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
KATHY MOLLOY PREVISICH, PLANNING DIRECTOR

ENVIRONMENTAL COORDINATOR
NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION
AGENDA DATE: January 24, 2011
DETERMINATION DATE: February 3, 2011

Pursuant to the California Environmental Quality Act, the following projects have been reviewed by the County Environmental Coordinator to determine if they have a potential to create significant impacts to the environment and, if so, how such impacts could be solved. A negative declaration has been prepared in cases where the project is determined not to have any significant environmental impacts. An environmental impact report (EIR) will be prepared for projects, which could have a significant impact.

Public review periods are provided for these Environmental Determinations according to the requirements of the County Environmental Review Guidelines, depending upon whether State agency review is required or whether an EIR is required. The environmental documents are available for review at the County Planning Department at 701 Ocean Street, Santa Cruz. You may also view environmental documents on the web at www.sccoplanning.com under the Planning Department menu, Agendas link. If you have questions or comments about these determinations please contact Matt Johnston of the Environmental Review staff at (831) 454-3201

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs or activities. If you require special assistance in order to review this information, please contact Bernice Romero at (831) 454-3137 (TDD number (831) 454-2123 or (831) 763-8123) to make arrangements.

09-0407 CUNNISON LN. AND SOQUEL DR., SOQUEL APN(S): 037-101-58,-59

The proposal to develop a neighborhood park and a community center to include an approximately 4,584 square foot one-story community center, 225 square foot restroom building, pedestrian pathways, replacement pedestrian bridge over an unnamed arroyo (including associated required mitigation restoration and elective stream/habitat restoration), sports play area with a half basketball court, skate area, children's play areas, gardens (community, heritage and native), bocce court, picnic tables, benches, kiosk, on-site parking, and approximately 6,800 cubic yards of grading. The project includes a 5 Year Master Plan with potential construction phasing. The project requires a Park Master Site Plan Development Permit, Riparian Exception, Parking Plan, Preliminary Grading Approval, and a Variance to increase the impervious surface area from approximately 20 percent to 29 percent.

ZONE DISTRICT: PR (Parks, Recreation, and Open Space)
APPLICANT: County of Santa Cruz Redevelopment Agency and Parks Department
OWNER: Santa Cruz County Redevelopment Agency
PROJECT PLANNER: Sheila McDaniel, 454-3439
EMAIL: pln056@co.santa-cruz.ca.us
ACTION: Negative Declaration with mitigations
REVIEW PERIOD: FEBUARY 3, 2011 TO MARCH 5, 2011
This project will be considered at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

NAME: The Farm Neighborhood Park
APPLICATION: 09-0407
A.P.N: 037-101-58, 59

NEGATIVE DECLARATION MITIGATIONS

A. In order to ensure that the mitigation measures and conditions set forth in the proposed project description are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. The following parties shall attend: The project engineer, project contractor supervisor, Santa Cruz County Environmental Planning staff, and project biologists. Results of pre-construction biotic surveys will be collected at that time and all protection measures, including tree protection fencing and limits of disturbance, shall be inspected.

B. 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.

1. 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 in trees to be retained, 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.
2. 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.

C. 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.

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

D. In order to mitigate impacts of nighttime lighting on the 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 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).

E. In order to ensure that no significant impacts occur as a result of construction noise related to the project, the following mitigations shall be incorporated into the conditions of approval:

1. Construction shall be restricted between 8 a.m. to 6 p.m.
2. No construction shall occur on weekends.

3. All internal combustion engines with intake and exhaust mufflers shall be maintained in good condition.
4. Project construction shall utilize "quiet" air compressors and other stationary noise sources where technology exists.
5. The project shall designate a "noise coordinator" who is responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting early, bad muffler, etc.) and will require that reasonable measures warranted to correct the problem be implemented. The applicant shall post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

F. In order to reduce the impacts to trees to be retained to a less than significant level, prior to issuance of building permits, the applicant shall provide a tree protection plan to the Planning Department for review and approval.

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CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ENVIRONMENTAL REVIEW INITIAL STUDY

Date: 11/22/10 **Application Number: 09-0407**

Staff Planner: Sheila McDaniel

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Santa Cruz County Redevelopment Agency and Parks Department

APN(s): 037-101-58, -59

OWNER: Santa Cruz County Redevelopment Agency

SUPERVISORAL DISTRICT: 1st District

PROJECT LOCATION: The property is located on the northwest corner of Cunnison Lane and Soquel Drive about ¾ mile East of Porter Street and Soquel Drive, within the Soquel Planning area.

SUMMARY PROJECT DESCRIPTION: Proposal to develop a neighborhood park and a community center to include an approximately 4,584 square foot one-story community center, 225 square foot restroom building, pedestrian pathways, replacement pedestrian bridge over an unnamed arroyo (including associated required mitigation restoration and elective stream/habitat restoration), sports play area with a half basketball court, skate area, children's play areas, gardens (community, heritage and native), bocce court, picnic tables, benches, kiosk, on-site parking, and approximately 6,800 cubic yards of grading. The project includes a 5 Year Master Plan with potential construction phasing. The project requires a Park Master Site Plan Development Permit, Riparian Exception, Parking Plan, Preliminary Grading Approval, and a Variance to increase the impervious surface area from approximately 20 percent to 29 percent.

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: Park Site Master Plan

NON-LOCAL APPROVALS

Other agencies that must issue permits or authorizations:

United State Fish and Wildlife Service Incidental Take Permit
California Water Resources Control Board, Section 401 Water Quality Certification
United States Army Corps of Engineers Permit
California Department of Fish and Game Streambed Alteration Agreement
Regional Water Quality Control Board Approval

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: 037-101-58 = 3.7 acres, 037-101-59 = 1.7 acres, Total = 5.5 acres
Existing Land Use: Vacant County Land
Vegetation: The site contains coast live oak riparian forest/eucalyptus trees, coast live oak forest, California annual grassland, developed/ornamental vegetation, ephemeral aquatic
Slope in area affected by project: ___ 0 - 30% ___ 31 – 100%
Nearby Watercourse: Un-named ephemeral stream running in the north to south direction
Distance To: The stream follows the east side of APN 037-101-59 and is located within the approximate center of APN 037-101-58

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: No
Water Supply Watershed: No
Groundwater Recharge: No
Timber or Mineral: No
Agricultural Resource: No
Biologically Sensitive Habitat: Yes
Fire Hazard: No
Floodplain: No
Erosion: No
Landslide: No
Liquefaction: No
Fault Zone: No
Scenic Corridor: No
Historic: No
Archaeology: No
Noise Constraint: No
Electric Power Lines: No
Solar Access: N/A
Solar Orientation: Southern
Hazardous Materials: No

SERVICES

Fire Protection: Central Fire Protection
School District: Soquel
Sewage Disposal: Santa Cruz County Sanitation District
Drainage District: Zone 5 Flood Control District
Project Access: Soquel Drive
Water Supply: Soquel Creek Water District

PLANNING POLICIES

Zone District: PR (Parks, Recreation, and Open Space)
General Plan: O-R (Existing Parks and Recreation), PK-N (Neighborhood Park)
Special Designation: No

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

PROJECT BACKGROUND:

Up until the early 1990s, this property contained The Farm Greenhouse Restaurant ("The Farm") which was the name of a restaurant, bakery and gift shop, with a fruit orchard, and flower and vegetable gardens. The Farm also catered outdoor weddings and receptions, sited amidst landscaped grounds. The Farm site buildings were occupied from 1993 through 2001, after which time the buildings were unoccupied.

In 1991 the County Board of Supervisors authorized the Redevelopment Agency to purchase the project site for future use as a neighborhood park and community facility. At the time, the park was part of a larger group of properties that were proposed to be developed as apartments and residences. The Board of Supervisors subsequently approved a plan that reconfigured the properties to create 39 affordable apartments and six single-family dwelling lots, retaining the 5.5 acre project site for future park development. The Farm buildings were removed over a period of years after purchase by the Redevelopment Agency until removal of the last remaining buildings occurred in 2007.

Development of the park project is a collaborative effort of the County of Santa Cruz Redevelopment Agency and the County of Santa Cruz Parks, Open Space and Cultural Services Department, who will operate and maintain the park after its completion. The programs for the park and the design of the site are the product of a series of neighborhood meetings and workshops and two Parks Commission hearings where a significant number of residents in the vicinity became actively involved in identifying the park features that would meet their recreational and open space needs. Following these meetings, the Board of Supervisors approved the Park Site Master Plan at a public hearing on November 21, 2006. The park master plan calls for the development of a LEED-certified community center building, community gardens, restrooms, parking lots, outdoor benches, pathways with interpretive signage, play structures, a skate board feature, a basketball half-court, heritage and native plants gardens, an outdoor sculpture and interpretive program elements.

This initial study is the next step in the entitlement process before permit review and approval by the Planning Commission and construction of the facility.

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

The property is a County-owned five and one half acre site divided by a riparian corridor traveling north south through the property. The property is comprised of two separate assessor's parcels. The larger of the two sites is located at the corner of Soquel Drive and Cunnison Lane (to be referred to as the Cunnison Lane/Soquel Drive parcel), approximately ¾ of a mile east of Soquel Drive and Porter Street. The smaller site is located on the eastern end of Tee Street (to be referred to as the Tee Street parcel), extending east from Hardin Way, and north of Soquel Drive.

The property is bordered by Soquel Drive to the south, Cunnison Lane to the east, and Tee Street to the west. The property is otherwise surrounded by single family residentially developed property on all sides. The Farm multi-residential housing development is located to the east of the site on Cunnison lane.

Both properties contain an ephemeral stream that travels in a north/south direction through the property. The stream follows the eastern edge of the Tee Street parcel and provides a substantial riparian corridor that occupies approximately half of this site. The ephemeral creek also travels through the Cunnison Lane/Soquel Drive Lane parcel from the northeast to southwest of the site toward Soquel Drive. As a result of this stream, and associated riparian corridor, the property is physically divided into two separate development areas, one located and accessed from Tee Street and one located and accessed by Soquel Drive and Cunnison lane. These areas were previously connected via an existing pedestrian bridge that was removed.

Topographically speaking, the property generally slopes to the southwest with an elevation range of 160 to 120 feet. The site contains an approximately fifteen to twenty-five foot depression where the ephemeral stream channel is located.

Site vegetation is comprised of approximately 2 acres of coast live oak riparian forest/eucalyptus trees along the unnamed ephemeral creek, 1/3 of an acre of coast live oak forest on the west side of property located on the Tee Street portion of the site, 1.7 acres of California annual grassland located on both sides of the creek, 1.2 acres of developed/ornamental vegetation comprised of agricultural fields including fruit orchards and field crops, and .07 acres of ephemeral aquatic habitat located in the ephemeral creek.

The property currently contains remnants of historic development including asphalt paving, portions of remaining fencing, and remnant soil mounds.

DETAILED PROJECT DESCRIPTION:

For purposes of clarity, the project description has been broken into three distinct areas of site development: The area located adjacent to Cunnison Lane/Soquel Drive, the area adjacent to Tee Street, and the Riparian Corridor area/creek area. These areas are as follows:

Cunnison Lane/Soquel Drive

This portion of the project site includes a proposed 4,584 square foot one-story community building with an assembly room with a small "warming" kitchen, two classrooms/art studios, kiln room, an office, foyer gallery, restrooms, outdoor building terrace and patios. Fifty four parking spaces are provided on site along Cunnison Lane and adjacent to Soquel Drive. The site also provides a half basketball court and skate facility located adjacent to Soquel Drive. Also proposed are community gardens,

heritage gardens, and native gardens located on the northeast portion of the site, as well as pedestrian pathways throughout the site, and nature trails alongside the riparian corridor area. Vehicular access to this site is proposed along two locations on Cunnison Lane. Pedestrian access is proposed from both Soquel Drive and Cunnison Lane. A gated entry is proposed at both vehicle site entry locations.

Tee Street Improvements

This portion of the park is proposed to contain a 225 square foot restroom building, four parking spaces on site, three children's play areas, picnic areas, benches, multi-purpose turf areas, nature trails, and a bocce ball court, as well as nature trails alongside the riparian corridor. Access to the four proposed parking spaces is via Tee Street. A gated entry is proposed at this vehicle site entry.

Riparian Corridor/Creek Area

The project proposes creek stabilization work within the creek channel that includes habitat restoration throughout the channel. In stream habitat restoration and riparian plantings within the corridor associated with creek restoration. The project plans include detailed restoration plans referencing the recommended restoration measures of the biotic report (Attachment 5) as well as erosion control plans.

Four principal areas of restoration are proposed for this project: Oak riparian mitigation to promote high quality habitat; Oak tree replacement mitigation within the riparian area for replacement of trees removed elsewhere on the site; Riparian corridor buffer plantings, which include removal of invasive species; and, park restoration plantings throughout the site and planting of native species to improve habitat value.

Other project work within the corridor includes pedestrian bridge construction to connect the two development areas of the park on Tee Street and Cunnison Lane. This involves bridge abutments and some oak tree trimming and requires a Riparian Exception.

Parks Program Statement

The Parks, Open Space and Cultural Services Department has provided a program statement (Attachment 15) that details the program specific uses proposed for the park and community center. Hours of operation for the proposed park are generally proposed between sunrise and sunset for outdoor recreation, picnic, play areas, nature trails, etc. The hours of operation for the community building, with associated classrooms, is generally proposed between 8 am and 10 p.m., with early morning classes starting as early as 7 a.m. During the weekdays, of the total 58 on site parking spaces, 45 parking spaces are to be dedicated to the community center uses and 13 spaces dedicated to outdoor uses. During the weekends, 37 space of the total 58 parking spaces are proposed to be dedicated for community center use and 21 spaces are available for outdoor uses at the park.

The three rooms of the community center are proposed to be occupied at various times of the day, based on the park program statement. The occupancy of the community center classrooms are proposed to be limited by the total number of parking spaces on site minus the required parking demand for the outdoor recreational uses on the weekdays and weekend. At no time will the parking required for general park usage, as determined by the traffic study, be used for the community center uses. The Program Statement includes a Parking Matrix (Attachment 15) that provides greater detail regarding the classroom occupancy of the various rooms on the weekdays and weekend. Upon completion of construction, the Parks Department will manage the park site, and program uses, including the classroom schedule.

Grading

The project requires approximately 6,800 cubic yards of cut and 1,900 cubic yards of fill for site preparation, mostly in the area of Cunnison lane, to address the challenges of sloping site topography for development of parking and circulation, site accessibility requirements, and to create a natural appearing slope.

III. ENVIRONMENTAL REVIEW CHECKLIST

A. GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.	☐	☐	☒	☐
	B. Strong seismic ground shaking?	☐	☐	☒	☐
	C. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	D. Landslides?	☐	☐	☒	☐

Discussion (A through D): The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). However, the project site is located approximately 7 miles to the southwest of the San Andreas fault zone, and 4 miles to the southwest of the Zayante Fault. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in central California history.

All of Santa Cruz County is subject to some hazard from earthquakes. However, the project site is not located within or adjacent to a County or State mapped fault zone. A geotechnical investigation for the proposed project was performed by Haro, Kasunich and Associates, Inc. and dated November 23, 2009 (Attachment 3). The report states that "Potential seismic hazards include structural damage from seismic shaking, surface ground rupture, liquefaction, and land sliding." "The potential for seismic induced liquefaction at the site is relatively low." "The potential for seismic

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

induced land sliding on gently sloping areas of the property is also relatively low." The geotechnical report recommendations are included in the design of the project. The report is required to be updated prior to issuance of the building permit to address evaluation of scour, and how it will affect proposed foundation design, as well as updated seismic design parameters for the most current building code (as of January 1, the 2010 CBC will be in effect). This will ensure that structural damage as a result of an event will be low, which will result in a less than significant impact.

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: The geotechnical report concluded that the "potential for deep seated instability of the creek bank slopes which would affect the proposed community center building or pedestrian bridge abutments is low." The proposed community building is setback approximately 35 feet, which provides for an adequate setback for the proposed building. The community center site is underlain by clay soil, which is known for expansion. The report recommends re-densification of the soil at the proposed spread footing building pads. The upper parking lot area is comprised of silty sand and the lower parking lot is comprised of clayey sand. Additional testing is recommended prior to determination of sub grade elevations of these areas and will be implemented during the project construction.

The recommendations contained in the geotechnical report, noted above, will be implemented to reduce this potential hazard to a less than significant level.

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

Discussion: There are slopes that exceed 30% on the property. The proposed community building is set back 35 feet from the slope and is not within close proximity to slopes in excess of 30%. However, creek restoration work along the creek banks is proposed to occur on slopes that exceed 30 percent slope. This work is intended to improve the quality of the habitat and is not expected to result in significant impacts.

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

Discussion: Some potential for erosion exists during the construction phase of the project; however, this potential is minimal because the plans provide an erosion control plan that includes standard erosion control measures as a required condition of the project. As typically noted in the conditions of approval, prior to approval of a grading or building permit the project must have an approved Erosion Control Plan that

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

specifies detailed erosion and sedimentation control measures. The plan includes provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion. The potential for erosion is less than significant.

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: According to the geotechnical report for the project, noted above, there are indications of expansive soils in the project area. The recommendations contained in the geological report, including re-densification of the soil pads for the proposed community center and restroom building shall be implemented during construction to adequately mitigate this potential hazard to a less than significant impact.

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. The project will connect to the Santa Cruz County Sanitation District (Attachment 11), and the applicant will 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.

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, no portion of the project site lies within a 100-year flood hazard area.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
2. Place within a 100-year flood hazard area structures 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, no portion of the project site lies within a 100-year flood hazard area.

3. Be inundated inundated by a seiche, tsunami, or mudflow?	☐	☐	☐	☒
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: The project would obtain water from Soquel Creek Water District and would not rely on private well water. Although the project would incrementally increase water demand, Soquel Creek Water District has indicated that adequate supplies are available to serve the project (Attachment 10). The Soquel Creek Water District has conditioned the project to provide offsets for new water service.

The project is not located in a mapped groundwater recharge area.

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 will not affect a public or private water supply.

6. Degrade septic system functioning?	☐	☐	☐	☒

Discussion: There is no indication that existing septic systems in the vicinity would be affected by the project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 proposed project includes stream restoration and bridge replacement within and alongside an ephemeral stream channel. A Stream Hydrology and Hydraulics Final Report (Attachment 13) prepared by Mesiti-Miller Engineering, Inc., dated July 29, 2009 determined the recommended bridge height to ensure that there would not be an alteration to the stream channel as a result of the bridge construction. The project is conditioned to require the soils report to provide an analysis of scour in the vicinity of bridge abutments for foundation design approval prior to issuance of the building and grading permits.

The project is designed to comply with the recommendations of the stream hydrology report to ensure that there are no alterations to the stream channel as a result of construction of the bridge.

The proposed project includes an On-Site Storm Drainage Final Report (Attachment 14) prepared by Mesiti-Miller Engineering, Inc., dated August 4th, 2009. Impervious areas are proposed to increase by 60,501 square feet as a result of the project. This requires a detention system to mitigate hydrologic changes and to maintain post development run-off at the pre-development run-off rate. The project design includes a proposed detention system on the Cunnison Lane portion of the project designed to meter flows into the street. The tee street drainage plans provide a detention/retention rainwater garden system designed to allow percolation of run-off into the groundwater and provide a usable surface. Off site improvements identified in Item 8 below, address project proposed improvements to ensure that flooding does not occur in the downstream drainage system.

The plan improvements will ensure that the project does not result in flooding on or off site.

8. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

Discussion: Drainage calculations included in the Off- Site Storm Drainage Final Report (Attachment 14) prepared by Mesiti-Miller Engineering, Inc., dated July 11th,

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

2009 have been accepted by the Department of Public Works (DPW) Drainage Section staff. Some of the downstream drainage facilities are not adequately sized to accommodate existing or proposed runoff. The calculations show that as a result of the proposed drainage runoff, project upgrades are required to be completed to a number of downstream drainage facilities impacted by the proposed project. The report recommends drainage upgrades to Soquel Drive East and Soquel Junction drainage areas, as noted in the report, and includes pipe diameter enlargement, replacement of three existing inlets, replacement of one existing junction structure, adjustment/replacement of another junction structure, and replacement of a manhole cover for adjustments of new pipe elevations. The project plans address these requirements. The project is conditioned to provide final drainage details and analysis prior to issuance of the building permit.

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:

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

Discussion: The project includes a detention system that provides a filtration system to ensure that contaminants do not enter into the drainage system without treatment. A plan for maintenance will be required to minimize the effects of urban pollutants. This is a standard condition of approval and is not required as a mitigation measure.

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 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: A Biotic Report was prepared for this project by H.T. Harvey and Associates Ecological Consultants, dated December 4, 2009 (Attachment 4 and 5, Excerpts, full report on file). It identified 30 special-status plants that occur in habitat types similar to those found on the project site, assessed potential impacts to these species as a result of the proposed project, and recommended measures to reduce

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

impacts to less than significant. These measures have been incorporated into the project design.

Less than Significant Impacts:

The report concluded that there are three impacts that are less than significant. Impacts to annual grassland that occur in less than optimal habitat area due to previous development disturbance. Impacts to the Maple-leaved checkerbloom can be assumed to be absent, based on the disturbed condition of the site. This species was not observed on the site, and although it may still be present the report concluded that the likelihood is low considering that the habitat is poor. Removal of non-natives will benefit the Maple-leaved checkerbloom.

Lastly, several special status wildlife species may occur on the site, but are not expected to breed there. This includes the bank swallow, western red bat, yellow warbler, and tri-colored blackbird. The project will have no effect on the breeding success of these species. Project activities may temporarily reduce habitat, but the report concluded habitat suitable to these species is readily available elsewhere locally. Thus, the project impacts to these species are not considered significant.

Potentially significant impacts to habitat :

The biotic report identified potentially significant impacts resulting from the project such as the loss of Coast Live Oak Riparian Forest, loss of Coast Live Oak Habitat, impacts to aquatic habitat by in stream stabilization. The recommended measures are identified in the biotic report excerpts, attached, and are included in the project restoration plans. The project includes a recommended implementation plan, planting plan, and a maintenance and monitoring plan. This includes impacts to Coast Live Oak Riparian Forest, loss of Coast Live oak, impacts to aquatic habitat, and in-stream stabilization.

Potentially significant impacts to terrestrial species:

Potential significant impacts to roosting bats and nesting birds have been identified as a result of restoration plan work. In order to reduce potential impacts to roosting bats, raptors, and migratory songbirds, the following mitigation measures shall be included in the project conditions of approval.

A. Tree removal activities shall be limited to the months between November 1 and March 1, if feasible.
   1. 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 in trees to be retained, 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.
   2. The maternity roosting season for bats is March1 – July 3. Tree removal

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

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.

B. 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.
   1. 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.
      a. 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.

C. 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?	☐	☐	☒	☐

Discussion: A Biotic Report was prepared for this project by H.T. Harvey and Associates Ecological Consultants and dated December 4, 2009 (Attachment 4 and 5). The project restoration work includes creek stabilization work within the creek channel and restoration of habitat within the riparian buffer. The project also includes pedestrian bridge construction across the channel and within the riparian buffer.

Four principal areas of restoration work are proposed by this project: Oak riparian restoration to promote high quality habitat; Oak woodland enhancement, including relocating, replanting, and replacement of trees removed elsewhere on the site; Riparian Exception buffer plantings within the buffer, which includes removal of

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

invasive species; and, park restoration plantings throughout the site with native species to improve habitat value.

The project requires a Riparian Exception from the Planning Department, a United States Army Corps of Engineers (USACE) permit for work within the creek and up to the high water mark, California Fish and Game Streambed Alteration Agreement for work along the streambed and stream bank, and a Regional Water Quality Control Board water quality certification pursuant to USACE jurisdiction requirements.

Recommended biotic protection measures are included in the project plans with exception of a few identified impacts.

Coast Live Oak Riparian Habitat: The plans include a restoration area of approximately .04 acre and is comprised of tree removal and replacement within the riparian corridor at a ratio of 3:1, tree pruning/shrub removal associated with in-stream restoration at a ratio of 1:1, in-stream repair work aquatic restoration at a ratio of 1:1, and, non-native eucalyptus removal at a ratio of 2:1. The replacement ratios are per the Habitat Restoration Summary and Table 5 of the Biotic Report and are included in the project proposal.

Oak Woodland: The project also includes removal of 15 oak trees outside the sensitive habitat areas that are recommended to be replaced with 43 trees. The plans include restoration plans identifying the replacement species and location as well as relocation of salvaged trees.

County of Santa Cruz Riparian Buffer Restoration: Construction disturbance within the buffer area is recommended to require seeding of native species on all temporarily disturbed areas within the buffer following construction. Erosion control plans are included in the project plans. A detailed erosion and drainage control plan is a required component of the County Grading permit

Non biotic report plantings include:

Park Restoration Plantings: Additional habitat enhancement is provided via landscape planting of native species throughout the site, in approximately .6 acres of the site.

Tree Protection Fencing Measures: The biotic report recommends tree protection measures as recommended by the arborist report (Exhibit 9). The tree protection fencing is not shown on the plans. In order to ensure no significant impacts to existing trees to be retained will occur, prior to issuance of building permits, the applicant shall submit to the Planning Department a tree protection plan for review and approval.

Tree Transplant : The report recommends trees suitable for replanting (less than 6 inches in diameter) are replanted. This includes approximately 8-12 native oak trees. Replanting is included in the project restoration plan and project plans, consistent with this recommendation.

Non-Native Species Removal: The report recommends removal of a non-native eucalyptus grove as well as non-native woody invasive trees within the project area. This is included in the restoration plan.

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

Drainage Pipe Construction: Installation of a drainage pipe on the Tee Street side requires placement of an outfall into the riparian corridor and is included in the proposed creek stabilization work. Construction work requires trimming of trees and/or roots. This work shall be conducted under the supervision of the project biologist. Tree and/or root trimming shall be supervised by the project arborist to minimize or avoid impacts, as noted in the biotic report.

Restoration Monitoring

The project includes a recommended monitoring plan that includes project construction supervised by an ecologist, a biologist prepared as-built plan following construction completion, and final performance and success criteria pursuant to the recommendations of the report.

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*:**

A Biotic Report was prepared for this project by H.T. Harvey and Associates Ecological Consultants and dated December 4, 2009 (Attachment 4 and 5). The report identifies potentially significant impacts from proposed in-stream channel stabilization work on .08 acres of the aquatic habitat and creek bank area, including temporary impacts to aquatic habitat and creek bank area. The following measures are included in the plans to reduce the impacts to less than significant levels.

Channel Repair and Stabilization Work: Three areas of the creek channel are proposed to be stabilized to reduce the likelihood of additional creek instability and habitat degradation, which will improve the long term quality of the habitat and reduce the likelihood of creek bank failure. The recommendations of the habitat restoration plan are incorporated into the plans as proposed.

Aquatic Habitat: To minimize impacts to water quality and protect habitat value, best management practices are recommended to be implemented during construction, project monitoring by a biologist during construction, dry season work only, and implementation of erosion control measures during construction.

Revegetation of Channel Slopes: Once the bridge has been constructed and in-channel stabilization is complete, all disturbed areas will be revegetated at a 1:1 ratio, trees removed will be replaced at a 2:1 or 3:1 ratio per the biotic report.

Roosting Bats, migratory songbirds and raptors: See C.1. above.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
4. Produce nighttime lighting that would substantially illuminate wildlife habitats?	☐	☒	☐	☐

Discussion: The project plans provide lighting consistent with the County Code lighting requirements enumerated in County Code 13.11, as noted on the plans. These requirements minimize impacts to surrounding properties. The plans propose the following lighting adjacent to the riparian corridor, which is consistent with the general standards:

Cunnison/Soquel Drive: Lighting is proposed at the community building exits, located to the rear of the building adjacent to the riparian corridor. These lights are wall mounted, 34 watt, fluorescent lights, with battery backup. The proposed trellis structure adjacent to the building and riparian corridor proposes a series of 50 watt down light bulbs with integral transformer. Parking lot lights adjacent to the riparian corridor are 15 foot maximum height, pole mounted, metal halide lights, without house shield fixtures. Two wall mounted lights are proposed on either end of the proposed pedestrian bridge, similar to those described for the building, above.

Tee Street: A 15 foot pole, 210 watt light, without shield, is proposed along the restroom building, within 30 feet of the riparian buffer. A wall mounted, 34 watt, fluorescent light, with battery backup fixture is proposed behind the restroom building also.

The Biotic Study (Attachment 4 and 5) did not identify any significant impacts that would occur as a result of potential project lighting. Nonetheless, the riparian corridor could be adversely affected by a new or additional source of light that is not adequately deflected or minimized. Based on the light diagram included in the project plans, two proposed light sources are recommended to be revised to mitigate lighting impacts to the riparian corridor.

Proposed Mitigation Measures:

A) The proposed 10 foot tall parking light pole adjacent to the riparian corridor is recommended to be revised to provide a shield that will prevent light from casting into the edge of the riparian buffer.

B) The four proposed lights on the bridge are recommended to be shielded so that lighting will not cast into the creek channel and riparian corridor.

These mitigation measures would reduce the project impacts to less than significant. Prior to issuance of a building permit, the applicant shall submit a lighting plan reflecting the mitigations, above, to the Planning Department for review and approval.

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

Discussion: No wetlands have been identified on the subject parcels.

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 proposed project includes riparian restoration plans that have been prepared to meet the recommendations of the biotic report to improve the habitat quality of the riparian corridor. This includes removal of non-natives and replacement with native vegetation. The work is exempt from the riparian protection ordinance and does not require a riparian exception.

The project proposes bridge construction across the creek, which is not exempt from the riparian ordinance. A riparian exception can be approved for this work.

No grading is permitted between October 15th and April 15th.

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

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

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

Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

1.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

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

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

Discussion: The project site is zoned Parks, Recreation and Open Space, 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 is not adjacent to land designated as Timber Resource. Thus, the project will not affect the resource or access to harvest the resource in the future.

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

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

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 and surrounding area within radius of two/thirds mile does not contain any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide, or Farmland of Local Importance would be converted to a non-agricultural use. In addition, the project site contains no forest land, and no forest land occurs within one mile 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 from project implementation.

2.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion: The project site is zoned Parks, Recreation, and Open Space, which is not considered to be an Extractive Use Zone (M-3) nor does it have a Land Use Designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project.

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

F. VISUAL RESOURCES AND AESTHETICS

Would the project:

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

Discussion: The project will 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, 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 property is a vacant, infill site surrounded by developed residential properties. Topographically speaking, the properties generally slope to the southwest with an elevation range of 120 feet to 160 feet. The project has been designed and landscaped to fit into this setting. Approximately 6800 cubic yards of grading is proposed to develop the combined property to accomplish handicap accessibility. The proposed grading gently realigns the natural contours of the site from Soquel Drive up along Cunnison Lane to address the project design requirements and creates a natural appearing slope. The final project will not significantly affect the existing visual character of the site.

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

Discussion: The project will create an incremental increase in night lighting. However, this increase will be small, and will be similar in character to the lighting associated with the surrounding existing uses.

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

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 existing structure(s) on the property is not designated as a historic resource on any federal, State or local inventory.

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

Discussion: No archeological resources have been identified in the project area. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of 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: No paleontological resources are mapped in the project area.

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

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 project does not involve the use of hazardous materials that require routine transport, use, or disposal as a result of the proposed project.

2.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒

Discussion: The project does not involve the use of hazardous materials.

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 does not involve the use of hazardous materials.

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 2/17/2010 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?	☐	☐	☐	☒

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

Discussion: The project is not located within an airport approach zone.

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?	☐	☐	☐	☒

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

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

Discussion: The project will not interfere with an adopted emergency response plan.

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

Discussion: The project does not involve electro-magnetic 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 will include 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, including but not limited to intersections, streets, highways and	☐	☐	☒	☐

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

freeways, pedestrian and bicycle paths, and mass transit?

Discussion:

A traffic study was prepared for the proposed project by Fehr & Peers Transportation Consultants (Attachment 8), dated September 30, 2009 and accepted by the Public Works Department Road Engineering. Based on the traffic report, the proposed project is expected to create a small incremental increase in traffic on nearby roads and intersections. However, given the small number of new trips created by the project (94 PM peak-hour trips when the community center is occupied and the outdoor area is in use, based on use primarily in the PM peak-hour of use, as detailed in the program statement attached as Appendix D –Community Center Program and Schedule Assumptions), this increase is a less than significant project level and cumulative-level impact at the three study intersections at the PM peak hour (Soquel Drive/Porter Street, Soquel Drive/Cunnison Lane, and Soquel Drive/Park Avenue). AM peak-hour trips were not evaluated because the main use of the facility occurs in the PM peak-hour and thus the increment of traffic for the AM is also less than significant. Further, the increase in PM traffic will not cause the Level of Service at any nearby signalized intersection at either the Soquel Drive/Porter Street or Soquel Drive/Park Avenue intersection to drop below Level of Service D. The proposed level of service under project conditions at the un-signalized Soquel Drive/Cunnison Lane intersection is expected to be LOS A overall, which will not reduce the level of service or result in significant impacts as a result of the project. Notwithstanding the overall LOS, the southbound left turn lane on the Cunnison Lane approach at this intersection is expected to be LOS E which initiated a review of traffic signal warrants. The traffic signal warrant analysis indicates that this intersection does not meet the minimum peak-hour volume signal warrants. In addition, the Public Works Department, in conjunction with the Redevelopment Agency, coordinated a community meeting process to consider a signal at this intersection. The Community supported the traffic analysis that a traffic signal was not necessary at this intersection. Furthermore, the project includes Transportation Improvement Area fees, which will offset any cumulative traffic impacts at this intersection.

