are evaluated in Figures S1, S2, and S3. Figures S4 and S5 evaluate the pre-graded conditions of the site:

- Figure S1, Gross Analysis, is Single Stability Analysis deeper (rotational) indicating a factor of safety 4.18.
- Figure S2 is Gross Analysis with a Pseudo-Static factor of 0.2 and indicates a Factor of Safety of 2.51.
- Figure S3 is Surficial Analysis with a 0.2 Pseudo-Static factor and indicates a Safety Factor of 2.72.
- Figure S4, Pre-Graded Gross Analysis, is Single Stability Analysis deeper (rotational) indicating a factor of safety 3.00.
- Figure S5 is Pre-Graded Gross Analysis with a Pseudo-Static factor of 0.2 and indicates a Factor of Safety of 1.89.

The concerns expressed in paragraph 4 of the Elder-Hanna letter and also general concerns of the slope stability of the site are addressed in the following paragraphs:

4. *In the meeting we discussed scour. The County remains concerned about the extent of the scour on the fill at the toe of the slope and the potential of the scour to affect the overall site stability. We are confused by statement 2c in Eric Easter's letter which states, "that the likely failure mode is not rotational but more likely to be surficial" when the stability analysis provided by the project geotechnical engineer shows rotational failures. If the slope is subject to surficial instability we believe that it remains critical to further evaluate the potential for scour to affect the overall stability of the site. We discussed during the meeting that if some method was used to "isolate" the slope from the scour of the creek, such as a stitch pier or a buttress fill, we would not require additional analysis or information from the project hydraulic / hydrology engineer.*

We agree that embankments, such as that at the Rodeo Gulch site, composed of construction debris are very difficult to analyze by conventional methods. Normal drilling and sampling of these embankment materials does not yield representative strength properties. The abundance, size and type of the harder blocks or fragments of the construction

debris has a great impact on the stability of the mass. For example an embankment composed of construction waste, blocks of concrete, steel, gravel, sand, clay, etc. is much more stable than a landfill composed of garbage, trash and other waste.

The historical record based on actual observations by the owner *(see Addendum 3, statement by Pete Locatelli)* at the time the fill was placed, is confirmed by drilling and Standard Penetration Tests (SPT) showing both high blow due to blocks of hard, dense materials and low blow counts due to softer materials. The results of the drilling and Standard Penetration Testing in seven drill holes in this small area, also confirms the historical record. *(See Figure 1 & 2 prepared by E.T. Easter, Inc.)* The results and location of SPT values of less than 10 are shown in red color and SPT values greater than 10 are shown in blue color. Please note the distribution and small number of lower SPT values. The evaluation of this historical slope stability is also confirmed by Figures 4 and 5 of Addendum 2.

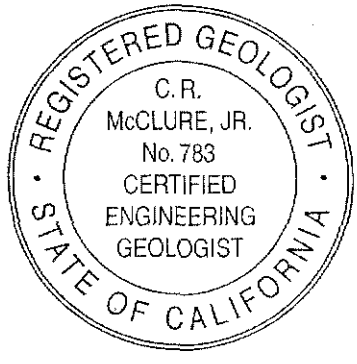
The consolidation due to time (more than 30 years), and the historical performance of the stable slope, the behavior of the embankment during high water flows in the creek, and more importantly during strong earthquake motions confirms the stability of the embankment.

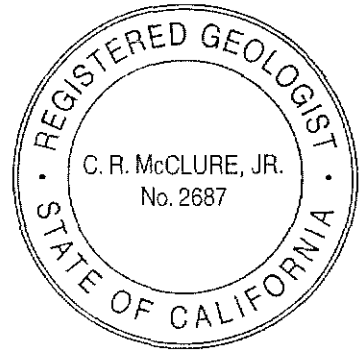
The geophysical study of the site in July, 2009 *(see Addendum 4, Geophysical Survey and illustration thereof in Figures 1 & 2 prepared by E.T. Easter, Inc.)* confirms that the embankment does not consist of a loose fill. The geophysical data indicates that the embankment mass is equivalent to dense soil.

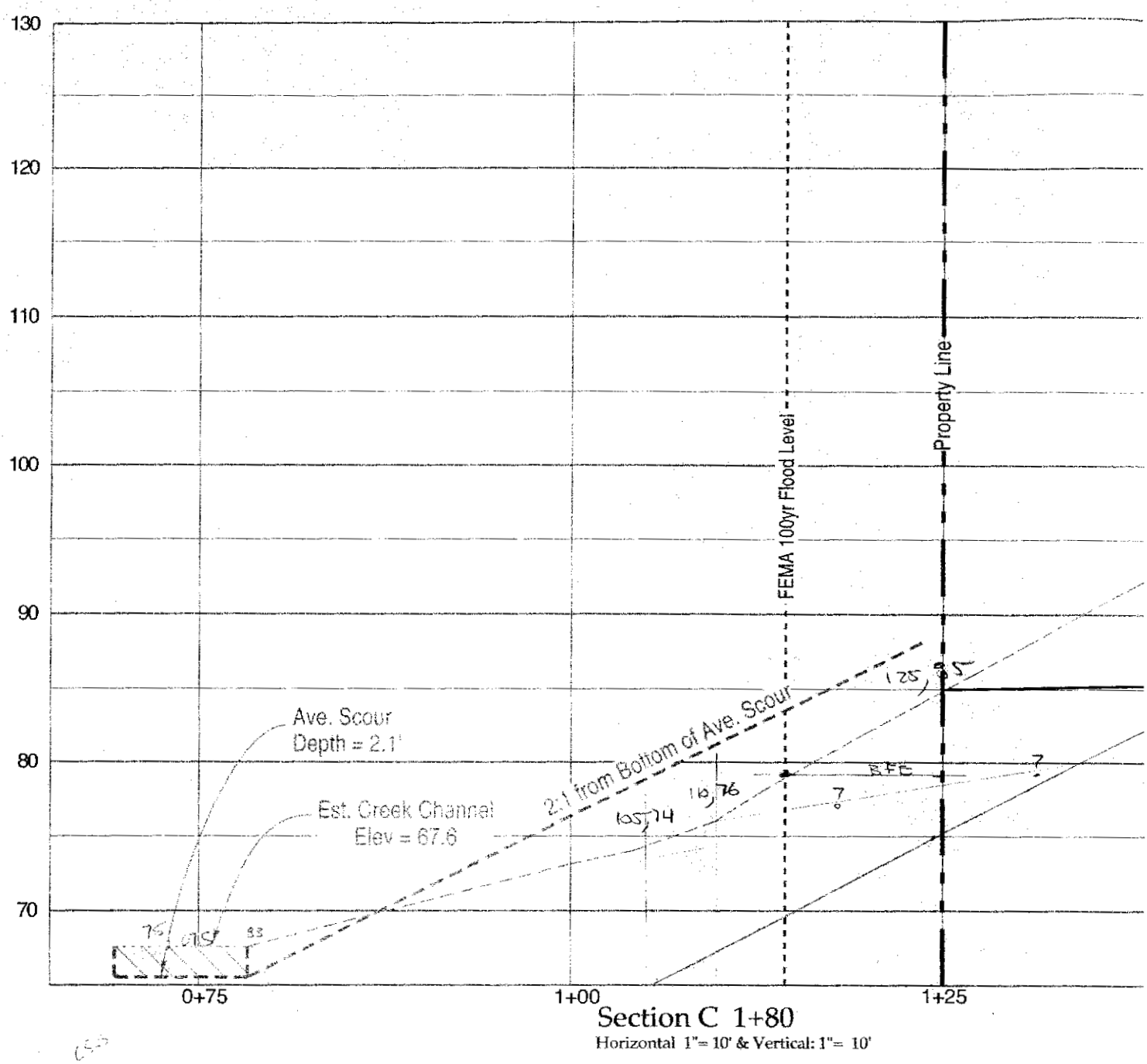
In summary the drilling (SPT data) and the geophysical survey explain why the embankment has performed so well historically. These data establish the site is stable. The proposed design provides a more stable condition by reducing the surcharge, and flattening the slope, and by founding the structures on caissons located into very competent material.

Respectfully,

C.R. McClure, Jr.





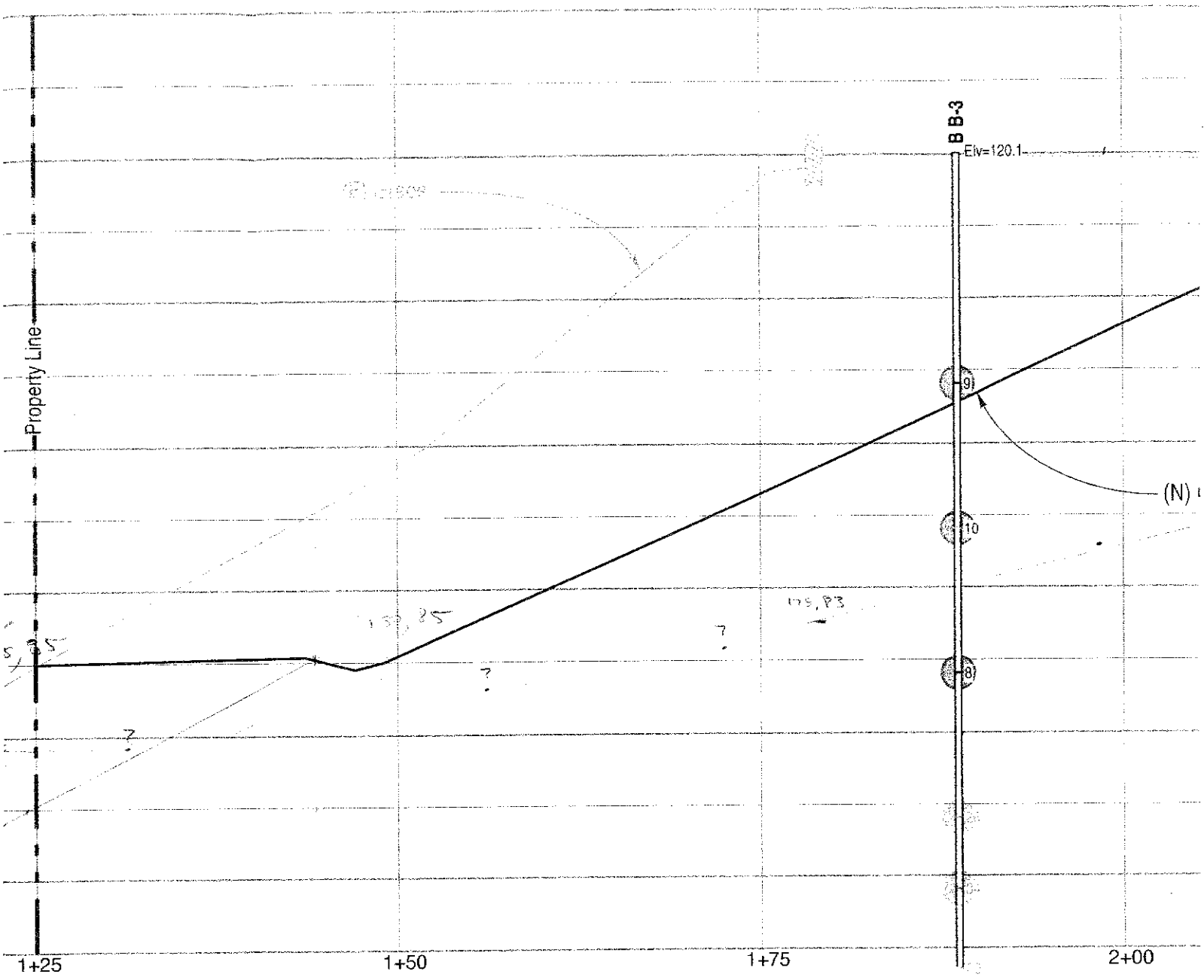


Section C 1+80

Horizontal 1"= 10' & Vertical: 1"= 10'

Notes:

1. This sketch shows the section view of the bore holes and coresponding blow count data for the borings completed on the McClure, Rodeo Gulch project.
2. This sketch shows both the data from Butano Geotechnical Engineering's borings in February 2007, as well as Redwood Geotechnical's borings from July 2008.
3. Blow counts are shown next to each boring at their approximate depth.
4. Borings are projected to a single plane to show the relative depths of materials.



esponding blow count
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epths of materials.

Addendum 1

Response to E.T. Easter Letter Dated December 28, 2009

We have read your letter of December 28, 2009.

Environmental Planning Response: (Kent Edler & Joe Hanna)

1. We did discuss the geotechnical report and hydrologic report, however we did not agree that if the items are addressed as described in the December 28, 2009 letter by E.T. Easter, that the geotechnical report and hydrologic issues would be resolved. Our perspective is that the information requested by us in the December 4, 2009 letter was not addressed in E.T. Easter's most recent letter and that the letter does not properly summarize the meeting with Eric Easter and County staff on December 18, 2009.

2. All parties agreed at the meeting that there were two components of slope stability concern on this site: surficial and deeper (or rotational).

3. We discussed that the information submitted to date by Redwood Geotechnical Engineering addressed only rotational stability for a final slope configuration that is not the one proposed on the plans. Our obvious response is that the Geotechnical Engineer must analyze the project configuration both from a surficial stability and rotational standpoint. As we indicated at the meeting the safety factor for these analysis must meet County Code: 1.5 for static conditions, and 1.2 for analysis considering earthquake shaking. Our understanding is that the surficial analysis must consider adverse moisture conditions as these are typically what cause surficial stability concerns.

4. In the meeting we discussed scour. The County remains concerned about the extent of the scour on the fill at the toe of the slope and the potential of the scour to affect the overall site stability. We are confused by statement 2c in Eric Easter's letter which states, "that the likely failure mode is not rotational but more likely to be surficial" when the stability analysis provided by the project geotechnical engineer shows rotational failures. If the slope is subject to surficial instability we believe that it remains critical to further evaluate the potential for scour to affect the overall stability of the site. We discussed during the meeting that if some method was used to "isolate" the slope from the scour of the creek, such as a stitch pier or a buttress fill, we would not require additional analysis or information from the project hydraulic / hydrology engineer.

5. There was further discussion that the Geotechnical Engineer continues to apply typical strength values to the site material without clear justification. Much of the fill material is debris, trash and junk (as indicated in the boring logs).The application of typical soil strength values based upon penetrometer values to this type of material is not appropriate for use in the stability analysis. It was recommended to consider waste dynamics / landfill stability type of modeling in the analysis.

6. We understand the applicants desire to use adaptive management rather than to completely deal with the stability issues prior to permit approval and this was discussed in the meeting. However, in order to do so, we need to have a better understanding of what could be expected (magnitude, severity, etc.) of potential failures as well as erosion. In addition, we would require agreements from the property owner and any affected property owner. There would also be additional regulatory agreements required as well (Fish and Game permit).

7. In conclusion, in order for this project to move forward, we need the project engineers to address the stability of the slope in a manner that is consistent with the proposed project and utilizes strength values that are appropriate for the type of material encountered in the borings.

8. In the closing of the letter a concern is indicated that that additional conditions are being added for each subsequent review. Environmental Planning is not adding new issues and is trying to obtain an analysis by the consults that address the over site stability of the site. If we have concerns or questions about the material submitted, we request additional information, but this should not be viewed as adding additional comments.

END OF COMMENTS ADDRESSED 2.21.10

REDWOOD GEOTECHNICAL ENGINEERING, INC.

CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

McClure Construction
160 Woods Cove Lane
Santa Cruz, CA 95060

Project No. 1959SCR
February 16, 2010

Subject: Supplemental Slope Stability Analysis

Reference: Proposed New Commercial Building
Rodeo Gulch Drive - APN 03011205
Santa Cruz County, California

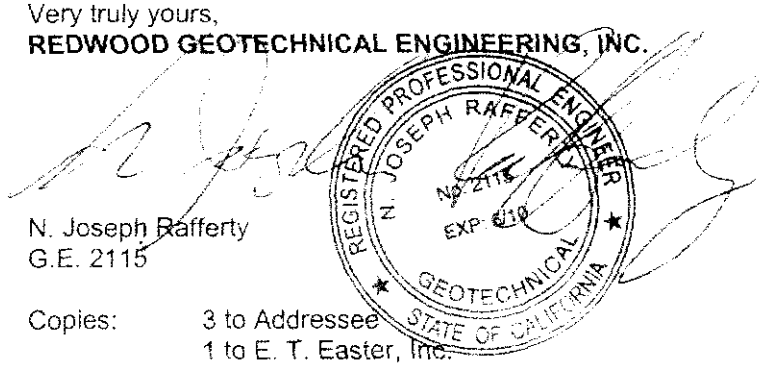
Dear Mr. McClure:

As requested, this letter summarizes a supplemental slope stability analysis for the referenced project. We completed a geotechnical investigation and July 18, 2008 report for this project. Our October 30, 2009 letter included the results of our slope stability analysis for a proposed 3:1 graded slope for this project. An alternative grading plan for a 2:1 graded slope with a horizontal bench was subsequently developed based on discussions with the planning department. The attached slope stability analysis incorporates the proposed 2:1 slope geometry and soil parameters corresponding to our previous slope stability analysis results for the proposed 3:1 slope geometry (attached to our October 30, 2009 letter). As shown in the attached slope stability results, the calculated safety factors for the proposed 2:1 slope with a bench are slightly higher than the calculated safety factors for the earlier proposal for a 3:1 graded slope.