The report noted that the proposed project is expected to attract pedestrian users from surrounding neighborhoods including Hardin Way, Monterey Avenue, and Orchard Street. The report concluded that the proposed park and community center will have a less than significant impact on the existing pedestrian, bicycle, and transit network; and the report did not recommend any required pedestrian improvements. However, the report suggested pedestrian crosswalk improvements at Cunnison lane to allow pedestrians to cross the street to the park. These improvements would also serve the metro bus stop along Soquel Drive. A pedestrian crosswalk will be included as a condition of

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	approval, but is not required as a mitigation measure.				
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?	☐	☐	☐	☒
3.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
4.	Result in inadequate emergency access?	☐	☐	☐	☒

Discussion: The project's road access meets County standards and has been approved by the local fire agency or California Department of Forestry, as appropriate.

During construction, one lane will remain open at all times. Fire trucks, ambulances and other emergency vehicles will not be blocked from using the road at any time.

5.	Cause an increase in parking demand which cannot be accommodated by existing parking facilities?	☐	☐	☐	☒

Discussion: The project includes a parking plan, which is substantiated by a parking study, contained in a traffic report (Attachment 12). It evaluates the required parking for the proposed facility and proposed uses, and concludes that parking demand will be accommodated on site. This parking plan is included in the proposed project description pursuant to the Parking Ordinance, County Code Section 13.10. 553.

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 standards that are necessary to prevent potential hazards to motorists, bicyclists, and/or pedestrians arriving to the site. The project proposes handicap accessible pathways from the existing bus stop on Soquel Drive to the proposed park and community center. The project provides bicycle parking on site for bicycle access as well. The project will improve public safety of public transit, bicycle, or pedestrian facilities from the street to

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

the site.

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 Item 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: A noise study was prepared for the project by Richard B. Rodkin, PE, dated October 31, 2008 and revised on July 27, 2009 (Attachment 7). The noise study determined that operational noise from the project that may increase the ambient noise level in the vicinity of the project would result from play/sports area as well as parking areas and picnic areas. The noise study recommends construction of a six foot fence along the west property line of the park south of Tee Street and an eight foot fence along the west property line north of Tee Street. This fence is included in the project plans. A portion of fence may be three to four feet in height along a single property owner's property line, as stipulated in an agreement with the county that the park noise would not disturb them. It is not anticipated that the agreed upon reduction in the fence height along a single property will significantly impact adjoining properties.

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

Discussion: The project site is not located adjacent to known sources of ground-borne vibration or ground-borne noise levels.

3.	Exposure of persons to or generation of noise levels in excess of standards established in the General Plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Discussion: Per County policy, average hourly noise levels shall not exceed the General Plan threshold of 50 L_{eq} during the day and 45 L_{eq} during the nighttime.

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

Impulsive noise levels shall not exceed 65 db during the day or 60 db at night. The noise study (Attachment 7) prepared for this project has shown that traffic noise along Soquel Drive and Cunnison Lane will result in less than .5 dBA Ldn increase in noise levels. This is considered less than a significant impact.

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

Discussion: Noise generated during construction will increase the ambient noise levels for adjoining areas. Construction will be temporary, however, and given the limited duration of this impact it is considered to be less than significant with standard construction noise controls. These include hours of operation, intake/ and exhaust mufflers on internal combustion engine noise sources, separation between noise sources and sensitive receptors, use of quiet stationary noise sources, construction plan identifying schedule for noise generating activities coordinated with noise sensitive facilities, and identification of a disturbance coordinator. In order to ensure that no significant impacts occur as a result of the project, Noise Study mitigation recommendations contained in the attached Noise Study (recommended mitigations only) prepared by Richard B. Rodkin, dated October 31, 2008 and Revised July 27, 2009 (Attachment 7) shall be incorporated into the conditions of approval:

A. Construction shall be restricted between 8 a.m. to 6 p.m.

B. No construction shall occur on weekends.

C. All internal combustion engines with intake and exhaust mufflers shall be maintained in good condition.

D. Project construction shall utilize "quiet" air compressors and other stationary noise sources where technology exists.

E. The project shall designate a "noise coordinator" who is responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting early, bad muffler, etc.) and will require that reasonable measures warranted to correct the problem be implemented. The applicant shall post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

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?	☐	☐	☐	☒

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

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

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 public airport or private airstrip.

K. AIR QUALITY

Where available, the significance criteria established by the Monterey Bay Unified 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 will be generated by the project there is no indication that new emissions of VOCs or NO_x will exceed MBUAPCD thresholds for these pollutants and therefore there will 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 will 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-	☐	☐	☒	☐

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

4. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
5. Create objectionable odors affecting 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 park project, like all development, is responsible for an incremental increase in green house gas emissions by usage of fossil fuels during the project construction and during on-going operation of the project in the form of facility heating.

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 SB 375 legislation. Until the CAP is completed, there are no specific standards or criteria to apply to this project. However, the following factors, when considered as a whole, are expected to reduce nay impacts of increased green house gas emissions to a less than significant level:

A. The project proposes to obtain LEED certification for the community center building, which will reduce ongoing heating for the building and thereby greenhouse gas emissions. (LEED is a third-party certification program and the nationally accepted benchmark for the design, construction and operation of high-performance green buildings.)

B. The facility is proposed along a major transit corridor and bus route, which will encourage visitors to access the facility via the public transit system.

C. The proposed park is located in a residential neighborhood and will reduce

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

vehicle trips of nearby residents that would otherwise travel to visit a park.

D. The location of this facility will reduce vehicle trips from this neighborhood traveling to community classes offered by the parks department at other facilities in the County that will now be available at this facility.

E. The project construction will be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment involved in the project.

2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion: See Item 1, above.

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:				
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks or other recreational activities?	☐	☐	☐	☒
e. Other public facilities; including the maintenance of roads?	☐	☐	☒	☐

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

Discussion (a through e): The project will result in an incremental contribution to the need for services; however, 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 will be used to offset the incremental increase in demand for 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 project is a proposed park and will not result in an increase in the use of other existing parks.

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

Discussion: The project is a recreational facility project under environmental review here. The proposed project should not result in a significant impact.

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 construction of which could cause significant environmental effects?	☐	☐	☒	☐

Discussion:

On-Site Drainage:

Drainage Calculations included in the On-Site Storm Drainage Final Report (Attachment 14) prepared by Mesiti-Miller Engineering, Inc., dated August 4th, 2009 noted in Table 4 of the report identify proposed impervious areas will increase from existing conditions by approximately 60,501 square feet. The drainage design recommended for the project includes two different approaches to slow down, infiltrate, and filter storm water. Some of the drainage from the parking areas is proposed to be diverted to vegetated areas, bioswales, rain gardens, and lawn areas. Two different

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

drainage approaches were provided for the site. The Cunnison Lane project requires a traditional drainage approach involving sub-surface detention/retention pipe via a series of bioswales and separator meant to meet the LEED certification design criteria. This detention system is designed to treat and meter flows into the public drainage system along Soquel Drive. Secondly, the Tee Street development area involves a detention/retention system that allows treatment through natural grassy areas and ultimately percolation into the groundwater system.

Off-Site Drainage:

The proposed project will add additional impervious surface within the drainage basin, which will increase the amount of runoff from the project as noted above. Drainage calculations included in the Off-Site Storm Drainage Final Report (Attachment 14) prepared by Mesiti-Miller Engineering, Inc., dated July 11, 2009 have been reviewed for potential off-site drainage impacts and are expected to be accepted by the Department of Public Works (DPW) Drainage Section staff. The calculations show that as a result of the proposed drainage runoff, off-site project upgrades are required to be completed to a number of downstream drainage facilities impacted by the proposed project. In particular, some of the downstream drainage improvements are not adequately sized to accommodate existing or proposed runoff. As a result, the report recommends drainage upgrades to Soquel Drive East and Soquel Junction (essentially Soquel Drive between Cunnison Lane and east of Hardin Way), and includes pipe diameter enlargement, replacement of three existing inlets, replacement of one existing junction structure, and adjustment/replacement of another junction structure, and replacement of a manhole cover for adjustments of new pipe elevations. Most of the off-site drainage improvements will be completed within the existing right-of-way.

These on-site and off-site drainage improvements are expected to result in the potential for temporary erosion during construction. The plans include an erosion control plan with measures that will limit site erosion and will not result in significant impacts.

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 will connect to an existing municipal water supply. Soquel Creek Water District has granted a conditional will serve letter, dated September 28, 2010 that is valid for two years, determining that adequate supplies are available to serve the project (Attachment 10) provided the project complies with the Water Demand Offset Program and additional conservation requirements of the water district prior to the actual connection.

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

Municipal sewer service is available to serve the project, as reflected in the attached letter from the County Sanitation District Memorandum, dated August 16, 2010 (Attachment 11).

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

Discussion: The project's wastewater flows will 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: The project is located within the existing boundaries of the Soquel Creek Water District. The project has received a will serve letter from the Soquel Creek Water District.

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 commitments?	☐	☐	☐	☒

Discussion: See item O.1, above.

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

Discussion: The project is projected to require the off-haul approximately 5000 cubic yards of soil to the county landfill. This landfill has sufficient permitted capacity to accommodate this disposal need. The project shall be conditioned to require the grading contractor to submit off-haul receipts to ensure that the volume is deposited at a permitted landfill location.

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
solid waste?				

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.

2.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

Discussion: The project provides a habitat restoration plan that has been subject to a biotic report and will be conditioned to comply with the recommended measures, as noted in the report.

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

Discussion: The project will 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 would not induce substantial population growth in an area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area including, but not limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes

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

including General Plan amendments, specific plan amendments, zone reclassifications, sewer or water annexations; or LAFCO annexation actions.

The proposed project is designed at the density and 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 does 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.

IV. TECHNICAL REVIEW CHECKLIST

	REQUIRED	DATE COMPLETED	N/A
Agricultural Policy Advisory Commission (APAC) Review	Yes ☐ No ☐		☒
Archaeological Review	Yes ☐ No ☒		☐
Biotic Report/Assessment	Yes ☒ No ☐	12/4/2009	☐
Geologic Hazards Assessment (GHA)	Yes ☐ No ☒		☐
Geologic Report	Yes ☐ No ☒		☐
Geotechnical (Soils) Report	Yes ☒ No ☐	11/23/2009	☐
Riparian Pre-Site	Yes ☒ No ☐	1/23/2009	☐
Septic Lot Check	Yes ☐ No ☐		☒
Other:	Yes ☒ No ☐		☐
Off-Site Storm Drainage Final Report		7/11/2009	
Off-Site Storm Drainage Final Report		8/4/2009	
Stream Hydrology and Hydraulics Final Report		7/29/2009	
Sanitary Sewer Final Report		8/4/2009	
Domestic and Fire Protection Water Supply Final Report		8/4/2009	
Draft Transportation Impact Analysis		9/30/2009	
Arborist Report		12/4/2009	
Biotic Mitigations Report		12/4/2009	

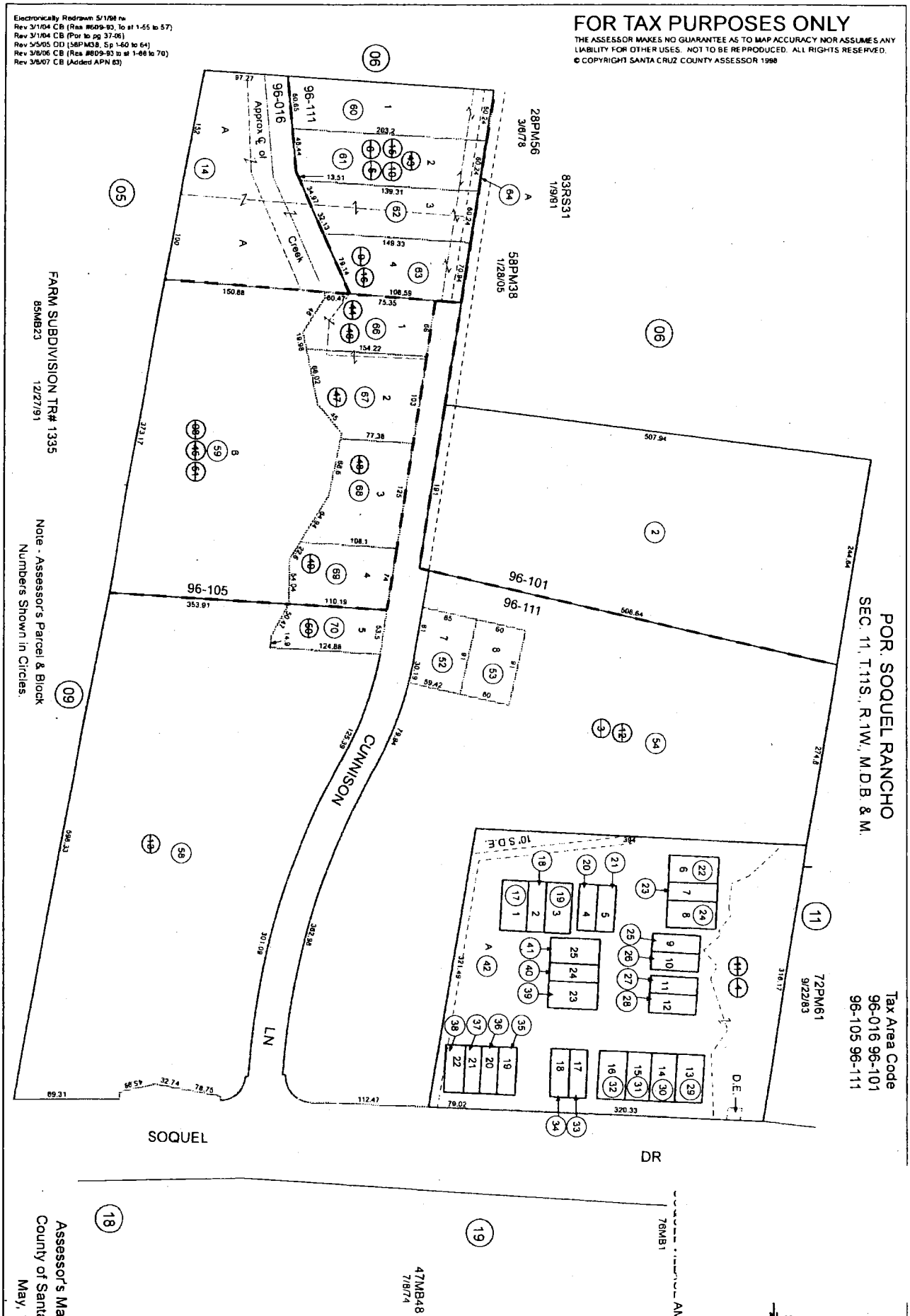
V. REFERENCES USED IN THE COMPLETION OF THIS ENVIRONMENTAL REVIEW INITIAL STUDY

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.

VI. ATTACHMENTS

1. Assessor's Map, Vicinity Map, Map of Zoning Districts, Map of General Plan Designations, Assessors Parcel Map
2. Project Cover Sheet prepared by MIG, Inc., dated 10/31/2009; Landscape Architectural Plan sheets L-1.0, L-1.1, L-1.3, L-2.0, L-2.1, L-2.2, L-2.3, L-3.0, L-3.1, L-3.2, L-4.0, L-4.1, L-7.0 prepared by MIG Architects, Inc. (including sheet L-1.2 by Mesiti-Miller Engineering, sheet L-5.0 by H.T.Harvey and Associates, and sheet L-6.1 by Balance Hydrologies, Inc.), dated 10/31/2009; Architectural Plan sheets A-1.0, A-2.0, A-3.0 prepared by Thatcher and Thompson Architects, dated 10/31/2009; Civil Engineering Plan sheets C-1.0, C-1.1,C-2.0,C-3.0 prepared by Mesiti-Miller Engineering, Inc., dated 10/31/2009; Survey Plan sheets 2 of 2, dated 4/30/2008, and Survey Plan sheets TS-1-TS3, dated 5/20/2008, prepared Ifland Survey; Structural Plan sheet S-1.0 prepared by Mesiti-Miller Engineering, Inc., dated 10/31/2009; Electrical Plan sheets E1.0, E2.0, E2.1, E3.0 prepared by Prime Design Group, dated 10/31/2009
3. Geotechnical Investigation (recommendations excerpt, full report on file with the Planning Department) prepared by Haro, Kasunich and Associates, Inc., dated November 23, 2009
4. Biotic Study (conclusions excerpt, full report on file with the Planning Department) prepared by H.T.Harvey and Associates, dated December 4, 2009
5. Biotic Mitigation and Monitoring Plan (mitigations excerpt, full report on file with the Planning Department) prepared by H.T.Harvey and Associates, dated December 4, 2009
6. Arborist Report (recommendations excerpt only, full report on file with the Planning Department) prepared by H.T. Harvey and Associates, dated December 4, 2009
7. Noise Study (mitigations excerpt, full report on file with the Planning Department) prepared by Richard B. Rodkin, PE, dated October 31, 2008 and revised July 27, 2009
8. Traffic Study (conclusions and recommendations excerpt, parking demand, full report on file with the Planning Department) prepared by Fehr and Peers Transportation Consultants, dated September 30, 2009
9. Discretionary Application Comments
10. Letter from Soquel Creek Water District, dated October 23, 2008 (expired 2010)
11. Memo from Department of Public Works, Sanitation, dated August 16, 2010 (Expired)
12. Parks Program Statement, undated

13. Stream Hydrology and Hydraulics Final Report prepared by Mesiti-Miller Engineering, Inc., dated July 29, 2009 (Recommendations excerpt, full report on file with the Planning Department)
14. On-Site Storm Drainage Final Report (Recommendations excerpt, full report on file with the Planning Department) prepared by Mesiti-Miller Engineering, Inc., dated August 4th, 2009, and Off-Site Storm Drainage Final Report (Recommendations excerpt, full report on file with the Planning Department) prepared by Mesiti-Miller Engineering, Inc., dated July 11, 2009



ATTACHMENT 1

Location Map

LEGEND

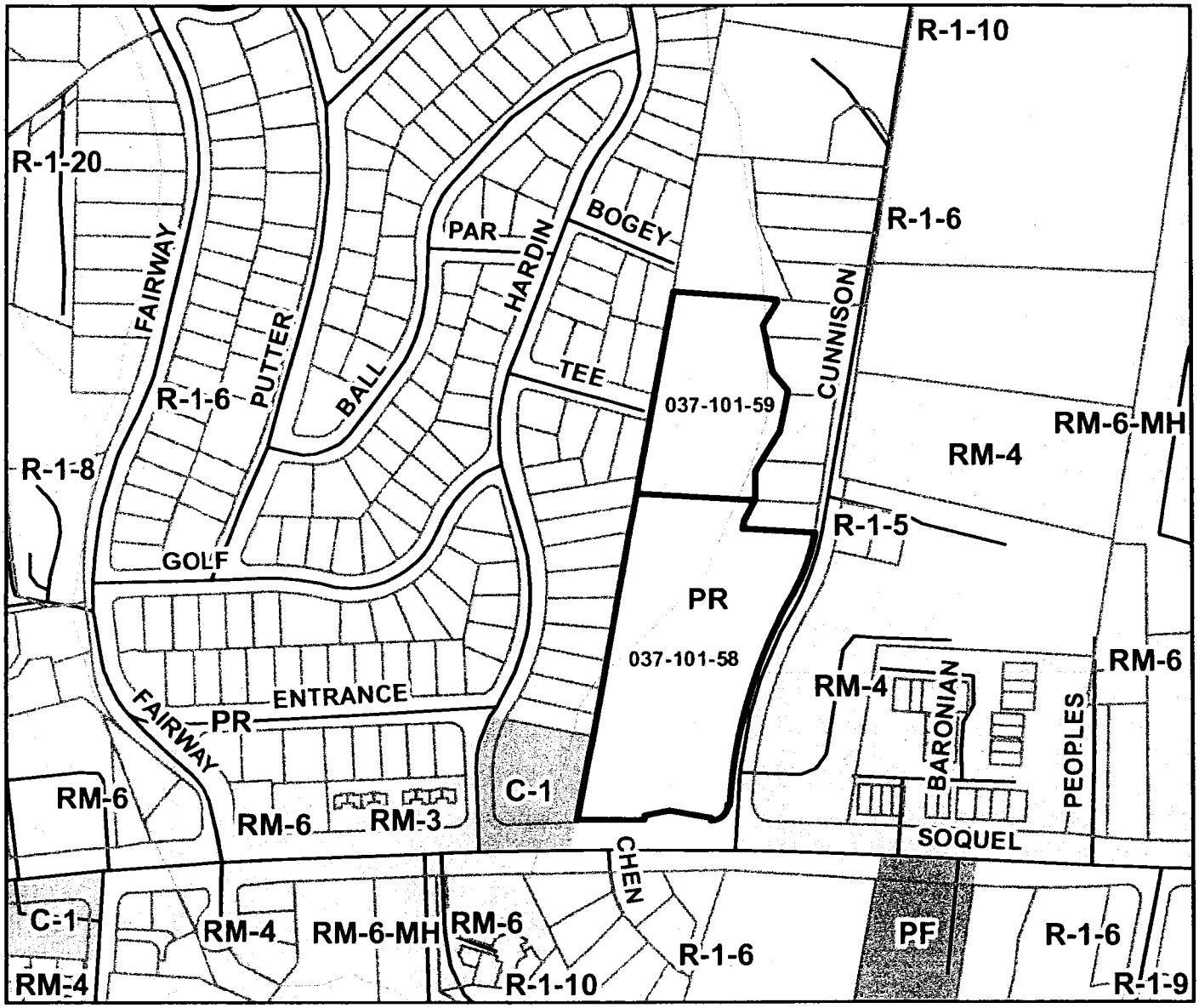
- APN: 037-101-59
- APN: 037-101-58
- Assessors Parcels
- Streets
- State Highways
- CAPITOLA

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
December 2009

ATTACHMENT

Zoning Map



410 205 0 410 820 1,230 1,640 Feet

LEGEND

- APN: 037-101-59
- APN: 037-101-58
- Assessors Parcels
- Streets

STREAMTYPE

- SWALE
- PARK
- RESIDENTIAL-SINGLE FAMILY
- RESIDENTIAL-MULTI FAMILY
- COMMERCIAL-NEIGHBORHOOD
- PUBLIC FACILITY

N W E S

Map Created by
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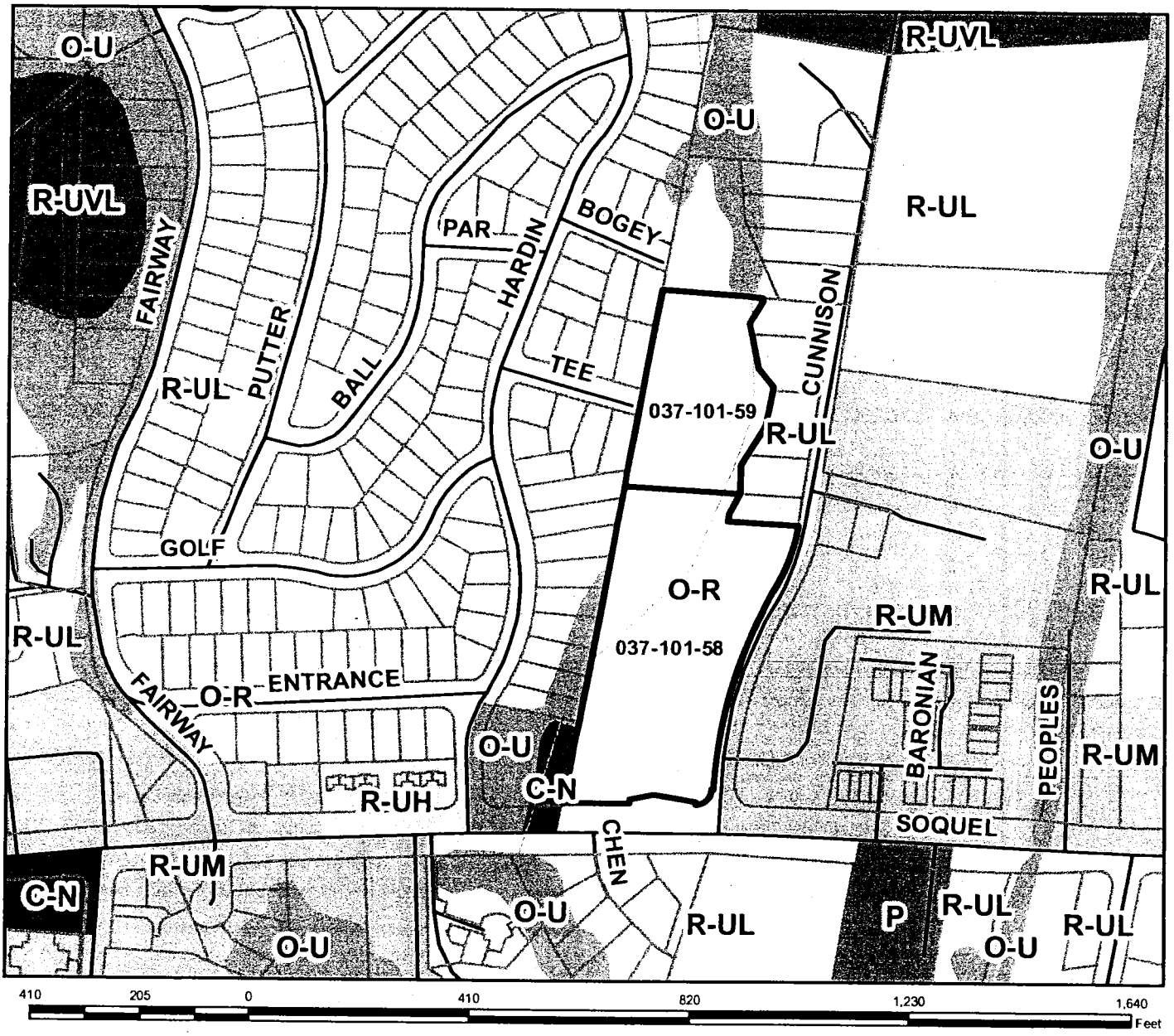
Planning Department
December 2009

ATTACHMENT 1

General Plan Designation Map



410 205 0 410 820 1,230 1,640 Feet

LEGEND

- APN: 037-101-59
- APN: 037-101-58
- Assessors Parcels
- Streets

STREAMTYPE

- SWALE
- Parks and Recreation
- Commercial-Neighborhood
- Public Facilites
- Residential - Urban Very Low Density
- Residential - Urban Low Density
- Residential - Urban Medium Density
- Residential - Urban High Density
- Urban Open Space

N W E S

Map Created by
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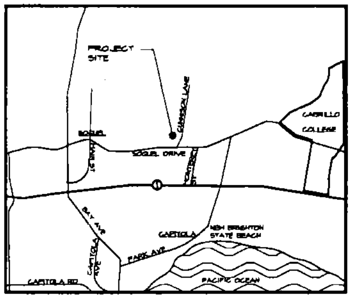
December 2009

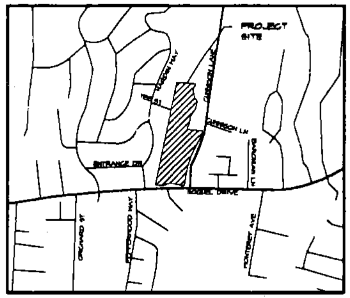
ATTACHMENT 1

Farm Neighborhood Park
and Community Center

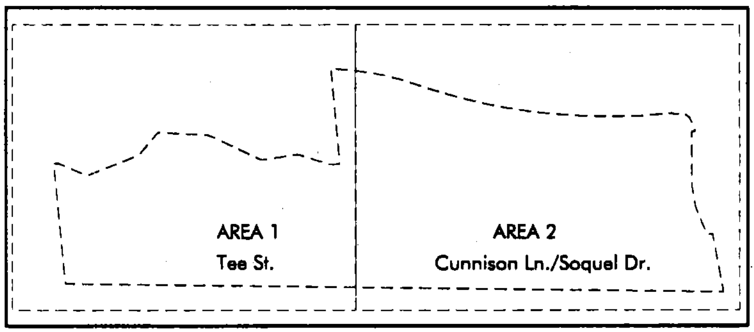
AREA MAP
Not to Scale



VICINITY MAP
Not to Scale



KEY MAP
Not to Scale



SANTA CRUZ COUNTY BOARD OF SUPERVISORS

JOHN LEOPOLD - DISTRICT 1
ELLEN PIRIE - DISTRICT 2
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PROJECT OWNER/APPLICANT

REDEVELOPMENT AGENCY OF SANTA CRUZ COUNTY
701 OCEAN STREET, ROOM 510
SANTA CRUZ, CA 95060
PROJECT MANAGER: SHERYL BAILEY

DRAWING INDEX

SHEET NO.	FROM	SHEET NAME
0	0	COVER
1	MME	PRE-1991 PLAN FOR THE FARM PARK
2	MME	PRE-1991 PLAN FOR THE FARM PARK
TS-1	MME	TOPOGRAPHIC SURVEY
TS-2	MME	TOPOGRAPHIC SURVEY
TS-3	MME	TOPOGRAPHIC SURVEY
C-1.0	MME	ON-SITE DRAINAGE PLAN
C-1.1	MME	OFF-SITE DRAINAGE PLAN
C-2.0	MME	UTILITY PLAN
C-3.0	MME	EROSION CONTROL PLAN
L-1.0	MIG	GRADING PLAN - TEE STREET
L-1.1	MIG	GRADING PLAN - CUNNISON LN./SOQUEL DR.
L-1.2	MIG	GRADING VOLUME STUDY PLAN
L-1.3	MIG	GRADING - PROFILES AND SECTIONS
L-2.0	MIG	SITE ACCESS PLAN
L-2.1	MIG	PARK SITE PLAN - TEE STREET
L-2.2	MIG	PARK SITE PLAN - CUNNISON LN./SOQUEL DR.
L-2.3	MIG	SIGNAGE PLAN
L-3.0	MIG	IRRIGATION PLAN - TEE STREET
L-3.1	MIG	IRRIGATION PLAN - CUNNISON LN./SOQUEL DR.
L-3.2	MIG	IRRIGATION PLAN - ESTIMATED WATER USE CALCULATIONS
L-4.0	MIG	PLANTING PLAN - TEE STREET
L-4.1	MIG	PLANTING PLAN - CUNNISON LN./SOQUEL DR.
L-5.0	HTH	HABITAT RESTORATION PLAN
L-6.1	HTH	INSTREAM REPAIR PLAN
L-6.2	HTH	INSTREAM REPAIR SECTIONS
L-6.3	HTH	INSTREAM REPAIR PLANTING PLAN
L-7.0	MIG	VISUAL ANALYSIS
S-1.0	MME	PEDESTRIAN BRIDGE PLAN
A-1.0	T+T	COMMUNITY BUILDING AND RESTROOM PLANS
A-2.0	T+T	COMMUNITY BUILDING AND RESTROOM ELEVATIONS
A-3.0	T+T	COMMUNITY BUILDING AND ARTIST SKETCH
E-1.0	PRIME	ELECTRICAL LISTS, SCHEDULES & DETAILS
E-2.0	PRIME	LIGHTING SITE PLAN
E-2.1	PRIME	LIGHTING SITE PLAN
E-3.0	PRIME	PHOTOMETRICS

REPORT NAME

- BIOTIC AND BOTANIC FINAL REPORT
- ARBORIST FINAL REPORT
- GEOTECHNICAL FINAL REPORT
- DOMESTIC AND FIRE PROTECTION WATER SUPPLY FINAL REPORT
- IRRIGATION WATER SUPPLY FINAL REPORT
- SANITARY SEWER FINAL REPORT
- ELECTRIC AND GAS UTILITIES FINAL REPORT
- ON-SITE STORM DRAINAGE FINAL REPORT
- OFF-SITE STORM DRAINAGE FINAL REPORT
- STREAM HYDROLOGY AND HYDRAULICS FINAL REPORT
- ENVIRONMENTAL NOISE ASSESSMENT
- FINAL TRANSPORTATION REPORT
- PHASE I ENVIRONMENTAL SITE ASSESSMENT AND PHASE II SOIL TESTING PROGRAM
- LEED GOALS AND PROGRAM REPORT
- INTERPRETIVE PROGRAM

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WATSONVILLE, CA 95076
TEL: 831/722-4175
FAX: 831/722 3202

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160 W. SANTA CLARA ST. SUITE 675
SAN JOSE, CA 95113
TEL: 408/ 278-1700
FAX: 408/ 278-1717

ECOLOGICAL CONSULTANT
CONTACT: JOE HOWARD, LANDSCAPE ARCHITECT

H.T. HARVEY & ASSOCIATES
983 UNIVERSITY AVENUE, BLDG. D
LOS GATOS, CA 95032
TEL: 408/458-3224
FAX: 408/458-3210

HYDRAULIC ENGINEER
CONTACT: SHAWN CHARTRAND, PHD

BALANCE HYDROLOGICS, INC.
242 WALNUT AVE, SUITE E
SANTA CRUZ, CA 95060
TEL: 831/457-9900
FAX: 831/457-8800

IARY TABLE

IZE	3.3 ACRES
) STRUCTURES	4,809 S.F.
) PARKING SPACES (9'X18' STALLS)	55
NG SPACES (9'X18' STALLS)	5

& TREE DEMOLITION AND PROTECTION SEE ARBOR REPORT

PROGRAM

USE TYPE:	PUBLIC RECREATION
HOURS OF OPERATION:	SUNRISE - SUNSET

TY REFERENCE TABLE

REEK WATER DISTRICT	831/475-8500
UZ COUNTY SANITATION DISTRICT	831/454-2160
FIRE PROTECTION DISTRICT	831/479-6842
.OOD CONTROL/WATER ATION DISTRICT	831/454-2160
3AS & ELECTRIC COMPANY	800/743-5000

PROJECT DESCRIPTION

THE PARK IS DESIGNED TO INCORPORATE BEST MANAGEMENT PRACTICES AND THE BUILDING IS DESIGNED TO MEET THE LEED SILVER CERTIFICATION LEVEL. THE PROJECT INCLUDES THE FOLLOWING FEATURES/COMPONENTS: 4,384 SQUARE FOOT ONE-STORY COMMUNITY BUILDING TO HOUSE AN ASSEMBLY ROOM WITH KITCHEN, TWO CLASSROOMS, AN OFFICE, FOYER GALLERY, MEN AND WOMEN RESTROOMS OUTDOOR BUILDING TERRACE AND PATIOS, FIFTY-FOUR (54) SPACE SURFACE UPPER AND LOWER PARKING AREAS, FOUR (4) SPACE SURFACE TEE STREET SIDE PARKING AREA, PEDESTRIAN CIRCULATION INCLUDING ABOUT 3/4 OF A MILE OF A NATURE TRAIL, PEDESTRIAN BRIDGE SPANNING THE ARROYO, SPORTS PLAY AREA WITH ½ BASKETBALL COURT, SKATE AREA AND TURF AREA, CHILDREN'S PLAY AREA, TURF AREA (TEE STREET SIDE), COMMUNITY GARDEN, HERITAGE AND NATIVE GARDENS, BOCCE COURT, SCULPTURAL ARTWORK, DRINKING FOUNTAINS, PICNIC TABLES, AND BENCHES, KIOSK, AND TRASH COLLECTION STORAGE AND RECEPTACLES. THE PROJECT WILL ALSO ENHANCE AND RESTORE THE RIPARIAN HABITAT ON SITE, INCLUDING THE REMOVAL OF SOME OF THE NON-NATIVE TREES.