As noted in our October 30, 2009 letter, the flatter 3:1 slope gradients shown on the earlier version the project plans would result in a substantial increase in the stability of the slope above Rodeo Gulch. The current slope stability results also indicate that the proposed 2:1 slope configuration would create an even lower risk of slope failure than the 3:1 slope configuration.

Based on our review and supplemental analysis, the current project plans appear to be in conformance with our geotechnical recommendations. If you have additional questions regarding this letter or our geotechnical report, please call our office.

Very truly yours,
REDWOOD GEOTECHNICAL ENGINEERING, INC.



N. Joseph Rafferty
G.E. 2115

Copies: 3 to Addressee
1 to E. T. Easter, Inc.

Attachments: Slope Stability Calculations for a proposed 2:1 graded slope

History of Rodeo Gulch Site By Pete Locatelli

I purchased the site in 1974 and owned it until 2000? During the widening of Soquel Drive in about 1975 excavated material was dumped on the lower slope of the site. The County of Santa Cruz had a permit to place this material and it was compacted by using a D-9 tractor. During the next five years or so I added construction waste material to the embankment until it reached it's present elevation.

In about 1980 I planted a four inch diameter pine tree on the edge of the fill. The tree is still there but about 36 inches in diameter and about 60 feet tall. It shows no sign of slope movement.

During construction of the structures on adjacent parcels, my property was used as a laydown area and storage area. This included large quantities of steel beams for the retaining wall, various heavy construction materials and equipment for almost a year.

Since that time the site has been used to store trucks and other heavy equipment for prolonged periods of time with no signs of settlement, although the surcharge to site was significant.

In 1982 . when much of the County was flooded my parcel was subjected to high water flows in the lower slope (creek) area.

In 1989, during the Loma Preita Earthquake the slope remained stable and showed no signs of slope movement. Although I was told accelerations greater than 1.5 g were recorded at the Capitola City Offices, which is further from the epicenter than my parcel.

During the last 30 years no slope failures or settlement observed.

_____Signed by Pete Locatelli 2/12/10

GEOPHYSICAL SURVEY

A MASW geophysical survey was performed the Rodeo Gulch Site during July, 2009 by Norcal Geophysical Consultants of Petaluma, CA. MR. William E. Black, Principal Geophysicist, with 25 years professional experience, PGp No. 843, directed the survey.
The MASW(Multi-Channel Analysis of Surface Waves) consisted of collecting both compressional (P) and shear (S) waves along two lines across the Rodeo Gulch Site. See Figure 1.

The data was collected using a Geometrics Geode, 24 channel seismograph, an I/0 Rotalong Roll-Box, two 24-take out CMP cables, and 48 8-Hz geophones. The geophones are distributed at 3 or 4 foot intervals the seismic lines. A shot point is moved along the lines at 6 to 8 foot intervals. Seismic energy is produced at each shot point using a 16-pound weight striking a metal plate placed on the ground surface.

The data is then interpreted using the SURFSEIS program, This program analyzes the data from each shot point along the seismic lines to form a 2-D cross-section representing the variation in P-wave and S-wave velocities with depth and distance along the seismic lines.

The results of the survey are shown on Table 1. As may be noted in the Table the Vp velocities are greater that 1500 feet/second and the Vs velocities are greater than 500 feet/second and are considered competent soil.
Table 2 relates both Vp and Vs velocities to various foundation conditions. The measured velocities at the Rodeo Gulch Site indicate the embankment is compossed of competent soil and are consistent with the history of the behavior of the Site during the last 30 years, including during significant earthquakes.

McClure Construction
160 Woods Cove Lane
Santa Cruz, CA 95060

Project No. 1959SCR
October 30, 2009

Subject: Project Plan Review & Supplemental Investigation

Reference: Proposed New Commercial Building
Rodeo Gulch Drive - APN 03011205
Santa Cruz County, California

Dear Mr. McClure:

As requested, this letter summarizes our project plan review and supplemental investigation for the referenced project. We completed a geotechnical investigation and July 18, 2008 report for this project. The project site is a flat graded fill pad. Subsurface borings to date have encountered unclassified fills up to about 35 feet deep along the western margin of the proposed new development. The thickness of the unclassified fill decreases in an easterly direction toward Rodeo Gulch Road. As outlined in our 2008 geotechnical report, primary geotechnical considerations for this project included embedding the structural foundations for the proposed new building into firm native bedrock below the fill materials and providing positive surface drainage. Within the parking areas adjacent to the new building, we recommended subexcavating at least four feet below the finish subgrade elevation and then replacing the excavated material in compacted lifts as engineered fill.

Project plans were completed by E. T. Easter, Inc., 9 sheets dated 10-15-09. As shown on these plans, the new commercial building would be supported on a deep foundation embedded into the native bedrock. The adjacent parking areas would be supported on a four-foot thick mat of compacted engineered fill. The larger parking area and vehicle entry would be situated south of the new commercial building. Placing the entry north of the new commercial building does not appear feasible due to the narrower alignment of northern portion of the site. Proposed grading would include removing about 6000 cubic yards of unclassified fill and regrading the existing fill slopes to a flatter 2 to1 slope gradient (horizontal to vertical), primarily in the southwestern portion of the site. A new bench would be built on the graded slope to collect slope runoff obave the bench and return it in a controlled fashion into the existing natural drainage course. Removing all of the unclassified fill below this site would require extensive grading to extend beneath the adjacent developed properties. Removal of all of the fill is therefore not considered an economically viable option. Our stability analysis as summarized below indicates that the proposed grading would improve the stability of the fill slope and would mitigate the stability of this slope to an ordinary level, consistent with other commercial developments in the site vicinity. Our preliminary review found these plans to be in conformance with our geotechnical recommendations. After submittal of the preliminary project plans, additional investigation was requested to address specific considerations including the following:

- A hydraulic evaluation of the existing slope near the adjacent riparian corridor for Rodeo Gulch.

- A quantitative slope stability analysis of the proposed graded slope.

- A settlement evaluation to determine the extent that future settlement would affect the proposed improvements.

A hydraulic evaluation for this project is summarized in the recently completed by Waterways

Consulting, Inc.; completed September 22, 2009. Hydraulic considerations included the potential for erosion along the base of the fill slope and the potential for future settlement within the existing fill embankment. Waterways Consulting, Inc. completed the supplemental evaluation of the erosion potential along the toe of the fill slope and within the riparian corridor. Based on the hydraulic evaluation report, there appears to be a low potential for erosion or scour along the base of the existing fill slope.

We completed a stability analysis for the existing fill slope and for the proposed slope with a flatter slope gradient and an intermediate bench. The computer program PCSTABL was used to complete the slope stability analysis. The slope geometry was based on cross sections through the existing slope and through a the proposed slope as flattened by the proposed grading. The subsurface profile and strength parameters used for the analysis incorporated our field observations and laboratory testing. Our profile incorporated a two-layer system composed of unclassified fill and the firm native materials at depth. Safety factors above 1.5 are commonly considered to indicate a stable static slope configuration. Where seismic loads are introduced into the analysis, a safety factor above 1.15 has been considered to indicate a stable slope configuration for a sustained (pseudo-static) horizontal acceleration of 0.15g. Saturated soil conditions were modeled by assuming a pore pressure ratio of 0.2. Our seismic analysis included calculated stability factors for static conditions, a pseudo-static horizontal acceleration (a_h) of 0.20g, and for a pseudo-static a_h yielding a safety factor of 1.15. The attached results of our slope stability analysis indicate that the existing slope has a safety factor of 1.5 for a horizontal pseudo-static load of 0.2 g. The calculated stability is consistent with the satisfactory performance of this slope during the October 17, 1989 Loma Prieta earthquake. Our analysis of a flatter graded slope as shown on the project plans yields a calculated safety factor of 1.95 for the same seismic loading condition. As shown on the attached slope stability calculations, the analysis indicates that the flatter slope gradient shown on the project plans would result in a substantial increase in the stability of the slope above Rodeo Gulch.

We also completed a supplemental evaluation of the settlement potential within the existing fill embankment. The scope of our work included an additional 50-foot deep boring, three consolidation tests on recovered samples, additional moisture content & density tests, an Atterberg Limit determination, an evaluation of the test results, and this supplemental report. The supplemental boring encountered a similar subsurface profile to the previous borings. The boring location is shown on the attached Figure 2a, Site Plan Schematic. Logs of the four exploratory borings to date are also attached to this letter. Older fill was encountered to a depth of about 35 feet. The fill was predominantly a mixture of sand and clay. The measured Atterberg Limits indicate that the clayey fill soil at this site has a low expansion potential. At depth, the borings encountered dense sandstone. Laboratory testing included three consolidation tests on recovered samples of the clayey fill. The laboratory test results are also attached to this report. The three consolidation tests yielded similar results. The primary consolidation appears to be essentially complete within the fill materials. The completion of the primary consolidation may be due to the

age of the fill (over thirty years), application of some level of compaction at the time the fill was placed, or a combination of these two or other factors. The test results indicate that the consolidation curves are essentially linear within the load range extending beyond the existing confining pressures. Due to the unclassified nature of these fills however, we continue to recommend that the building foundations extend into the native bedrock. The proposed new paved parking areas would be supported on at least four feet of engineered fill as recommended in our report. We anticipate that this 4-foot thick mat of engineered fill would distribute any residual settlement below the new pavement sections to negligible levels. The storm drainage systems are designed to slope in a westerly direction, toward the thicker portions of the fill. In the event that the remaining fill sustains minor additional settlement such as secondary consolidation; this differential settlement would not create an adverse drainage condition.

Based on our review and supplemental analysis, the current project plans appear to be in conformance with our geotechnical recommendations. If you have additional questions regarding this report, please call our office.

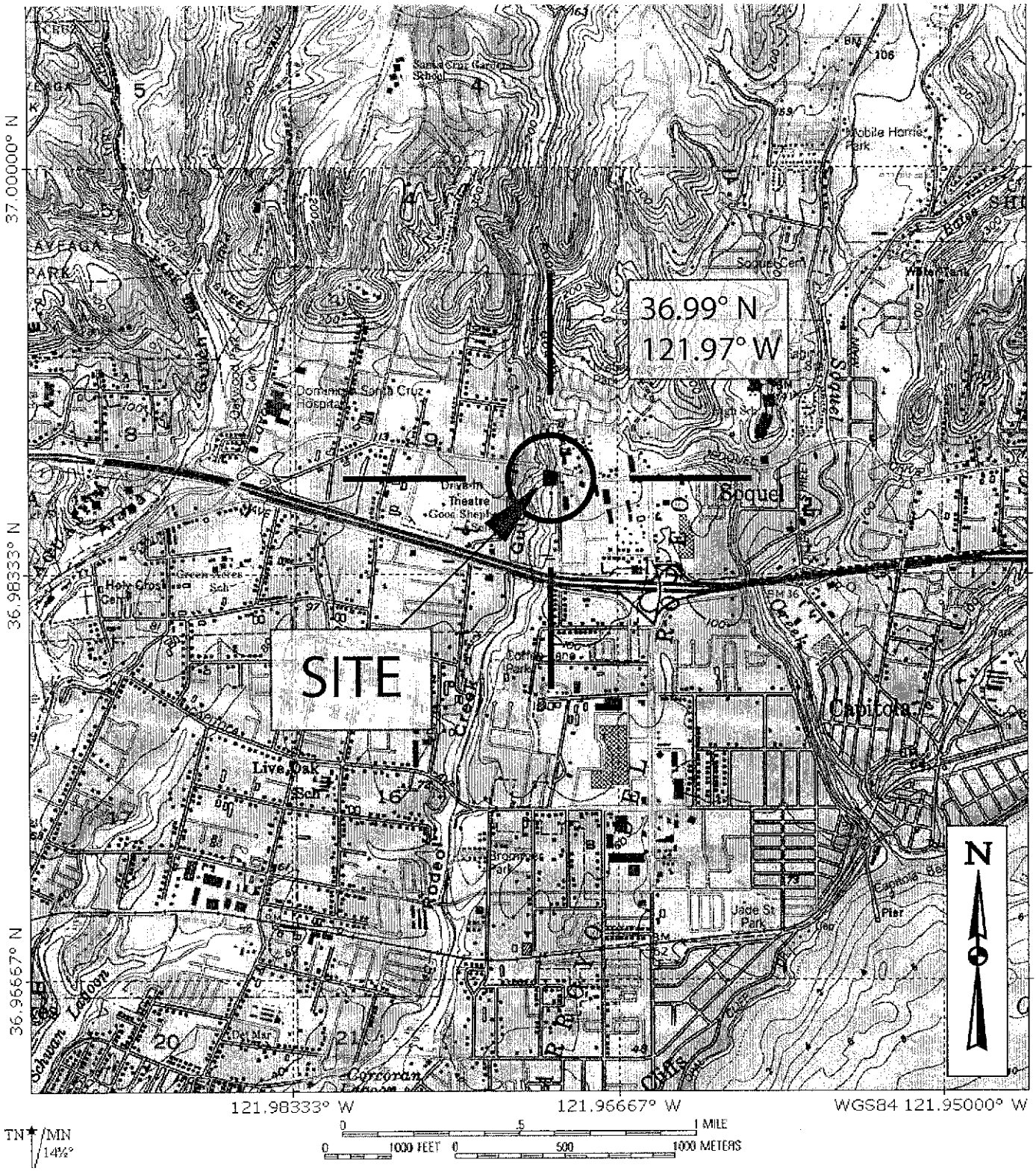
Very truly yours,
REDWOOD GEOTECHNICAL ENGINEERING, INC.

N. Joseph Rafferty
G.E. 2115

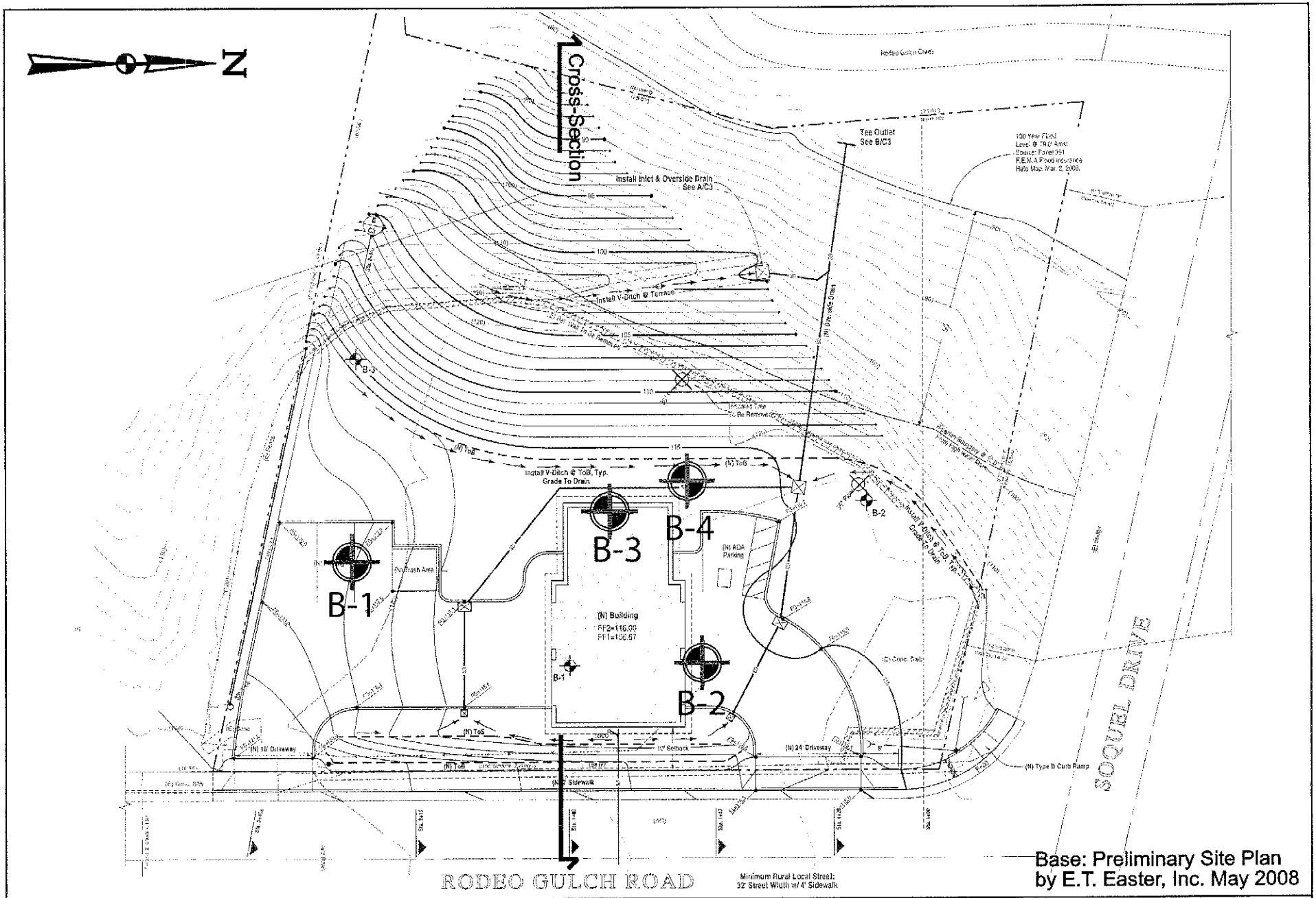
Copies: 4 to Addressee
2 to E. T. Easter, Inc.