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
COVER SHEET

Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY: SM	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME: COVER_SHT_30034.dwg
DRAWN BY: HK	SHEET
JOB NO.: 30034	0
SCALE	

ATTACHMENT 2

Notes

PERMIT HISTORY
SANTA CRUZ COUNTY PLANNING DEPARTMENT

APN: 37-101-58 (FORMERLY 37-101-13, FORMERLY 37-101-7, FORMERLY 37-101-5)

1.
USE PERMIT: 74-40-U
DATE: 7-30-74
DESCRIPTION: TO CONVERT EXISTING SINGLE FAMILY DWELLING TO RESTAURANT, CONVERT BARN TO ANTIQUE SHOP, GARAGES TO PRODUCE AND PLANT RETAIL SALES CHICKEN COOP TO NURSEY AND RAISE FIELD CROPS AND FLOWERS FOR BOTH RETAIL AND RESTAURANT USE.

2.
BUILDING PERMIT: 38274
DATE: 5-1-74
DESCRIPTION: SPEC WHSE FOR REPAIR TO CONVERT SFD TO ANTIQUE SHOP, PRODUCE, NURSERY PLANTS AND SUPPLIES.

3.
BUILDING PERMIT: 39097
DATE: 7-17-74
DESCRIPTION: ROOF SHELTER FOR PRODUCE STAND 110' X 10' & 13' X 13' GAZEBO

4.
BUILDING PERMIT, PLUMBING-GAS PERMIT, ELECTRIC PERMIT, MECHANICAL PERMIT, SEWER & DRAINAGE PERMIT: 46504, 846,400
DATE: 3-11-76
DESCRIPTION: A FOOD ONLY RESTAURANT (MASONRY)

5.
BUILDING PERMIT, PLUMBING-GAS PERMIT, ELECTRIC PERMIT, DRAINAGE PERMIT: 50306
DATE: 1-4-77
DESCRIPTION: CONSTRUCT 1 STRY ADD TO EXISTING RESTAURANT TO INCLUDE NEW KITCHEN ENTRY WAY. TO CONVERT 2370 SFD TO DINING

6.
USE PERMIT: 74-40-U
DATE: 3-15-77
DESCRIPTION: THE FARM RESTAURANT

7.
USE PERMIT: 77-318-U
DATE: 3-22-77
DESCRIPTION: GREEN HOUSE RESTAURANT
CONDITIONS INCLUDED
CUSTOMER PARKING (40 X 9' X 18') 3" AB SURFACE
EMPLOYEE PARKING (10 X 9' X 18') 3" AB SURFACE

8.
BUILDING PERMIT: 140437 REMODEL

ASSESSOR'S PARTIAL HISTORY
SANTA CRUZ COUNTY ASSESSOR'S OFFICE

APN: 37-101-58 (FORMERLY 37-101-13, FORMERLY 37-101-7, FORMERLY 37-101-5)

1.
APPRAISAL YEAR: 1949
3 BATHROOMS (2 WC, 2 LA, 1 TUB 1 SHR.)
5 BEDROOMS
2 LIVING ROOMS
2 DINING ROOMS
2 KITCHENS

"A" MAIN STRUCTURE: 1491 SF (1ST FLOOR)
"B" GARAGE: 540 SF
"C" BARN: 738 SF
"D" CHKN HS: 168 SF
"E" L-O BARN: 84 SF
"F" CHKN HS: 1,156 SF
"G" ARBOR: 1,600 SF (ARBOR AND BLACKTOP)
"H" GREEN HOUSE: 600 SF
"I" BRICK COURT YARD: UNKNOWN

TOTAL IMPERVIOUS AREA = 6,886 SF + BRICK AREAS + DRIVEWAY AREAS

2.
APPRAISAL YEAR: 1978
BUILDING PERMIT: 46504
RESTAURANT, 846400, 3-10-76
3 BATHROOMS (3 WC, 3 LA, 1UR.)
1 KITCHEN
1 DINING

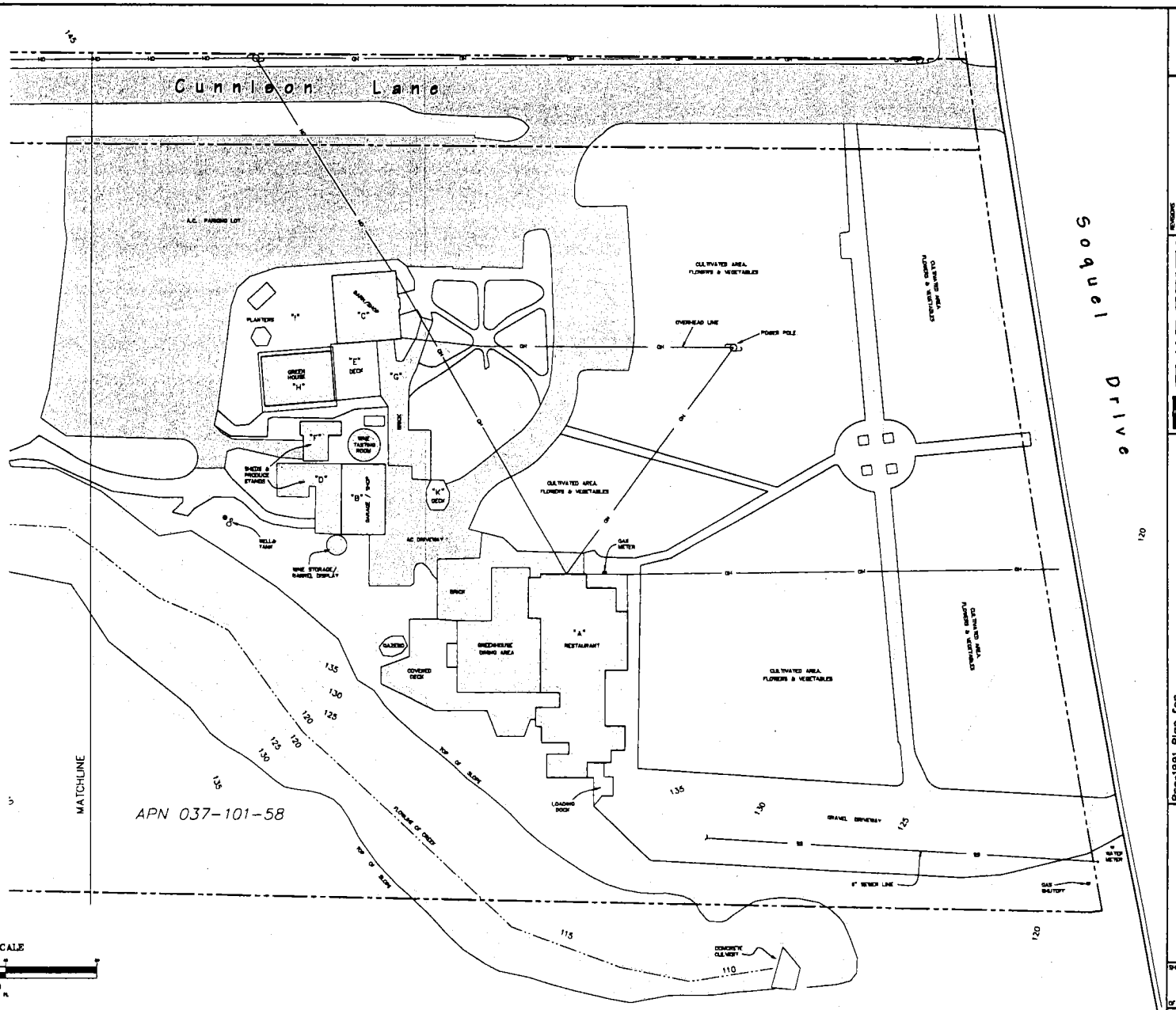
"A" MAIN STRUCTURE: 3834 SF (1ST FLOOR)
"B" SHOP/GARAGE: 864 SF
"C" SHOP/BARN: 636 SF
"D" CHKN SHED: 168 SF
"E" STORAGE: 168 SF
"F" ARBOR: 000 (USE 1,600 SF FROM 1949)
"G" GREENHOUSE: 600 SF
"I" BRICK COURT YARD: UNKNOWN
"J" SHED: 32 SF
"K" DECK: 800 SF

TOTAL IMPERVIOUS AREA = 6,894 SF + BRICK AREAS + DRIVEWAY AREAS

Legend

- GRAVEL AREA
- BUILDING
- ASPHALT AREA
- CONCRETE AREA
- BRICK AREA

GRAPHIC SCALE
(IN FEET)
1 inch = 80 ft.



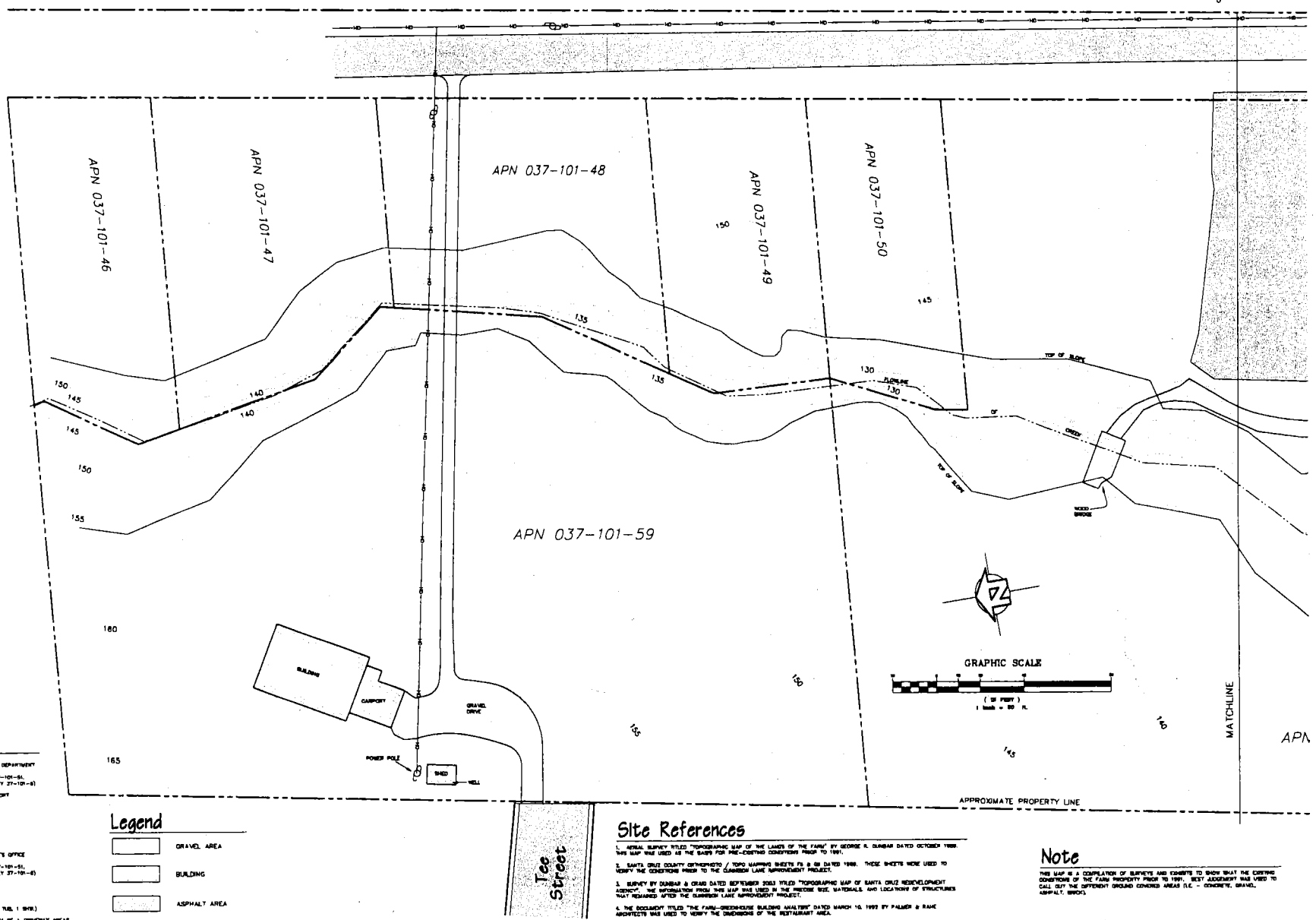
IFLAND SURVEY
Surveying - Mapping - GPS

REVISIONS
APPROVED

Pre-1991 Plan for
Santa Cruz County RDA - The Farm Park
Soquel Drive, Soquel, CA

THE FARM PARK
DATE 04/30/08
SCALE 1" = 20'
DRAWN BRJ
SHEET 1 OF 2 SHEETS
JOB NO. G08024

47/163
ATTACHMENT 22



Notes

PERMIT HISTORY
SANTA CRUZ COUNTY PLANNING DEPARTMENT

APN: 37-101-59 (FORMERLY 37-101-51, FORMERLY 37-101-46, FORMERLY 37-101-6)

1. CHARACTERISTIC MOBILITY REPORT
DATE: 04-17-89
MAIN BUILDING AREA: 1074 SF
YEAR BUILT (EST): 1958
ROOMS: 4
BEDROOMS: 2
BATHROOMS: 1
CARPORT AREA: 343 SF

ASSESSOR'S PARTIAL HISTORY
SANTA CRUZ COUNTY ASSESSOR'S OFFICE

APN: 37-101-59 (FORMERLY 37-101-51, FORMERLY 37-101-46, FORMERLY 37-101-6)

1. APPRAISAL YEAR: 1958
MAIN BUILDING AREA: 1,074 SF
BEDROOMS: 2
KITCHEN: 1
BATHROOMS: 1 (1 WC, 1 LA, 1 TUB, 1 SHR.)

TOTAL IMPERVIOUS AREA = 1,074 SF + DRIVEWAY AREAS

2. APPRAISAL YEAR: 1967
MAIN BUILDING AREA: 1,074 SF
CARPORT AREA: 343 SF (1967)
CARPORT PERMIT: #3673, ENGL 5-1967

TOTAL IMPERVIOUS AREA = 1,417 SF + DRIVEWAY AREAS

Legend

- GRAVEL AREA
- BUILDING
- ASPHALT AREA
- CONCRETE AREA
- BRICK AREA

Site References

1. AERIAL SURVEY TITLED "TOPOGRAPHIC MAP OF THE LANDS OF THE FARM" BY GEORGE R. DUNBAR DATED OCTOBER 1988. THIS MAP WAS USED AS THE BASIS FOR PRE-EXISTING CONDITIONS PRIOR TO 1991.

2. SANTA CRUZ COUNTY ORTHOPHOTO / TOPO MAPPING SHEETS F5 & G8 DATED 1988. THOSE SHEETS WERE USED TO VERIFY THE CONDITIONS PRIOR TO THE CLAWSON LANE IMPROVEMENT PROJECT.

3. SURVEY BY DUNBAR & CRAIG DATED SEPTEMBER 2083 TITLED "TOPOGRAPHIC MAP OF SANTA CRUZ REDEVELOPMENT AGENCY". THE INFORMATION FROM THIS MAP WAS USED IN THE RECENT SIZE, MATERIALS AND LOCATIONS OF STRUCTURES THAT REMAINED AFTER THE CLAWSON LANE IMPROVEMENT PROJECT.

4. THE DOCUMENT TITLED "THE FARM—GREENHOUSE BUILDING ANALYSIS" DATED MARCH 10, 1992 BY PALMER & RAHE ARCHITECTS WAS USED TO VERIFY THE DIMENSIONS OF THE RESTAURANT AREA.

5. "CLAWSON LANE PROJECT – TENTATIVE MAP" BY COASTLAND CONSULTANTS DATED MAY 1991 WAS USED TO VERIFY CONDITIONS BEFORE THE CLAWSON LANE PROJECT WAS COMPLETED.

6. COUNTY PHOTOGRAMMETRIC MAPPING SHEET 2, 1988 BY R.M. TORELL INC.

7. PERMIT HISTORY AND ASSESSOR'S PARTIAL HISTORY NOTES PREPARED FROM RECORDS ON FILE AT THE COUNTY OF SANTA CRUZ ASSESSOR'S OFFICE AND PLANNING DEPARTMENT.

Note

THIS MAP IS A COMPILATION OF SURVEYS AND EXHIBITS TO SHOW WHAT THE EXISTING CONDITIONS OF THE FARM PROPERTY PRIOR TO 1991. BEST JUDGEMENT WAS USED TO CALL OUT THE DIFFERENT GROUND COVERED AREAS (I.E. - CONCRETE, GRAVEL, ASPHALT, BRICK).

IFLAND SURVEY
Surveying - Mapping - GPS

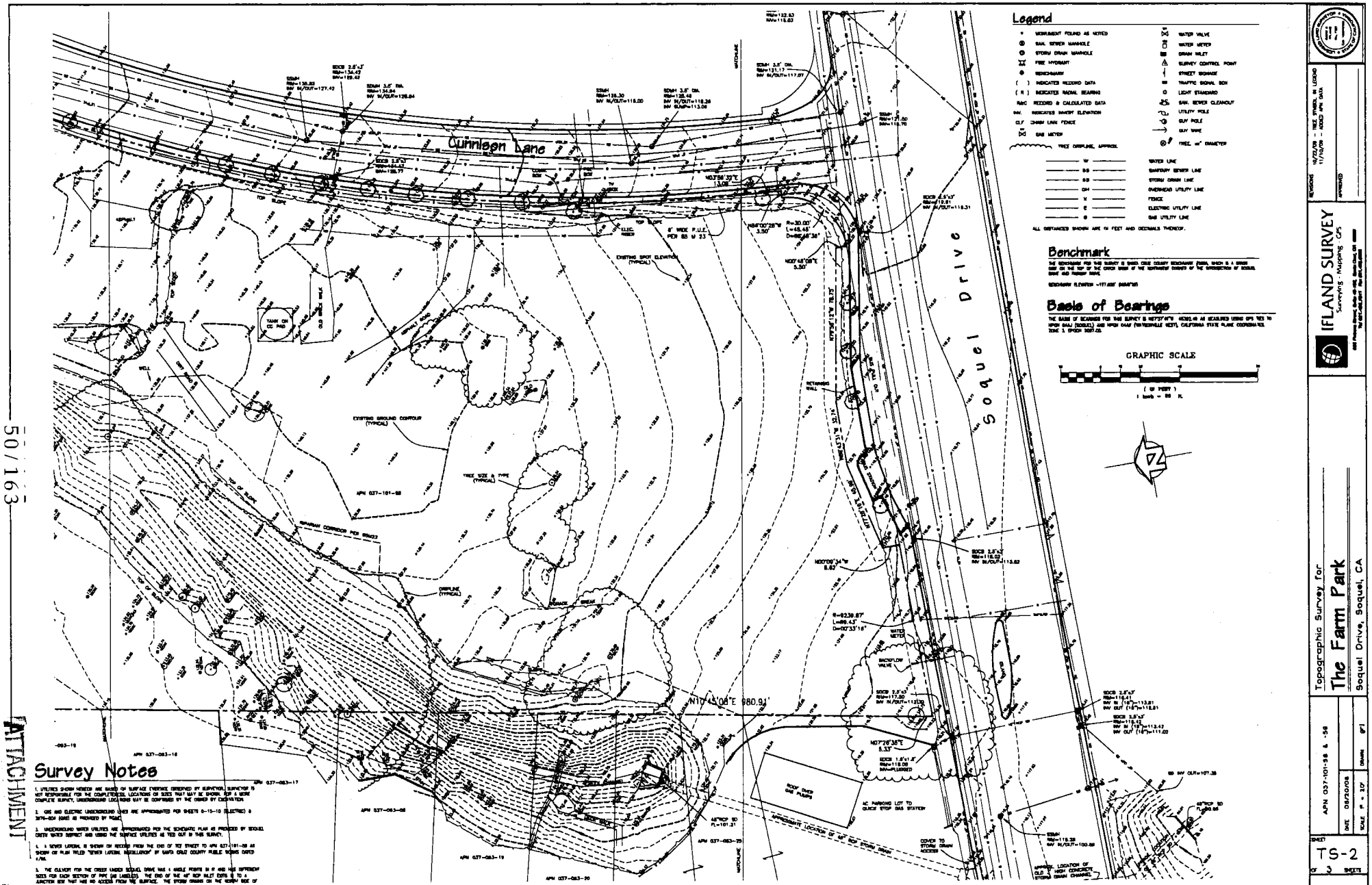
Pre-1991 Plan for
Santa Cruz County RDA - The Farm Park
Soquel Drive, Soquel, CA

THE FARM PARK
DATE: 04/30/08
DRAWN: BRJ
SCALE: 1" = 20'
SHEET 2 OF 2 SHEETS
JOB NO. G08024

48 / 163

ATTACHMENT 2

ATTACHMENT 2

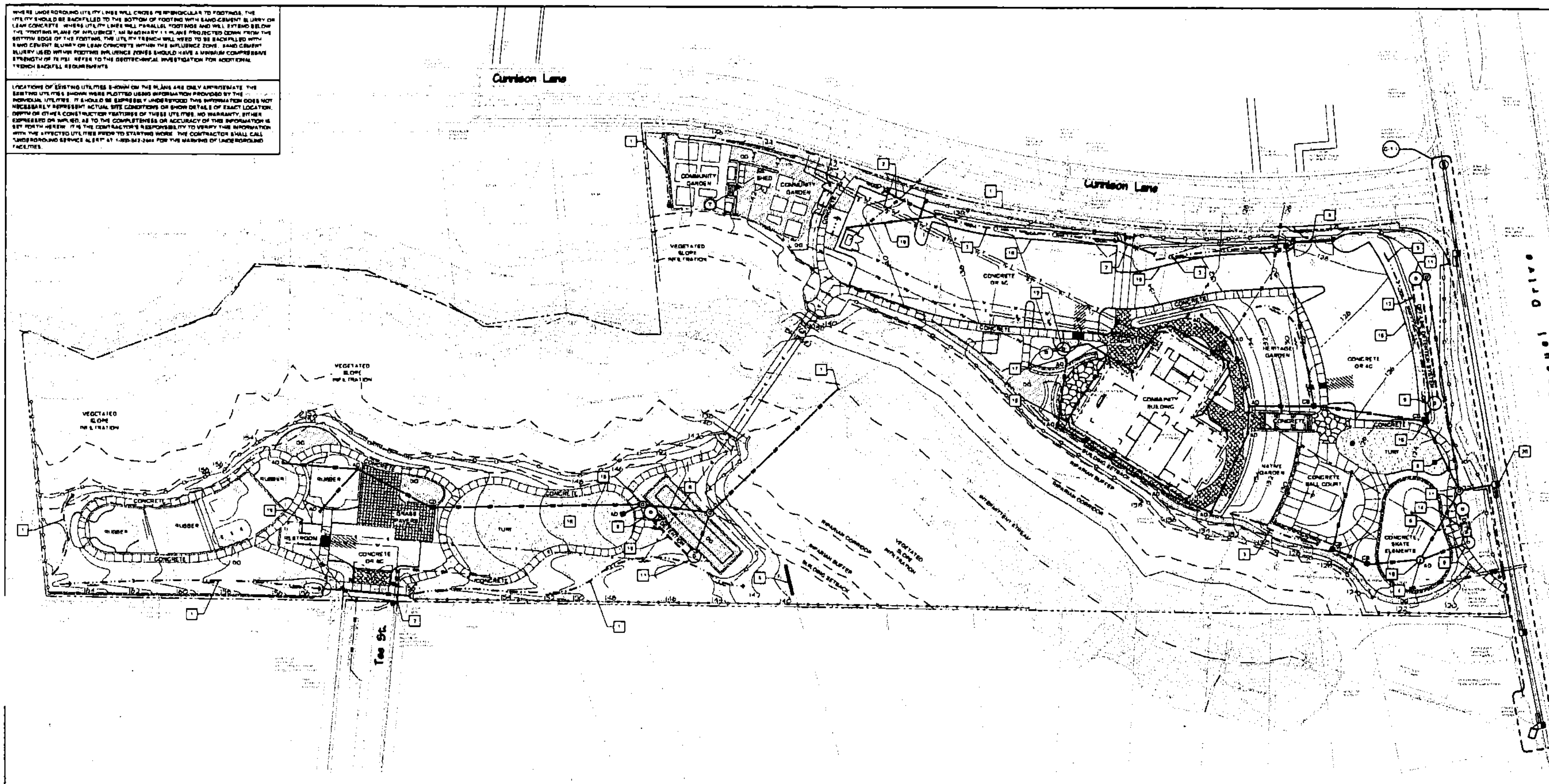


ATTACHMENT 2

ATTACHMENT 2

WHERE UNDERGROUND UTILITY LINES WILL CROSS PERPENDICULAR TO FOOTINGS, THE UTILITY SHOULD BE BACKFILLED TO THE BOTTOM OF FOOTING WITH SAND-CEMENT SLURRY OR LEAN CONCRETE. WHERE UTILITY LINES WILL PARALLEL FOOTINGS AND WILL EXTEND BELOW THE "FOOTING PLANE OF INFLUENCE", AN IMAGINARY 1:1 PLANE PROJECTED DOWN FROM THE BOTTOM EDGE OF THE FOOTING, THE UTILITY TRENCH WILL NEED TO BE BACKFILLED WITH SAND CEMENT SLURRY OR LEAN CONCRETE WITHIN THE INFLUENCE ZONE. SAND CEMENT SLURRY USED WITHIN FOOTING INFLUENCE ZONES SHOULD HAVE A MINIMUM COMPRESSIVE STRENGTH OF [illegible] PSI. REFER TO THE GEOTECHNICAL INVESTIGATION FOR ADDITIONAL TRENCH BACKFILL REQUIREMENTS.

LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. THE EXISTING UTILITIES SHOWN WERE PLOTTED USING INFORMATION PROVIDED BY THE INDIVIDUAL UTILITIES. IT SHOULD BE EXPRESSLY UNDERSTOOD THIS INFORMATION DOES NOT NECESSARILY REPRESENT ACTUAL SITE CONDITIONS OR SHOW DETAILS OF EXACT LOCATION, DEPTH OR OTHER CONSTRUCTION FEATURES OF THESE UTILITIES. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE COMPLETENESS OR ACCURACY OF THIS INFORMATION IS SET FORTH HEREIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS INFORMATION WITH THE AFFECTED UTILITIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" AT 1-800-642-2444 FOR THE MARKING OF UNDERGROUND FACILITIES.



ON-SITE DRAINAGE PLAN

SCALE: 1" = 30'

SHEET NOTES

1. OFF-SITE RUNOFF INTERCEPTION AND BYPASS BIOSWALE
2. CULVERT WITH FLARED END SECTIONS AND ROCK ENERGY DISSIPATORS AT INLET AND OUTLET
3. VEGETATED BIOSWALE
4. FLUSH-MOUNTED SMOOTH BRASS AREA DRAIN, ZURN OR EQUAL
5. SD LEVEL SPREADER
6. LOW-FLOW DETENTION SYSTEM BYPASS PIPE
7. OUTLET TEE AND ENERGY DISSIPATOR PER INSTREAM REPAIR PLAN
8. DRIVEWAY ENTRANCE TRENCH DRAIN
9. STRUCTURAL WATER QUALITY TREATMENT UNIT, DET 1/C-1.0
10. CONCAVE TURF RAIN GARDEN GRADED TO PROMOTE INFILTRATION AND REDUCE IRRIGATION
11. DETENTION SYSTEM OUTLET CONTROL STRUCTURE WITH WEIR AND ORIFICE RUNOFF CONTROL, DET 1/C-1.0
12. DOWNSPOUTS DIRECTED TO RAINWATER HARVESTING SYSTEM, REFER TO SHT C-3.0
13. SUBSURFACE DETENTION SYSTEM #1, DETENTION VOL = 1,[illegible] CU.FT. ([illegible] LF [illegible] RCP)
14. SUBSURFACE DETENTION SYSTEM #2, DETENTION VOLUME = [illegible] CU.FT. ([illegible] LF [illegible] RCP)
15. SUBSURFACE DETENTION SYSTEM #3, DETENTION VOLUME = [illegible] CU.FT. (33 LF [illegible] RCP)
16. DETENTION SYSTEM INLET CONTROL STRUCTURE. LOW FLOWS ROUTED THROUGH AN ORIFICE TO THE BYPASS AND THE OUTLET. HIGH-FLOWS DIVERTED INTO THE OFF LINE DETENTION SYSTEM
17. RAINWATER HARVESTING SYSTEM OVERFLOW DIRECTED TO DETENTION SYSTEM
18. SERIES OF CURB OPENINGS TO ALLOW DRAINAGE FROM PARKING AREAS TO FLOW INTO BIOSWALES
19. DOWNSPOUTS ROUTED AWAY FROM FOUNDATIONS TO PLANTERS/LANDSCAPED AREAS/BIOSWALES
20. POINT OF CONNECTION TO OFF-SITE SD SYSTEM IN SOQUEL DRIVE, REFER TO SHT C-1.1

LEGEND

PROPERTY BOUNDARY
EX MAJOR CONTOUR
EX MINOR CONTOUR
MAJOR CONTOUR
MINOR CONTOUR
STORM DRAIN PIPE
SANITARY SEWER LINE
DOMESTIC WATER SERVICE
FORCE MAIN
FIRE WATER SERVICE
IRRIGATION WATER SERVICE
CABLE TV SERVICE
ELECTRICAL SERVICE
GAS UTILITY LINE
TELEPHONE SERVICE
STORM DRAIN STRUCTURES WITH LIDS
STORM DRAIN CATCH BASINS / AREA DRAINS
RAINWATER WET WELL / PUMP
RAINWATER TANK
SSMD CLEANOUT

GENERAL NOTES

1. ALL INLETS SHALL BE MARKED "NO DUMPING, DRAINS TO BAY"
2. MAINTENANCE AGREEMENT REQUIRED FOR STRUCTURAL WATER QUALITY TREATMENT UNITS
3. REFER TO THE EROSION CONTROL PLAN C-3.0 FOR CONSTRUCTION ACTIVITY MEASURES TO PROTECT WATER QUALITY

LIST OF ABBREVIATIONS

AC	ASPHALT CONCRETE
AD	AREA DRAIN
BD	BACK DRAIN
CB	CATCH BASIN
DET	DETAIL
DETN	DETENTION SYSTEM
DG	DECOMPOSED GRANITE
E	ELECTRICAL
EG	EXISTING GRADE
EL/ELEV	ELEVATION
EX	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FM	FORCE MAIN
FW	FIRE SERVICE WATER
G	GAS
H	HORIZONTAL
INV	INVERT
OC	ON CENTER
RC	RELATIVE COMPACTION
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER
SD	STORM DRAIN
SF	SQUARE FEET
SHT	SHEET
SS	SANITARY SEWER
STA	STATION
TYP	TYPICAL
UD	UNDERDRAIN
V	VERTICAL
W	WATER

FLOODPLAIN

1. DEPTH OF FLOODING IN THE INTERMITTENT STREAM CHANNEL DURING THE 100-YEAR STORM IS WITHIN THE CHANNEL BANKS. DEPTHS VARY FROM 2 TO 4 FEET AT THE BRIDGE TO A MAXIMUM DEPTH OF 12 FEET AT THE CULVERT INLET (STREAM HYDROLOGY AND HYDRAULICS FINAL REPORT, MESITI-MILLER ENGINEERING, JULY 29, 2009).