Attachments:

Site Vicinity Map
Site Plan Schematic
Boring Logs
Slope Stability Calculations
Consolidation Test Results



REDWOOD GEOTECHNICAL ENGINEERING, INC. CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS	SITE VICINITY MAP Rodeo Gulch Drive Santa Cruz County, California
PROJECT NUMBER: 1959SCR	BASE MAP: USGS Soquel Quadrangle
October 2009	Approximate Scale: As Shown — Figure 1a

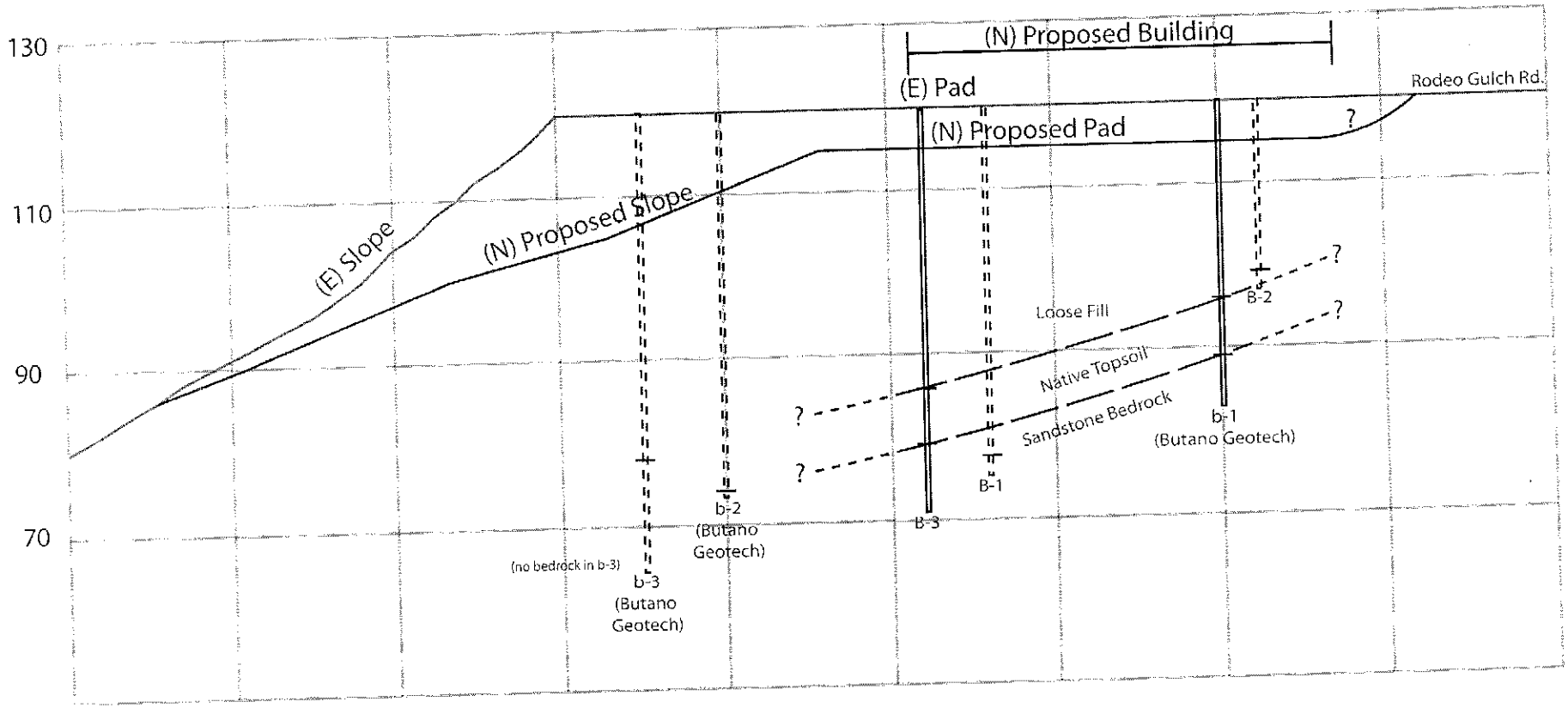


Base: Preliminary Site Plan
by E.T. Easter, Inc. May 2008

REDWOOD GEOTECHNICAL ENGINEERING, INC.
CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

SITE PLAN SCHEMATIC
Rodeo Gulch Drive
Santa Cruz County, California

October 2009
Project Number: 1959SCR
Approximate Scale: 1 inch = 30 feet
Figure 2a



Base: Preliminary Site Plan by E.T. Easter, Inc. May 2008

REDWOOD GEOTECHNICAL ENGINEERING, INC.
CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

CROSS SECTION SCHEMATIC
Rodeo Gulch Road
Santa Cruz County, California

July 2008
Project Number: 1959SCR
Approximate Scale: 1"=20'
Figure 3

Geotechnical Investigation
for
Proposed New Commercial Building
South Rodeo Gulch Road
APN 03011205
Soquel, California

for

Mr. David McClure

Santa Cruz, California

By

REDWOOD GEOTECHNICAL ENGINEERING, INC.

Geotechnical Engineering, Forensics, & Engineering Geology

Project No. 1959SCR

July 2008

Mr. Dave McClure
160 Woods Cove Lane
Santa Cruz, CA 95060

Project No. 1959SCR
July 18, 2008

Subject: Geotechnical Investigation

Reference: Proposed New Commercial Building
South Rodeo Gulch Road
APN 03011205
Soquel, California

Dear Mr. McClure:

As requested, we completed a geotechnical investigation for a proposed new commercial building at the referenced site. Exploratory borings indicate that the site is underlain by older fill, about 24 to 34 feet thick across the proposed building envelope. We understand that most of this fill was placed on the site over 30 years ago. At depth, we encountered a layer of firm native soil and then sandstone bedrock in each of the exploratory borings. The fill, native soil, and bedrock materials appear to have low expansion potentials.

Primary geotechnical considerations for this project will include embedding structural foundations into firm native bedrock and providing positive surface drainage. A deep, drilled pier foundation appears feasible to support the proposed new commercial building. Alternative foundation systems incorporating helix anchor foundations and/or tiebacks may also be feasible to extend foundation support into the native sandstone bedrock. Our report includes recommendations for a drilled pier and grade beam foundation. Adjacent pavements and slabs for parking areas and an access driveway should be supported on at least four feet of compacted engineered fill. Anticipated site work would include removing some of the existing fill to flatten the steeper fill slope above Rodeo Gulch, subexcavating at least four feet below the subgrade elevation of new pavements and exterior concrete slabs-on-grade, and providing positive surface drainage gradients. Our report presents our geotechnical recommendations for design and construction of the project, as well as the findings of our investigation upon which they are based. We request the opportunity to review final project plans prior to construction and to observe geotechnical aspects of the project during construction. If you have additional questions regarding this report, please call our office.

Very truly yours,
REDWOOD GEOTECHNICAL ENGINEERING, INC.

N. Joseph Rafferty
G.E. 2115

Copies: 3 to Addressee
3 to Mr. Eric Easter

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

Introduction

This report presents the results of our geotechnical investigation for a proposed new commercial building at the southwest intersection of South Rodeo Gulch Road and Soquel Drive in Santa Cruz County, California, (as shown on our Site Vicinity Map, Figure 1). The proposed new building would be designed for a commercial oil change facility incorporating a new partial basement below the main level, adjacent parking areas, and site drainage improvements to collect roof and surface runoff. We were provided with a preliminary site plan prepared by E. T. Easter, Inc., the project engineer. Our Site Plan Schematic (Figure 2) is based on a reduced copy of the preliminary site plan.

Purpose and Scope

The purpose of our investigation was to evaluate the surface and subsurface conditions in the vicinity of the proposed improvements, and to develop geotechnical recommendations for design and construction of the project. The specific scope of our work included the following:

1. A review of available data in our files pertinent to the site and vicinity. This included published geologic maps and other work by our firm in the site vicinity.

2. Three power driven exploratory borings about 22½ to 49 feet deep.

3. Laboratory testing of selected samples.

4. Evaluation of the field and laboratory data to develop geotechnical recommendations for site grading, building foundations, retaining walls, concrete slabs-on-grade, and site drainage.

5. Presentation of the results of our investigation in this written report.

Site Location and Project Description

The property is located southeast of the intersection at South Rodeo Gulch Road and Soquel Drive. The site is bounded to the west by the channel for Rodeo Gulch, to the north by the Soquel Drive bridge that spans Rodeo Gulch, to the east by South Rodeo Gulch Road, and to the south by a developed commercial property. The majority of the site is an essentially level graded fill embankment. We understand that most of the embankment fill was placed on this site over thirty years ago. Along the western margin of the graded pad, a steep fill slope descends about 40 feet down to the channel for Rodeo Gulch. Along the northern and southern margins of the graded pad, the fill slope descends to the west-facing creek bank. The essentially level margins of the pad are bounded with a low masonry wall except along the east side where it is fenced at South Rode Gulch Road. The graded pad is currently used as a staging area for construction equipment and supplies. No buildings or permanent structures were observed or reported on this site. Most of the fill embankment slopes are vegetated with grass, brush, and trees. We did not observe bare slopes, bowl-shaped depressions, or other indications of recent slope failure along the embankment slopes or the adjacent creek banks for rodeo Gulch. Along the east side of South Rodeo Gulch Road is a graded cut slope. The dense sandy soil exposed in the cut bank appears to be firm sandy native soil or weathered sandstone bedrock.

A proposed new commercial building on this site would be an oil change facility incorporating a partial basement below the main level of the building. We anticipate that the basement floor would be about 10 to 15 feet below the current elevation of South Rodeo Gulch Road and about ten feet below the finish pad elevation. The new oil-change facility would incorporate a paved access road to South Rodeo Gulch Road. The access road alignment would pass through the drive-through facility. Additional paved parking areas would be built along the west side of the access road. Anticipated site work would include flattening the existing embankment slope, lowering the pad elevation, subexcavating at least four feet of fill below new pavement and slab subgrades, placing at

least four feet of compacted engineered fill below all new pavements, installing new underground utilities, and providing positive drainage gradients with finish grading and landscaping.

Field Exploration and Laboratory Testing

We completed a field reconnaissance and logged three laboratory borings about 22½ to 49 feet deep on June 18, 2008. The exploratory borings were drilled with power-driven, tractor-mounted, drilling equipment. The approximate locations of the borings are shown on our Site Plan Schematic (Figure 2). The subsurface conditions were logged in accordance with the Unified Soil Classification System (ASTM D2487). The boring logs are presented as Figures 4 through 6. The logs denote the subsurface conditions encountered at the locations and dates indicated. This does not warrant that they are representative of subsurface conditions at other locations or times. Three additional test borings were also drilled on this site during an earlier, preliminary site investigation on February 23, 2007. Boring logs from these borings were also provided by the owner.

Drive samples were taken by driving split-spoon tube samplers with a 140 pound hammer dropping 30 inches per blow. The drive samplers utilized a standard 2" O.D. Terzaghi sampler (T), 2.5" O.D. modified liner sampler (SL), or 3.0" O.D. modified liner sampler (LL). The blow counts recorded on the boring logs indicate the number of hammer blows required to drive the final 12 inches or the depth indicated on the logs. The strength characteristics of the underlying earth materials were estimated from standard penetration tests of in situ materials or from penetrometer measurements of recovered soil samples.

Samples were collected at selected depths for testing. Selected samples were tested for natural moisture content and density. The laboratory tests provide approximate indicators of soil compressibility, strength, and potential expansion characteristics. The results of the

field and laboratory testing appear on the logs at the depths where sampling or testing were completed.

Subsurface Conditions

As discussed below, each of the exploratory borings encountered unclassified fills, a layer of native residual soil, and then sandstone bedrock at depth. The attached Cross Section Schematic, Figure 3, depicts the approximate subsurface conditions encountered across the central portion of the site. As shown on the cross section, the depth to the native soil and the native bedrock was found to increase from east to west across the site. Our field observations indicate that the unclassified fills and residual native soil have some lean clay with low expansion potentials. Published geologic maps indicate that the site vicinity is underlain by geologically older alluvial terrace deposits and weathered bedrock of the Franciscan formation.

An older fill embankment on this site appears to be about 24 to 34 feet thick across the central portion of the proposed building envelope. Along the outer pad margins, previous borings by others encountered up to 40 feet of fill. Recovered samples of fill were composed primarily of sand, clay, and silt. The recovered samples and measured blow counts indicate that the fill varies widely in composition and ranges in consistency from loose to medium dense. The borings also encountered significant amounts of concrete, metal, wood, and other debris. The first two borings, B-1 and B-2, did not encounter refusal on obstructions within either the fill or the native materials. At Boring B-3, along the western margin of the proposed building envelope, we encountered an obstruction at a depth of about 8 feet. The drill rig was moved about five feet to the east to extend this boring beyond the obstruction to a final depth of 49 feet.

A layer of native residual soil was encountered in each boring between the fill materials and

the native sandstone bedrock. The residual soil was composed primarily of medium dense clayey sand and firm sandy clay with abundant rounded gravels. Natural flood plain deposits and alluvial terrace deposits are also mapped in the site vicinity. The variable grain sizes and firm consistency of the native soil is consistent with the flood plain deposits and terrace deposits commonly found in the site vicinity.

At depth, each boring encountered native sandstone bedrock. Below the proposed building envelope, the sandstone bedrock was about 31 to 41 feet below the existing pad. Below the transition from native soil to bedrock, about 5 feet of the sandstone bedrock had weathered to the consistency of dense sand. Below this weathered bedrock zone, the sandstone was very dense in consistency. The native sandstone bedrock appears to be consistent with Purisima formation sandstone mapped in the site vicinity.

Static ground water was found at a depth of about 42 feet in Boring 3 at the time of our investigation. The moisture levels encountered locally during drilling in the residual native soil profile may indicate that seepage accumulates above the top of the native bedrock profile; in this native residual soil layer. We note that shallow localized seepage within the native soil and bedrock materials is common in the site vicinity, particularly during or after heavy rain storms. Ground water levels may also fluctuate due to variations in rainfall, stratification, construction activity or other factors not evident during our investigation.

Seismicity

A general discussion of seismicity is presented below. A detailed discussion of faulting, seismicity, and geologic hazards is beyond the scope of this report. The site is located within the seismically active San Francisco Bay Region. Large fault systems in the region have generated moderate to severe earthquakes on several occasions during the recorded history of the area. Recent studies have concluded that there is a high probability (on the

order of 62%) that one or more large earthquakes will cause strong to severe ground shaking in the San Francisco Bay Region during the next 30 years. We found no indication that the mapped fault traces listed below cross this site. Active faults mapped near the site are listed in the following table.

Fault	Approx. distance to building site kilometers (miles)	Direction from site to fault
San Andreas (Santa Cruz)	15 (9½)	northeast
Zayante	9 (5½)	northeast

As shown on the attached Site Vicinity Map, Figure 1, the property is situated at a latitude and longitude of **36.99°N** and **-121.97°W** respectively. Based on Table 1613.A.5.2 of the 2007 CBC, the site has been characterized as Site Class **D**, a stiff soil profile.

The primary seismic hazard at this site appears to be from strong ground shaking. The potential for surface fault rupture appears low. The mapped 100-year flood level in the creek is below the bedrock elevation along the outer building perimeter. The potential for seismically induced ground failure from liquefaction, lateral spreading, landsliding, or other seismic ground failure also appears low at the proposed building site.