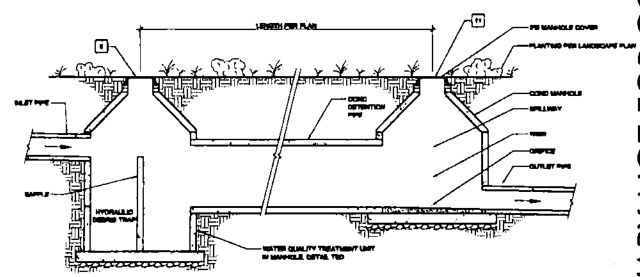
DESIGN APPROACH

1. FOR ON-SITE DRAINAGE ANALYSIS INCLUDING EXISTING AND PROPOSED IMPERVIOUS AREA MAPS, DRAINAGE DESIGN APPROACH, AND DETENTION SYSTEM SIZING REFER TO THE "ON-SITE DRAINAGE FINAL REPORT FOR FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER SCHEMATIC DESIGN" MESITI-MILLER ENGINEERING, AUGUST 4TH, 2009

2. FOR OFF-SITE DRAINAGE ANALYSIS REFER TO THE "OFF-SITE DRAINAGE FINAL REPORT FOR FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER SCHEMATIC DESIGN" MESITI-MILLER ENGINEERING, AUGUST 4TH, 2009

3. FOR AN ANALYSIS OF ON-SITE SOIL CHARACTERISTICS AND PERCOLATION TEST RESULTS THAT DEMONSTRATE VERY LOW INFILTRATION RATES REFER TO THE "GEOTECHNICAL INVESTIGATION FOR FARM NEIGHBORHOOD PARK" HARO KASUNICH AND ASSOCIATES, DECEMBER 2008

4. THE PROJECT SITE IS LOCATED OUTSIDE OF THE WATER SUPPLY WATERSHED BOUNDARY.



SUBSURFACE DETENTION SYSTEM (1)

SCALE: 1" = 4'

PRELIMINARY NOT FOR CONSTRUCTION

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:
Mesiti-Miller Engineering, Inc.
Civil and Structural Engineering

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT: Thacher & Thompson Architects
CIVIL ENGINEER: Mesiti-Miller Engineering, Inc.
STRUCTURAL ENGINEER: Mesiti-Miller Engineering, Inc.
ELECTRICAL ENGINEER: Wave Design Group, Inc.
ECOLOGICAL CONSULTANT: H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT: David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE
ON-SITE DRAINAGE PLAN

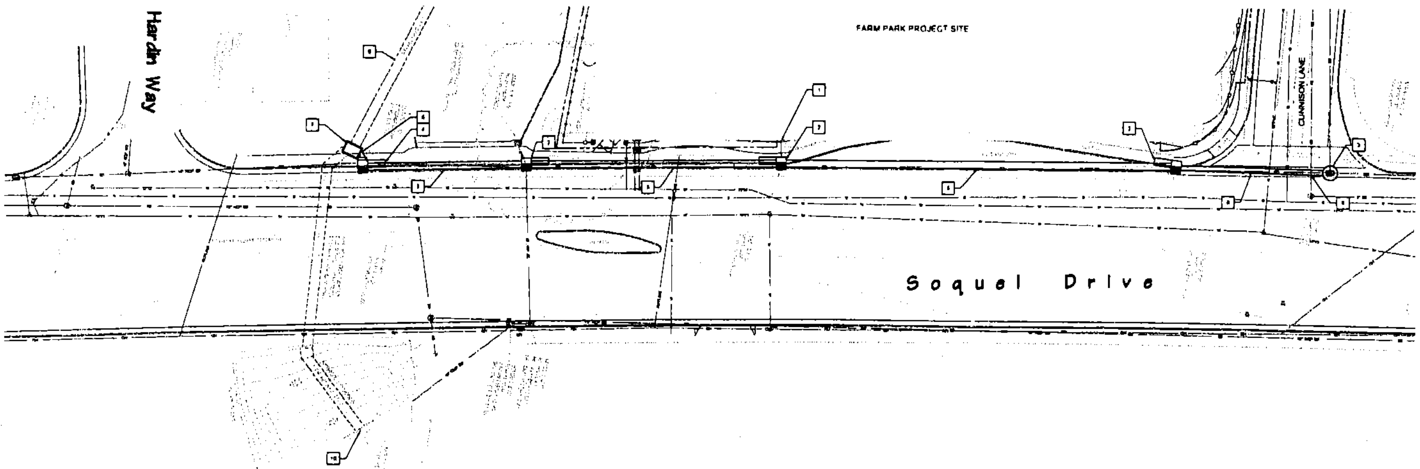
Development Permit Submittal

DATE	REVISIONS

STAMP

CHECKED BY: RC/DH	DATE: 10/21/2009
DATE: 10/31/2009	FILE NAME: C1.0-DRAINAGE-ON
DRAWN BY: RTC/TC	SHEET
JOB NO.: MIG 30034, MME 7141	C-1.0
SCALE: 1"=30'	

ATTACHMENT 2



SHEET NOTES

1. ON-SITE SD SYSTEM, SEE SHT C-1.0 FOR CONTINUATION
2. REPLACE EX SD INLET WITH CALTRANS GOL-18 INLET
3. REPLACE EX SD MANHOLE WITH COUNTY OF SANTA CRUZ STD MANHOLE
4. REPLACE EX SD JUNCTION STRUCTURE WITH CALTRANS GOL-18 INLET
5. REPLACE EX DOUBLE 18"Ø RCP SD WITH SINGLE 30"Ø RCP SD
6. EX 48"Ø SD CULVERT
7. RECONSTRUCT EX SD JUNCTION STRUCTURE TO SUIT NEW 30"Ø RCP SD INLET
8. REPLACE EX 18"Ø RCP SD WITH 24"Ø RCP SD
9. AVOID EX SANITARY SEWER
10. SD SYSTEM OUTLET TO OPEN CHANNEL

LEGEND

- PROPERTY BOUNDARY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- STORM DRAIN PIPE
- SANITARY SEWER LINE
- DOMESTIC WATER SERVICE
- FORCE MAIN
- FIRE WATER SERVICE
- IRRIGATION WATER SERVICE
- CABLE TV SERVICE
- ELECTRICAL SERVICE
- GAS UTILITY LINE
- TELEPHONE SERVICE
- STORM DRAIN STRUCTURES WITH LID
- STORM DRAIN CATCH BASINS / AREA DRAINS
- RAINWATER WET WELL / PUMP
- RAINWATER TANK
- SD CLEANOUT

GENERAL NOTES

1. ALL UTILITY CROSSINGS SHALL BE POTHOLED AND VERIFIED PRIOR TO CONSTRUCTION
2. ALL INLETS SHALL BE MARKED "NO DUMPING, DRAINS TO BAY".

OFF-SITE DRAINAGE PLAN

SCALE: 1" = 20'

WHERE UNDERGROUND UTILITY LINES WILL CROSS PERPENDICULAR TO FOOTINGS, THE UTILITY SHOULD BE BACKFILLED TO THE BOTTOM OF FOOTING WITH SAND-CEMENT SLURRY OR LEAN CONCRETE. WHERE UTILITY LINES WILL PARALLEL FOOTINGS AND WILL EXTEND BELOW THE "FOOTING PLANE OF INFLUENCE", AN IMAGINARY 1:1 PLANE PROJECTED DOWN FROM THE BOTTOM EDGE OF THE FOOTING, THE UTILITY TRENCH WILL NEED TO BE BACKFILLED WITH SAND CEMENT SLURRY OR LEAN CONCRETE WITHIN THE INFLUENCE ZONE. SAND CEMENT SLURRY USED WITHIN FOOTING INFLUENCE ZONES SHOULD HAVE A MINIMUM COMPRESSIVE STRENGTH OF 75 PSI. REFER TO THE GEOTECHNICAL INVESTIGATION FOR ADDITIONAL TRENCH BACKFILL REQUIREMENTS.

LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. THE EXISTING UTILITIES SHOWN WERE PLOTTED USING INFORMATION PROVIDED BY THE INDIVIDUAL UTILITIES. IT SHOULD BE EXPRESSLY UNDERSTOOD THIS INFORMATION DOES NOT NECESSARILY REPRESENT ACTUAL SITE CONDITIONS OR SHOW DETAILS OF EXACT LOCATION, DEPTH OR OTHER CONSTRUCTION FEATURES OF THESE UTILITIES. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE COMPLETENESS OR ACCURACY OF THIS INFORMATION IS SET FORTH HEREIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS INFORMATION WITH THE AFFECTED UTILITIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" AT 1-800-642-2444 FOR THE MARKING OF UNDERGROUND FACILITIES.

1" = 20'

PRELIMINARY NOT FOR CONSTRUCTION

M I G
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

Mesiti-Miller Engineering, Inc.
Civil and Structural Engineering

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT: Thacher & Thompson Architects
CIVIL ENGINEER: Mesiti-Miller Engineering, Inc.
STRUCTURAL ENGINEER: Mesiti-Miller Engineering, Inc.
ELECTRICAL ENGINEER: Prime Design Group, Inc.
ECOLOGICAL CONSULTANT: H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT: David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE: OFF-SITE DRAINAGE PLAN

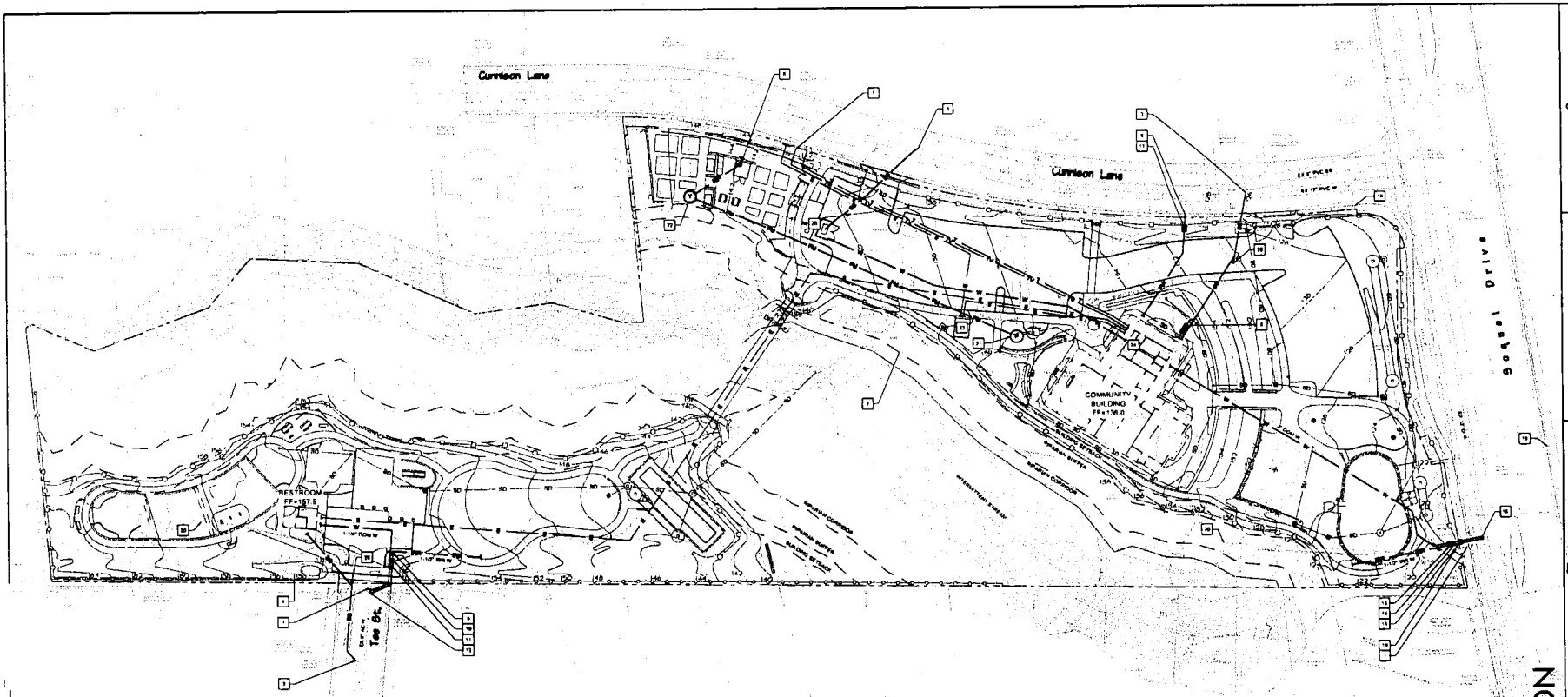
Development Permit Submittal

DATE	REVISIONS

STAMP

CHECKED BY	DATE
RC/DH	10/21/2009
DATE: 10/21/2009	FILE NAME: C1.0-DRAINAGE-OFF
DRAWN BY: RTC	SHEET
JOB NO.: MIG 30034, MME 7141	C-1.1
SCALE: 1"=30'	

ATTACHMENT 2



SHEET NOTES

1. REMOVE EX 16" WATER METER AND SERVICE CONNECTION PER SCWD REQUIREMENTS
2. POINT OF CONNECTION TO EX SS MANHOLE, LATERAL INVERT ELEVATION TO BE CONFIRMED
3. POINT OF CONNECTION TO EX 8" PVC SANITARY SEWER MAIN
4. EX WELL TO BE DESTROYED PER SECTION 19 OF STATE BULLETIN 74-81
5. POINT OF CONNECTION TO EX 8" FIRE SERVICE STUB-OUT IN PLANTING STRIP (APPROX. LOCATION)
6. IRRIGATION BOOSTER PUMP
7. POINTS OF CONNECTION TO EX UNDERGROUND ELECTRIC, CABLE TV, AND PHONE SERVICES
8. 350 GALLON (MINIMUM) EXTERIOR GREASE INTERCEPTOR FOR DISHWASHER
9. 1-1/2" DOMESTIC WATER PRESSURE REDUCER AND 1" IRRIGATION WATER PRESSURE REDUCER
10. 1-1/2" DOMESTIC BACK FLOW PREVENTOR AND 1" IRRIGATION BACK FLOW PREVENTOR
11. 1" DOMESTIC WATER METER AND 1" IRRIGATION WATER METER AT BACK OF SIDEWALK
12. 1-1/2" DOMESTIC WATER SERVICE CONNECTION AND 1-1/2" IRRIGATION WATER SERVICE CONNECTION
13. 2" DOMESTIC WATER PRESSURE REDUCER AND 1" IRRIGATION WATER PRESSURE REDUCER
14. 2" DOMESTIC BACK FLOW PREVENTOR AND 1" IRRIGATION BACK FLOW PREVENTOR
15. 1-1/2" DOMESTIC WATER METER AND 1" IRRIGATION WATER METER AT BACK OF SIDEWALK
16. 2" DOMESTIC WATER SERVICE CONNECTION AND 1-1/2" IRRIGATION WATER SERVICE CONNECTION
17. FIRE SERVICE BACKFLOW PREVENTION ASSEMBLY, SIZE TBD
18. EX FIRE HYDRANT
19. REMOVE EX 8" BACKFLOW PREVENTION ASSEMBLY
20. DEMOLISH EX SS LATERAL AND CAP APPROXIMATE LOCATION SHOWN
21. WET WELL / SUBSURFACE RAINWATER PUMP
22. 5,000 GALLON RAINWATER STORAGE TANK
23. ELECTRICAL TRANSFORMER
24. ELECTRICAL AND MECHANICAL EQUIPMENT ROOM, PER ARCHITECTURAL DRAWINGS
25. TRASH ENCLOSURE PER CITY OF SANTA CRUZ STD9 WITH HOSE BIB AND TRIMED FLOOR DRAIN
26. SS CLEANOUT

LEGEND

- PROPERTY BOUNDARY
- EX MAJOR CONTOUR
- EX MINOR CONTOUR
- SD — STORM DRAIN PIPE
- SS — SANITARY SEWER LINE
- W — DOMESTIC WATER SERVICE
- FW — FIRE WATER SERVICE
- G — GAS LINE
- TV — CABLE TV SERVICE
- E — ELECTRICAL SERVICE
- T — TELEPHONE SERVICE

GENERAL NOTES

1. ALL SITE WATER SERVICES INCLUDING DOMESTIC, IRRIGATION, AND FIRE PROTECTION SHALL BE IN ACCORDANCE WITH SOQUEL CREEK WATER DISTRICT STANDARDS AND SPECIFICATIONS.

UTILITY PLAN

SCALE: 1" = 30'

WHERE UNDERGROUND UTILITY LINES WILL CROSS PERPENDICULAR TO FOOTINGS, THE UTILITY SHOULD BE BACKFILLED TO THE BOTTOM OF FOOTING WITH SAND-CEMENT SLURRY OR LEAN CONCRETE. WHERE UTILITY LINES WILL PARALLEL FOOTINGS AND WILL EXTEND BELOW THE "FOOTING PLANE OF INFLUENCE" AS HEREINAFTER PLANE PROJECTED DOWN FROM THE BOTTOM EDGE OF THE FOOTING, THE UTILITY TRENCH WILL NEED TO BE BACKFILLED WITH SAND CEMENT SLURRY OR LEAN CONCRETE WITHIN THE INFLUENCE ZONE. SAND CEMENT SLURRY USED WITHIN FOOTING INFLUENCE ZONES SHOULD HAVE A MINIMUM COMPRESSIVE STRENGTH OF 75 PSI. REFER TO THE GEOTECHNICAL INVESTIGATION FOR ADDITIONAL TRENCH BACKFILL REQUIREMENTS.

LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. THE EXISTING UTILITIES SHOWN WERE PLOTTED USING INFORMATION PROVIDED BY THE INDIVIDUAL UTILITIES. IT SHOULD BE EXPRESSLY UNDERSTOOD THIS INFORMATION DOES NOT NECESSARILY REPRESENT ACTUAL SITE CONDITIONS OR SHOW DETAILS OF EXACT LOCATION, DEPTH OR OTHER CONSTRUCTION FEATURES OF THESE UTILITIES. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE COMPLETENESS OR ACCURACY OF THIS INFORMATION IS SET FORTH HEREIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE INFORMATION WITH THE AFFECTED UTILITIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" AT 1-800-642-2444 FOR THE MARKING OF UNDERGROUND FACILITIES.

0' 15' 30' 60'
1" = 30'

PRELIMINARY NOT FOR CONSTRUCTION

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

Wood-Miller Engineering, Inc.
Civil and Structural Engineers

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT:
CIVIL ENGINEER:
STRUCTURAL ENGINEER:
ELECTRICAL ENGINEER:
ECOLOGICAL CONSULTANT:
ENVIRONMENTAL CONSULTANT:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
UTILITY PLAN

Development Permit Submittal

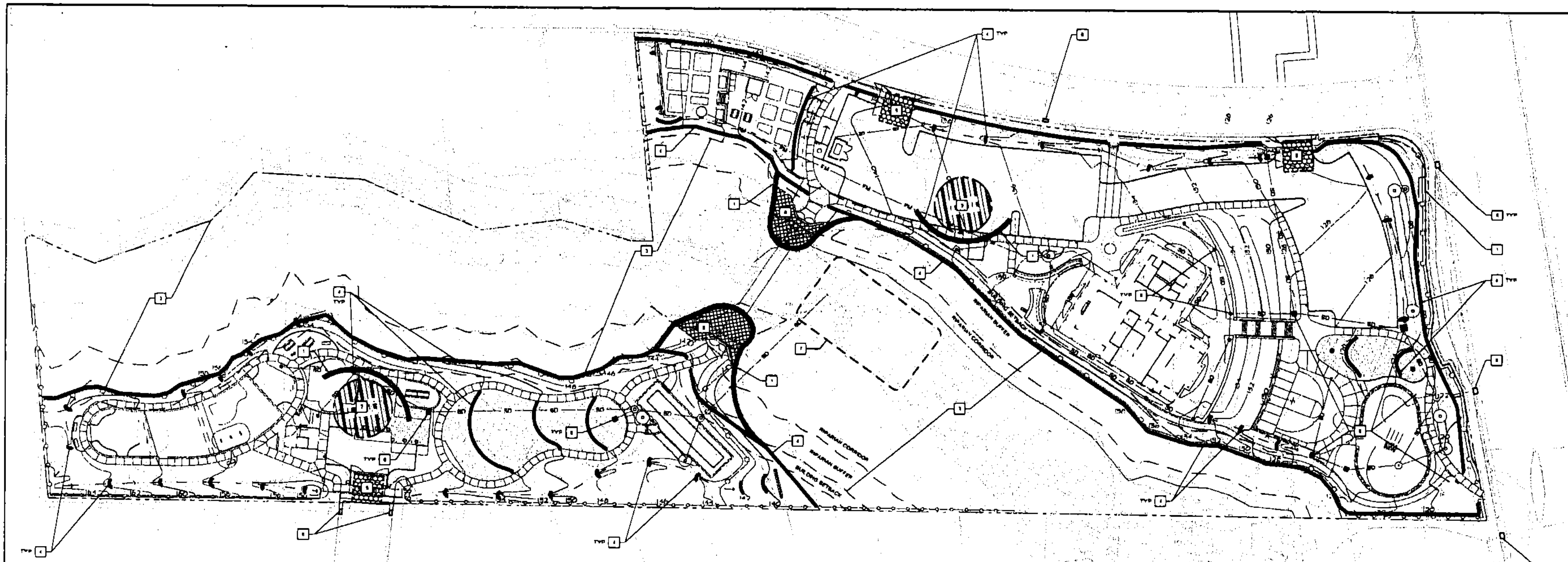
DATE	REVISIONS

STAMP

CHECKED BY: RC/DH	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME: C2.0-UTILITY-PLAN
DRAWN BY: RTC	SHEET: C-2.0
JOB NO.: MIG 30034 MME 71.41	
SCALE: 1"=30'	

54 / 163

ATTACHMENT 2



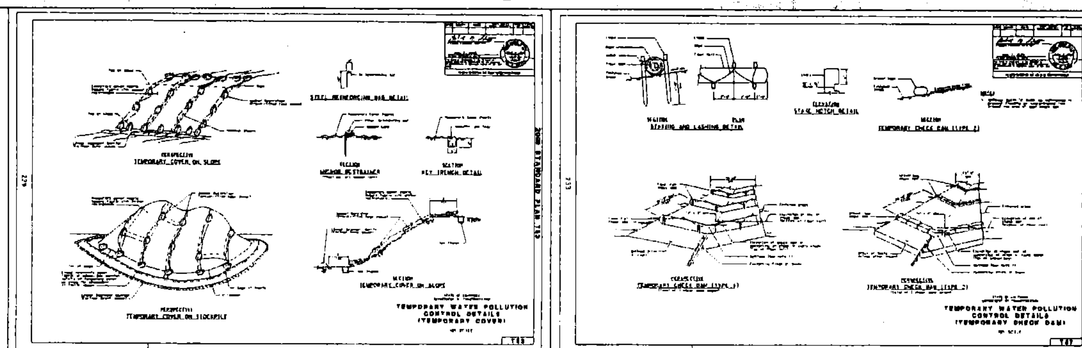
EROSION CONTROL PLAN

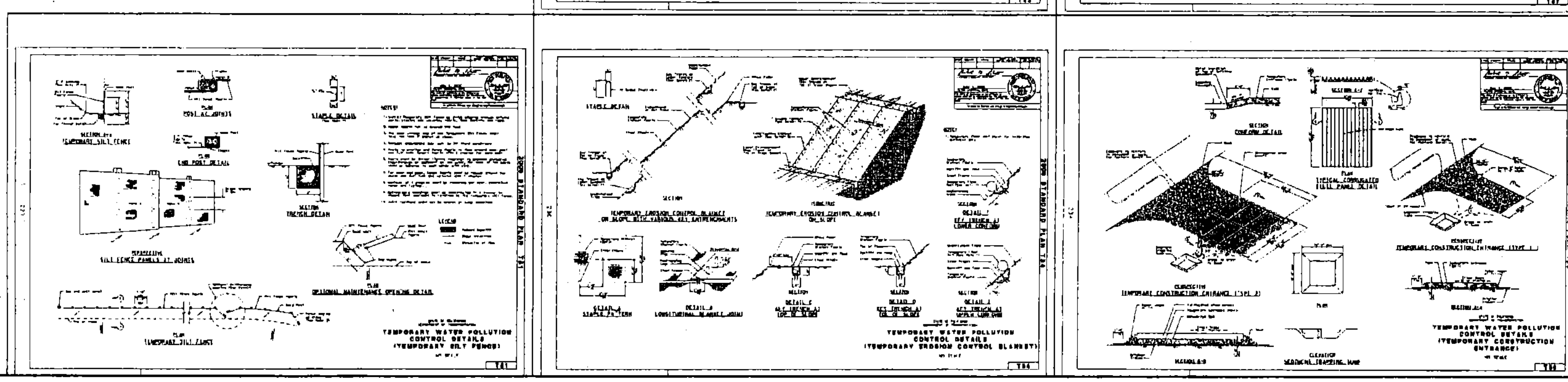
SCALE: 1" = 30'

SHEET NOTES

1. TEMPORARY SILT FENCE PER CALTRANS STANDARD PLAN [illegible], THIS SHEET
2. TEMPORARY COVER OVER STOCKPILE PER CALTRANS STANDARD PLAN [illegible], THIS SHEET. LOCATION APPROXIMATE
3. MINIMIZE DISTURBANCE TO EXISTING VEGETATION OR SOILS WITHIN THE RIPARIAN AREAS SHOWN
4. TEMPORARY FIBER ROLL CHECK DAM (TYPE 1) PER CALTRANS STANDARD PLAN [illegible], THIS SHEET, TYPICAL
5. TEMPORARY CONSTRUCTION ENTRANCE PER CALTRANS STANDARD PLAN [illegible], THIS SHEET
6. DRAINAGE INLET / CATCH BASIN SEDIMENT PROTECTION BARRIER PER DETAIL TBD, TYPICAL
7. INSTREAM REPAIR AREA. REFER TO HABITAT RESTORATION PLAN FOR AREA-SPECIFIC EROSION CONTROL DETAILS
8. TEMPORARY EROSION CONTROL BLANKET ON GRADED SLOPES STEEPER THAN 3H:1V PER CALTRANS STANDARD PLAN [illegible], THIS SHEET

GENERAL NOTES





PRELIMINARY NOT FOR CONSTRUCTION

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

Mesiti-Miller Engineering, Inc.
Civil and Structural Engineering

PROJECT TEAM:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
EROSION CONTROL PLAN

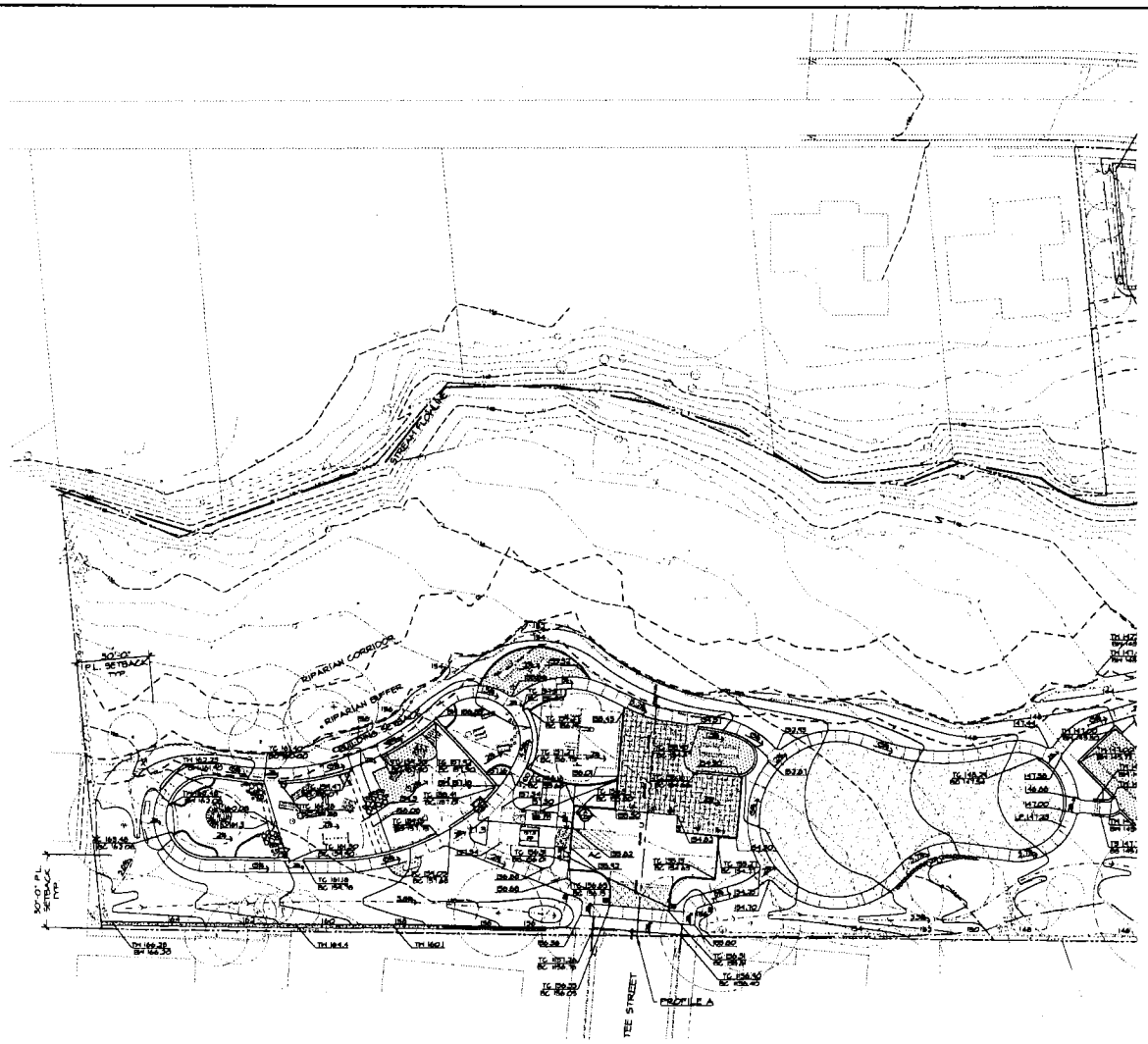
Development Permit Submittal

DATE	REVISIONS

STAMP

CHECKED BY	DATE
RC/DH	10/31/2009
DATE	FILE NAME
10/31/2009	C3.0-EROSION-PLAN
DRAWN BY	SHEET
RTC	C-3.0
JOB NO. MIG 30034 MME 7141	
SCALE 1"=30'	

ATTACHMENT 2



LEGEND

- (E) MAJOR CONTOURS
- (E) MINOR CONTOURS
- MAJOR CONTOURS
- MINOR CONTOURS
- GRADE BREAK
- SWALES
- DIRECTION AND SLOPE OF FINISH SURFACE PITCH
- SURFACES ARE FLUSH
- SPOT ELEVATIONS
- TS/BS TOP OF STAIR / BOTTOM OF STAIR
- TC/BC TOP OF CURB / BOTTOM OF CURB
- TW/BW TOP OF WALL / BOTTOM OF WALL
- HP/LP HIGHPOINT / LOW POINT
- FF FINISH FLOOR ELEVATION
- BOULDER RETAINING CURB
- STREAM FLOWLINE
- LIMIT OF GRADING

NOTE:
1) FOR CUT/FILL VOLUMES SEE SHEET L1.2
2)NO GRADING IS ALLOWED IN RIPARIAN CORRIDOR OR BUFFER WITHOUT A RIPARIAN EXCEPTION
3) PROTECTIVE FENCING PER SCC STANDARD AT DRIPLINES OF (E) TREES TO REMAIN
4) GRADING WITHIN TREE DRIPLINES TO BE PER SCC STANDARDS

REFERENCE REPORTS:
GEOTECHNICAL REPORT - HARO/KASUNICH + ASSOCIATES, INC. (12/08)
BIOTIC REPORT - H.T. HARVEY + ASSOCIATES (10/30/09) HYDROLOGIC, STREAM HYDROLOGY AND HYDRAULICS FINAL REPORT - H.T. HARVEY + ASSOCIATES, BALANCE HYDROLOGIC INC. (1/29/09)