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

Based on the results of our investigation, the site appears compatible with the proposed project, provided the following recommendations are incorporated into the design and construction of the site improvements. The exploratory borings encountered unclassified fills about 24 to 34 feet thick along the eastern and western margins of the proposed building envelope, respectively. At depth, the borings encountered firm native soil and dense sandstone bedrock. The fill, native soil, and bedrock materials encountered in our borings appear to have low expansion potentials. Primary geotechnical aspects of this project will include site grading, foundation construction, and site drainage. These geotechnical aspects of the project must be observed and tested by the soil engineer. We also request an opportunity to review the final project plans prior to permit submittal or construction.

Building foundations should extend below the existing fill into the native sandstone bedrock. New drilled pier foundations are recommended to support the proposed commercial building. Vertical foundation support would be derived from end-bearing piers embedded into the firm native bedrock below the unclassified fill and residual soil materials. Lateral load capacity may be developed from foundation embedment within the firm native soil and the sandstone bedrock at depth. Anticipated pier depths are estimated to range from about 25 to 50 feet to extend the foundations into firm native sandstone bedrock. Pier drilling during or following the winter rainy season may require casing or other specialized construction procedures due to seasonal groundwater. Pier drilling may also locally encounter concrete debris, hard cobbles, or other local obstructions within the unclassified fill materials. The foundation design should incorporate sufficient stiffness to allow the grade beams to span across a localized obstruction at any individual pier location. The foundation contractor should be provided with a copy of this soil report. Pilot drilling is recommended at the time of construction to evaluate the current site conditions prior to drilling the remainder of the foundation pier holes. Alternative foundation systems such as helix anchors may also be feasible at this site.

Anticipated site work would include removing a substantial amount of the existing fill from the steeper, outer fill slope. A new partial basement excavation is also proposed for the new commercial building. We anticipate that this excavation would generate a substantial net export of material from the site. We recommend that the new pavement and slab sections be supported on at least four feet of compacted engineered fill. These areas should be subexcavated at least four feet. Clean excavated soil from this site may be stockpiled for use in engineered fill lifts. Contaminated materials excavated from this site should be wasted off site. We recommend a pre-construction meeting with the grading contractor to evaluate the proposed grading schedule and the current site conditions at the time of construction.

The site drainage will be critical both during construction and after the project is completed. Finish grading must provide positive surface drainage gradients. The final grading and landscaping should not obstruct the site drainage or allow moisture to accumulate adjacent to foundations, slabs, pavements, or other improvements. New exterior driveway slabs, walkways, and conforming pavement sections must also be positively sloped for drainage.

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

Site Grading

1. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-02. The soil engineer should be notified **at least four (4) working days** prior to any site clearing or grading so that 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 soil engineer will perform required testing and observation

during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Areas to be graded should be cleared of all obstructions; including principal roots; boulders and cobbles over 6 inches in diameter, concrete rubble, organic materials, or other debris or unsuitable material. Depressions or voids created during site clearing should be backfilled with compacted lifts of engineered fill. Where site clearing or grading disturbs the subgrade or the foundation zone, the disturbed materials should be subexcavated and then replaced in lifts in compacted lifts as engineered fill. Cleared areas should be stripped of organic-laden topsoil. Stripping depth is typically about 2 to 4 inches. Actual depth of stripping should be determined in the field by the soil engineer. Strippings should be wasted off-site or stockpiled for use in landscaped areas if desired.

3. We recommend subexcavating at least **four feet** of the existing fill below all new slab and pavement areas. Subexcavation should extend at least 5 horizontal feet beyond the limits of new slabs or paving. Engineered fills supporting new pavement sections should be placed in compacted lifts. Clean subexcavated soil may be used for engineered fill. Fill that is contaminated with organic materials, debris, or other unsuitable materials should be cleared from the site. Areas to receive engineered fill should be scarified to a depth of 6 inches, moisture conditioned, and compacted. These areas may then be brought to design grade with lifts of compacted engineered fill. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, moisture conditioned, and compacted to at least 90 percent relative compaction. The moisture content should be about 2 to 6 percent above the optimum moisture content. Portions of the site may need to be moisture conditioned to achieve a moisture content suitable for effective compaction. The upper 6 inches of pavement subgrades should be compacted to at least 95 percent relative compaction. The aggregate base below new pavements should likewise be compacted to at least 95 percent relative compaction.

4. If grading is performed during or shortly after the rainy season, the grading contractor may encounter compaction difficulty, due to excessive moisture in the subgrade soil. If compaction cannot be achieved by adjusting the soil moisture content, it may be necessary to over excavate the subgrade soil and replace it with select import angular crushed rock to stabilize the subgrade. The depth of over excavation is typically about 12 to 24 inches under these adverse conditions. Specialized grading procedures will require observation by the soil engineer or his representative.

5. Proposed fill materials should be evaluated by the soil engineer prior to placement. A significant amount of the existing fill at this site should be suitable for use as engineered fill. Where subexcavation encounters organic materials, boulders, cobbles over 6 inches in diameter, or other debris, these materials should be removed from the subexcavated soil prior to use in compacted engineered fill. Import materials used for engineered fill should be essentially non-expansive and free of organic material. Fill materials should contain no rocks or clods greater than 6 inches in diameter. We estimate shrinkage factors of at least 25 percent for the on-site materials when used in engineered fills.

6. Following grading, all disturbed areas should be planted as soon as possible with erosion-resistant vegetation. After the earthwork operations have been completed and the soil 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 soil engineer.

Drilled Piers & Grade Beam Foundations

7. Drilled pier and grade beam foundations are recommended to extend foundation support for the commercial building into firm native bedrock at depth. End-bearing drilled piers should be **at least 18 inches in diameter, and be embedded at least 4 feet into**

dense native bedrock materials. Anticipated pier depths would be on the order of 25 to 50 feet. The piers should be tied to continuous grade beams below all shear walls and bearing walls. Piers should be spaced at least 3 diameters from center to center. Along the perimeter of the partial basement, the piers should be at least 4 feet away from the basement wall to avoid the backdrain section for the new partial basement.

8. The end-bearing drilled pier foundation excavations must be kept moist and be thoroughly cleaned of all slough or loose materials prior to pouring concrete. The foundation excavations must be observed by the soil engineer or his representative during drilling and prior to placing steel or concrete. If unusual or unforeseen soil conditions are found during construction, additional recommendations may be required. The pier drilling should be scheduled to avoid the winter rainy season. Foundation drilling during winter and spring rains may require casing or other specialized construction procedures to mitigate seasonal groundwater intrusion.

9. Piers constructed in accordance with the above may be designed for an allowable end-bearing capacity of **4000 psf**. An active equivalent fluid pressure of **40 pcf** should be applied to the full fill depth along 2 pier diameters. The active pressure should be resisted by a passive pressure developed by pier embedment within the native soil and underlying bedrock. For passive lateral resistance, an equivalent fluid pressure of **500 pcf** may be assumed to act against 2 pier diameters within the native soil and the native bedrock materials. Based on the exploratory borings, the depth to dense bedrock ranged from 31 to 41 feet across the proposed building envelope. Based on the subsurface profiles encountered across this site, the zone of passive resistance may be assumed to act within the native soil from at least 6 feet above the depth where the native sandstone bedrock is encountered. All of the existing fill materials should be neglected when computing passive lateral resistance. Additional lateral resistance may be developed by extending the piers deeper into the native sandstone along the eastern side of the building envelope and then distributing the increased lateral resistance into the building envelope through the grade beams.

10. Piers should be vertically reinforced the full length. The vertical reinforcement should be lapped and tied each way to the upper grade beam reinforcement. Actual reinforcement requirements should be determined by the structural designer in accordance with anticipated use and applicable design standards.

Retaining Walls and Lateral Pressures

11. We anticipate that new retaining walls up to 10 feet high would be incorporated into the proposed new partial basement below the main level. Low landscaping walls may also be incorporated into this project. Proposed retaining wall designs should be reviewed by the soil engineer prior to submittal for permit review. Retaining walls should be designed to resist both lateral backfill pressures and any additional surcharge loads from wheel loads or equipment loads. Retaining wall backfills should consist of free-draining filtered drain rock or compacted engineered fill. Surcharge loads from compaction equipment should be minimized by using light-weight tamping or vibrating compaction equipment.

12. Active lateral soil pressures should be assumed for free standing retaining walls backfilled with predominantly granular, non-expansive soil. Structurally restrained retaining walls should be designed to resist a uniformly applied wall pressure of **25 H psf**. Free-standing retaining walls may be designed to resist an active equivalent fluid pressure of at least **50 pcf** for level backfills and **75 pcf** for sloping backfills no steeper than 2:1. Retaining walls should also be designed to resist one half of any surcharge loads imposed on the backfill behind the walls. These lateral pressures are based on granular backfills behind retaining walls. Where predominantly clayey materials are encountered at this site, they may be used within the upper two feet of landscaping behind retaining walls but are not recommended for retaining wall backfill material at greater depths.

13. The above lateral pressures assume that all retaining walls are **fully drained** to prevent hydrostatic pressure behind the walls. Drainage materials behind the wall should consist of filtered drain rock; **Class 2 permeable material**, Caltrans Specification 68-1.025; or an approved equivalent. Retaining wall back drain sections should be at least 12 inches wide. The drain section should extend from the base of the walls to within 12 inches of the top of the backfill. A rigid perforated pipe should be placed, holes down, about 4 inches above the bottom of the wall and tied to a suitable drain outlet. Wall back drains should be sealed at the surface with concrete slabs, clayey soil, or other impermeable material to minimize infiltration of surface runoff into the back drains. Surface runoff should be diverted away from back drains and collected in separate drain lines or channels.

14. A high quality waterproofing membrane should be used for retaining walls adjacent to areas where moisture would be undesirable. The membrane should be continuous and extend from the top of the wall to the outer margin of the foundation. The floors of the garage should also be waterproofed to prevent seasonal seepage.

Concrete Slabs-on-Grade

15. New concrete slabs-on-grade are anticipated for new exterior walkways, and portions of the new access driveway. Prior to construction of each slab, the subgrade surface should be cleared of loose soil, thoroughly moisture conditioned, and compacted to provide a firm, uniform surface for slab support. Concrete slabs-on-grade should be supported on at least 4 inches of non-expansive granular material bearing on uniformly compacted subgrades. Exterior slabs should be relieved with control joints or headers to divide slabs into smaller, approximately square sections to minimize random cracks. Control joint spacing should not exceed 10 feet. Slab reinforcing should be provided in accordance with the anticipated use and loading of the slab.

16. In the proposed new partial basement, and other areas where slab floor wetness would be undesirable, a blanket of 4 inches of free-draining gravel should be placed beneath the floor slab to act as a capillary break. The drain rock layer should be drained with a free-draining outlet pipe or a sump to allow for relief of any accumulated seepage. In order to minimize vapor transmission, an impermeable membrane should be placed over the gravel. The membrane should be covered with 2 inches of sand or rounded gravel to protect it during construction. The sand or gravel should be lightly moistened just prior to placing the concrete to aid in curing the concrete.

17. Exterior concrete slab-on-grade sections should be founded on firm, uniformly moisture conditioned and compacted subgrades. Reinforcing steel should be provided in accordance with the anticipated use and loading of the slab. The reinforcement should not be tied to the building foundations. These exterior slabs can be expected to suffer some cracking and movement. However, thickened exterior edges, a well-prepared subgrade including premoistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

Site Drainage

18. Positive drainage is essential to the future performance of the proposed improvements. Finish landscaping and hardscaping along the building perimeter must be designed and constructed to promote positive drainage. Diligent maintenance of completed drainage improvements is required for the life of the improvements. The drainage improvements should be both durable and easily accessible to promote frequent routine maintenance by the owner. Collected water should be returned to the natural drainage in a controlled fashion. It will be the owner's responsibility to maintain the site drainage system in good working condition for the life of the improvements.

19. Surface drainage must include provisions for positive slope gradients so that surface runoff flows away from the foundations, driveways, and other improvements. Minimum positive slope gradients of two percent are recommended for all concrete and landscape surfaces in the vicinity of the site improvements. Surface drainage must be directed away from the building foundations and concrete slabs. Collected water should be returned to the natural drainage in a controlled fashion.

20. Full roof gutters should be placed around all eaves. Discharge from the roof gutters should be conveyed away from the downspouts by splash blocks, lined gutters, pipes or other positive drainage. Collected runoff should be discharged away from the building foundations and other improvements.

21. The migration of water or spread of extensive root systems below foundations, slabs, or pavements may cause undesirable differential movements and subsequent damage to these structures. Landscaping should be planned accordingly.

Plan Review, Construction Observation, and Testing

22. Our firm must be provided the opportunity for a general review of the final project plans and specifications prior to construction so that our geotechnical recommendations may be 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. The recommendations presented in this report also require our observation and, where necessary, testing of the earthwork and foundation excavations. 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 exploratory excavations. 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 be 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.

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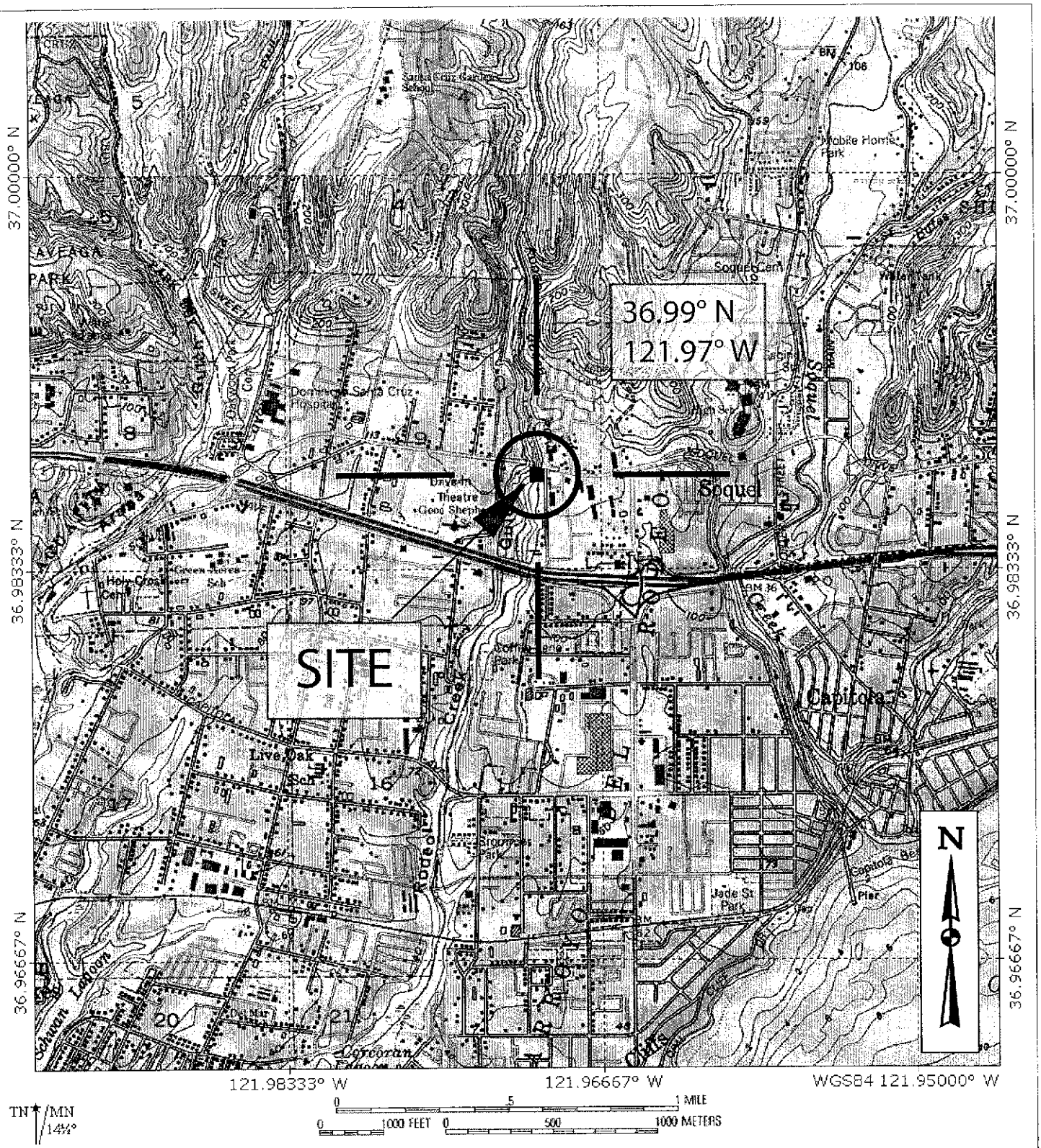
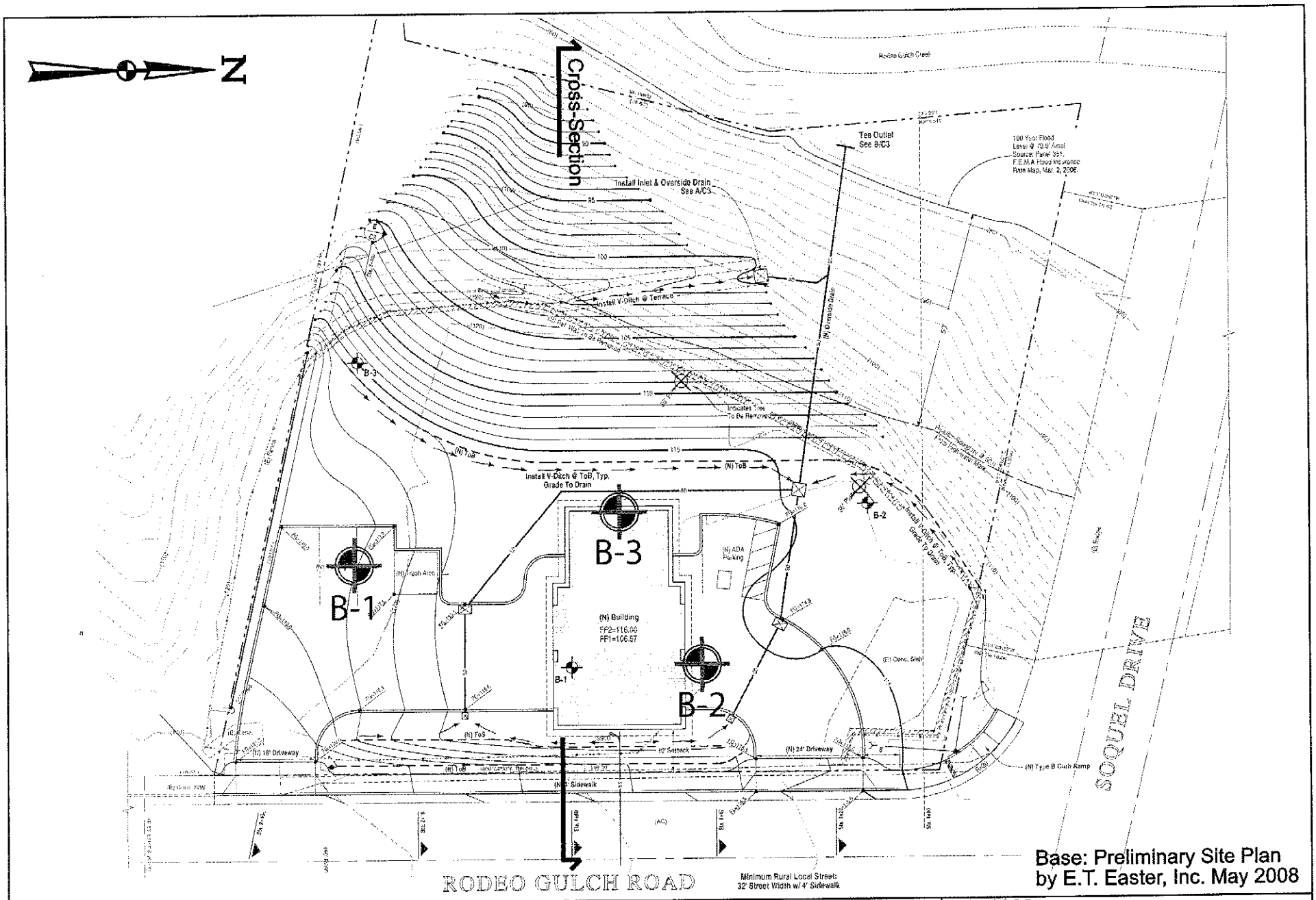
LIST OF FIGURES