INTENT OF GRADING:
1) NO GRADING IN RIPARIAN BUFFER
2)PROVIDE PEDESTRIAN ACCESS TO ALL BUILDINGS AND ACTIVITY AREAS AT SLOPES LESS THAN 5%
3) USE MINIMUM HEIGHT RETAINING WALLS
4) RETAIN AS MANY (E) TREES AS POSSIBLE

CURVE TABLE			
CURVE	DELTA	RADIUS	ARC LENGTH
C1	16°56'28"	22'-1"	76'-4 5/4"
C2	17°37'28"	74'-0"	22'-7 7/8"
C3	10°04'10"	150'-0"	26'-4 11/32"
C4	51°47'24"	20'-0"	18'-0 15/16"
C5	30°58'32"	192'-5 24/32"	104'-0 25/32"

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 75°00'56" E	99'-1 23/32"
L2	S 64°11'38" E	84'-8 25/32"
L3	S 31°12'56" W	4'-7"
L4	S 14°36'31" W	74'-8 5/8"
L5	S 07°01'01" E	50'-8 1/8"
L6	S 07°01'01" W	54'-0 3/16"
L7	S 82°58'59" E	43'-4 15/16"

ABBREVIATIONS

- BVC BEGINNING OF VERTICAL CURVE
- VPI VERTICAL POINT OF INTERSECTION
- EVC END OF VERTICAL CURVE
- STA STATION POINT
- BHC BEGINNING OF HORIZONTAL CURVE
- EHC END OF HORIZONTAL CURVE

0 10' 20' 40'

NORTH

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT: Thacher & Thompson Architects
CIVIL ENGINEER: Nolte-Miller Engineering, Inc.
STRUCTURAL ENGINEER: Nolte-Miller Engineering, Inc.
ELECTRICAL ENGINEER: Nolte Design Group, Inc.
ECOLOGICAL CONSULTANT: H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT: Donald J. Ricketts & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE
GRADING PLAN
TEE STREET

Development Permit Application

DATE	REVISIONS

STAMP
REGISTERED LANDSCAPE ARCHITECT
No. 3971
STATE OF CALIFORNIA

CHECKED BY	DATE
SM	10/21/2009
DATE	FILE NAME
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DRAWN BY	SHEET
HK	L-1.0
JOB NO.	
30034	
SCALE	
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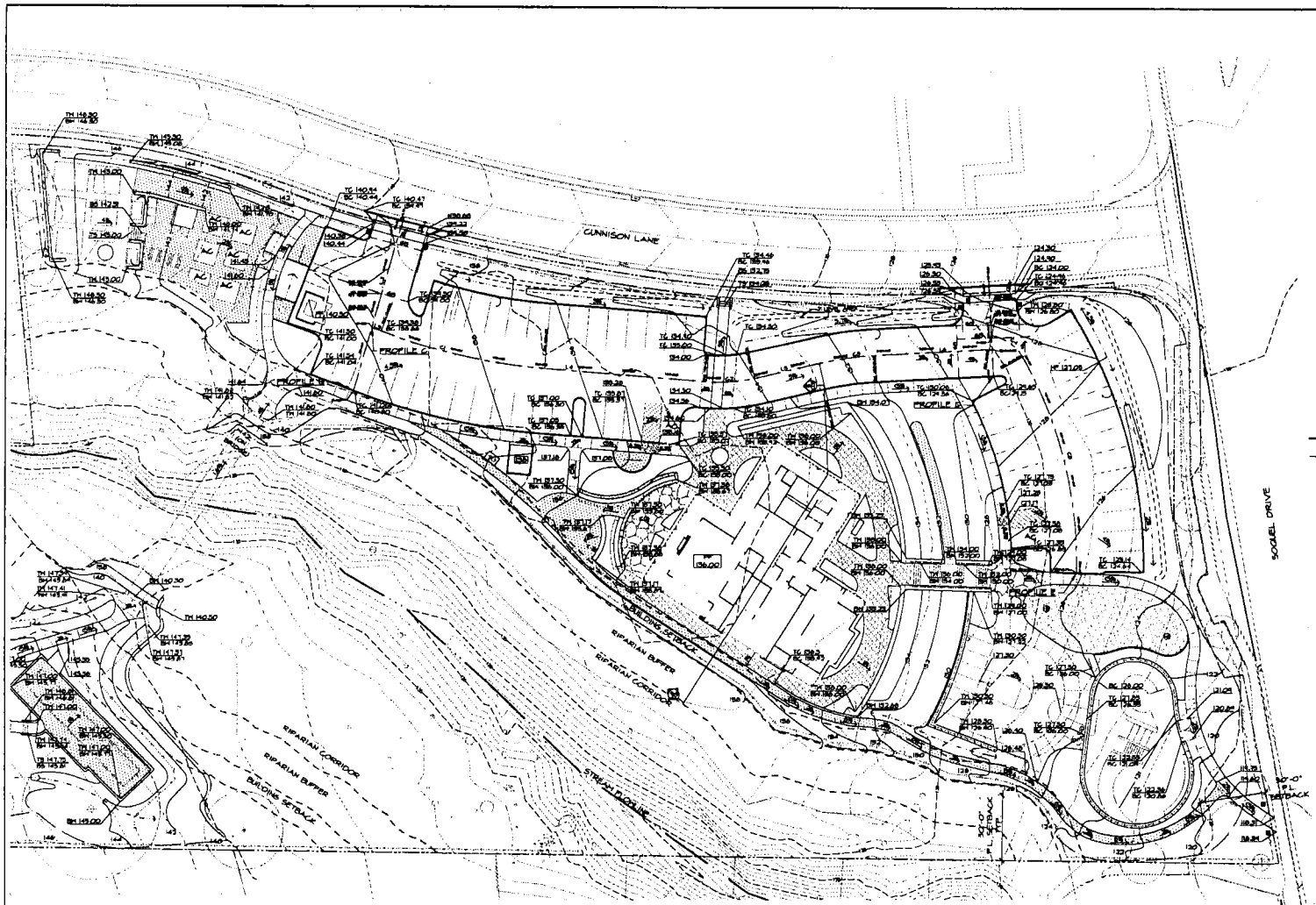

LEGEND

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- (E) MINOR CONTOURS
- MAJOR CONTOURS
- MINOR CONTOURS
- GRADE BREAK
- SWALES
- DIRECTION AND SLOPE OF FINISH SURFACE PITCH
- SURFACES ARE FLUSH
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- TW/BW TOP OF WALL / BOTTOM OF WALL
- HP/LP HIGHPOINT / LOW POINT
- FF FINISH FLOOR ELEVATION
- BOULDER RETAINING CURB
- STREAM FLOWLINE
- LIMIT OF GRADING

NOTE:
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2)NO GRADING IS ALLOWED IN RIPARIAN CORRIDOR OR BUFFER WITHOUT A RIPARIAN EXCEPTION
3) PROTECTIVE FENCING PER SCC STANDARD AT DRIPLINES OF (E) TREES TO REMAIN
4) GRADING WITHIN TREE DRIPLINES TO BE PER SCC STANDARDS

REFERENCE REPORTS:
GEOTECHNICAL REPORT - HARO/KASUNICH + ASSOCIATES, INC. (12/06)
BIOTIC REPORT - H.T. HARVEY + ASSOCIATES (10/30/09) HYDROLOGIC STREAM HYDROLOGY AND HYDRAULICS FINAL REPORT - H.T. HARVEY + ASSOCIATES, BALANCE HYDROLOGIC INC (1/29/09)

INTENT OF GRADING:
1) NO GRADING IN RIPARIAN BUFFER
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ABBREVIATIONS

BVC	BEGINNING OF VERTICAL CURVE
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BHC	BEGINNING OF HORIZONTAL CURVE
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CURVE TABLE

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LINE TABLE

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L6	S 07°01'01" W	54'-0 3/16"
L7	S 82°58'59" E	43'-9 15/16"

0 10' 20' 40'

NORTH

MIG
MOOSE MCDONALD GOLTSMAN, INC.
CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOOSE MCDONALD GOLTSMAN, INC.
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
BIOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-88
037-101-89

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
GRADING PLAN
CUNNISON LN./ SOQUEL DR.

Development Permit Application

DATE	REVISIONS

STAMP
REGISTERED LANDSCAPE ARCHITECT No. 3171 STATE OF CALIFORNIA

CHECKED BY	DATE
BM	10/21/2009
DATE 10/21/2009	FILE NAME GRADING_30034.DWG
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JOB NO. 30034	
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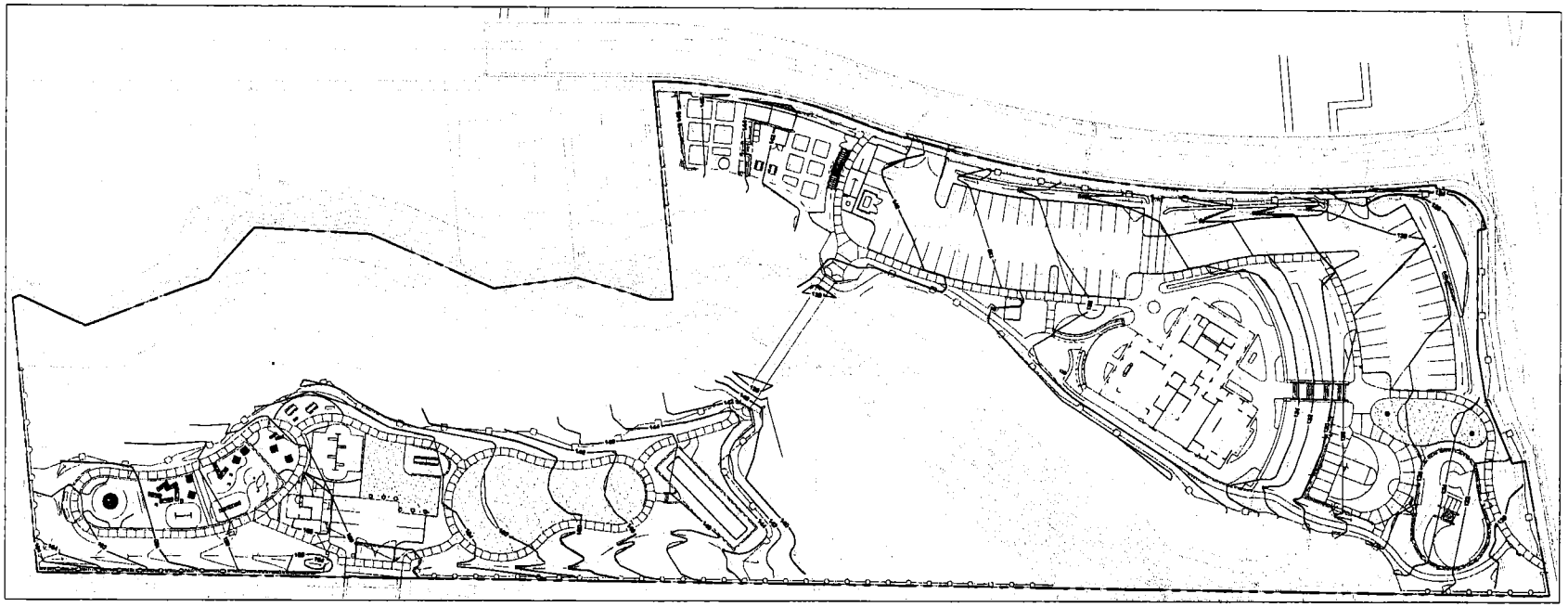


SCHEMATIC DESIGN - GRADING VOLUME STUDY

SCALE: 1" = 30'

SCHEMATIC DESIGN GRADING VOLUME ESTIMATE

GRADING	CUT	FILL	NET
CUNNISON LANE PARCEL	6,300 CY	300 CY	6,000 CY CUT
TEE STREET PARCEL	700 CY	1,600 CY	900 CY FILL
TOTAL	7,000 CY	1,900 CY	5,100 CY OFF HAUL

GRADING VOLUME NOTES:

1. CUT AND FILL VOLUME ESTIMATES WERE MEASURED BETWEEN THE EXISTING GRADE SURFACE (TOPOGRAPHIC SURVEY FOR THE FARM PARK, GARY PLAND AND ASSOCIATES, 05/2008) AND A FINISHED GRADE SURFACE BASED ON THE SCHEMATIC GRADING PLAN (MIG, 08/18/09).

2. THE PROPOSED GROUND ELEVATIONS AT THE BUILDINGS WERE SET ONE FOOT BELOW FINISHED FLOOR ELEVATION.

3. GRADING ESTIMATES WERE UN-FACTORED FOR EXPANSION OR COMPACTION. NO ALLOWANCES WERE MADE FOR OVER-EXCAVATION FOR UNSUITABLE MATERIALS, CONTAMINATED SOILS, TRENCHING, SUB-SURFACE UTILITIES, PAVEMENTS, BASE ROCK, SAFETY SURFACING, FOUNDATIONS, OR CONCRETE STRUCTURES, EXCEPT AT THE BUILDINGS.

MIG

MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

Kimley-Horn and Associates, Inc.
Civil and Structural Engineering

PROJECT TEAM:

LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.

ARCHITECT

CIVIL ENGINEER

STRUCTURAL ENGINEER

ELECTRICAL ENGINEER

ECOLOGICAL CONSULTANT

ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA.
95073

SHEET TITLE

GRADING VOLUME STUDY

Development Permit Submittal

DATE	REVISIONS

STAMP

CHECKED BY	DATE
EC/DH	10/21/2009
DATE	FILE NAME
10/21/2009	L1.2-GRADING-VOLS
DRAWN BY	SHEET
RTC	L-1.2
JOB NO.	
MIG 30004 MME 7141	
SCALE	
1"=30'	

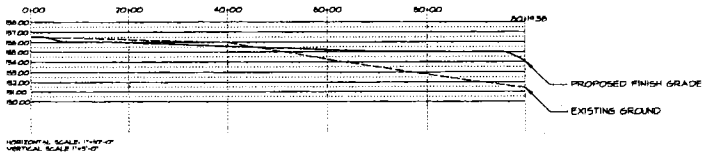
PRELIMINARY NOT FOR CONSTRUCTION

ATTACHMENT 12

ABBREVIATIONS

BVC	BEGINNING OF VERTICAL CURVE
VPI	VERTICAL POINT OF INTERSECTION
EVC	END OF VERTICAL CURVE
STA	STATION POINT

PROFILE A



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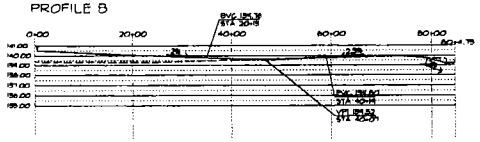
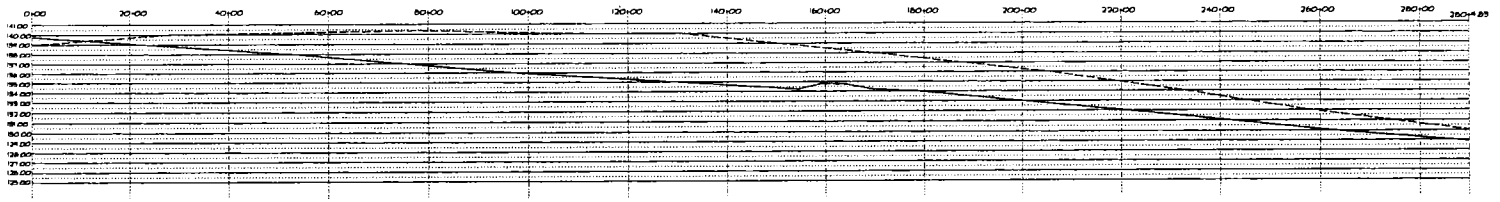


PROFILE C



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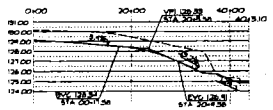

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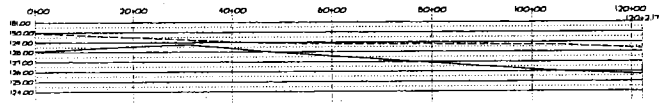

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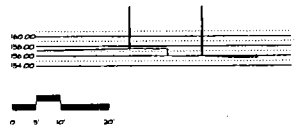

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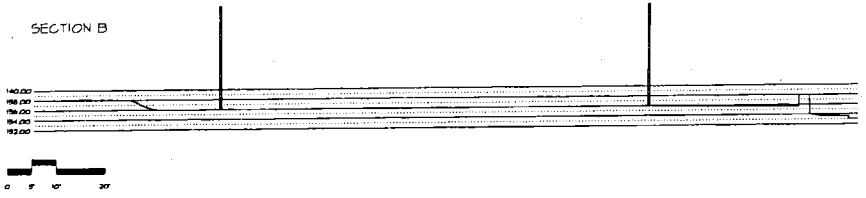

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
ECOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA,
95073

SHEET TITLE

GRADING PLAN

PROFILES AND SECTIONS

Development Permit Application

DATE	REVISIONS

STAMP

REGISTERED LANDSCAPE ARCHITECT
STEVEN M. KEAY
No. 3571
STATE OF CALIFORNIA

CHECKED BY: SM	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME: GRADING_30034.DWG
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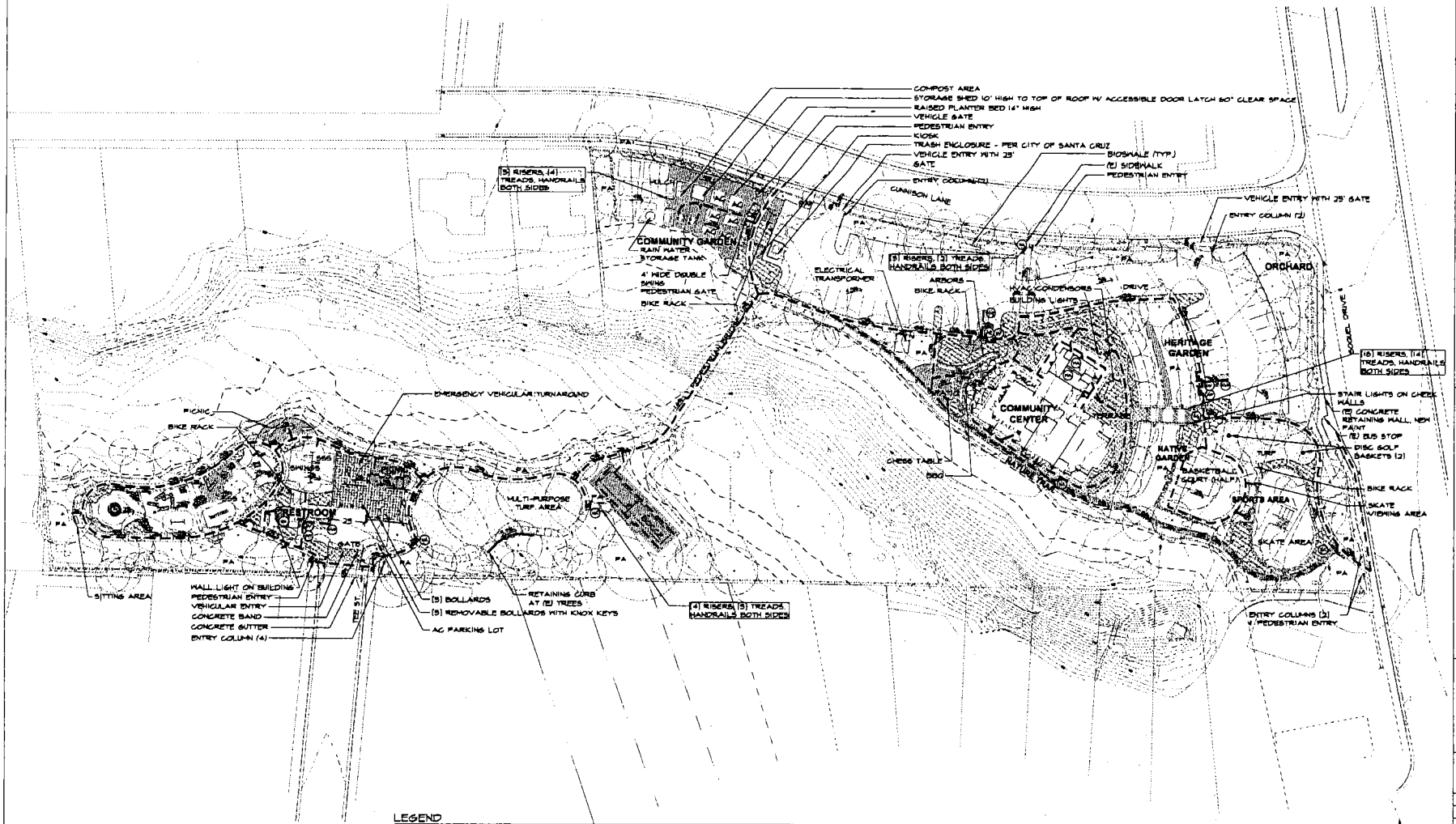
JOB NO.: 30034	
SCALE: 1"=20'-0"	

59/163

ATTACHMENT 2



LEGEND

- UNAUTHORIZED VEHICLE IN ACCESSIBLE PARKING STALL SIGN
- ACCESSIBLE PARKING SIGN
- NOT ACCESSIBLE PATH OF TRAVEL
- ACCESSIBLE VAN PARKING
- ACCESSIBLE UNISEX RESTROOM STALL
- ACCESSIBLE MEN'S RESTROOM STALL
- ACCESSIBLE WOMEN'S RESTROOM STALL
- ACCESSIBLE DRINKING FOUNTAIN
- D.G. PATH
- CONCRETE PATH
- ACCESSIBLE PATH OF TRAVEL

(E) FENCE
EASEMENT LINE
PROPERTY LINE
6' CHAIN LINK FENCE
6' SOLID FENCE AT RESIDENTIAL PROPERTY
6' SOLID FENCE ON 3' CONCRETE RETAINING WALL
4' SOLID FENCE ON 3' CONCRETE RETAINING WALL
8' SOLID FENCE
5' SPLIT RAIL FENCE - EXACT LOCATION SHOWN ON MITIGATION PLAN
3' PICKET FENCE
PARKING LOT LIGHTS
EXTERIOR BUILDING LIGHTS
BOLLARDS (6)
BIKE RACKS (4)
DRINKING FOUNTAIN - FREESTANDING (ADA) (1) WALL MOUNT AT RESTROOM (1)
TRASH RECEPTACLE (LITTER AND RECYCLING BINS (3))
DOG WASTE RECEPTACLE (3)
ADA PARKING SIGN
PICNIC TABLE (ACCESSIBLE)
6' BENCH
PERIMETER PLANTING AREAS (NOT INCLUDING RIPARIAN RESTORATION)
ACCESSIBLE PARKING STALL OR PLANTER BOX AT COMMUNITY GARDEN (ADA)
TRUNCATED DOME DETECTION WARNINGS
AC AISLE

NET MERRY-GO-ROUND APOLLO - DYNAMO
DOUBLE HUMPTY CLIMBING LADDER - LSI
TRACK RIDE - LSI
SPIGA SPINNER - KOMPAN
CUSTOM WOOD PLAY FORT OR "RAFT" PLATFORM
HORIZONTAL LOG (NATURAL)
UPRIGHT LOG STUMP (NATURAL)
BOULDERS
SSS SYNTHETIC SAFETY SURFACING

0 15' 30' 60' NORTH

NOTES:
ACCESSIBLE PATH OF TRAVEL:
WHERE INDICATED A BARRIER-FREE ACCESS WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING ¼" AT 1:20 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED ½" VERTICAL. MAXIMUM CROSS SLOPE OF 2% 1:20 IS THE MAXIMUM LONGITUDINAL SLOPE. MIN. 4'-0" WIDTH, AND SLIP RESISTANT SURFACE.

ACCESSIBLE ENTRANCES:
ALL ENTRIES/EXITS TO BE ACCESSIBLE PER C.B.C. 11338B.1.1.1 AND 11338.3.4.2. ACCESSIBLE ENTRY/EXITS TO HAVE 24" STRIKE SIDE CLEARANCE AT EXTERIOR SIDE OF DOOR; HAVE 60" MIN. LEVEL AREA (2% MAX. SLOPE) PERPENDICULAR TO DOOR AT EXTERIOR ; AND HAVE A LEVEL LANDING AREA CONNECTED TO THE ACCESSIBLE ROUTE THROUGHOUT THE SITE.

MIG
MOORE IACOFANO GOLTSMAN, INC.
CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
ECOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
SITE ACCESS PLAN

Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY	DATE
SM	10/31/2009
DATE	FILE NAME
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20084	
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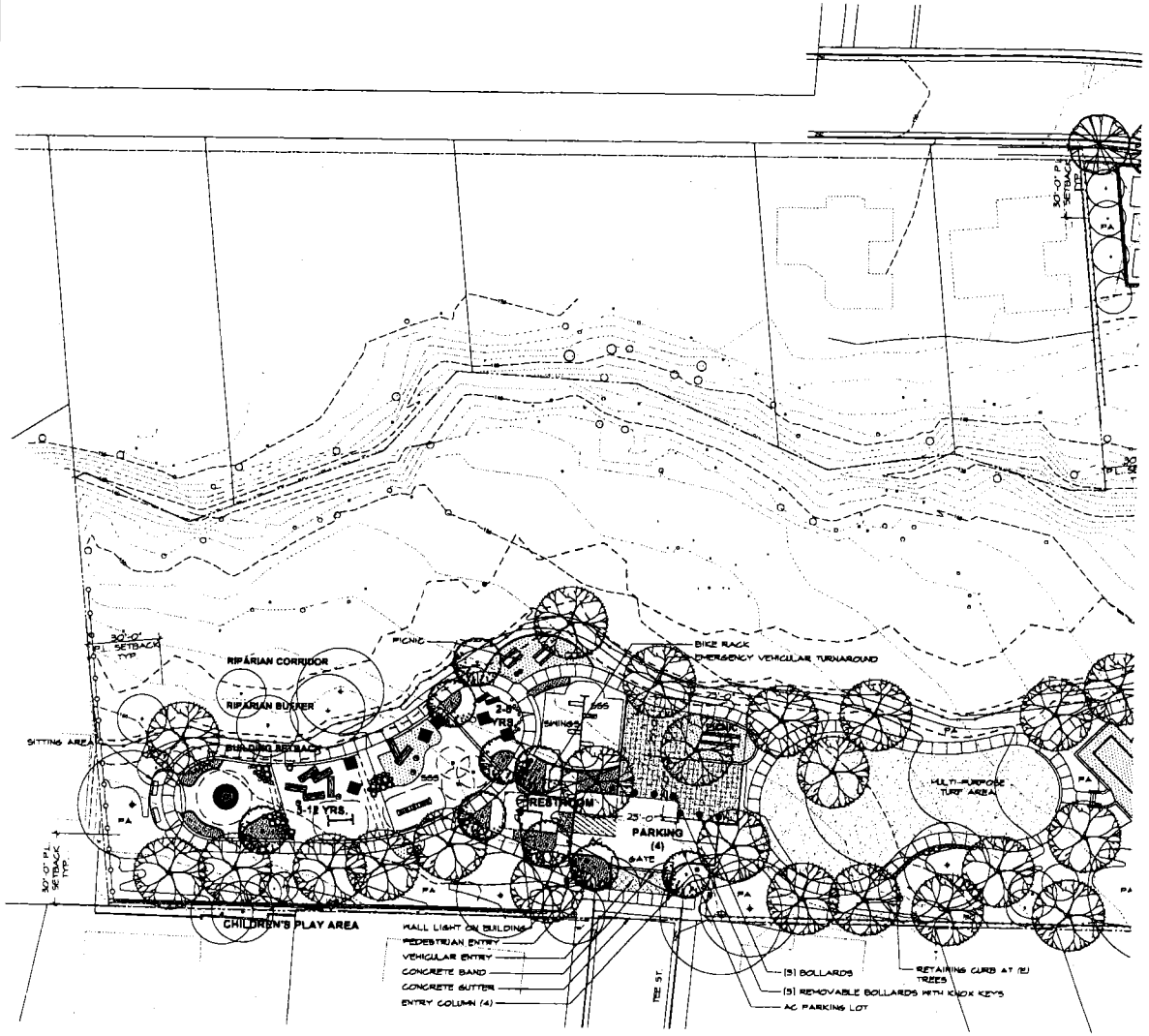
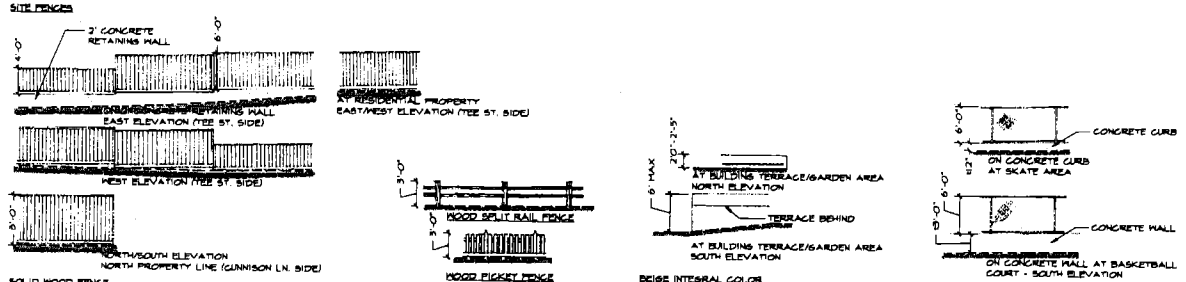


SITE FENCES



LEGEND

- (E) FENCE
- EASEMENT LINE
- PROPERTY LINE
- 6' CHAIN LINK FENCE
- 6' SOLID FENCE AT RESIDENTIAL PROPERTY
- 6' SOLID FENCE ON 2' CONCRETE RETAINING WALL
- 4' SOLID FENCE ON 2' CONCRETE RETAINING WALL
- 8' SOLID FENCE
- 3' SPLIT RAIL FENCE - EXACT LOCATION SHOWN ON MITIGATION PLAN
- 3' PICKET FENCE
- PARKING LOT LIGHTS
- EXTERIOR BUILDING LIGHTS
- BOLLARDS (6)
- BIKE RACKS (4)
- DRINKING FOUNTAIN - FREESTANDING (ADA) (1) WALL MOUNT AT RESTROOM (1)
- TRASH RECEPTACLE (LITTER AND RECYCLING BINS (3))
- DOG WASTE RECEPTACLE (5)
- ADA PARKING SIGN
- PICNIC TABLE (ACCESSIBLE)
- 6' BENCH
- PA — PERIMETER PLANTING AREAS (NOT INCLUDING RIPARIAN RESTORATION)
- AC — ACCESSIBLE PARKING STALL OR PLANTER BOX AT COMMUNITY GARDEN (ADA)
- TRUNCATED DOME DETECTION WARNINGS
- AC AISLE
- TURF BLOCK (VEHICLE DEPTH)
- STONE PAVING
- SPECIAL PAVING- COLORED/TEXTURED CONCRETE
- DECOMPOSED GRANITE PAVING
- PLANTING AREA
- CONCRETE SIDEWALK

NOTE: FOR SIGN TYPES AND LOCATIONS, SEE SHEET L2.3

ALL FENCES AND WALLS IN 30' SETBACK REQUIRE VARIANCE (OVERHEIGHT FENCE APPROVAL)

PLAY EQUIPMENT LEGEND

- NET MERRY-GO-ROUND APOLLO - DYNAMO
- DOUBLE HUMPTY CLIMBING LADDER - LSI
- TRACK RIDE - LSI
- SPICA SPINNER - KOMPAN
- CUSTOM WOOD PLAY FORT OR "RAFT" PLATFORM
- HORIZONTAL LOG (NATURAL)
- UPRIGHT LOG STUMP (NATURAL)
- BOULDERS
- 555 — SYNTHETIC SAFETY SURFACING

0 10' 20' 40'

NORTH

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT: Thacher & Thompson Architects
CIVIL ENGINEER: Nolte-Miller Engineering, Inc.
STRUCTURAL ENGINEER: Nolte-Miller Engineering, Inc.
ELECTRICAL ENGINEER: Prime Design Group, Inc.
ECOLOGICAL CONSULTANT: H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT: David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
027-101-58
027-101-59

Soquel Drive & Gunnison Lane
Santa Cruz County, CA.
95073

SHEET TITLE

SITE PLAN

TEE STREET

Development Permit Application

DATE	REVISIONS

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JOB NO. 30034	
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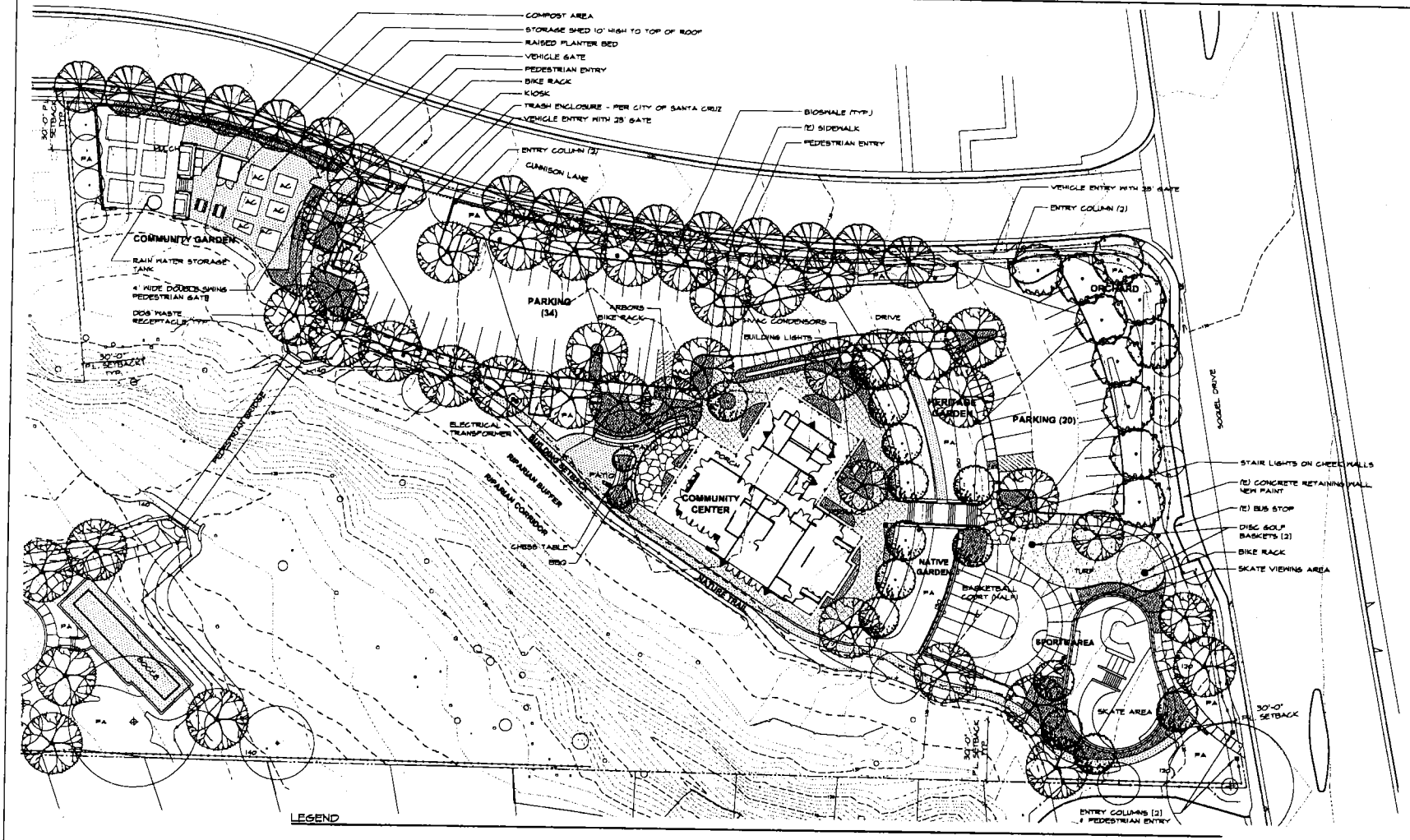

LEGEND

- (E) FENCE
- EASEMENT LINE
- PROPERTY LINE
- 6' CHAINLINK FENCE
- 6' SOLID FENCE AT RESIDENTIAL PROPERTY
- 6' SOLID FENCE ON 2' CONCRETE RETAINING WALL
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- BOLLARDS (6)
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- SPECIAL PAVING- COLORED/TEXTURED CONCRETE
- DECOMPOSED GRANITE PAVING
- PLANTING AREA
- CONCRETE SIDEWALK

NOTE: FOR SIGN TYPES AND LOCATIONS, SEE SHEET L2.3

ALL FENCES AND WALLS IN 30' SETBACK REQUIRE VARIANCE (OVERHEIGHT FENCE APPROVAL)

0 10' 20' 40'

NORTH

MIG
MOOSE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
ECOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE

SITE PLAN

CUNNISON LN./ SOQUEL DR.