REDWOOD GEOTECHNICAL ENGINEERING, INC. CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS	SITE VICINITY MAP Rodeo Gulch Drive Santa Cruz County, California
PROJECT NUMBER: 1959SCR	BASE MAP: USGS Soquel Quadrangle
July 2008	Approximate Scale: As Shown — Figure 1



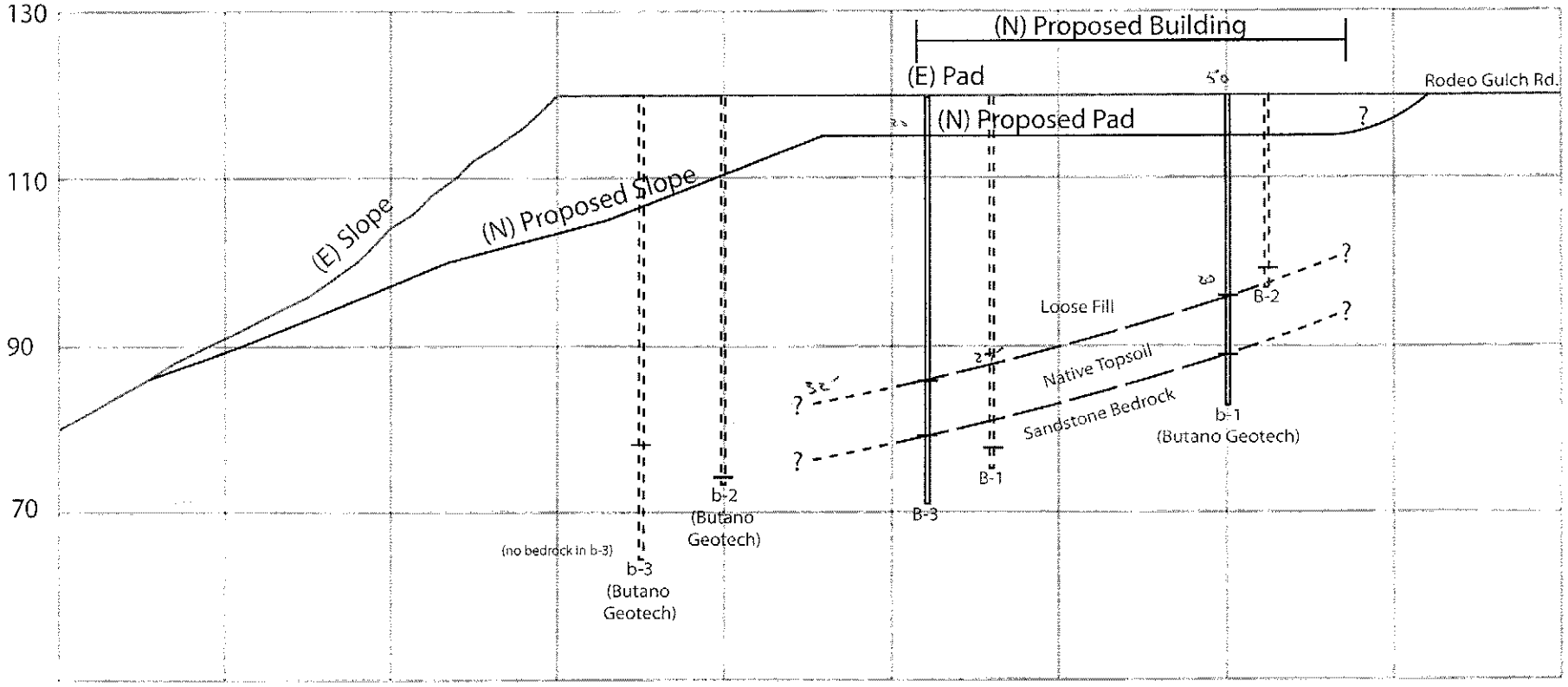
Base: Preliminary Site Plan
by E.T. Easter, Inc. May 2008

REDWOOD GEOTECHNICAL ENGINEERING, INC.

CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

SITE PLAN SCHEMATIC
Rodeo Gulch Drive
Santa Cruz County, California

July 2008
Project Number: 1959SCR
Approximate Scale: 1 inch = 30 feet
Figure 2



Base: Preliminary Site Plan by E.T. Easter, Inc. May 2008

REDWOOD GEOTECHNICAL ENGINEERING, INC. CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS	CROSS SECTION SCHEMATIC Rodeo Gulch Road Santa Cruz County, California	July 2008 Project Number: 1959SCR Approximate Scale: 1"=20' Figure 3

Waterways Consulting, Inc.

Hydraulic Evaluation for APN 030-112-05
Located in Santa Cruz County, California

prepared for: McClure Construction, Inc.

prepared by: Matt Weld, C.E.
Brian M Smith , C.E.

September 28, 2009

WATERWAYS CONSULTING

1.0 INTRODUCTION

Waterways Consulting, Inc. (Waterways) was retained by McClure Construction, Inc. to evaluate the flood inundation level and scour and erosion potential along Rodeo Gulch, at Assessor's Parcel Number (APN) 030-112-05.

Our approach utilized hydraulic results published in the FEMA Flood Insurance Study (FIS) for Santa Cruz County (FEMA, 2006) and hydrologic results published in the County of Santa Cruz Zone 5 Master Drainage Plan (Zone 5 MDP). Additionally, independent hydraulic calculations were performed to confirm the velocity and depth results published by FEMA.

The following report describes our methodology, results, and conclusions.

2.0 PROJECT SETTING

The project site is located on the southwest corner of the intersection of South Rodeo Gulch Road and Soquel Drive (**Figure 1**). The site is bounded to the west by Rodeo Gulch and has a steep fill slope that descends about 40 feet to the channel bed. The lower portion of the fill slope embankment is densely vegetated with large willows, blackberry, and various shrubs and vines.

The channel extends approximately 1,600 lineal feet downstream from the project site before passing beneath Highway 1, where the creek is conveyed through a concrete culvert. The dimensions of the culvert are unknown, due to the large accumulation of sand in the bottom of the culvert (see attached photos).

The Soquel Street bridge is located immediately upstream of the project site. The bridge deck is positioned above the 100-year flood elevation published by FEMA. Bridge piers are narrow and have little effect on flood flows.

The channel in the vicinity of the project site is approximately 20 feet wide at its base and between 4 and 7 feet deep. A 50 foot wide floodplain is located to the west of the channel, at the project site, and widens downstream. The channel within this reach has a profile slope of approximately 0.52%, as shown on the FEMA flood profile of Rodeo Creek Gulch (**Figure 2**).

Observations of the channel between the Highway 1 culvert and the project site revealed no apparent signs of instability, such as headcuts or bank erosion. The channel banks and floodplain were protected by dense vegetation. The channel bed was found to be composed of loose sand, indicative of the relatively low velocities and shears typically experienced within the reach.

Review of the boring logs included in the geotechnical report prepared by Redwood Geotechnical Engineering, Inc. indicates that the project site is underlain by sandstone bedrock at depths of between 31 and 41 feet below the proposed building site, which is very close to the elevation of the channel bed. However, sandstone bedrock was not observed in the channel bed during the site visit. The stream bank adjacent to the project site is reported to contain unclassified fills composed of sand, clays, and silts, ranging from loose to medium dense. Observations of the channel banks confirm the presence of dense sands and clays.

3.0 HYDROLOGY

Hydrologic data for the project site was compiled from the FIS for Santa Cruz County and the Zone 5 MDP. Additionally, Waterways calculated the 2-year flood discharge using Regional Regression equations developed by the USGS.

The FIS results were published for Rodeo Gulch at its mouth (Table 1), which receives runoff from a drainage area of 3 square miles. The project site has a drainage area of approximately 2 square miles (Figure 3), which indicates that the hydrologic results published in the FIS are overestimates for the project site. These values were adjusted by drainage area as a check on the the values reported in the Zone 5 MDP, as described below.

The Zone 5 MDP estimates the 100-year flow in Rodeo Gulch to be 864 cfs at the Highway 1 culvert, just downstream of the site. The Zone 5 MDP values were derived from a detailed analysis, using the U.S. Army Corps of Engineers Flood Hydrograph Package (HEC-1), and are thus more accurate than the older FEMA values. For this reason, the Zone 5 MDP results were used in our hydraulic calculations.

In addition to the 100-year discharge, scour calculations require the use of a bankfull discharge and top width. Review of the 2-year discharge reported in the Zone 5 MDP did not match the channel geometry measured at the site. Therefore, a bankfull (2-year) flood discharge was calculated from Regional Regression equations developed by the USGS for the Central Coast Region (Waananen & Crippen, 1977.

Parameters used in the regression calculation include:

- The tributary drainage area;
- Average of altitudes along the main channel at 10 percent and 85 percent of the distance from the project site to the divide; and
- The mean annual precipitation (**Appendix A**).

A 2-year discharge of 366 cfs was calculated using this method. This discharge produced a water surface elevation that was more appropriate to the channel geometry and was adopted for use in the hydraulic analysis.

Table 1. Summary of Discharges		
Discharge	**Location**	**Reference**
1,540 cfs (100-yr)	Rodeo Gulch at mouth	FEMA, 2006
1,027 cfs (100-yr)	Rodeo Gulch at project site	Adjusted for drainage area*
864 cfs (100-yr)	Rodeo Gulch at Highway 1	Zone 5 Master Drainage Plan
1,290 cfs (50-yr)	Rodeo Gulch at mouth	FEMA, 2006
790 cfs (10-yr)	Rodeo Gulch at mouth	FEMA, 2006
366 cfs (2-yr)	Rodeo Gulch at project site	SCCDC

* Discharge reported by FEMA was adjusted by a ratio of the project site drainage area to the drainage area used in the FEMA analysis.

4.0 HYDRAULICS

4.1 CHANNEL HYDRAULICS

Hydraulic data for the project site was determined from evaluation of the FIS and from hydraulic calculations performed using Manning's equation.

The FIS flood profile (Figure 2) shows cross section "N" located at the upstream side of the Soquel bridge and cross section "M" located at the upstream side of the Highway 1 culvert. The published elevations at these sections were used to calculate a channel slope of 0.52% at the project site. From the profile, the base flood elevation at the parcel was estimated to be 78.7 feet (NGVD 29). The BFE is almost flat between the two cross sections, due to the backwater effect of the culvert (**Figure 2**). This backwater effect is clearly shown on the 50-year and 100-year flood profiles in the FIS. The results published by FEMA are presented below in Table 2.

Hydraulic calculations were performed using Manning's equation applied to channel cross section geometry measured by Waterways at the site and channel slopes estimated from the FIS. Roughness values (Manning's "n") were chosen from field-based observations of vegetation density, overbank conditions, and depth of flow. Roughness values for the channel and floodplain ranged between 0.06 and 0.1 (McCuen, 2004). Results of the hydraulic calculations are presented in **Appendix B** and below in Table 2.

Manning's calculations were performed at a typical cross section in the project area to develop a conservative estimate of velocities in the absence of the culvert's backwater effect. As expected,

these calculations resulted in slightly higher velocities than those published by FEMA for the same discharge. These slightly more conservative values were adopted for our analysis, given the possibility of future upgrades to the culvert.

Table 2. Summary of Channel Hydraulics

Calculation/Reference	Discharge (cfs)	Depth (feet)	Velocity (ft/sec)	Base Flood Elev. (NGVD 29)
FEMA, 2006 (Section N)	1,540	10.8	3.1	78.7
Manning's	1,540	10.5	3.9	N.A.
Manning's	860	9.0	3.2	N.A.
Manning's	366	7	3.1	N.A.

4.2 SCOUR ANALYSIS

The Bureau of Reclamation has developed an approach for estimating depth of scour due to bends, piers, grade control structures and vertical rock banks or walls (Cramer et al., 2003). The method computes an "average" scour depth by applying a systematic adjustment to the results of three regime equations. Parameters used in the equations include:

- mean grain size of the bed material
- design flow, depth, and top width
- bankfull flow, depth, and top width

The channel section used in the analysis was located where the floodplain is constricted compared to upstream and downstream conditions. Adjustment coefficients were chosen for bend scour and represented a moderate bend. We estimated a D_{50} particle size of 0.2 millimeters (medium sand), based on visual observation of the channel bed (**Appendix C**). The 100-year flow of 864 cfs reported in the Zone 5 MDP was used to calculate the potential scour depth. Results of the scour analysis are presented in **Appendix B** and below in Table 3.

Table 3. Summary of Scour Calculations

Discharge (cfs)	Potential Scour Depth (feet)
864	2.1

5.0 CONCLUSIONS

A Base Flood Elevation of 78.7 feet was estimated for the site based on the flood profile published in the FIS for Santa Cruz County. This BFE should be conservative, due to the larger discharge used in the FEMA analysis, as compared to the discharge calculated in the Zone 5 MDP. The BFE would inundate the lower portion of the fill slope, as shown on the Preliminary Grading and Drainage Plan (Sheet C1), prepared by E.T. Easter, Inc.

Additional incision of the channel is unlikely to occur, due to grade control provided by the Highway 1 culvert. Further, there were no headcuts observed in the channel downstream of the project site. The presence of sand deposits on the bed is also strong evidence of the fact that the channel profile has stabilized.