Development Permit Application

DATE	REVISIONS

STAMP

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SM	10/21/2009
DATE	FILE NAME
10/21/2009	SITE_PLAN_30034.DWG
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MK	L-2.2
JOB NO.	
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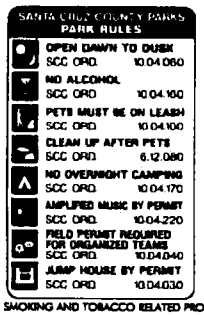
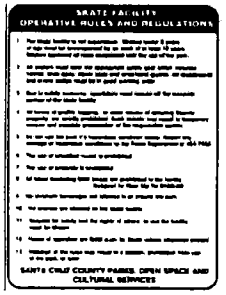
SIGNS



SMOKING AND TOBACCO RELATED PRODUCTS PROHIBITED SCC,10.04155



MINIMUM FINE $250

VAN ACCESSIBLE

SIGN LEGEND

SIGNAGE PROGRAM

No signs will be illuminated

	SIGN	MATERIAL	LOCATION
E	Entrance - County Standard	Painted Wood	Corner Cunnison Lane and Soquel Drive Tee Street Entry
PR	Park Rules - County Standard	Steel Pole, Reflective Image (Black and White)	Soquel Drive Pedestrian Entry Cunnison Lane Pedestrian Entry (north) Tee Street Entry
UV	Unauthorized Vehicles Sign at Accessible Parking Stall	Steel Pole, Reflective Image (Black and White)	At each accessible parking space
AC	Accessible Stall - ADA Standard	Steel Pole, Reflective Image (Blue and White)	(1) per accessible stall per ADA requirements
NA	Not Accessible Path of Travel	Painted Wood	At decisions from an accessible route
SR	Skate Facility Rules - County Standard	Steel, Reflective Image (Black and White)	Attach to Fence at Entry
PE	Play Equipment Age Guidelines	By Manufacturer	Mount on each manufactured play equipment piece
G	Boy's of Garden Community Garden	Painted Wood	Garden Arbor
	Boy's of Certification	Bronze Plaque	Garden Gate
	Heritage Garden	Painted Wood	Garden Border
	Native Garden	Painted Wood	Garden Border

0 15' 30' 60'

NORTH

MIG

MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:

LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.

ARCHITECT
Weather & Thompson Architects

CIVIL ENGINEER
Nolan-Miller Engineering, Inc.

STRUCTURAL ENGINEER
Nolan-Miller Engineering, Inc.

ELECTRICAL ENGINEER
Pelsor Badger Group, Inc.

ECOLOGICAL CONSULTANT
H.T. Harvey & Associates

ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE

SIGNAGE PLAN PLAN

Development Permit Application

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HR	L-2.3
JOB NO.	
30034	
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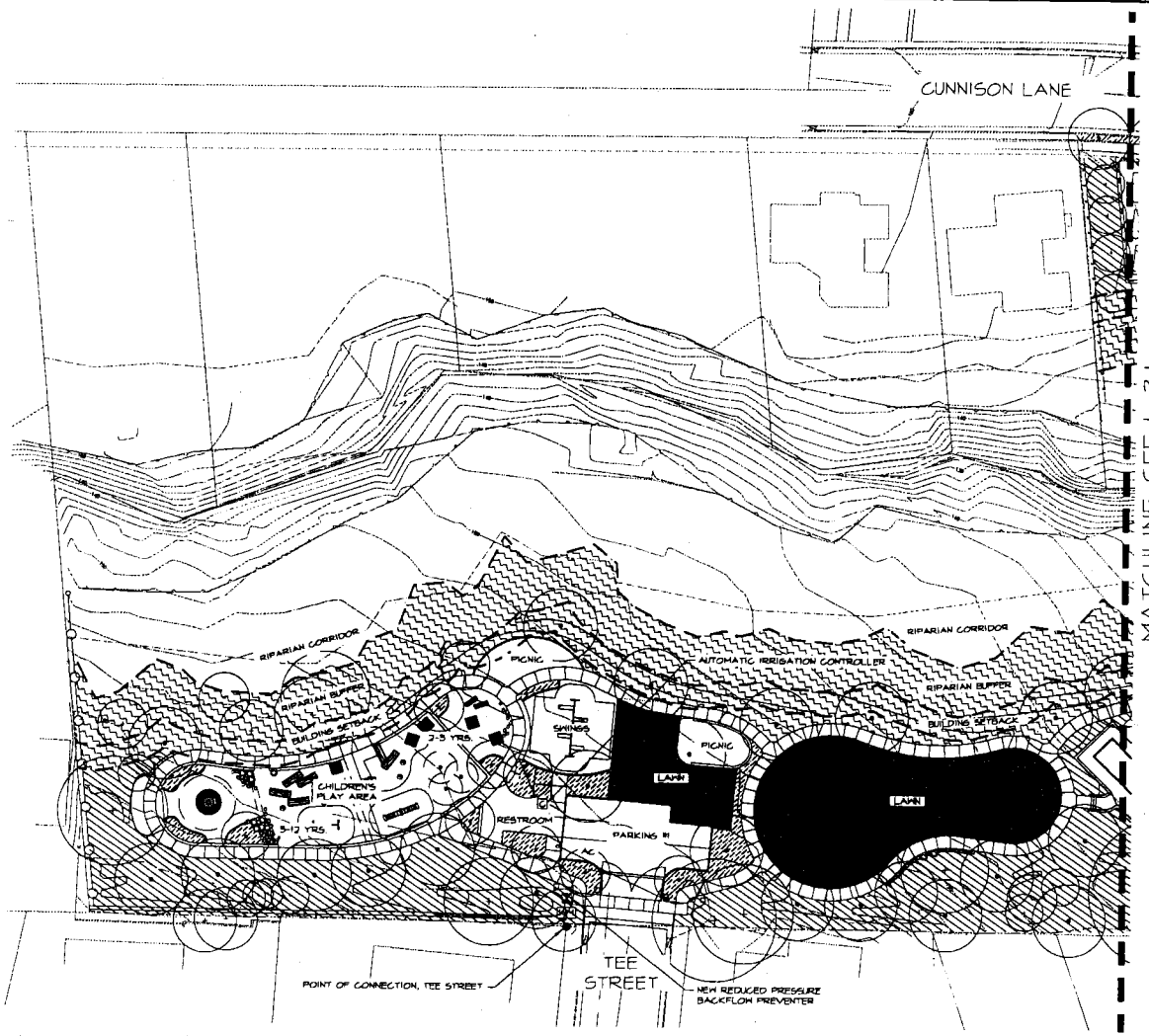
ATTACHMENT 2



IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	REMARKS
	IRRIGATION POINT-OF-CONNECTION (POC)	CONNECT NEW RPBP AND NEW MAINLINE DOWNSTREAM OF NEW DEDICATED IRRIGATION WATER METER AS SHOWN. REFER TO CIVIL DRAWINGS FOR MORE INFORMATION.
WM	NEW DEDICATED IRRIGATION WATER METER	REFER TO CIVIL DRAWINGS SOQUEL CREEK WATER DISTRICT INSTALLATION DETAIL S-8 FOR MORE INFORMATION.
	NEW REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)	INSTALLED IN PROTECTIVE ENCLOSURE. REFER TO SOQUEL CREEK WATER DISTRICT INSTALLATION DETAIL S-14 FOR MORE INFORMATION.
	NEW AUTOMATIC IRRIGATION CONTROLLER	AUTOMATIC IRRIGATION CONTROLLER CONFIGURATION SHALL INCLUDE: REAL-TIME ET-BASED CALCULATIONS OF IRRIGATION SCHEDULE BASED ON CURRENT WEATHER CONDITIONS; ON-SITE RAIN SHUT-OFF SENSOR; REAL-TIME FLOW MONITORING.
	SUBSURFACE DRIP IRRIGATION DISTRIBUTION EQUIPMENT	AUTOMATIC REMOTE CONTROL VALVES, FILTER AND PRESSURE REGULATOR WITH BURIED PVC MAINLINE, BURIED PVC LATERAL LINES, AND BURIED LOW FLOW DRIP TUBING (4" MINIMUM DEPTH) LOCATED AT PLANT ROOT ZONE. EMITTERS ON DRIP TUBING SHALL BE PROVIDED WITH NON-TOXIC ROOT INTRUSION TECHNOLOGY AND PRESSURE-COMPENSATING CHECK VALVE DEVICES.
	OVERHEAD STREAM ROTOR IRRIGATION DISTRIBUTION EQUIPMENT	HIGH EFFICIENCY, MULTI-TRAJECTORY ROTATING STREAM NOZZLE (RANGE 8' - 30' RADIUS) WITH MATCHED PRECIPITATION AND LOW APPLICATION RATES. NOZZLE TO BE INSTALLED ON PRESSURE REGULATED 6-INCH BOTTOM INLET POP-UP SPRAY BODY. SPRAY BODY SHALL INCLUDE FACTORY INSTALLED CHECK VALVES.
	PERMANENT FLOOD IRRIGATION DISTRIBUTION EQUIPMENT	AUTOMATIC REMOTE CONTROL VALVES WITH BURIED PVC MAINLINE, COMBINATION BURIED PVC LATERAL LINES AND 18" FLEXIBLE HOSE WITH ONE (1) LOW VOLUME (.25 GPM) FLOOD BUBBLER PER PLANT.
	TEMPORARY FLOOD IRRIGATION DISTRIBUTION EQUIPMENT	AUTOMATIC REMOTE CONTROL VALVES WITH BURIED PVC MAINLINE, COMBINATION PVC LATERAL LINES AND 18" FLEXIBLE HOSE WITH ONE (1) LOW VOLUME (.25 GPM) FLOOD BUBBLER PER PLANT. (TRANSITIONING ON-GRADE)
	RAIN WATER HARVESTING SYSTEM/ MANUAL IRRIGATION	HOSE BIBS WILL BE PROVIDED AT STRATEGIC LOCATIONS TO PROVIDE FOR HAND WATERING OF GARDEN PLOTS. WATER SOURCE AT COMMUNITY GARDEN WILL BE FROM A RAINWATER HARVESTING SYSTEM.

GENERAL LEGEND

SYMBOL	DESCRIPTION
	DECOMPOSED GRANITE
	EXISTING TREE
	PROPOSED TREE

TEE STREET: PRELIMINARY PRESSURE CALCULATION

WATER PURVEYOR:	SOQUEL CREEK WATER DISTRICT
STATIC PRESSURE:	118
MAXIMUM GPM DEMAND:	30

POINT OF CONNECTION

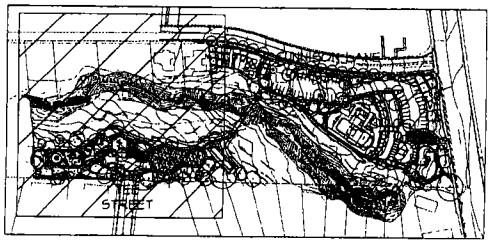
QUANTITY	SIZE AND DESCRIPTION	GPM	PSI LOSS
1	1" DSM-TYPE WATER METER	30	2
1	1" REDUCED PRESSURE BACKFLOW DEVICE	30	14
1	SUPERIOR 1" 8100 VALVE	30	3
1	RAINMASTER 4000-DLV	30	1

PIPING

QUANTITY	SIZE AND DESCRIPTION	GPM	PSI LOSS
240	1-1/2" SCH. 40	30	3
1	1" WATER PLASTIC K.V.	30	3

TOTAL COMPONENT LOSS:	24
MINIMUM REQUIRED BY HEAD:	50
ELEVATION LOSS/GAIN:	0
TOTAL PRESSURE REQUIRED:	50
RESIDUAL PRESSURE:	68

KEY MAP:



0 10' 20' 40' NORTH

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT:
CIVIL ENGINEER:
SURVEYOR:
STRUCTURAL ENGINEER:
MECHANICAL ENGINEER:
ELECTRICAL ENGINEER:
ECOLOGICAL CONSULTANTS:
STREAM RESTORATION CONSULTANTS:
GEOTECHNICAL ENGINEER:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
IRRIGATION PLAN
TEE STREET

Development Permit Application

DATE	REVISIONS

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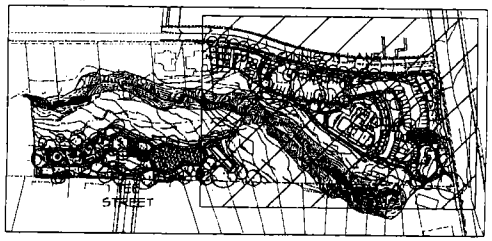
AJV	L-3.0
JOB NO.	
30034	
SCALE	
1"=20'-0"	

SOQUEL DRIVE PRELIMINARY PRESSURE CALCULATION			
WATER PURVEYOR: SOQUEL CREEK WATER DISTRICT			
STATIC PRESSURE: 121			
MAXIMUM GPM DEMAND: 76			
POINT OF CONNECTION			
QUANTITY	SIZE AND DESCRIPTION	GPM	PSI LOSS
1	1" DMA TYPE WATER METER	76	7
1	1" REDUCED PRESSURE BACKFLOW DEVICE	76	19
1	SUPERIOR 1" 8100 VALVE	76	2
1	RAIN METER ASSEMBLY	76	1
PIPING			
QUANTITY	SIZE AND DESCRIPTION	GPM	PSI LOSS
700	1-1/2" SCH. 40	76	5
1	1" WATER PLASTIC C.V.	76	1
	TOTAL COMPONENT LOSS		35
	MINIMUM REQUIRED BY HEAD		80
	ELEVATION LOSS/GAIN		13
	TOTAL PRESSURE REQUIRED		93
	RESIDUAL PRESSURE		41

KEY MAP:



0 10' 20' 40' NORTH

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MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT:
CIVIL ENGINEER:
SURVEYOR:
STRUCTURAL ENGINEER:
MECHANICAL ENGINEER:
ELECTRICAL ENGINEER:
BIOLOGICAL CONSULTANTS:
STREAM RESTORATION CONSULTANTS:
GEOTECHNICAL ENGINEER:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA.
95073

SHEET TITLE
IRRIGATION PLAN
SOQUEL DRIVE

Development Permit Application

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AJV	L-3.1
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30034	
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1"=20'-0"	

ATTACHMENT 2

TEE STREET PARCEL

ET Adjustment Factor	1
Annual ETo	46.17

CATEGORY	MONTH	IRRIGATED AREA (SQ. FT.)	MONTHLY REFERENCE EVAPOTRANSPIRATION RATE (ETo)	50% OF AVG. PRECIPITATION (IN./MO)	AVERAGE ADJUSTED LANDSCAPE (KL)	DISTRIBUTION UNIFORMITY (DU)	GALLONS REQUIRED PER MONTH
SOURCE	SITE MAP		SOQUEL CREEK WATER DISTRICT	CIMIS	WUCOLS	ESTIMATE	(ETo-AVG PRECIP.) x ET ADJ. FACTOR x SF AREA x KL x 0.62) / DU
LOW WATER AND NATIVE ORNAMENTAL							
	January	2,783	1.83	1.69	0.36	0.9	100
	February	2,783	2.2	1.75	0.36	0.9	308
	March	2,783	3.66	0.91	0.36	0.9	1,900
	April	2,783	4.84	0.53	0.36	0.9	2,975
	May	2,783	5.25	0.23	0.36	0.9	3,467
	June	2,783	5.67	0.04	0.36	0.9	3,884
	July	2,783	5.61	0.00	0.36	0.9	3,870
	August	2,783	5.26	0.01	0.36	0.9	3,619
	September	2,783	4.25	0.02	0.36	0.9	2,920
	October	2,783	3.42	0.33	0.36	0.9	2,135
	November	2,783	2.38	0.75	0.36	0.9	1,114
	December	2,783	1.83	1.42	0.36	0.9	282
						GALLONS REQUIRED PER YEAR	[illegible]
TURF AREAS							
	January	7,134	1.83	1.69	0.72	0.8	575
	February	7,134	2.2	1.75	0.72	0.8	1,774
	March	7,134	3.66	0.91	0.72	0.8	10,958
	April	7,134	4.84	0.53	0.72	0.8	17,160
	May	7,134	5.25	0.23	0.72	0.8	19,909
	June	7,134	5.67	0.04	0.72	0.8	22,400
	July	7,134	5.61	0.00	0.72	0.8	22,319
	August	7,134	5.26	0.01	0.72	0.8	20,874
	September	7,134	4.25	0.02	0.72	0.8	16,840
	October	7,134	3.42	0.33	0.72	0.8	12,314
	November	7,134	2.38	0.75	0.72	0.8	6,425
	December	7,134	1.83	1.42	0.72	0.8	1,626
						GALLONS REQUIRED PER YEAR	[illegible]
PROPOSED (YEAR 1) RESTORATION AREAS[1]							
(PROVIDED BY H.T. HARVEY & ASSOCIATES)	March-October					GALLONS REQUIRED PER YEAR	[illegible]
ESTABLISHED (ANNUALLY AFTER YEAR 3) RESTORATION AREAS							
(PROVIDED BY H.T. HARVEY & ASSOCIATES)	March-October					GALLONS REQUIRED PER YEAR	[illegible]

PROPOSED LANDSCAPE, GALLONS REQUIRED PER YEAR		
LOW WATER AND NATIVE ORNAMENTAL+TURF AREAS+PROPOSED RESTORATION AREAS	TOTAL GALLONS REQUIRED PER YEAR	344,636
	ESTIMATED BILLING UNITS/YEAR	461

ESTABLISHED LANDSCAPE, GALLONS REQUIRED PER YEAR		
LOW WATER AND NATIVE ORNAMENTAL+TURF AREAS+ESTABLISHED RESTORATION AREAS	TOTAL GALLONS REQUIRED PER YEAR	197,636
	ESTIMATED BILLING UNITS/YEAR	264

1 Irrigation will be tapered over a three year period. Proposed year 2 and 3 water requirements are expected to be less than proposed year 1.

SOQUEL DRIVE PARCEL

ET Adjustment Factor	1
Annual ETo	46.17

CATEGORY	MONTH	IRRIGATED AREA (SQ. FT.)	MONTHLY REFERENCE EVAPOTRANSPIRATION RATE (ETo)	50% OF AVG. PRECIPITATION (IN./MO)	AVERAGE ADJUSTED LANDSCAPE (KL)	DISTRIBUTION UNIFORMITY (DU)	GALLONS REQUIRED PER MONTH
SOURCE	SITE MAP		SOQUEL CREEK WATER DISTRICT	CIMIS	WUCOLS	ESTIMATE	(ETo-AVG PRECIP.) x ET ADJ. FACTOR x SF AREA x KL x 0.62) / DU
LOW WATER AND NATIVE ORNAMENTAL							
	January	6,920	1.83	1.69	0.36	0.9	248
	February	6,920	2.2	1.75	0.36	0.9	765
	March	6,920	3.66	0.91	0.36	0.9	4,724
	April	6,920	4.84	0.53	0.36	0.9	7,398
	May	6,920	5.25	0.23	0.36	0.9	8,622
	June	6,920	5.67	0.04	0.36	0.9	9,657
	July	6,920	5.61	0.00	0.36	0.9	9,622
	August	6,920	5.26	0.01	0.36	0.9	8,999
	September	6,920	4.25	0.02	0.36	0.9	7,260
	October	6,920	3.42	0.33	0.36	0.9	5,309
	November	6,920	2.38	0.75	0.36	0.9	2,770
	December	6,920	1.83	1.42	0.36	0.9	701
						GALLONS REQUIRED PER YEAR	[illegible]
MEDIUM WATER ORCHARD/MEADOW							
	January	3,758	1.83	1.69	0.6	0.8	253
	February	3,758	2.2	1.75	0.6	0.8	779
	March	4,082	3.66	0.91	0.6	0.8	5,199
	April	4,082	4.84	0.53	0.6	0.8	8,142
	May	4,082	5.25	0.23	0.6	0.8	9,489
	June	4,082	5.67	0.04	0.6	0.8	10,629
	July	4,082	5.61	0.00	0.6	0.8	10,590
	August	4,082	5.25	0.01	0.6	0.8	9,904
	September	4,082	4.25	0.02	0.6	0.8	7,990
	October	4,082	3.42	0.33	0.6	0.8	5,843
	November	4,082	2.38	0.75	0.6	0.8	3,049
	December	4,082	1.83	1.47	0.6	0.8	771
						GALLONS REQUIRED PER YEAR	[illegible]
MEDIUM WATER ORNAMENTAL							
	January	4,082	1.83	1.69	0.72	0.9	291
	February	4,082	2.2	1.75	0.72	0.9	898
	March	4,082	3.66	0.91	0.72	0.9	5,546
	April	4,082	4.84	0.53	0.72	0.9	8,685
	May	4,082	5.25	0.23	0.72	0.9	10,122
	June	4,082	5.67	0.04	0.72	0.9	11,337
	July	4,082	5.61	0.00	0.72	0.9	11,296
	August	4,082	5.25	0.01	0.72	0.9	10,565
	September	4,082	4.25	0.02	0.72	0.9	8,523
	October	4,082	3.42	0.33	0.72	0.9	6,232
	November	4,082	2.38	0.75	0.72	0.9	3,252
	December	4,082	1.83	1.42	0.72	0.9	823
						GALLONS REQUIRED PER YEAR	[illegible]
TURF AREAS							
	January	1,899	1.83	1.69	0.72	0.8	153
	February	1,899	2.2	1.75	0.72	0.8	472
	March	1,899	3.66	0.91	0.72	0.8	2,917
	April	1,899	4.84	0.53	0.72	0.8	4,568
	May	1,899	5.25	0.23	0.72	0.8	5,323
	June	1,899	5.67	0.04	0.72	0.8	5,963
	July	1,899	5.61	0.00	0.72	0.8	5,941
	August	1,899	5.26	0.01	0.72	0.8	5,556
	September	1,899	4.25	0.02	0.72	0.8	4,483
	October	1,899	3.42	0.33	0.72	0.8	3,278
	November	1,899	2.38	0.75	0.72	0.8	1,710
	December	1,899	1.83	1.42	0.72	0.8	433
						GALLONS REQUIRED PER YEAR	[illegible]
COMMUNITY GARDEN[2]							
	January	2,300	1.83	1.69	0.8	0.9	183
	February	2,300	2.2	1.75	0.8	0.9	566
	March	2,300	3.66	0.91	0.8	0.9	3,489
	April	2,300	4.84	0.53	0.8	0.9	5,464
	May	2,300	5.25	0.23	0.8	0.9	6,368
	June	2,300	5.67	0.04	0.8	0.9	7,133
	July	2,300	5.61	0.00	0.8	0.9	7,107
	August	2,300	5.26	0.01	0.8	0.9	6,647
	September	2,300	4.25	0.02	0.8	0.9	5,362
	October	2,300	3.42	0.33	0.8	0.9	3,921
	November	2,300	2.38	0.75	0.8	0.9	2,046
	December	2,300	1.83	1.42	0.8	0.9	518
						GALLONS REQUIRED PER YEAR	[illegible]
PROPOSED (YEAR 1) RESTORATION AREAS[1]							
(PROVIDED BY H.T. HARVEY & ASSOCIATES)	March-October					GALLONS REQUIRED PER YEAR	[illegible]
ESTABLISHED (ANNUALLY AFTER YEAR 3) RESTORATION AREAS							
(PROVIDED BY H.T. HARVEY & ASSOCIATES)	March-October					GALLONS REQUIRED PER YEAR	[illegible]

PROPOSED LANDSCAPE, GALLONS REQUIRED PER YEAR		
LOW WATER AND NATIVE ORNAMENTAL+MEDIUM WATER ORNAMENTAL+TURF AREAS+COMMUNITY GARDEN+PROPOSED RESTORATION AREAS	TOTAL GALLONS REQUIRED PER YEAR	332,343
	ESTIMATED BILLING UNITS/YEAR	444

ESTABLISHED LANDSCAPE, GALLONS REQUIRED PER YEAR		
LOW WATER AND NATIVE ORNAMENTAL+MEDIUM WATER ORNAMENTAL+TURF AREAS+ESTABLISHED (ANNUALLY AFTER YEAR 3) RESTORATION AREAS	TOTAL GALLONS REQUIRED PER YEAR	248,343
	ESTIMATED BILLING UNITS/YEAR	332

1 Irrigation will be tapered over a three year period. Proposed year 2 and 3 water requirements are expected to be less than proposed year 1.
2 Irrigation water source to be supplemented by rainwater harvesting system.

SOQUEL CREEK WATER DISTRICT

Annual Exterior Water Allowance Worksheet

1) Project Name: Farm Neighborhood Park and Community Center - Tee Street Parcel

2) Project Address: 5540 Tee Street
Santa Cruz County California

3) Assessor's Parcel Number: APN 37-101-59

Landscape Water Allowance Formula

Step 1: Enter the total square footage of irrigated Landscape Area in project. Water features are included in the calculation of the landscaped area.

Step 2: Enter the annual Reference Evapotranspiration Rate (ETo) for the landscaped area.

Step 3 ETo Water Savings Adjustment Factor: An 80 percent adjustment to the ETo is applied for water savings.

Step 4: Calculate the Landscape Water Allowance for the project by multiplying the total square footage shown in Box A by the Annual ETo in Box B and by .00083 (conversion factor from inches of water to 100-cubic feet per year).

1. Total Irrigated Landscaped Area (square feet) (Box A)	20,934*
2. Annual ETo for Landscaped Area (inches per year) (Box B)	46.17
3. ETo Adjustment Factor (unitless)	x 0.8
4. Conversion Factor (to gallons per square feet - assumes 1 inch depth)	x .62
5. Maximum Landscape Water Allowance (gallons per year)	479,396
6. Divide by 748 to convert into billing units.	÷ 748
7. Total billing units per year	641

Example

1. Total Irrigated Landscaped Area (square feet)	10,000
2. Annual ETo for Landscaped Area (inches per year)	x 46.17
3. ETo Adjustment Factor (unitless)	x 0.8
4. Conversion Factor (to gallons per square feet)	x .62
5. Maximum Landscape Water Allowance (gallons per year)	229,003
6. Divide by 748 to convert into billing units.	÷ 748
7. Total billing units per year	306

* Does not include exempted riparian habitat restoration area utilizing temporary irrigation system.

SOQUEL CREEK WATER DISTRICT

Annual Exterior Water Allowance Worksheet

1) Project Name: Farm Neighborhood Park and Community Center - Soquel Drive Parcel

2) Project Address: 5555 Soquel Drive
Santa Cruz County California

3) Assessor's Parcel Number: APN 37-101-58

Landscape Water Allowance Formula

Step 1: Enter the total square footage of irrigated Landscape Area in project. Water features are included in the calculation of the landscaped area.

Step 2: Enter the annual Reference Evapotranspiration Rate (ETo) for the landscaped area.

Step 3 ETo Water Savings Adjustment Factor: An 80 percent adjustment to the ETo is applied for water savings.

Step 4: Calculate the Landscape Water Allowance for the project by multiplying the total square footage shown in Box A by the Annual ETo in Box B and by .00083 (conversion factor from inches of water to 100-cubic feet per year).

1. Total Irrigated Landscaped Area (square feet) (Box A)	26,209*
2. Annual ETo for Landscaped Area (inches per year) (Box B)	46.17
3. ETo Adjustment Factor (unitless)	x 0.8
4. Conversion Factor (to gallons per square feet - assumes 1 inch depth)	x .62
5. Maximum Landscape Water Allowance (gallons per year)	600,195
6. Divide by 748 to convert into billing units.	÷ 748
7. Total billing units per year	803

Example

1. Total Irrigated Landscaped Area (square feet)	10,000
2. Annual ETo for Landscaped Area (inches per year)	x 46.17
3. ETo Adjustment Factor (unitless)	x 0.8
4. Conversion Factor (to gallons per square feet)	x .62
5. Maximum Landscape Water Allowance (gallons per year)	229,003
6. Divide by 748 to convert into billing units.	÷ 748
7. Total billing units per year	306

* Does not include exempted riparian habitat restoration area utilizing temporary irrigation system. Includes community garden [illegible], but credit will be taken when rain water harvesting system is installed.