Maximum velocities of 3.9 ft/sec were calculated at the project site. These velocities are capable of moving the sandy channel bed material. However, our observations indicate that sediment is being replenished from upstream sources.

Severe bank erosion is unlikely to affect the property, given this relatively low velocity, the well vegetated condition of the embankment, and the presence of dense soils observed in the channel banks.

Scour calculations for the 100-year flood event indicate a maximum potential scour depth of 2.1 feet at the project site, in absence of the backwater effect from the culvert downstream.

This scour depth was calculated for a typical channel section within the project reach, where the floodplain is relatively constricted compared to upstream and downstream sites. The maximum scour for such a location would likely occur within a pool, located along the outside of a meander bend. Such a condition would be localized to the vicinity of the bend, and would not extend over the entire length of the project. Over time, such scoured areas could be expected to re-fill with sediment from the upper watershed, as the channel form naturally evolves.

The analysis presented above reflects the current conditions and maintenance of the Rodeo Gulch channel. Changes in land use, vegetation management, and channel maintenance practices could result in changes to the channel bed and bank stability in this reach.

This estimate does not consider the potential effect of large debris jams. Large debris jams may result in significant adjustments of the low flow channel, and may therefore induce erosion in sites where it would not otherwise occur. However, such jams are typically initiated at bridges, culverts or point bars located on bends. Since jam formation has not been a significant issue at the downstream culvert, we do not anticipate a problem at the project site, which is located on a relatively straight and unobstructed reach of the creek.

WATERWAYS CONSULTING

7.0 REFERENCES

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COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Samantha Haschert
Application No.: 08-0394
APN: 030-112-05

Date: July 9, 2010
Time: 13:20:44
Page: 1

Environmental Planning Completeness Comments

========= REVIEW ON SEPTEMBER 19, 2008 BY ANTONELLA GENTILE =========

1. The geotechnical report has not been accepted. See letter from Kent Edler, Senior Civil Engineer, dated 9/18/08. Items 2-5 of the letter are not completeness issues, but will ultimately need to be addressed prior to acceptance of the report and issuance of a building permit.

2. Modify the recommendations provided by the Resource Conservation District (RCD) to account for the engineered fill that will be placed in the restoration area.

3. Provide grading quantities on the civil-engineered drawings. The quantities should be listed as separate line items: cut and fill volumes to achieve final grades, over-excavation/re-compaction volumes, and total off-haul.

== UPDATED ON DECEMBER 4, 2009 BY K. EDLER, J. HANNA, A. GENTILE ==

1. The Hydraulic Evaluation by Waterways Consulting indicates a potential scour depth of 2.1 feet at the toe of the slope. However, the adjacent slope is an unclassified fill slope and the estimated base flood elevation is estimated at 78.7 feet, which is approximately 11 feet above the elevation of the channel. The report needs to evaluate the scour / erosion potential in the approximately 11 feet of unclassified fill in the event of a 100-year flood.

2. The scour analysis must consider the dynamics of the stream. Fill has been dumped into the channel and rests on an alluvial edge of the stream and deflects the stream to the west. Will the stream excavate the original channel over time? Will this affect the fill-s stability?

3. The civil engineers analysis must consider the site geomorphology of the site. These issues include:

a. Is there a buried portion of the stream beneath the fill?

b. Can subsurface flow affect the fill?

c. Is the stream-s alluvium subject to liquefaction?

d. Will rising water affect the fill?

4. At least in the area that will be subject to stream flow the final embankment must be rounded so that there are not abrupt changes in slope.

5. The slope stability analysis in the October 30, 2009 Project Plan Review and Supplemental Investigation by Redwood Geotechnical Engineer does not use the same final slope configuration as indicated by the E.T. Easter Plans. The analysis uses a 3:1 slope and does not include an intermediate bench. The plans by E.T. Easter indicate a 2:1 slope and an intermediate 20- bench. The stability analyses and proposed final slope configurations need to match. The current geotechnical engineering reports indicates that the seismic stability safety factor is below the County-s requirement

for 1.2 factors of safety. Please note whatever slope is ultimately proposed must have this safety factor.

6. The soils report needs to explain how the values used in the stability analyses in the stability analyses were selected. Shear testing values should be provided. Where shear tests developed with the recent exploration?

7. Please have RCD work with the civil engineer or other qualified erosion control specialist to create a revegetation plan that can be planted on fill and will be non-erosive. Provide this plan and any supporting documentation. At a minimum the slope must be revegetated with an appropriate degradable erosion control blanket.

8. #4, #5 from 09/18/08 soils report review letter not addressed.

========= UPDATED ON JUNE 15, 2010 BY KENT M EDLER =========

No completeness comments for grading and soils issues.
========= UPDATED ON JUNE 22, 2010 BY ANTONELLA GENTILE =========
Project complete per Environmental Planning. See compliance comments and conditions of approval for more information.

Environmental Planning Miscellaneous Comments

========= UPDATED ON JUNE 22, 2010 BY ANTONELLA GENTILE =========
Compliance comments: The "riparian boundary" is shown incorrectly on sheet A1.01. The riparian buffer for an urban arroyo with a perennial stream is defined as 50 feet from the top of the existing bank. Additionally, a 10-foot setback from the buffer shall apply for all structures. A Riparian Exception can be supported by staff for this project, however the riparian corridor, buffer, and setback must be labeled properly on the project plans. Please revise this sheet to match plans prepared E. T. Easter, Inc.

Conditions of Approval:

1. A plan review letter from the soils engineer will be required prior to issuance of a building permit.

2. Winter grading will not be approved for this site.

3. Grading for this project must commence by July 15th, in order to ensure completion of the grading and installation of erosion control in the riparian area by October 15th. If grading is not started by July 15th, the start of grading must wait until the following July 15th.

4. If permanent drainage improvements are not installed prior to October 15th, temporary drainage measures must be implemented during the rainy season to control drainage onsite. The project civil engineer must review, approve and inspect all temporary drainage onsite and provide a letter to Environmental Planning stating that they have reviewed, approved and inspected all temporary drainage measures onsite.

5. A Certified Professional in Erosion and Sediment Control (CPESC), or similarly qualified individual, must review and inspect all erosion control measures during the rainy season (October 15th -April 15th). The erosion control specialist must inspect the site every 2 weeks and submit inspection reports to Environmental Planning for review.

6. Prior to issuance of a building permit, the grading plans must be revised so that the cut slope at the southern side of the site is set back a minimum of 2- from the property line.

7. All trees to be removed for this project shall be replaced at a 3 to 1 ratio with species approved by Environmental Planning.

8. The use of invasive species for landscaping and/or restoration is prohibited.

9. A restoration plan, with a 3-5 year maintenance plan, shall be submitted for review and approval by Environmental Planning prior to building permit issuance.

10. Reports shall be submitted twice a year detailing the progress of the restoration plan, for at least 3 years and until the restoration ecologist has provided a statement that success criteria have been met and area has been restored to the point where regular management and/or irrigation is no longer needed.

11. Plantings on the 2/1 slope shall be hand-watered only.

12. A survey by a qualified biologist shall be conducted 7-10 days before clearing of brush and tree removal to look for nesting birds and other protected species. All recommendations provided by the biologist shall be required.

13. Sediment, pollutants, and other debris shall be prevented from entering the creek at all times during construction and at project completion.

Project Review Completeness Comments

======== REVIEW ON NOVEMBER 3, 2008 BY CHRISTINE HU ======== SCAS REPORT NEGATIVE. LETTER SENT TO APPLICANT. NO COMMENT
======== UPDATED ON NOVEMBER 3, 2008 BY CHRISTINE HU ========
NO COMMENT

Project Review Miscellaneous Comments

======== REVIEW ON NOVEMBER 3, 2008 BY CHRISTINE HU ======== SCAS NEGATIVE. LETTER SENT TO APPLICANT. NO COMMENT

Code Compliance Completeness Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

Code review is not required. Code case was resolved on 6/21/06. (LM) ========
REVIEW ON SEPTEMBER 11, 2008 BY LAURA MADRIGAL ========
NO COMMENT

======== UPDATED ON SEPTEMBER 15, 2008 BY LAURA MADRIGAL ========
NO COMMENT

Code Compliance Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

======== REVIEW ON SEPTEMBER 11, 2008 BY LAURA MADRIGAL ========
NO COMMENT
======== UPDATED ON SEPTEMBER 15, 2008 BY LAURA MADRIGAL ========

Dpw Drainage Completeness Comments

======== REVIEW ON SEPTEMBER 15, 2008 BY TRAVIS RIEBER ========
1. The development must hold runoff levels at predevelopment rates. Detention will be allowed only to the extent that predevelopment runoff rates cannot be maintained through other applied measures, and where drainage problems are not resolved. Designers shall contact the Department of Public Works for approval prior to the design of a structural detention system. Please provide a proposal consistent with County standards.

2. The development proposal must incorporate methods of design that include both resource and flood control protections, effective for a broad range of storms. Please provide a proposal consistent with County standards.

3. Projects are required to minimize impervious surfacing. This project is proposing an extensive paved area. The requirement to minimize impervious surfacing can be achieved by the use of porous pavement where feasible.

4. Is there an existing curb and gutter along South Rodeo Gulch Road? (If it is not existing see the design criteria page one for additional information to be provided) Show all the existing roadside drainage improvements along the property frontage to a reasonable safe point of release. ======== UPDATED ON DECEMBER 1, 2009 BY TRAVIS RIEBER ========
1. Please provide a stamped and signed letter from the project geotechnical engineer stating the non feasibility of pervious paving as well as retention type mitigations.

2. According to the response letter from Eric Easter, the project civil engineer, site predevelopment runoff rates will be maintained with the a detention system. Show the location of the proposed detention system on the plans. Detailed design calculations will be review at the building application stage.

3. Is it feasible for pervious area runoff collected in the v-ditches to be dispersed in a non-erosive manner without directing it the detention/drainage system?

4. Make clear on the plans how runoff from the new curb and gutter along the property frontage will be controlled and directed into the existing 12 inch culvert.

5. Provide a tributary drainage area map and calculations demonstrating that the existing 12 inch culvert that the proposed curb and gutter drains to is adequately

sized for the amount of runoff being directed to it.

The applicant is encouraged to discuss the above comments with the reviewer to avoid unnecessary additional routings. Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON JUNE 14, 2010 BY TRAVIS RIEBER =========
The civil plans with revisions dated 5/24/2010 and Hydrology Analysis dated 5/24/2010 have been received and are approved for the discretionary application stage. Please see the miscellaneous comments for information to be provided at the building application stage.

Dpw Drainage Miscellaneous Comments

========= REVIEW ON SEPTEMBER 15, 2008 BY TRAVIS RIEBER =========
Provide a detail of the water quality treatment unit in the plan set.

For fee calculations and impacts please provide tabulation of existing impervious areas and new impervious areas resulting from the proposed project. Make clear on the plans by shading or hatching the limits of both the existing and new impervious areas. To receive credit for the existing impervious surfaces to be removed please provide documentation such as assessor-s records, survey records, aerial photos or other official records that will help establish and determine the dates they were built.

Note: A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

A recorded maintenance agreement is required for the water quality treatment unit.

Because this application is incomplete in addressing County requirements, resulting revisions and additions will necessitate further review comments and possibly different or additional requirements.

All resubmittals shall be made through the Planning Department. Materials left with Public Works will not be processed or returned.

Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON DECEMBER 1, 2009 BY TRAVIS RIEBER =========
1. Please provide calculations demonstrating that the proposed detention system meets design criteria requirements. Please reference the Santa Cruz County Design Criteria for design requirements. The design criteria can be found on the internet at: http://www.dpw.co.santa-cruz.ca.us/DESIGN%20CRITERIA.PDF

2. Required detention volume determinations shall be based on all net new impervious area, both on-site 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 percent of the total area).

3. Please provide construction details for the proposed detention system.

4. Provide a detail of the water quality treatment unit in the plan set.

5. For fee calculations and impacts please provide tabulation of existing impervious areas and new impervious areas resulting from the proposed project. Make clear on the plans by shading or hatching the limits of both the existing and new impervious areas. To receive credit for the existing impervious surfaces to be removed please provide documentation such as assessor-s records, survey records, aerial photos or other official records that will help establish and determine the dates they were built.

Note: A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

6. A recorded maintenance agreement is required for the proposed detention system and water quality treatment unit. Please contact the County of Santa Cruz Recorder-s office for appropriate recording procedure. The maintenance agreement form can be picked up from the Public Works office or can be found online at: http://www.dpw.co.santa-cruz.ca.us/Storm%20Water/FigureSWM25.pdf

7. Once the above comments are addressed please provide the final drainage report and a reproducible set of stamped and signed civil plans to Public Works for signatures.

8. Public Works staff will inspect the drainage improvements. Please submit a construction estimate for all drainage related items. Please deposit 2% of the construction cost or a minimum of $580.00, directly to Public Works.

The applicant is encouraged to discuss the above comments with the reviewer to avoid unnecessary additional routings. Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON JUNE 14, 2010 BY TRAVIS RIEBER =========
1. According to the plans the proposed GO Inlet is located within the curb ramp. Please relocate the proposed GO Inlet to a location outside of the curb ramp.

2. Connecting the GO inlet within the right of way to the onsite drainage system is not preferable. If the GO inlet is connected to the onsite drainage system the property owner will be required to record a maintenance agreement for the piping system between the GO inlet and the outfall.

3. Please provide calculations demonstrating that the proposed detention system meets design criteria requirements. Please reference the Santa Cruz County Design Criteria for design requirements. The design criteria can be found on the internet at: http://www.dpw.co.santa-cruz.ca.us/DESIGN%20CRITERIA.PDF

4. Required detention volume determinations shall be based on all net new impervious area, both on-site 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 percent of the total area). According to the

plans runoff from the v-ditches and landscape areas are being directed to the detention system. Please revise.

5. Please provide construction details for the proposed detention system.

6. Please remove the FloGard Filter from the GO inlet with water quality treatment unit detail.

7. For fee calculations please provide tabulation of new impervious and semi-impervious (gravel, base rock, paver blocks, pervious pavement) areas resulting from the proposed project. Make clear on the plans by shading or hatching the limits of both the existing and new impervious areas. To receive credit for the existing impervious surfaces to be removed please provide documentation such as assessor-s records, survey records, aerial photos or other official records that will help establish and determine the dates they were built.

Note: A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing (50%) to offset costs and encourage more extensive use of these materials.

8. How will leaves, twigs, gravel, sand, silt and other debris with a potential to plug the release orifice of the detention system be prevented from entering the drainage system?

9. Site plans shall specify required maintenance procedures to assure proper long term functioning of the proposed drainage system. A recorded maintenance agreement is required for the proposed detention system and water quality treatment unit. Please contact the County of Santa Cruz Recorder-s office for appropriate recording procedure. The maintenance agreement form can be picked up from the Public Works office or can be found online at: http://www.dpw.co.santa-cruz.ca.us/Storm-Water/FigureSWM25.pdf

10. All catch basins shall be marked with the legend -NO DUMPING DRAINS TO OCEAN. NO TIRE DESECHO CORRE AL MAR.-

11. Once the above comments are addressed please provide the final drainage report and a reproducible set of stamped and signed civil plans to Public Works for signatures.

12. Public Works staff will inspect the drainage improvements. Please submit a construction estimate for all drainage related items. Please deposit 2% of the construction cost or a minimum of $580.00, directly to Public Works.

The applicant is encouraged to discuss the above comments with the reviewer to avoid unnecessary additional routings. Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY DEBBIE F LOCATELLI =========

Driveways shall conform to County of Santa Cruz Design Criteria for maximum grades. (See FIG DW-1)

Dpw Driveway/Encroachment Miscellaneous Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY DEBBIE F LOCATELLI =========
Encroachment permit required for all off-site work in the County road right-of-way at the time of building permit application.
========= UPDATED ON DECEMBER 2, 2009 BY DEBBIE F LOCATELLI =========
The existing 12" HDPE Curbside Drain (near bridge) will need to be replaced with a County Standard GO Inlet, not to be located within the curb ramp. Also, a storm drain pipe will be required from GO Inlet to a location (under bridge) which does not undermine bridge structure.

The sideline of any driveway shall not be closer than 10 ft. to the intersection curb return, per the County of Santa Cruz Design Criteria.(June 2006 Edition)

Note: Is it possible to merge the two out going lanes into one as it enters onto Rodeo Gulch Road? If so, that would provide the 10 ft. intersection curb return.(This would need to be approved by road engineering)

The transition to bridge will be addressed by road engineering.

Dpw Road Engineering Completeness Comments

========= REVIEW ON SEPTEMBER 18, 2008 BY RODOLFO N RIVAS =========
1) Roadside improvements for Urban Local Street are required for this project. Please refer to the County of Santa Cruz Design Criteria standards for Urban Local Street.

2) Show street cross section for South Rodeo gulch.

3) Provide F/L profile for Soquel Drive and for South Rodeo Gulch Road, and also provide centerline profiles for the two driveways serving the proposed facility.

4) The proposed vehicular circulation will create conflict between vehicles attempting to exit the facility and traffic flow on South Rodeo Gulch given the proximity between the northern most driveway and the signalized intersection. In order to reduce such conflicts, we recommend that vehicular circulation be reversed so that the driveway closer to the intersection becomes the entrance driveway.

5) Indicate how the traffic signal at the intersection will be impacted by showing existing and proposed location of traffic signal equipment such as controller, conduits, signal standard, pedestrian push button, etc.

6) Show detail of how proposed improvements will connect to the existing bridge on Soquel Drive.

7) Provide signage and striping details.

8) The development is subject to Live Oak Transportation Improvement (TIA) fees at a

rate of $508 per daily trip-end generated by the proposed use. The project plans show the construction of a 2,842 square foot automobile lube service facility. The estimated trip generation (per Public Works Department Trip Generation Rate Table) for fee purposes is 24 trip-ends per 1,000 gross square feet (ksf). Therefore the total trips are calculated as 2.842 ksf of commercial automobile service, multiplied by 24 trip ends/ksf equals 68 trip ends being generated by the project. The fee is calculated as 68 trip ends multiplied by $508 per trip end equals $34,544. The total TIA fee of $34,544 is to be split evenly between transportation improvement fees and roadside improvement fees. Applicant has the option of submitting to the approving body a lower trip-end rate, provided that the proposed trip-end rate is based on a traffic engineering study. ========= UPDATED ON NOVEMBER 30, 2009 BY RODOLFO N RIVAS =========

1) Roadside improvements for Urban Local Street are required for this project. Please refer to the County of Santa Cruz Design Criteria standards for Urban Local Street. As per County Design Criteria, the required improvements for an Urban Local Street consist of a 56' Right of Way, a 36' roadway width that includes two (12') travel lanes and parking on both sides of the street (12'); additionally, landscape strips and sidewalks on both sides of the street are required. If applicant wishes the approving body to consider eliminating or reducing the requirements regarding the construction of street improvements, applicant must propose an exception. Exceptions to the County standards for streets may be proposed by showing: a) a typical road section of the required standard on the plans crossed out; b) the reason for the exception below; and c) the proposed typical road section. If the exception is granted by the approving body, applicant will need to provide a two foot strip of additional Right of Way for the installation of traffic signs along the project's parcel, in addition to the proposed improvements.

-- 2) Provide a 6' Public Utility Easement (PUE)

-- 3) The proposed vehicular circulation will create conflict between vehicles attempting to exit the facility and traffic flow on South Rodeo Gulch given the proximity between the northern most driveway and the signalized intersection. In order to reduce such conflicts, we recommend that vehicular circulation be reversed so that the driveway closer to the intersection becomes the entrance driveway.

-- 4) Indicate how the traffic signal at the intersection will be impacted by showing existing and proposed location of traffic signal equipment such as controller, conduits, signal standard, pedestrian push button, etc.

-- 5) Show detail of how proposed improvements will connect to the existing bridge on Soquel Drive.

-- 6) Provide signage and striping details. ========= UPDATED ON JUNE 14, 2010 BY RODOLFO N RIVAS =========

1) The location of the driveway closer to Soquel Drive has been revised so that the driveway will be at a distance 34- from the existing crosswalk on South Rodeo Gulch. The new location and the new driveway width are acceptable to Public Works. However,

only one pavement arrow at the center of such driveway should be used in order to prevent two vehicles from entering South Rodeo Gulch simultaneously. 2) Provide a detail of the sidewalk and handrail connection to the bridge on Soquel Drive. Such detail should include slope information for the sidewalk between the pedestrian ramp and the bridge. 3) Move the proposed drainage inlet away from the pedestrian ramp to a location between the ramp and the bridge on Soquel Drive. 4) Provided that the existing power pole does not inhibit visibility of the traffic signal, relocate traffic signal to a location behind the center of the pedestrian ramp's landing. Otherwise, consider leaving the signal as proposed and adding a pedestal with push button at the location behind the center of the ramp's landing. 5) Provide accessibility to the traffic signal controller by constructing a 2' concrete walkway around the controller. The subject walkway should connect to the proposed sidewalk.
========= UPDATED ON JUNE 14, 2010 BY RODOLFO N RIVAS =========

Dpw Road Engineering Miscellaneous Comments

========= REVIEW ON SEPTEMBER 18, 2008 BY RODOLFO N RIVAS =========
NO COMMENT
========= UPDATED ON NOVEMBER 30, 2009 BY RODOLFO N RIVAS =========
NO COMMENT
========= UPDATED ON JUNE 14, 2010 BY RODOLFO N RIVAS =========
NO COMMENT

Dpw Sanitation Completeness Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY AMY GROSS =========
Environmental Compliance Unit Review Comments Oil Can Henry-s Application No: 08-0394

1st Review Summary Statement:

The Environmental Compliance Unit cannot recommend approval of the project as proposed.

Policy Compliance Items: 1.) An Oil-water separator (clarifier) is indicated on the plans, however the size and connections to the Oil-water separator are not indicated. No plumbing or sewer connection plans are included.

Information Items: General Sanitation District requirements for these facility types are as follows: 1.) No plumbing or sewer connection plans are included. 2.) Floor drains are not allowed in service bays unless they are connected to a 3-stage 1500 gallon District approved clarifier. 3.) Trash enclosure needs to have overhead coverage if a sewer drain is present. 4.) No car wash is indicated on the plans. If it is decided that one will be put in, the wastewater that is not recycled for additional car washing must treated through a minimum of two 1500-gallon clarifiers (oil-water separators) as specified in the Santa Cruz County design Criteria.

Please see miscellaneous comments. ========= UPDATED ON SEPTEMBER 17, 2008 BY DIANE ROMEO ========= No. 1 Review Summary Statement; Appl. No. 09-0394; APN: 30-112-05:

Sewer service is available for this project provided that the following completeness

issues are addressed. The Proposal is out of compliance with District or County sanitation policies and the County Design Criteria (CDC) Part 4, Sanitary Sewer Design, June 2006 edition, and also lacks sufficient information for complete evaluation. The District/County Sanitation Engineering and Environmental Compliance sections cannot recommend approval the project as proposed.

This review notice is effective for one year from the issuance date to allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new availability letter must be obtained by the applicant. Once a tentative map is approved this letter shall apply until the tentative map approval expires.

Reference for County Design Criteria: http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.PDF Completeness Items:

A complete engineered sewer plan, addressing all issues required by District staff and meeting County -Design Criteria- standards (unless a variance is allowed), is required. District approval of the proposed discretionary permit is withheld until the plan meets all requirements. The following items need to be shown on the plans:

Show proposed sewer laterals (including length of pipe, pipe material, cleanouts located maximum of 100-feet apart along with ground and invert elevations) and slope noted (minimum 2%) and connection to the existing public sewer. Note on plans that a sewer overflow or backflow prevention device is required. Show sewer force main (from pump station) connection to gravity portion of lateral.

Attach plumbing plan.

Include District-s -General Notes- on plans. Contact staff for electronic copy. Attach an approved (signed by the District) copy of the sewer system plan to the building permit submittal. All elements (notes and details) pertaining to the sewer improvement plan shall contained on sewer improvement plan and shall be the same as those approved under this permit. Signed copy shall be the version approved along with discretionary approval. Any changes subsequent to approved version shall be highlighted on plans and may result in delay in issuing building permit. This shall be condition of approval for this permit application.

Any questions regarding the above criteria should be directed to Diane Romeo of the Sanitation Engineering division at (831) 454-2160.

Please see miscellaneous comments.
========== UPDATED ON NOVEMBER 24, 2009 BY AMY GROSS =========
Environmental Compliance Unit Review Comments Oil Can Henry-s Application No: 08-0394 2nd Review Summary Statement: The Environmental Compliance Unit cannot recommend approval of the project roposed. Policy Compliance Items: 1.) An Oil-water separator (clarifier) is indicated on the plans, however t ize and connections to the Oil-water separator are not indicated. No plumb or sewer connection plans are included. Information Items: General Sanitation District requirements for these facility types are as fo s: 1.) No plumbing or sewer connection plans are included. 2.) Floor drains are not allowed in service bays unless they are connected to a tage

1500 gallon District approved clarifier. All clarifiers or oil-water rators will meet the Santa Cruz County Design Criteria. See the design crit eria at http://www.dpw.co.santa-cruz.ca.us/environment.htm#Clarifiers 3.) Trash enclosure needs to have overhead coverage if a sewer drain is present 4.) No car wash is indicated on the plans. If it is decided that one will be pu , the wastewater that is not recycled for additional car washing must be tr d through a minimum of two 1500-gallon clarifiers (oil-water separators) as cified in the Santa Cruz County design Criteria. Please see miscellaneous comments. ========= UPDATED ON NOVEMBER 30, 2009 BY DIANE ROMEO =========
No. 2 Review Summary Statement; Appl. No. 08-0394; APN: 30-112-05:

Sewer service is available for this project provided that the following completeness issues are addressed. The Proposal is out of compliance with District or County sanitation policies and the County Design Criteria (CDC) Part 4, Sanitary Sewer Design, June 2006 edition, and also lacks sufficient information for complete evaluation. The District/County Sanitation Engineering and Environmental Compliance sections cannot recommend approval the project as proposed.

This review notice is effective for one year from the issuance date to allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new availability letter must be obtained by the applicant. Once a tentative map is approved this letter shall apply until the tentative map approval expires.

Reference for County Design Criteria: http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.PDF Completeness Items:

A complete engineered sewer plan, addressing all issues required by District staff and meeting County -Design Criteria- standards (unless a variance is allowed), is required. District approval of the proposed discretionary permit is withheld until the plan meets all requirements. The following items need to be shown on the plans:

The exterior sewer lateral plan does not meet the District-s Design Criteria requirements. Engineer shall continue to work with District staff correct deficiencies per phone discussion.

Attach plumbing plan.

Any questions regarding the above criteria should be directed to Diane Romeo of the Sanitation Engineering division at (831) 454-2160.

There are no additional miscellaneous comments. ========= UPDATED ON JUNE 7, 2010 BY DIANE ROMEO =========
No 5 Review Summary Statement; Application No. 08-0394; APN: 30-112-05: Sewer service is available for this project. This review notice is effecti or one year from the issuance date to allow the applicant the time to recei entative map, development or other discretionary permit approval. If after s time frame this project has not received approval from the Planning Depar t, a new availability letter must be obtained by the applicant. Once a ten ve map is approved this letter shall apply until the tentative map approval ires. Reference for County Design

Criteria: http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.PDF The sewer improvement plan submitted for the subject project is approved by District based upon plans submitted for the fifth review. Any future chan to these plans shall be routed to the District for review to determine if a ional conditions by the District are required by the plan change. All chan shall be highlighted as plan revisions and changes may cause additional req ments to meet District standards. There are no Sanitation Engineering Miscellaneous Comments. Any questions regarding the above criteria should be directed to Diane Rome the Sanitation Engineering division at (831) 454-2160. ========= UPDATED ON JUNE 10, 2010 BY DIANE ROMEO =========
3rd Review Summary Statement: The Environmental Compliance Unit approves the project as proposed. Policy Compliance Items: The plans are in compliance with Environmental Compliance requirements. Information Items: General Sanitation District requirements for these facility types are as follows: Floor drains are not allowed in service bays. All hazardous materials and waste must be secondarily contained. Trash enclosure needs to have overhead coverage if a sewer drain is present. No car wash is indicated on the plans. If it is decided that one will be put in, the wastewater that is not recycled for additional car washing must be treated through a minimum of two 1500-gallon clarifiers (oil-water separators) as specified in the Santa Cruz County design Criteria. Please see miscellaneous comments.

Dpw Sanitation Miscellaneous Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY AMY GROSS =========
Miscellaneous: The Sanitation District must be allowed to review plans for all clarifiers/oil water separators prior to issuance of a permit and to inspect the installation. Any questions regarding these criteria or to schedule an inspection should be directed to the Santa Cruz County Sanitation District Environmental Compliance Unit at (831) 477-3907

All resubmittals shall be made through the Planning Department. Materials left with Public Works will not be processed or returned.

Please call the Dept. of Public Works, Environmental Compliance Unit at 477-3907 if you have questions. ========= UPDATED ON SEPTEMBER 17, 2008 BY DIANE ROMEO =========
Sanitation Engineering miscellaneous comments are: Water use data (actual or projected), and other information as may be required for this project, must be submitted to the District for review and e in capacity and waste pretreatment requirements before the discretionary permit application can be approved.
========= UPDATED ON NOVEMBER 24, 2009 BY AMY GROSS =========
Miscellaneous: The Sanitation District must be allowed to review plans for all clarifiers/ water separators prior to issuance of a permit and to inspect the installat Any questions regarding these criteria or to schedule an inspection shoul directed to the Santa Cruz County Sanitation District Environmental Compli Unit at (831) 477-3907 All resubmittals shall be made through the Planning Department. Materials with Public Works will not be processed or returned. Please call the Dept. of Public Works, Environmental Compliance Unit at 477 7 if you have questions.
========= UPDATED ON NOVEMBER 30, 2009 BY DIANE ROMEO =========
There are no additional miscellaneous comments. ========= UPDATED ON JUNE 10, 2010 BY DIANE ROMEO ========= Miscellaneous: The Sanitation District must be allowed to review plans for all clarifiers/oil water separators prior to issuance of a permit and to inspect the installation. Any questions regarding these criteria or to

schedule an inspection should be directed to the Santa Cruz County Sanitation District Environmental Compliance Unit at (831) 477-3907 All resubmittals shall be made through the Planning Department. Materials left with Public Works will not be processed or returned. Please call the Dept. of Public Works, Environmental Compliance Unit at 477-3907 if you have questions.

Environmental Health Completeness Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY JIM G SAFRANEK =========
NO COMMENT

Environmental Health Miscellaneous Comments

========= REVIEW ON SEPTEMBER 16, 2008 BY JIM G SAFRANEK =========
Hazardous materials or hazardous waste are to be used, stored or generated on site; contact the appropriate Hazardous Material Inspector in Environmental Health at 454-2022 and complete all permitting requirements prior to issuance of BP.

Samantha Haschert

From: Kent Edler
Sent: Tuesday, June 15, 2010 8:12 AM
To: Joseph Hanna; Antonella Gentile
Cc: Samantha Haschert
Subject: Oil Can Henry's Comments

Joe and Antonella,

Here's my comments on Oil Can Henry's. Feel free to add to them and pass them along to Samantha.

June 15, 2010 Updated Comments

Completeness Comments
No comments for grading, soils and geology issues.

Compliance Comments
None for grading, soils and geology issues.

COA's

1. A plan review letter from the soils engineer will be required prior to issuance of a building permit.
2. Winter grading will not be approved for this site.
3. Grading for this project must commence by July 15th, in order to ensure completion of the grading and installation of erosion control in the riparian area by October 15th. If grading is not started by July 15th, the start of grading must wait until the following July 15th.
4. If permanent drainage improvements are not installed prior to October 15th, temporary drainage measures must be implemented during the rainy season to control drainage onsite. The project civil engineer must review, approve and inspect all temporary drainage onsite and provide a letter to Environmental Planning stating that they have reviewed, approved and inspected all temporary drainage measures onsite.
5. A Certified Professional in Erosion and Sediment Control (CPESC), or similarly qualified individual, must review and inspect all erosion control measures during the rainy season (October 15th -April 15th). The erosion control specialist must inspect the site every 2 weeks and submit inspection reports to Environmental Planning for review.
6. Prior to issuance of a building permit, the grading plans must be revised so that the cut slope at the southern side of the site is set back a minimum of 2' from the property line.

Thanks,

Kent Edler, P.E.
Senior Civil Engineer

Samantha Haschert

Subject: 08-0394
Entry Type: Conversation

Start: Thu 12/3/2009 2:34 PM
End: Thu 12/3/2009 2:34 PM
Duration: 0 hours

3rd RTG

DPW Road Engineering

Spoke with Rodolfo. DPW supports proposed design with the addition of a 2 foot easement along the north side of the proposed sidewalk for 'no parking' signage. Design requires an exception to the Urban Local Street Design Criteria. Wider lanes are supported because large trucks are using the roadway.

COUNTY OF SANTA CRUZ
INTER-OFFICE CORRESPONDENCE

DATE: September 18, 2008
TO: Samantha Haschert, Project Planner
FROM: Steve Guiney, Planning Department Liaison to the Redevelopment Agency
SUBJECT: Application #08-0394, 1st Routing, APN 030-112-05, NW corner South Rodeo Gulch Road and Soquel Drive, Live Oak

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The applicant is proposing to construct a two bay, two story lube-oil changing facility of about 2852 square feet on a vacant parcel, including grading of 3243 cubic yards to remove illegal fill and restoration of the riparian area.