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
Thatcher & Thompson Architects
CIVIL ENGINEERS
Mesiti-Miller Engineering, Inc.
SURVEYORS
Gary Ifland and Associates, Inc.
STRUCTURAL ENGINEERS
Mesiti-Miller Engineering, Inc.
MECHANICAL ENGINEERS
List Engineering
ELECTRICAL ENGINEERS
Maas Design
ECOLOGICAL CONSULTANTS
H.T. Harvey & Associates
STREAM RESTORATION CONSULTANTS
Balance Hydrologics, Inc.
GEOTECHNICAL ENGINEERS
Haro/Kasunich & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE
IRRIGATION PLAN
ESTIMATED WATER USE CALCULATIONS

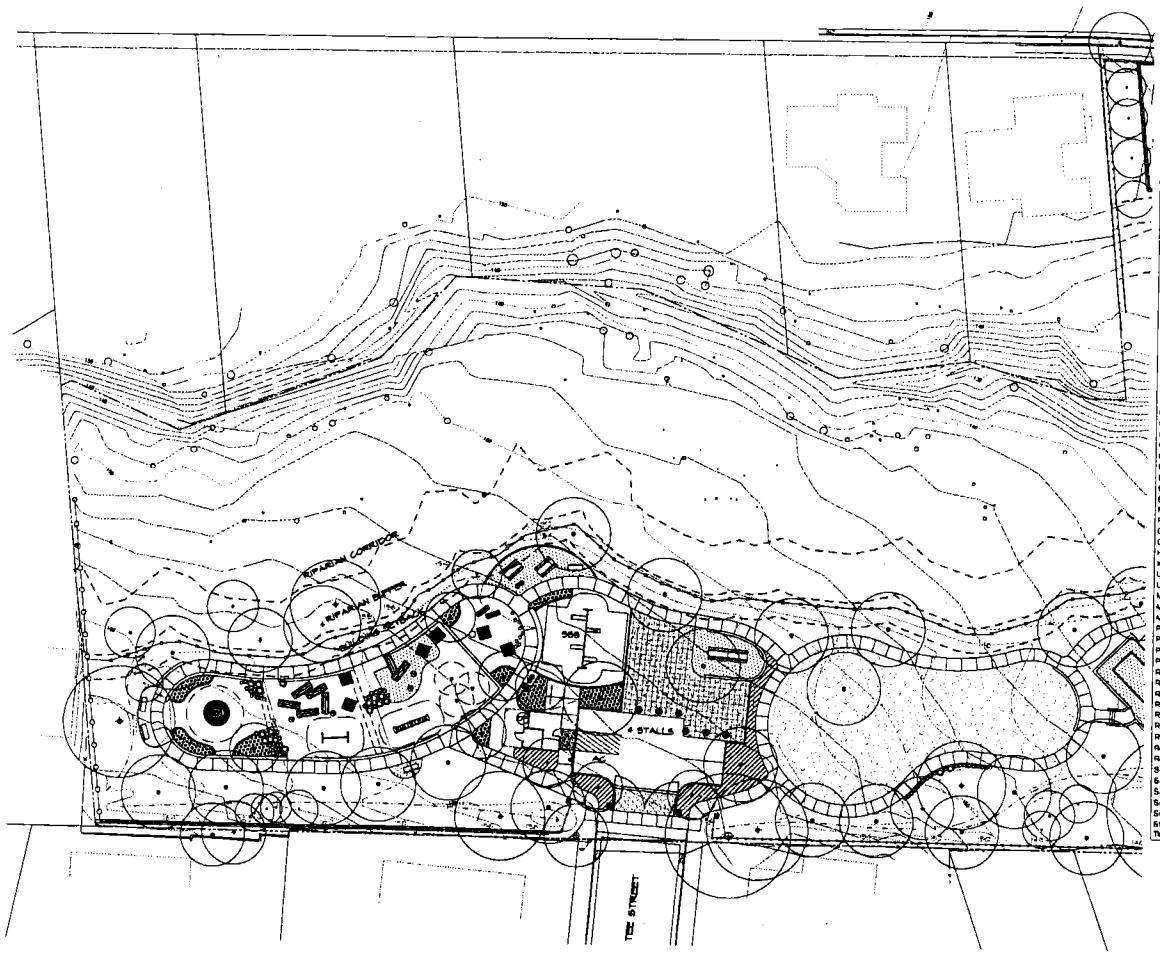
Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY: SM	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME: IRRG 30034.DWG
DRAWN BY: AJY	SHEET
JOB NO. 30034	L-3.2
SCALE: AS NOTED	

ATTACHMENT 2



PLANT LIST

Botanical Name	Species Name	Parking Area Shade	Children's Play Area	Sports/Perimeter/ Orchard Area	Heritage/Community Bldg. Garden	Native Garden
Trees						
Acer macrophyllum (M) (D)	Big Leaf Maple					X
Aesculus californica (D)	Buckeye		X			X
Cercis occidentalis (D)	Western Redbud			X	X	X
Chilopsis rashtensis (D)	Pink Dawn and White Cloud			X	X	
Malus spp. (M) (D)	Crabapple			X	X	
Platanus racemosa (M) (D)	California Sycamore	X		X	X	
Prunus ilicifolia (D)	Hollyleaf Cherry		X	X		
Pyrus calleryana (M) (D)	Callery Pear					X
Quercus agrifolia (E)	Coast Live Oak			X	X	
Sambucus mexicana (D)	Blue elderberry			X		X
Ground Cover						X
Achillea millefolium	Common Yarrow					
Arctostaphylos 'John Dourley'	John Dourley Manzanita			X	X	X
Artemisia californica	California sagebrush			X		X
Crocosmia x crocosmiiflora	Montbretia			X		X
Eriogonum grande rubescens	San Miguel Island Buckwheat				X	
Eschscholzia californica	California poppy		X		X	X
Hemerocallis spp. (M)	Day Lily		X			X
Juncus patens	Common Rush		X		X	
Leymus condensatus 'Canyon Prince'	Giant Ryegrass					X
Lonicera hispidula	Pink Honeysuckle			X		
Lupinus spp.	Lupine					X
Polystichum munitum (M)	Sword Fern					X
Sisyrinchium bellum	Wild Mustard		X			X
Zauschneria californica	California Fuchsia			X		
Shrubs			Play Area	Orchard Area	Bldg. Garden	
Arctostaphylos 'Howard McMinn'	Howard McMinn Manzanita			X		
Calamagrostis acutiflora 'Stricta'	Giant Feather Grass		X			X
Ceanothus 'Joyce Coulter'	Wild Lilac			X		
Ceanothus 'Ray Hartman'	Wild Lilac			X		X
Correa pulchella	Australian fuchsia			X		X
Cotinus coggygria	Smoke Bush		X		X	
Dietes vegeta	African Iris			X		
Eriogonum arborescens	Santa Cruz Island Buckwheat			X		
Eriogonum fasciculatum	California Buckwheat		X			X
Feijoa sellowiana	Pineapple Guava		X			X
Fremontodendron californicum	Flannel Bush		X	X		
Garrya elliptica	Coast Silk-Tassel					X
Grevillea 'Canberra'	Grevillea 'Canberra'			X		X
Heteromeles arbutifolia	Toyon			X		
Kniphofia uvaria (M)	Red Hot Poker			X		X
Lavandula angustifolia	English Lavender				X	
Leonotis leonurus	Lion's Tail		X		X	
Mimulus aurantiacus	Monkey Flower		X		X	
Muhlenbergia rigens	Deer Grass		X			X
Myrtus communis	True Myrtle		X	X		X
Penstemon heterophyllus	Foothill Penstemon				X	
Phlomis fruticosa	Jerusalem Sage					X
Phormium tenax	New Zealand Flax		X			
Punica granatum 'Nana'	Dwarf Pomegranate			X		
Rhamnus californica	Coffeeberry		X		X	
Rhus integrifolia	Lemonade Berry			X		
Rhus ovata	Sugar Bush		X	X		X
Ribes sanguineum	Pink Flowering Currant					X
Ribes speciosum	Fuschia Flowering Gooseberry		X			X
Romneya coulteri	Matilija Poppy		X		X	X
Rosa californica	California Rose					X
Rosa spp. (M)	Climbing Rose					X
Rosmarinus officinalis 'Tuscan Blue'	Rosemary				X	
Santolina chamaecyparissus	Cotton Lavender		X	X		
Salvia clevelandii 'Winifred Gilman'	Cleveland Sage		X		X	
Salvia greggii	Autumn Sage		X	X		
Salvia mellifera	Black Sage		X		X	
Sedum 'Autumn Joy'	Autumn Joy Stone Crop		X			X
Stachys byzantina	Lamb's Ears		X		X	
Teucrium (M)	Princess Flower				X	

LEGEND

- TURF
- TURF BLOCK
- PROPOSED TREE
- (E) TREE TO BE PROTECTED
- SHALE FLOW LINE

NOTE:
1) FOR RIPARIAN CORRIDOR AND HABITAT RESTORATION PLANTINGS (NO HATCH), SEE SHEET L-6.2
2) ALL PLANTS ARE RATED MUCOLS LOW EXCEPT WHERE NOTED AS (M) FOR MUCOLS MEDIUM WATER USE.
3) TREES THAT ARE MARKED WITH A (D) ON THE PLANT LIST ARE DECIDUOUS, TREES MARKED WITH A (E) ARE EVERGREEN.
4) MUCOLS MEDIUM WATER USE PLANTS (M) TO BE ON SEPARATE HYDRO-ZONE IRRIGATION VALVES.
5) HYDROSEED SHALE AREAS (SEE SHEET L-5.0)
6) SEE ARBORIST'S PLAN FOR (E) TREES TO BE REMOVED
7) AN AUTOMATIC TIMED IRRIGATION SYSTEM WILL BE USED, SEE SHEETS L-5.0, L-5.1, L-5.2
8) ALL TREES ARE TO BE 15 GALLON UNLESS OTHERWISE NOTED. ALL SHRUBS ARE TO BE 5 GALLON UNLESS OTHERWISE NOTED

0 10' 20' 40'

NORTH

MIG
MOORE IACOFANO GOLTSMAN, INC.
CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
Thacher & Thompson Architects
CIVIL ENGINEER
Nolte-Miller Engineering, Inc.
STRUCTURAL ENGINEER
Nolte-Miller Engineering, Inc.
ELECTRICAL ENGINEER
Pinter Design Group, Inc.
ECOLOGICAL CONSULTANT
H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT
David L. Rhoads & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
PLANTING PLAN
TEE STREET

Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY	DATE
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DATE 10/21/2009	FILE NAME PLNT_30034.DWG
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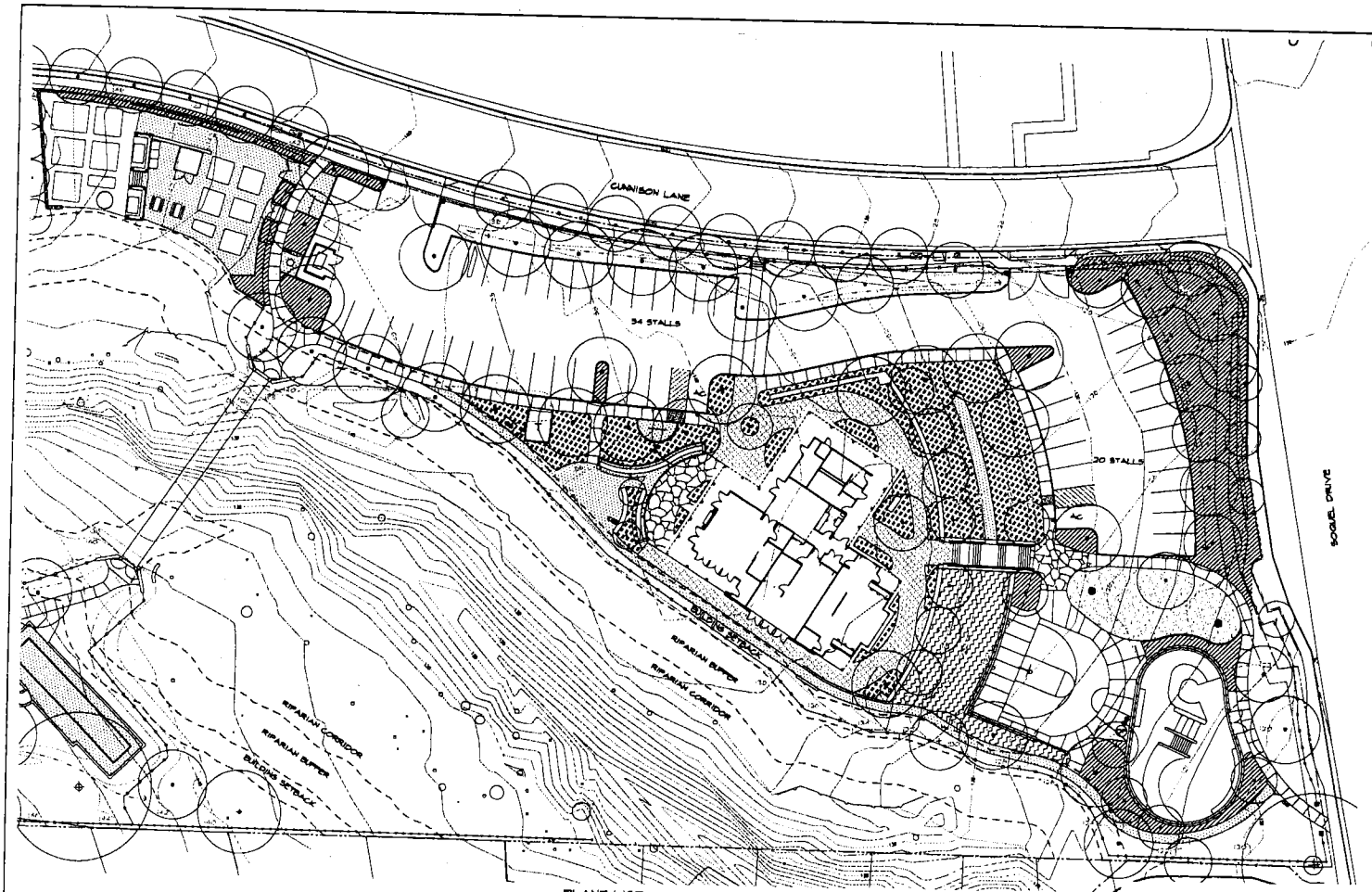

LEGEND

- TURF
- TURF BLOCK
- PROPOSED TREE
- (E) TREE TO BE PROTECTED
- SWALE FLOW LINE

NOTE:
1) FOR RIPARIAN CORRIDOR AND HABITAT RESTORATION PLANTING (NO MATCH), SEE SHEET L-6.2
2) ALL PLANTS ARE RATED MUCOLS LOW EXCEPT WHERE NOTED AS (M) FOR MUCOLS MEDIUM WATER USE.
3) TREES THAT ARE MARKED WITH A (D) ON THE PLANT LIST ARE DECIDUOUS, TREES MARKED WITH A (E) ARE EVERGREEN.
4) MUCOLS MEDIUM WATER USE PLANTS (M) TO BE ON SEPARATE HYDRO-ZONE IRRIGATION VALVES.
5) HYDROSEED SWALE AREAS (SEE SHEET L-5.0)
6) SEE ARBORIST'S PLAN FOR (E) TREES TO BE REMOVED
7) AN AUTOMATIC TIMED IRRIGATION SYSTEM WILL BE USED, SEE SHEETS L-3.0, L-3.1, L-3.2
8) ALL TREES ARE TO BE 15 GALLON UNLESS OTHERWISE NOTED. ALL SHRUBS ARE TO BE 5 GALLON UNLESS OTHERWISE NOTED.

PLANT LIST

Botanical Name	Species Name	Parking Area Shade	Children's Play Area	Sports/Perimeter Orchard Area	Heritage/Community Bldg. Garden	Native Garden
Trees						
Acer macrophyllum (M) (D)	Big Leaf Maple		X			X
Aesculus californica (D)	Buckeye					X
Cercis occidentalis (D)	Western Redbud			X	X	X
Chitalpa tashkentensis (D)	Pink Dawn and White Cloud			X	X	
Malus sop. (M) (D)	Crabapple			X	X	
Platanus racemosa (M) (D)	California Sycamore	X	X	X	X	
Prunus ilicifolia (D)	Hollyleaf Cherry			X		
Pyrus calleryana (M) (D)	Callery Pear					X
Quercus agrifolia (E)	Coast Live Oak			X	X	
Sambucus mexicana (D)	Blue elderberry					X
Ground Cover				X		X
Achillea millefolium	Common Yarrow					
Arctostaphylos 'John Dourley'	John Dourley Manzanita			X	X	X
Artemisia californica	California sagebrush			X		X
Crocosmia x crocosmiiflora	Montbretia			X		X
Eriogonum grande rubescens	San Miguel Island Buckwheat				X	
Eschscholzia californica	California poppy		X		X	X
Hemerocallis spp. (M)	Day Lily				X	X
Juncus patens	Common Rush		X			
Leymus condensatus 'Canyon Prince'	Giant Ryegrass		X			X
Lonicera hispidula	Pink Honeysuckle			X		
Lupinus spp.	Lupine					X
Polystichum munitum (M)	Sword Fern					X
Sinapis arvensis	Wild Mustard		X			X
Zauschneria californica	California Fuchsia					X

Scientific Name	Species Name	Children's Play Area	Sports/Perimeter Orchard Area	Heritage/Community Bldg. Garden	Native Garden
Shrubs					
Arctostaphylos 'Howard McMinn'	Howard McMinn Manzanita		X		
Calamagrostis acutiflora 'Stricta'	Giant Feather Grass	X			X
Callistemon viminalis 'Little John'	Dwarf Callistemon		X		
Ceanothus 'Joyce Coulter'	Wild Lilac		X		
Ceanothus 'Ray Hartman'	Wild Lilac		X		X
Correa pulchella	Australian fuchsia	X		X	
Cotinus coggygria	Smoke Bush		X		
Dietes vegeta	African Iris		X		
Eriogonum arborescens	Santa Cruz Island Buckwheat	X			
Eriogonum fasciculatum	California Buckwheat	X			X
Feijoa sellowiana	Pineapple Guava	X			X
Fremontodendron californicum	Flannel Bush	X	X		
Garrya elliptica	Coast Silk-Tassel		X		X
Grevillea 'Canberra'	Grevillea 'Canberra'		X		X
Heteromeles arbutifolia	Toyon		X		
Knifofia uvaria (M)	Red Hot Poker		X		X
Lavandula angustifolia	English Lavender			X	
Leonotis leonurus	Lion's Tail	X		X	
Mimulus aurantiacus	Monkey Flower	X		X	
Muhlenbergia rigens	Deer Grass	X			X
Myrtus communis	True Myrtle	X	X		X
Penstemon heterophyllus	Foothill Penstemon			X	
Phlomis fruticosa	Jerusalem Sage				X
Phormium tenax	New Zealand Flax	X			
Punica granatum 'Nana'	Dwarf Pomegranate		X		
Rhamnus californica	Coffeeberry	X		X	
Rhus integrifolia	Lemonade Berry		X		X
Rhus mate	Sugar Bush		X		X
Ribes sanguineum	Pink Flowering Currant	X			
Ribes speciosum	Fuschia Flowering Gooseberry	X			X
Romneya coulteri	Matilija Poppy			X	X
Rosa californica	California Rose				X
Rosa spp. (M)	Climbing Rose				X
Rosmarinus officinalis 'Tuscan Blue'	Rosemary			X	
Santolina chamaecyparissus	Cotton Lavender	X	X		
Salvia clevelandii 'Winifred Gilman'	Cleveland Sage	X		X	
Salvia greggii	Autumn Sage	X			
Salvia mellifera	Black Sage	X	X	X	
Sedum 'Autumn Joy'	Autumn Joy Stone Crop				X
Stachys byzantina	Lamb's Ears	X		X	
Tibouchina (M)	Princess Flower			X	

MIG
MOORE IACOFANO GOLTSMAN, INC.
CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT:
CIVIL ENGINEER:
STRUCTURAL ENGINEER:
ELECTRICAL ENGINEER:
ECOLOGICAL CONSULTANT:
ENVIRONMENTAL CONSULTANT:

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE
PLANTING PLAN
CUNNISON LN./ SOQUEL DR.

Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY	DATE
SM	10/31/2009
DRAWN BY	FILE NAME
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JOB NO.	SHEET
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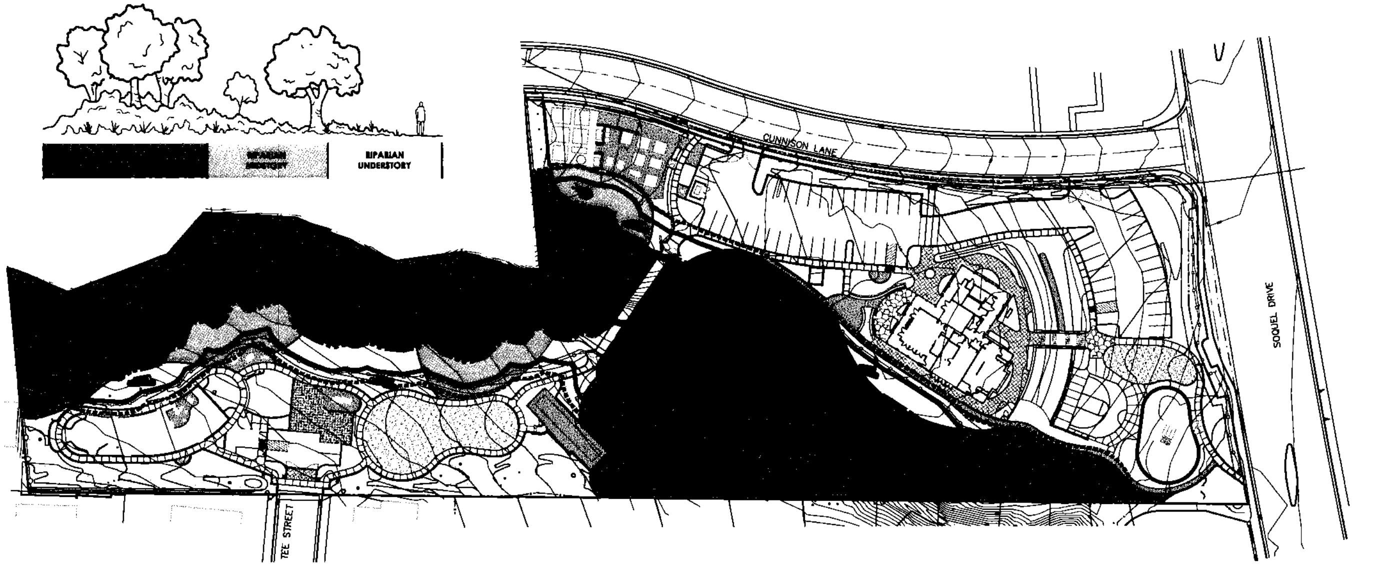
7681163

ATTACHMENT 2



HABITAT RESTORATION AREAS

- EXISTING OAK RIPARIAN FOREST
- PROPOSED INSTREAM REPAIR AREA/ OAK RIPARIAN FOREST RESTORATION
- PROPOSED OAK RIPARIAN FOREST
- PROPOSED RIPARIAN MIDSTORY
- PROPOSED RIPARIAN UNDERSTORY
- PROPOSED UPLAND OAK WOODLAND

LEGEND

- EDGE OF SANTA CRUZ COUNTY RIPARIAN CORRIDOR
- SANTA CRUZ COUNTY 20' RIPARIAN BUFFER
- SANTA CRUZ COUNTY 10' BUILDING SETBACK
- EUCALYPTUS REMOVAL AREA
- SELECT SHRUBS TO CREATE BENEFICIAL INSECT HABITAT ADJACENT TO COMMUNITY GARDEN
- COARSE WOODY DEBRIS PILES
  - PLACED IN UNDERSTORY TO CREATE ADDITIONAL HABITAT DIVERSITY
  - MADE OF SALVAGED LOGS FROM PROJECT SITE TREE REMOVALS
- 2 PROPOSED INSTREAM REPAIR
  - WEIR STRUCTURE CONSTRUCTED WITH REUSED WOOD FROM ONSITE
  - SLOPE REPAIR & STABILIZATION

NATIVE PLANTING LIST

	COMMON NAME	SCIENTIFIC NAME			RIPARIAN MIDSTORY ZONE	RIPARIAN UNDERSTORY ZONE	UPLAND OAK WOODLAND ZONE
TREES	BIG LEAF MAPLE	ACER MACROPHYLLUM	✓	✓			✓
	BLUE ELDERBERRY*	SAMBUCUS MEXICANA	✓	✓	✓		✓
	BUCKEYE*	AESCULUS CALIFORNICA	✓	✓	✓		✓
	COAST LIVE OAK	QUERCUS AGRIFOLIA	✓	✓	✓	✓	✓
	HOLLYLEAF CHERRY*	PRUNUS ILICIFOLIA			✓		✓
SHRUBS	BLACK SAGE*	SALVIA MELLIFERA			✓	✓	✓
	BUCK BRUSH	CEANOTHUS CUNIATUS	✓	✓	✓		✓
	BUCKWHEAT*	ERIOGONUM FASCICULATUM			✓	✓	✓
	BUSH POPPY	ROMNEYA COULTERI			✓		✓
	CALIFORNIA ROSE	ROSA CALIFORNICA	✓	✓	✓	✓	✓
	CALIFORNIA SAGEBRUSH	ARTEMSIA CALIFORNICA		✓	✓	✓	✓
	CEANOTHUS*	MULTIPLE SPECIES	✓	✓	✓	✓	✓
	COFFEEBERRY*	RHAMNUS CALIFORNICA	✓	✓	✓		✓
	COYOTE BRUSH*	BACCHARIS PILULARIS	✓	✓	✓		✓
	DOGWOOD	MULTIPLE SPECIES	✓	✓			✓
	HAZELNUT	CORYLUS CORNUTA	✓	✓	✓		✓
	HUCKLEBERRY	VACCINIUM OVATUM					✓
	LUPINE*	MULTIPLE SPECIES	✓	✓	✓	✓	✓
	PACIFIC WAX MYRTLE	MYRICA CALIFORNICA	✓	✓	✓		✓
	PINK-FLOWERING CURRANT	RIBES SANGUINEUM	✓	✓	✓		✓
	REDFLOWER CURRANT	RIBES MENZIESII SANGUINEUM	✓	✓	✓	✓	✓
	SNOWBERRY	SYMPHORICARPOS ALBUS	✓	✓	✓	✓	✓
	STICKY MONKEY FLOWER*	MIMULUS AURANTIACUS	✓	✓	✓	✓	✓
	TOYON*	HETEROMELES ARBUTIFOLIA	✓	✓	✓		✓
GROUND COVER	BLUE WILD RYE	ELYMUS GLAUCUS	✓	✓	✓	✓	✓
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	✓	✓	✓	✓	
	CALIFORNIA BROME	BROMUS CARINATUS	✓	✓	✓	✓	✓
	CALIFORNIA HONEYSICKLE	LONICERA HISPIDULA			✓	✓	✓
	CALIFORNIA OATGRASS	DANTHONIA CALIFORNICA	✓	✓	✓	✓	✓
	CALIFORNIA POPPY	ESCHOLZIA CALIFORNICA		✓	✓	✓	✓
	GOLDENROD*	SOLIDAGO CALIFORNICA		✓	✓	✓	✓
	IRIS	IRIS FERNALDII	✓				
	LUPINE	MULTIPLE SPECIES	✓	✓	✓	✓	✓
	MEADOW BARLEY	HORDEUM BRACHYANTHERUM	✓	✓	✓	✓	✓
	MELIC GRASS	MELICA IMPERFECTA	✓	✓	✓	✓	✓
	MILKWEED*	ASCLEPIUS FASCICULARIS		✓	✓	✓	✓
	MUGWORT	ARTEMISIA DOUGLASIANA	✓	✓	✓	✓	✓
	PURPLE NEEDLEGRASS	NASSELLA PULCHRA			✓	✓	✓
	RUSH	MULTIPLE SPECIES	✓	✓			✓
	SALAL	GAULTHERIA SHALLON					✓
	SEDGE	MULTIPLE SPECIES	✓				
	SEEP MONKEYFLOWER	MIMULUS GUTTATUS	✓				
	SLENDER HAIRGRASS	DESCHAMPSIA ELONGATA	✓	✓	✓	✓	✓
	SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS	✓	✓	✓	✓	✓
	THREE-WEEK FESCUE	VULPIA MICROSTACHYS	✓	✓	✓	✓	✓
	WESTERN SWORD FERN	POLYSTICHUM MNUTUM			✓	✓	✓
	WILD CUCUMBER	MARAH FABACEUS	✓	✓			
	WILD RYE	LEYMUS TRITICOIDES	✓	✓	✓	✓	✓
	YARROW*	MULTIPLE SPECIES			✓	✓	✓

* SPECIES ATTRACTS BENEFICIAL INSECTS AND WILL BE USED NEAR THE COMMUNITY GARDEN

NORTH

0' 40' 80' 160'

NOTES

1) SALVAGE & TRANSPLANT 8 TO 12 EXISTING SMALL OAKS (8 INCHES IN DIAMETER OR LESS) FROM DEMOLITION AREAS WITHIN THE GRADING FOOTPRINT TO WITHIN THE HABITAT RESTORATION AREAS.

2) SELECTIVELY CONTROL AGRESSIVE INVASIVE WOODY SPECIES IN ALL HABITAT RESTORATION AREAS.

3) RIPARIAN HABITAT RESTORATION AREAS WILL RECEIVE TEMPORARY IRRIGATION DURING THE 3 TO 5 YEAR PLANT ESTABLISHMENT PERIOD. UPLAND OAK WOODLAND AREAS WILL BE CONNECTED TO A PERMANENT IRRIGATION SYSTEM.

4) FOR DETAILED PLANS OF THE INSTREAM REPAIR AREA AND ASSOCIATED HABITAT RESTORATION SEE SHEETS L-6.1, L-6.2 & L-6.3.

MIG

MOORE IACOFANO GOLTSMAN, INC.

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ECOLOGICAL CONSULTANTS

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Thacher & Thompson Architects

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Mesiti-Miller Engineering, Inc.

STRUCTURAL ENGINEER
Mesiti-Miller Engineering, Inc.

ELECTRICAL ENGINEER
Prime Design Group, Inc.

ECOLOGICAL CONSULTANT
H.T. Harvey & Associates

ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA,
95073

SHEET TITLE

HABITAT RESTORATION PLAN

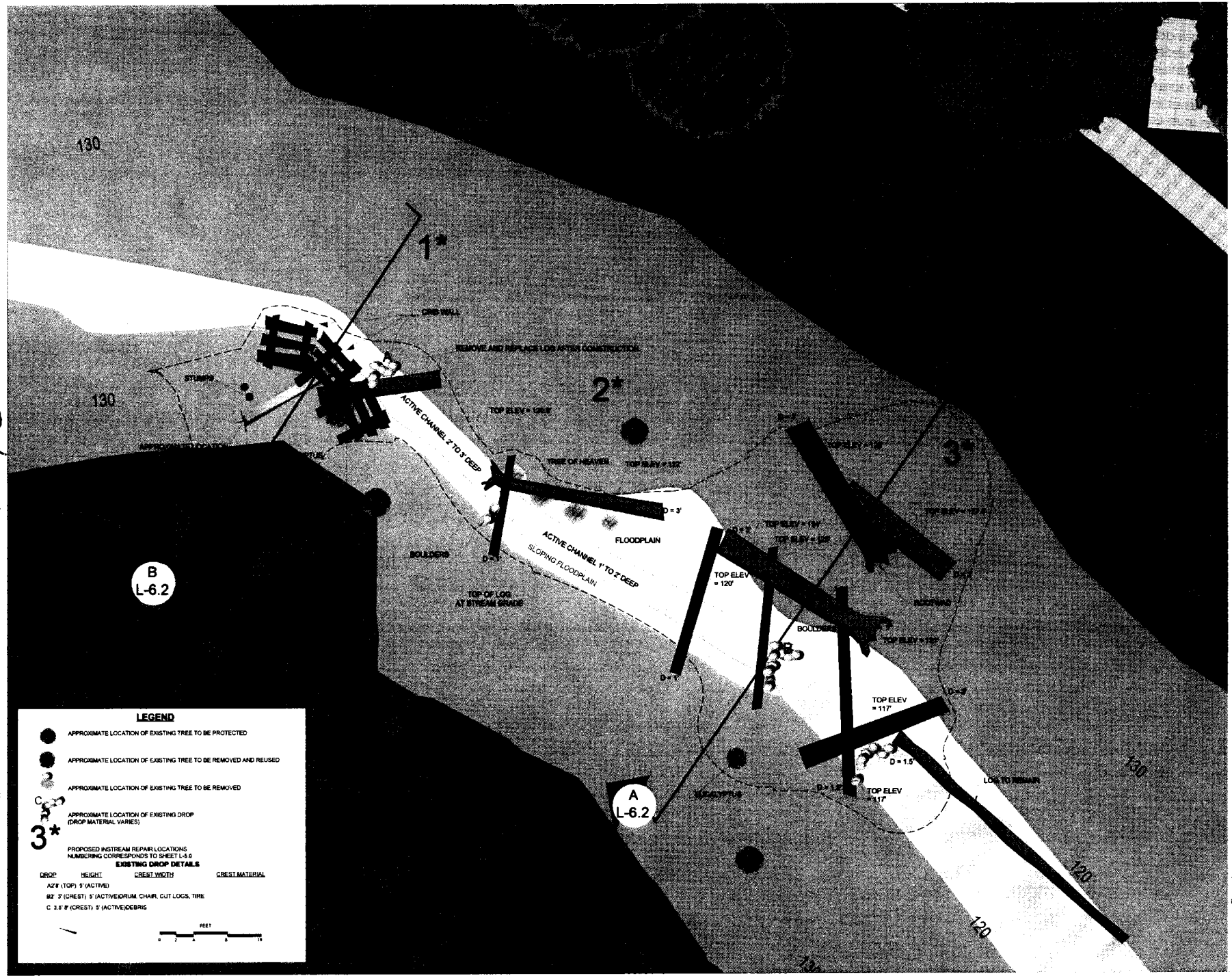
Development Permit Application

DATE	REVISIONS

STAMP

CHECKED BY	DATE
JH	10/30/2009
DATE	FILE NAME
10/31/2009	Restoration Plan.DWG
DRAWN BY	SHEET
CJJ	L-5.0
JOB NO. 30034	
SCALE 1"=40'-0"	

ATTACHMENT 2



MIG
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Balance Hydrologics, Inc.