The Engineering Review Group considered this application on September 17th, 2008. The Redevelopment Agency's (RDA) primary concern with this project is the inadequacy of the landscaping plan.

The landscaping plan should be created by a landscape professional and should show the following:

- Proposed species to be planted for all areas of the site, including the landscaping around the proposed building and driveways as well as the restoration area on the slope down toward Rodeo Gulch Creek that will be regraded.
- The number of street trees along Rodeo Gulch should be increased with trees in the landscape strip planted every 16 feet on-center.
- All proposed tree species should be 24 inch box, not 15 gallon.
- The landscape coverage at the northeast corner of the property is inadequate; there needs to be additional planting there.
- The Restoration and Revegetation Details (Sheet L-2) should provide numbers of each tree species to be planted and their proposed sizes.

Additional items of note include the following:

- The trash enclosure should be relocated to the rear (south) side of the property where it would be less readily visible that on the Soquel Drive frontage
- The proposed sign on the north elevation should not be internally lit unless channel letters are used. Otherwise the lighting should be exterior to the sign.
- The proposed light on the east elevation should be removed. There is no walkway adjacent to that side of the building so it appears that the light serves no particular purpose.
- More detail is needed about the proposed aluminum sectional doors. What color will they be? Are any windows proposed in the doors?
- The floor plans are not oriented the same way as the elevations, which is confusing. Floor plans and elevations should be oriented in the same directions.

The issue referenced above should be evaluated as part of this application and/or addressed by conditions of approval. RDA does need to see future routings of this project. RDA appreciates this opportunity to comment. Thank you.

cc: Greg Martin & Rodolfo Rivas, DPW Road Engineering
Paul Rodrigues, Betsey Lynberg, RDA
Jan Beautz, District Supervisor

Accessibility: Project Com.. ..or Development Review
County of Santa Cruz Planning Department

Date: September 11, 2008
Planner: Samantha Haschert
Project:: Oil Can Henry's

Application Number: ***08-0394***
APN: 030-112-05

Dear McClure Construction,

A preliminary review of the plans for the above project was conducted to determine any accessibility concerns. The following comments are to be applied to the project design.
Note: Santa Cruz County has adopted the 2007 California Building Codes, effective January 1, 2008. Building Permit applications submitted after that date will be subject to these new codes.

Please refer to the brochure titled *Accessibility Requirements - Building Plan Check* which can also be found on the County of Santa Cruz Planning Department website:
http://www.sccoplanning.com/html/bldg/access_plancheck.htm

Project Description:
Construction of a new passenger vehicle service station – S-1 Occupancy, 1 story with basement, type 5A construction.

Completeness Items:
None

Compliance Issues:
None

Permit Conditions/Additional Information:
The plans for the Building Permit Application must include the following CBC accessibility code requirements along with all standard accessibility details:

Accessibility site signage – 1117B.5.1.3
Sidewalk warning curbs along the path of travel from the r/w - 1133B.8
Detectable warnings at hazardous vehicular areas - at the entry door area to the building/accessible parking loading aisle area – 1133B.8.5
Path of travel verification form. SCC
Stairway details - 1133B.4

Please contact me with any questions regarding these comments.

Rafael Torres-Gil
Supervising Building Inspector/Building Plans Examiner
County of Santa Cruz Planning Department
(831) 454-3174
pln146@co.santa-cruz.ca.us

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: 08-0394 (third routing)

Date: December 1, 2009

To: Samantha Haschert, Project Planner

From: Larry Kasparowitz, Urban Designer

Re: *New commercial building at Rodeo Gulch and Soquel Drive, Soquel*

COMPLETENESS ITEMS

- *none*

COMPLIANCE ISSUES

Design Review Authority

13.11.040 Projects requiring design review.

(e) All commercial remodels or new commercial construction.

Design Review Standards

13.11.072 Site design.

Evaluation Criteria	Meets criteria in code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
Compatible Site Design			
Location and type of access to the site	✔		
Building siting in terms of its location and orientation	✔		
Building bulk, massing and scale	✔		
Parking location and layout	✔		
Relationship to natural site features and environmental influences	✔		
Landscaping	✔		
Streetscape relationship			**N/A**
Street design and transit facilities			**N/A**
Relationship to existing structures	✔		
Natural Site Amenities and Features			
Relate to surrounding topography	✔		
Retention of natural amenities	✔		

Siting and orientation which takes advantage of natural amenities	✔		
Ridgeline protection			N/A
Views			
Protection of public viewshed	✔		
Minimize impact on private views	✔		
Safe and Functional Circulation			
Accessible to the disabled, pedestrians, bicycles and vehicles			N/A
Solar Design and Access			
Reasonable protection for adjacent properties	✔		
Reasonable protection for currently occupied buildings using a solar energy system	✔		
Noise			
Reasonable protection for adjacent properties	✔		

13.11.073 Building design.

Evaluation Criteria	Meets criteria In code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
Compatible Building Design			
Massing of building form	✔		
Building silhouette	✔		
Spacing between buildings	✔		
Street face setbacks			N/A
Character of architecture	✔		
Building scale	✔		
Proportion and composition of projections and recesses, doors and windows, and other features	✔		
Location and treatment of entryways	✔		
Finish material, texture and color	✔		
Scale			
Scale is addressed on appropriate levels	✔		
Design elements create a sense of human scale and pedestrian interest	✔		
Building Articulation			
Variation in wall plane, roof line, detailing, materials and siting.	✔		

Solar Design			
Building design provides solar access that is reasonably protected for adjacent properties.	✔		
Building walls and major window areas are oriented for passive solar and natural lighting.			N/A

13.11.074 Access, circulation and parking.

Parking			
Minimize the visual impact of pavement and parked vehicles.	✔		
Parking design shall be an integral element of the site design.	✔		
Site buildings toward the front or middle portion of the lot and parking areas to the rear or side of the lot is encouraged where appropriate.	✔		
Lighting			
All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties.			*Suggest as Condition of Approval*
Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.			*Suggest as Condition of Approval*
All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light standards to a maximum height of 15 feet are allowed.			*Suggest as Condition of Approval*
Building and security lighting shall be integrated into the building design.			*Suggest as Condition of Approval*
Light sources shall not be visible form adjacent properties.			*Suggest as Condition of Approval*
Loading areas			
Loading areas shall be designed to not interfere with circulation or parking, and to permit trucks to fully maneuver on the property without backing from or onto a public street.	✔		
Landscape			
A minimum of one tree for each five parking spaces should be planted along each single or double row of parking spaces.	✔		
A minimum of one tree for each five parking spaces shall be planted along rows of parking.	✔		
Trees shall be dispersed throughout the parking lot to maximize shade and visual	✔		

relief.			
At least twenty-five percent (25%) of the *trees required for parking lot screening* shall be 24-inch box size when planted; all other trees shall be 15 gallon size or larger when planted.	✔		
Parking Lot Design			
Driveways between commercial or industrial parcels shall be shared where appropriate.	✔		
Avoid locating walls and fences where they block driver sight lines when entering or exiting the site.	✔		
Minimize the number of curb cuts	✔		
Driveways shall be coordinated with existing or planned median openings.	✔		
Entry drives on commercial or industrial projects greater than 10,000 square feet should include a 5-foot minimum net landscaped median to separate incoming and out going traffic, where appropriate.	✔		
Service Vehicles/Loading Space. Loading space shall be provided as required for commercial and industrial uses.	✔		
Where an interior driveway or parking area parallels the side or rear property line, a minimum 5-foot wide net landscape strip shall be provided between the driveway and the property line.	✔		
Parking areas shall be screened form public streets using landscaping, berms, fences, walls, buildings, and other means, where appropriate.	✔		
Reduce the visual impact and scale of interior driveways, parking and paving.	✔		
Parking Lot Landscaping			
It shall be an objective of landscaping to accent the importance of driveways from the street, frame the major circulation aisles, emphasize pedestrian pathways, and provide shade and screening.	✔		
Parking lot landscaping shall be designed to visually screen parking from public streets and adjacent uses.	✔		
Parking lots shall be landscaped with large canopy trees.	✔		
A landscape strip shall be provided at the end of each parking aisle.	✔		

A minimum 5-foot wide landscape strip (to provide necessary vehicular back-out movements) shall be provided at dead-end aisles.	✔		
Parking areas shall be landscaped with large canopy trees to sufficiently reduce glare and radiant heat from the asphalt and to provide visual relief from large stretches of pavement.	✔		
Variation in pavement width, the use of texture and color variation is paving materials, such as stamped concrete, stone, brick, pavers, exposed aggregate, or colored concrete is encouraged in parking lots to promote pedestrian safety and to minimize the visual impact of large expanses of pavement.	✔		
As appropriate to the site use, required landscaped areas next to parking spaces or driveways shall be protected by a minimum six-inch high curb or wheel stop, such as concrete, masonry, railroad ties, or other durable materials.	✔		
Pedestrian Travel Paths			
On-site pedestrian pathways shall be provided form street, sidewalk and parking areas to the central use area. These areas should be delineated from the parking areas by walkways, landscaping, changes in paving materials, narrowing of roadways, or other design techniques.	✔		
Plans for construction of new public facilities and remodeling of existing facilities shall incorporate both architectural barrier removal and physical building design and parking area features to achieve access for the physically disabled.	✔		
Separations between bicycle and pedestrian circulation routes shall be utilized where appropriate.	✔		

Planting comments

- ***Use ground cover planting from flats at 9" or 12" o.c.***

Santa Cruz County Survey Project

Exhibit B

Santa Cruz Archaeological Society
1305 East Cliff Drive, Santa Cruz, California 95062

Preliminary Cultural Resources
Reconnaissance Report

Parcel APN: 030-112-05 SCAS Project number: SE-08-1104

Development Permit Application No. 08-0354 Parcel Size 24088.7 sq. ft. (EMIS)

Applicant: McClure Construction

Nearest Recorded Cultural Resource: 1.2 mi SE

On 10/14/2008 (date) Three (3) (#) members of the Santa Cruz Archaeological Society spent a total of ½ hours on the above described parcel for the purpose of ascertaining the presence or absence of cultural resources on the surface. Though the parcel was traversed on foot at regular intervals and diligently examined, the Society cannot guarantee the surface absence of cultural resources where soil was obscured by grass, underbrush, or other obstacles. No core samples, test pits or any subsurface analysis was made. A standard field form indicating survey methods, type of terrain, soil visibility, closest freshwater source, and presence or absence of prehistoric and/or historic cultural evidence was completed and filed with this report at the Santa Cruz County Planning Department.

The preliminary field reconnaissance did not reveal any evidence of cultural resources on the parcel. The proposed project would therefore, have no direct impact on cultural resources. If subsurface evidence of such resources should be uncovered during construction the County Planning Department should be notified.

Further details regarding this reconnaissance are available from the Santa Cruz County Planning Department or from Rob Edwards, Director, Cabrillo College Archaeological Technology Program, 6500 Soquel Drive, Aptos, CA 95003, (831) 479-6294, or email redwards@cabrillo.edu.

CITY OF
SANTA CRUZ

WATER DEPARTMENT

212 Locust Street, Suite C, Santa Cruz CA 95060 Phone (831) 420-5210 Fax (831) 420-5201

October 8, 2010

Dave McClure
160 Woods Cove Lane
Santa Cruz, CA 95060

Re: **APN 030-112-05, Rodeo Gulch & Soquel Dr, Santa Cruz County, CA**
Proposed 3,200 sf Oil Lube Facility

Dear Mr. McClure:

This letter is to advise you that the subject parcel is 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 parcel 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 not complete; 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 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,

for Bill Kocher
Director

BK/st
P:\WTEN\EngTech\Sherry's\WATER AVAILABILITY 030112-05.doc
Cc: SCWD File

036-112-05

RESOURCE
CONSERVATION DISTRICT
OF SANTA CRUZ COUNTY

820 Bay Avenue, Suite 128
Capitola, California 95010
tel 831.464.2950 | fax 831.475.3215
www.rcdsantacruz.org

July 30, 2008

Dear Dave:

As a follow-up to our Friday July 17, 2008, and Friday July 25, 2008 on-site visits to S. Rodeo Gulch Road, off Soquel Drive, in Soquel, we are happy to provide you with the following report.

NATURE OF REQUEST

The landowner contacted the Resource Conservation District of Santa Cruz County for assistance in developing a revegetation plan to be submitted with the Oil Can Henry's Service Building Preliminary Grading and Drainage Plan to the County of Santa Cruz, as requested by Matt Johnston, Deputy Environmental Coordinator.

BACKGROUND DATA

The property is currently undeveloped and consists of a flat upper area and a sloped area that drains to Rodeo Gulch Creek.

The mapped soil types on the property, according to the Santa Cruz County Soil Survey published by NRCS, 1980, include: 179, 177, 171, Soquel Loam, 2 to 9 percent slopes (171), Watsonville Loam, 2 to 15 percent slopes (177), Watsonville Loam, thick surface, 2 to 15 percent slopes (179), and Lompico-Felton complex, 30 to 50 percent slopes (143). Note: Information contained in the Santa Cruz County Soil Survey should not be used in place of an on-site soils investigation if specific soil information is needed in the design of buildings, roads, or other land developments. Soil Survey information is intended to be used for general planning purposes and is not a substitute for a soil engineering report or a site specific soil evaluation.

In general, soils on the slope tend to have moderate to rapid runoff and moderate to high erosion potential, due to an underlying clay layer. Appropriate erosion control measures can be installed to control surface flow, reduce erosion and allow for adequate revegetation.

The existing vegetation in the sloped area consists of:

California Natives	*Non-native Invasives*
Coast Live Oak	Eucalyptus trees
Alder trees	Acacia trees
Willow trees	French broom
Pine tree (spp?)	Periwinkle
California Blackberry	Poison hemlock
Stinging nettle	Cape ivy
	English ivy

RECOMMENDATIONS

1. Remove as many non-native invasive tree species as feasible.

2. Remove all other non-native invasive species biomass from the site prior to grading, including all roots and seed heads. Remove Poison hemlock and French broom seed heads before they go to seed (March - May), transport and dispose of properly so as not to further disperse the seed. Removal for Periwinkle,

Cape and English ivy should be done at the appropriate times and also transported, and disposed of properly.

3. Re-vegetate the sloped area, after grading, with native plants (seed and container plants) from local native plant nurseries. A list of local native plant nurseries is enclosed with this letter. Native plants already growing on the site may be used for revegetation. Plant deep-rooted vegetation to ensure soil stability. If you would like to request a more diverse list of plants, a list of recommended native plants can be provided from Resource Conservation District staff upon request. California brome, a native grass, my be a good grass to use on the sloped area as it was seen growing on the other side of Rodeo Gulch. It is not recommended to use the Santa Cruz erosion control mix due to the proximity to Rodeo Gulch as this mix does include some non-native invasive clover and grass seed. Please reference the enclosed County of Santa Cruz seed mix selections. Mulch should be applied over native seed.

4. Provide irrigation for native seed and container plants during the summer and fall months for at least two years following planting.

5. An erosion control blanket may be installed to protect the soil from raindrop impact, which can transport particles downslope and decrease water infiltration. The strength of the blanket will be determined by the quantity of flow expected at the site, as well as by the desired longevity. See enclosed typical installation drawing and specifications for erosion control blanket.

6. Straw wattles, also referred to as coir rolls, installed on the contours, can reduce water velocity and allow vegetation to become established. Specifications for coir roll installation is available upon request.

7. Monitor and maintain all existing and planned drainage and erosion control measures, including road culverts and vegetation during all future rainfall events to ensure proper protection and function. Correct deficiencies as needed.

IMPORTANT NOTES

The Resource Conservation District of Santa Cruz County (RCDSCC) makes no representation on the existence or non-existence if any utilities. Contact the underground service alert office at 1-800-642-2444 for information regarding the location of underground utilities. The landowner and/or operator(s) is liable for any damage resulting from disturbance of utility lines when implementing any recommendation in this letter that involves the excavation or movement of soil.

The landowner and/or operator(s) must assume responsibility for any further necessary technical assistance, for compliance with any laws or ordinances, and for obtaining all necessary permits relating to the implementation of these recommendations.

The RCDSCC is a special district organized under state law. The RCDSCC is also a public resource agency and has no enforcement or regulatory functions. The District works closely with the USDA Natural Resources Conservation Service, through a mutual agreement, in responding to the soil and water management needs of Santa Cruz County land users.

If you should have any questions regarding our field visit, this report, or any of the enclosures, please do not hesitate to contact us. We have enclosed two copies of this report for your use.

Sincerely,

Kelli Camara, Program Manager

Jennifer Stern, Restoration Ecologist

The mission of the Resource Conservation District of Santa Cruz County is to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs.

ATTACHMENT 7