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LANDSCAPE ARCHITECT
MOORE, IACOFANO GOLTSMAN, INC

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STRUCTURAL ENGINEER
Mesa-Miller Engineering, Inc

ELECTRICAL ENGINEER
Prime Design Group Inc

ECOLOGICAL CONSULTANT
H.T. Harvey & Associates

ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane Santa Cruz County, CA, 95073

SHEET TITLE

INSTREAM REPAIR PLAN

Development Permit Application

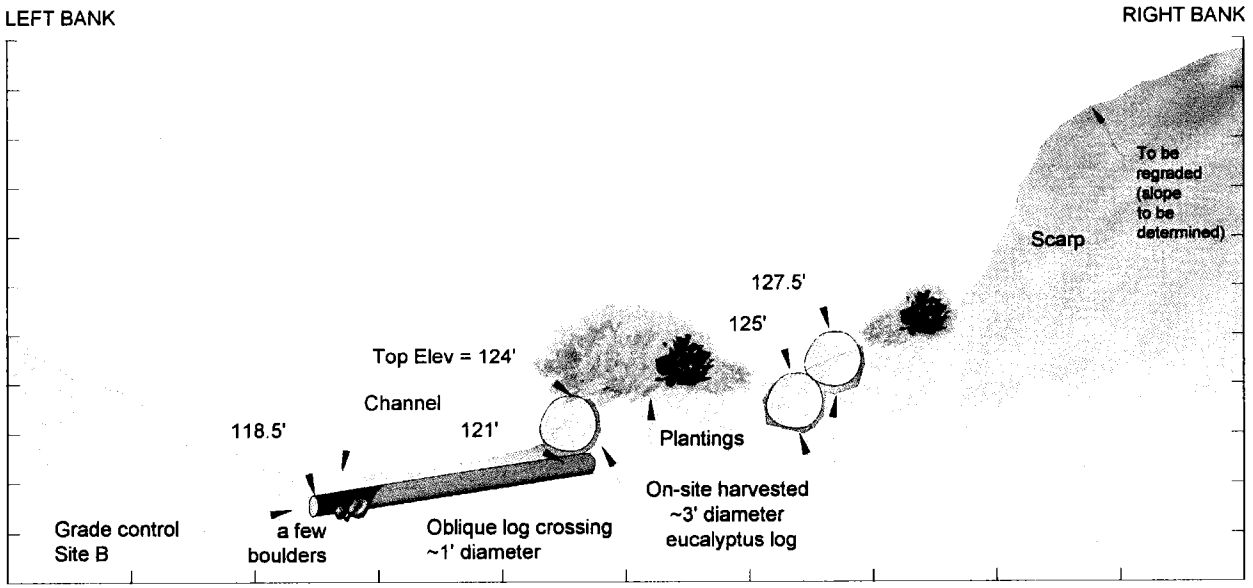
DATE REVISIONS

STAMP

CHECKED BY SM
DATE 10/31/2009
DATE 10/31/2009
FILE NAME 207187CrossSections.dwg
DRAWN BY KT
SHEET L-6.1
JOB NO 207187
SCALE 1" = 4'-0"

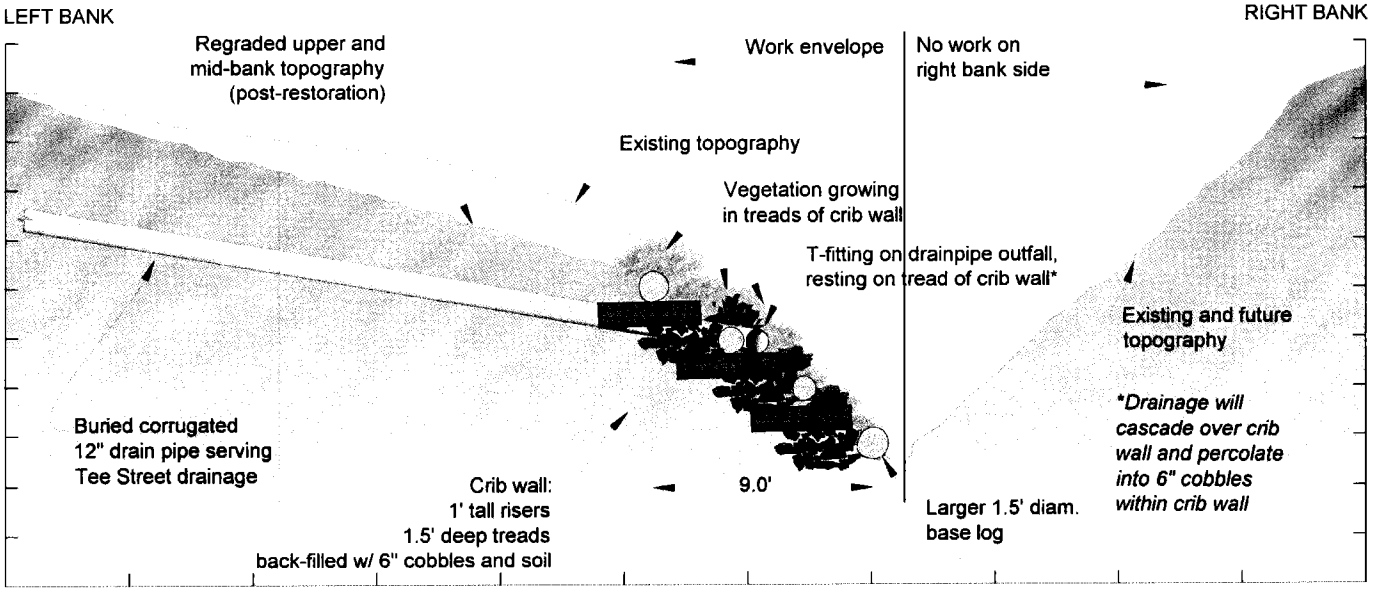
ATTACHMENT 2

A



Note: Length of logs and anchoring to be determined

B



MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

Balance Hydrologics, Inc.

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
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FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane Santa Cruz County, CA, 95073

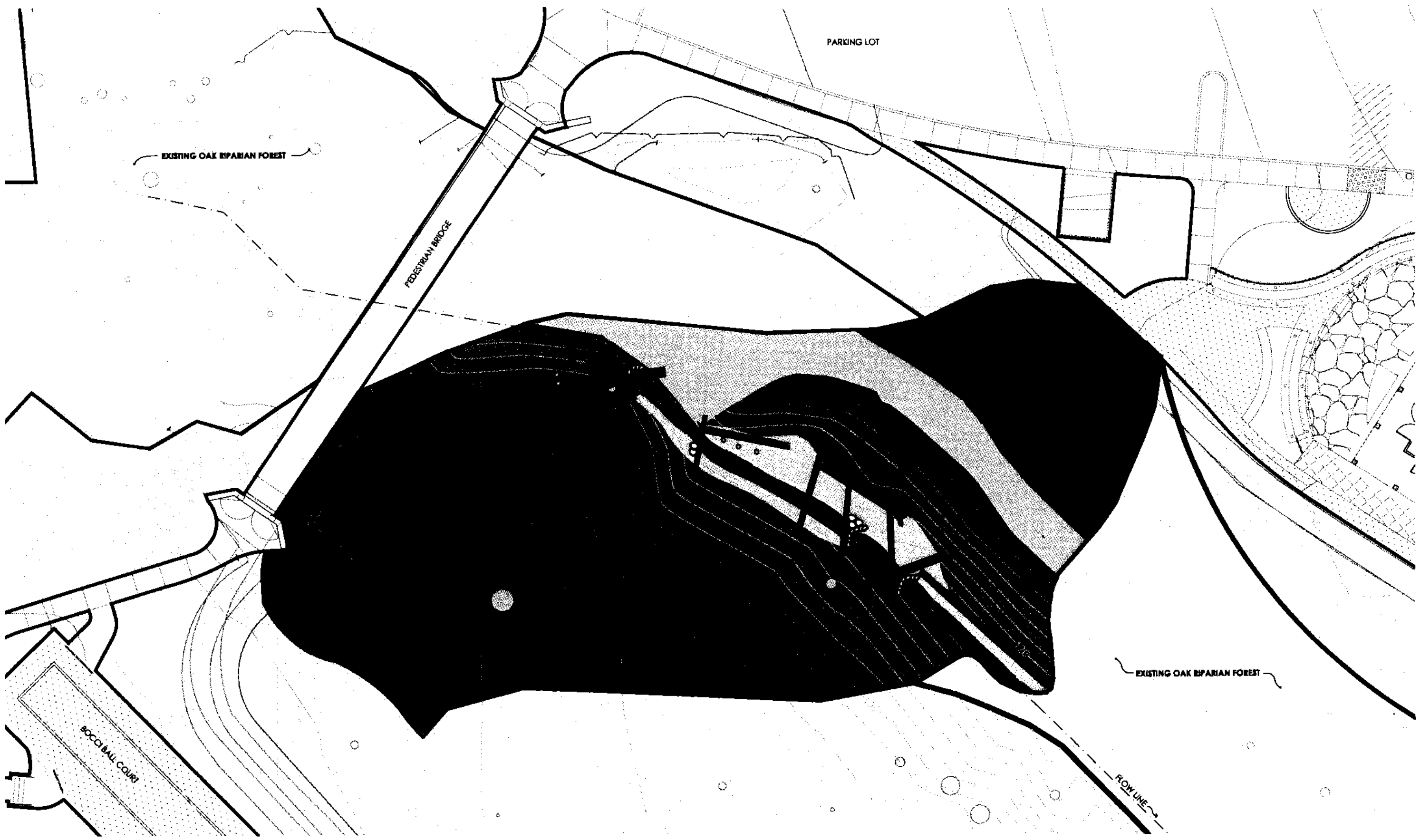
SHEET TITLE
INSTREAM REPAIR SECTIONS

Development Permit Application
DATE REVISIONS

STAMP

CHECKED BY SM
DATE 10/31/2009
DATE 10/31/2009
FILE NAME 207187CrossSections.dwg
DRAWN BY KT
SHEET L-6.2
JOB NO 207187
SCALE 1" = 2'-0"

ATTACHMENT 2



NATIVE PLANTING LIST

INSTREAM REPAIR AREA/ OAK RIPARIAN FOREST

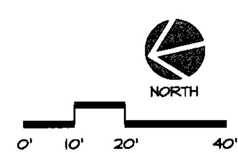
	COMMON NAME	SCIENTIFIC NAME	OAK RIPARIAN FOREST FLOODPLAIN	[illegible]	[illegible]	OAK RIPARIAN FOREST WITH STEEP SLOPES (SEED ONLY)
TREES	BIG LEAF MAPLE	ACER MACROPHYLLUM	✓	✓		
	BLUE ELDERBERRY	SAMBUCUS MEXICANA		✓	✓	
	BUCKEYE	AESCULUS CALIFORNICA		✓	✓	
	COAST LIVE OAK	QUERCUS AGRIFOLIA		✓	✓	
SHRUBS	BUCK BRUSH	CEANOTHUS CUNEATUS		✓	✓	
	CALIFORNIA ROSE	ROSA CALIFORNICA	✓	✓	✓	
	CEANOTHUS	MULTIPLE SPECIES		✓	✓	
	COFFEEBERRY	RHAMNUS CALIFORNICA		✓	✓	
	COYOTE BRUSH	BACCHARIS PILULARIS		✓	✓	
	DOGWOOD	MULTIPLE SPECIES	✓	✓		
	HAZELNUT	CORYLUS CORNUTA		✓	✓	
	LUPINE	MULTIPLE SPECIES		✓	✓	
	PACIFIC WAX MYRTLE	MYRICA CALIFORNICA		✓	✓	
	PINK-FLOWERING CURRANT	RIBES SANGUINEUM	✓	✓		
	REDFLOWER CURRANT	RIBES MENZIESII SANGUIENEUM	✓	✓		
	SNOWBERRY	SYMPHORICARPOS ALBUS	✓	✓	✓	
	STICKY MONKEY FLOWER	MIMULUS AURANTIACUS		✓	✓	
	TOYON	HETEROMELES ARBUTIFOLIA		✓	✓	
GROUND COVER	BLUE WILD RYE	ELYMUS GLAUCUS	✓	✓	✓	✓
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	✓	✓	✓	
	CALIFORNIA BROME	BROMUS CARINATUS		✓	✓	✓
	CALIFORNIA OATGRASS	DANTHONIA CALIFORNICA		✓	✓	✓
	IRIS	IRIS FERNALDII	✓	✓	✓	
	LUPINE	MULTIPLE SPECIES	✓	✓	✓	✓
	MEADOW BARLEY	HORDEUM BRACHYANTHERUM	✓	✓	✓	✓
	MELIC GRASS	MELICA IMPERFECTA		✓	✓	✓
	MUGWORT	ARTEMISIA DOUGLASIANA	✓	✓	✓	
	RUSH	MULTIPLE SPECIES	✓			
	SEDGE	MULTIPLE SPECIES	✓			
	SEEP MONKEYFLOWER	MIMULUS GUTTATUS	✓			
	SLENDER HAIRGRASS	DESCHAMPSIA ELONGATA		✓	✓	✓
	SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS		✓	✓	✓
	THREE-WEEK FESCUE	VULPIA MICROSTACHYS		✓	✓	✓
	WILD CUCUMBER	MARAH FABACEUS	✓	✓		
	WILD RYE	LEYMUS TRITICOIDES	✓	✓		

LEGEND

- OAK RIPARIAN FOREST FLOODPLAIN
- OAK RIPARIAN FOREST LOWER SLOPE
- OAK RIPARIAN FOREST UPPER SLOPE
- OAK RIPARIAN FOREST WITH STEEP SLOPES (PLANTING BY SEED ONLY)
- OTHER HABITAT RESTORATION AREAS SEE SHEET L-5.0
- COARSE WOODY DEBRIS PILE
- EXISTING TREE
- EXISTING TREE TO BE REMOVED AND REUSED FOR INSTREAM REPAIR FEATURES
- INSTREAM REPAIR FEATURE, TYP. SEE SHEETS L-6.1 AND L-6.2
- ACTIVE CHANNEL BED

NOTES

1) SEE SHEET L-5.0 FOR LOCATION OF INSTREAM REPAIR AREA



MIG

MOORE IACOFANO GOLTSMAN, INC.

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ECOLOGICAL CONSULTANTS

PROJECT TEAM:

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ARCHITECT
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STRUCTURAL ENGINEER
Mesiti-Miller Engineering, Inc.

ELECTRICAL ENGINEER
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ECOLOGICAL CONSULTANT
H.T. Harvey & Associates

ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE

INSTREAM REPAIR HABITAT RESTORATION PLAN

Development Permit Application

DATE	REVISIONS

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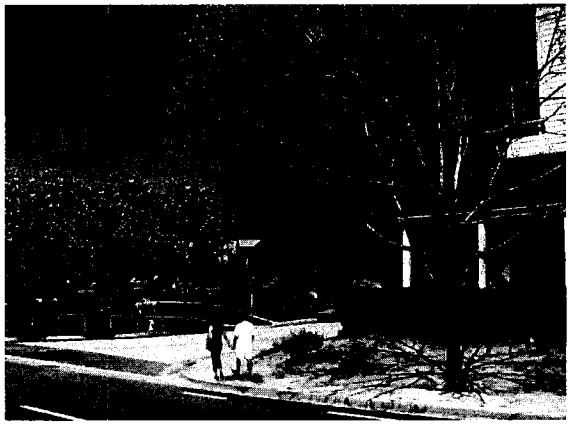
CHECKED BY: JH	DATE: 10/30/2009
DATE: 10/31/2009	FILE NAME: In Stream Planting.DWG
DRAWN BY: CJJ	SHEET
JOB NO. 30034	L-6.3
SCALE: 1" = 10'	

ATTACHMENT 2

VIEW 1 - SOUTHWEST CORNER OF PARK ON SOQUEL DR.

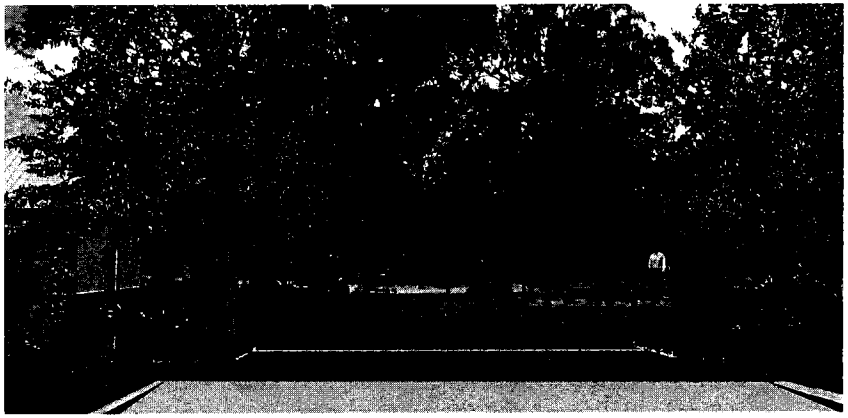
VIEW 2 - SOQUEL DR. OPPOSITE (E) BUS STOP



VIEW 3 SOUTHWEST CORNER OF PARK ON SOQUEL DRIVE

VIEW 4 - COMMUNITY BUILDING PEDESTRIAN ENTRANCE ON CUNNISON LN.

VIEW 5 - COMMUNITY GARDEN ON CUNNISON LANE



VIEW 6- TEE STREET ENTRANCE

VISUAL ANALYSIS KEY MAP

MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:

LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.

ARCHITECT

CIVIL ENGINEER

STRUCTURAL ENGINEER

ELECTRICAL ENGINEER

ECOLOGICAL CONSULTANT

ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

APN #
037-101-58
037-101-59

Soquel Drive & Cunnison Lane
Santa Cruz County, CA,
95073

SHEET TITLE

VISUAL ANALYSIS

Development Permit Application

DATE	REVISIONS

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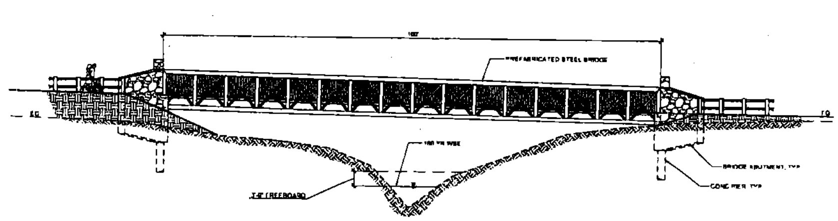
CHECKED BY	DATE
SM	10/31/2009
DATE	FILE NAME
10/31/2009	VIS_ANLY_30034.DWG
DRAWN BY	SHEET
MK	L-7.0
JOB NO.	
30034	
SCALE	

13/163

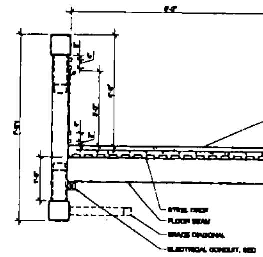
ATTACHMENT 2



BRIDGE ELEVATION

SCALE: 1" = 10'

2



TYPICAL SECTION

SCALE: 1/2" = 1'-0"

3

GENERAL NOTES

1. PEDESTRIAN BRIDGE SHALL BE PREFABRICATED WEATHERING STEEL TRUSS - DESIGN FOR 85 PSF LIVE LOAD WITH TWO DIAGONALS PER PANEL. DESIGN TO BE IN ACCORDANCE WITH AASHTO "GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES" LATEST EDITION.

2. GALVANIZED FORM DECK SHALL BE VULCRAFT 1 [illegible] 18 GAGE, [illegible] CLASS COATING. DECKING SHALL BE SHOP ATTACHED TO FLOOR BEAMS VIA SELF-DRILLING FASTENERS OR WELDING. MINIMUM OF TWO FASTENERS PER SHEET PER FLOOR BEAM. LONGITUDINAL SHEET LAPS SHALL BE ATTACHED WITH SELF-DRILLING FASTENERS AT 36" MAXIMUM SPACING. DESIGN OF THE DECK REINFORCING IS BASED UPON NON-COMPOSITE ACTION WITH THE FORM DECK.

3. MATERIALS
   A) NORMAL WEIGHT CONCRETE: f'c = 4000 PSI 28-DAY (145 PCF MAX)
   B) REINFORCING: GRADE 60 MEETING ASTM A615

4. CONCRETE DESIGN, QUALITY, MIXING AND PLACEMENT SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-05 AND SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 318-[illegible].

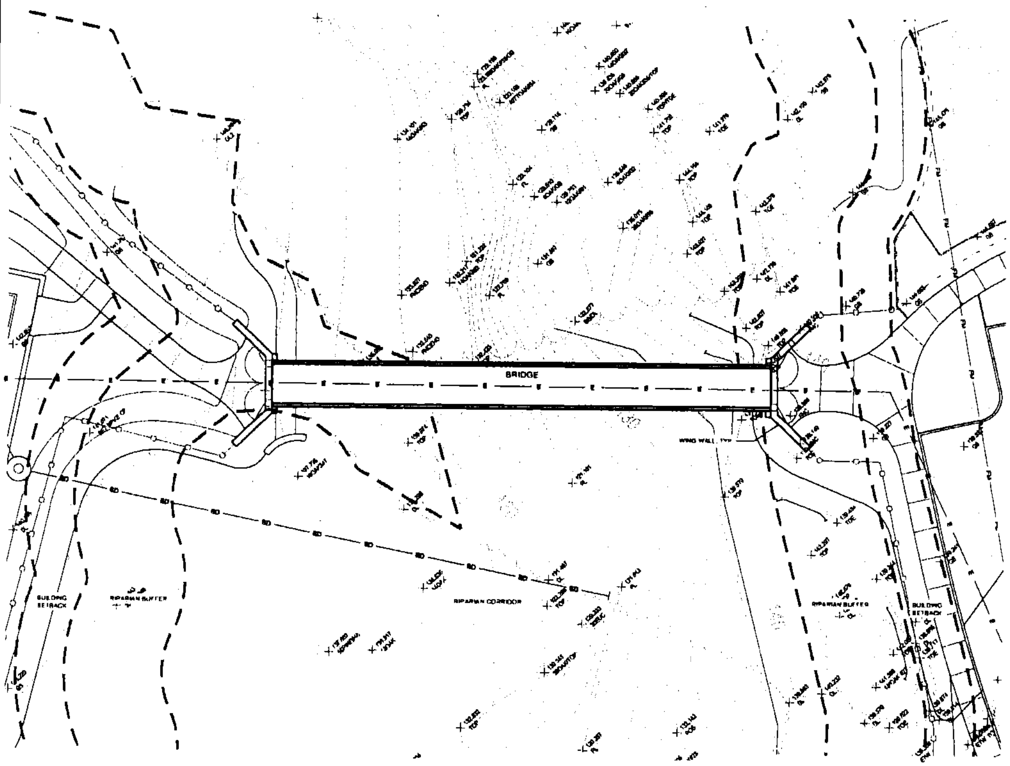
5. THE CONTRACTOR MUST EXERCISE CARE TO CONTROL TRAFFIC AND STORAGE OF MATERIALS ON THE FORM DECK BEFORE POURING THE SLAB.

6. LOW LEVEL LIGHTING PER ELECTRICAL DRAWINGS.

7. "WALK BIKES ON BRIDGE" SIGNS PER ARCHITECTURAL DRAWINGS.

ABBREVIATIONS:

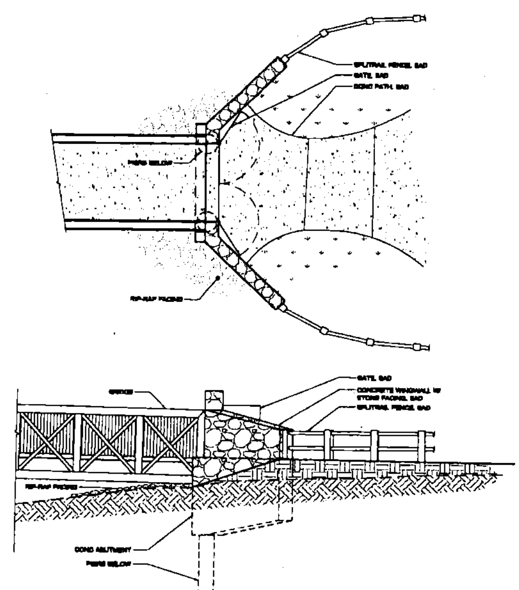
ACI	AMERICAN CONCRETE INSTITUTE
BB	BEGIN BRIDGE
CLR	CLEAR
CONC	CONCRETE
EB	END BRIDGE
EG	EXISTING GRADE
ELEV	ELEVATION
FG	FINISH GRADE
SAD	SEE ARCHITECTURAL DRAWING
SED	SEE ELECTRICAL DRAWING
STA	STATION
TYP	TYPICAL
WSE	WATER SURFACE ELEVATION



BRIDGE PLAN

SCALE: 1" = 10'

1



BRIDGE ABUTMENT DETAIL

SCALE: 1"=5'

4

PRELIMINARY NOT FOR CONSTRUCTION

M I G
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PROJECT TEAM:
LANDSCAPE ARCHITECT: MOORE IACOFANO GOLTSMAN, INC.
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ECOLOGICAL CONSULTANT: H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA, 95073

SHEET TITLE

PEDESTRIAN BRIDGE PLAN

Development Permit Submittal

DATE	REVISIONS

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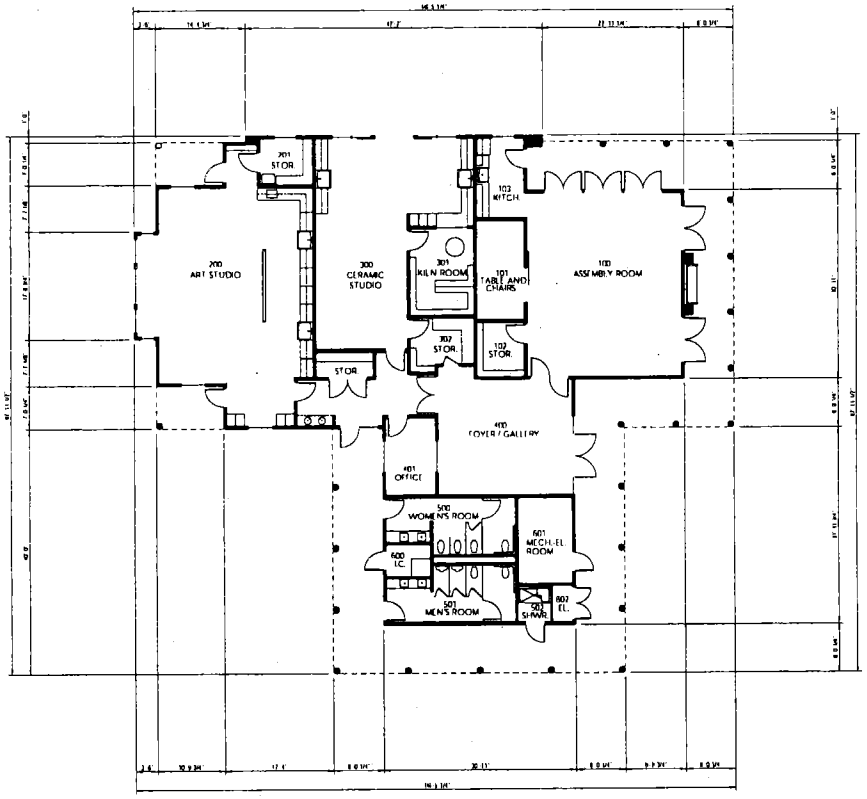
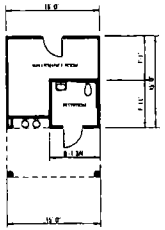
CHECKED BY: RC/DH	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME: S1.0-PED BR-PLAN
DRAWN BY: GR	SHEET
JOB NO.: MIG 30034, MME 7141	S-1.0
SCALE: VARIES	

ATTACHMENT 2



COMMUNITY BUILDING FLOOR PLAN
4,584 S.F.

PROJECT NORTH



TEE STREET RESTROOM FLOOR PLAN
225 S.F.

MIG
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CONSULTANT:
THATCHER & THOMPSON ARCHITECTS

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Thatcher & Thompson Architects
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STRUCTURAL ENGINEER
Haro, Kasunich and Associates, Inc.
ELECTRICAL ENGINEER
Nibbi Brothers General Contractors
ECOLOGICAL CONSULTANT
H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT
Donald J. Ferrara & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA
95073

SHEET TITLE
COMMUNITY BUILDING AND RESTROOM FLOOR PLANS
TEE STREET

Development Permit Submittal

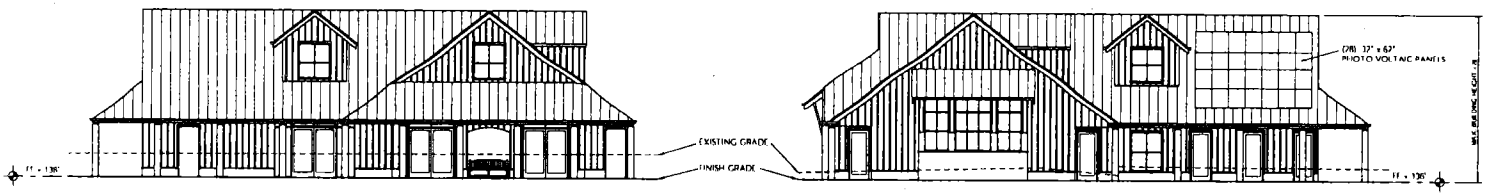
DATE	REVISIONS

STAMP

CHECKED BY	DATE
SM	10/31/2009
DATE 10/31/2009	FILE NAME PLAN.DWG
DRAWN BY PS	SHEET A-1.0
JOB NO. 30053	
SCALE 1"=8'-0"	

75/163

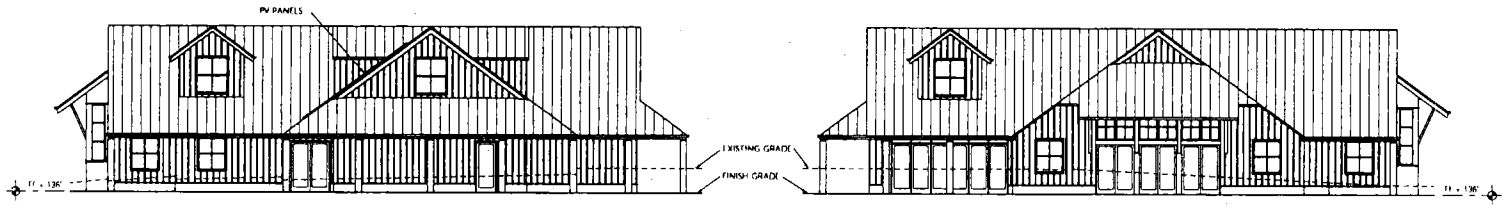
ATTACHMENT 2



COMMUNITY BUILDING
NORTH ELEVATION

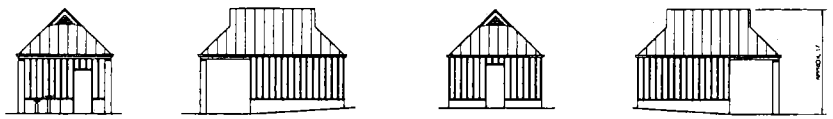
COMMUNITY BUILDING
SOUTH ELEVATION

BUILDING MATERIALS	
ROOF:	STANDING SEAM METAL
SIDING:	FIBER CEMENT BOARD & BATT
EAVES:	PAINTED WOOD
SOFFITS:	PAINTED 1X8 V-RUSTIC BOARDS
WINDOWS / DOORS:	ALUMINUM



COMMUNITY BUILDING
EAST ELEVATION

COMMUNITY BUILDING
WEST ELEVATION



NORTH WEST SOUTH EAST

TEE STREET RESTROOM BUILDING

BUILDING MATERIALS	
ROOF:	STANDING SEAM SHEET METAL
SIDING:	FIBER CEMENT BOARD & BATT
EAVES:	PAINTED WOOD
SOFFITS:	PAINTED 1x6 V-RUSTIC BOARDS
WINDOWS / DOORS:	ALUMINUM
BASE:	CONCRETE

MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:
THACHER & THOMPSON ARCHITECTS

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
Thacher & Thompson Architects
CIVIL ENGINEER
Haro, Kasunich and Associates, Inc.
STRUCTURAL ENGINEER
Haro, Kasunich and Associates, Inc.
ELECTRICAL ENGINEER
Prime Design Group, Inc.
ECOLOGICAL CONSULTANT
H.T. Harvey & Associates
ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane Santa Cruz County, CA, 95073

SHEET TITLE
COMMUNITY BUILDING AND RESTROOMS ELEVATIONS
TEE STREET

Development Permit Submittal

DATE	REVISIONS

STAMP

CHECKED BY	DATE
SM	10/31/2009
DATE	FILE NAME
10/31/2009	PLAN.DWG
DRAWN BY	SHEET
PS	A-2.0
JOB NO.	
30034	
SCALE	
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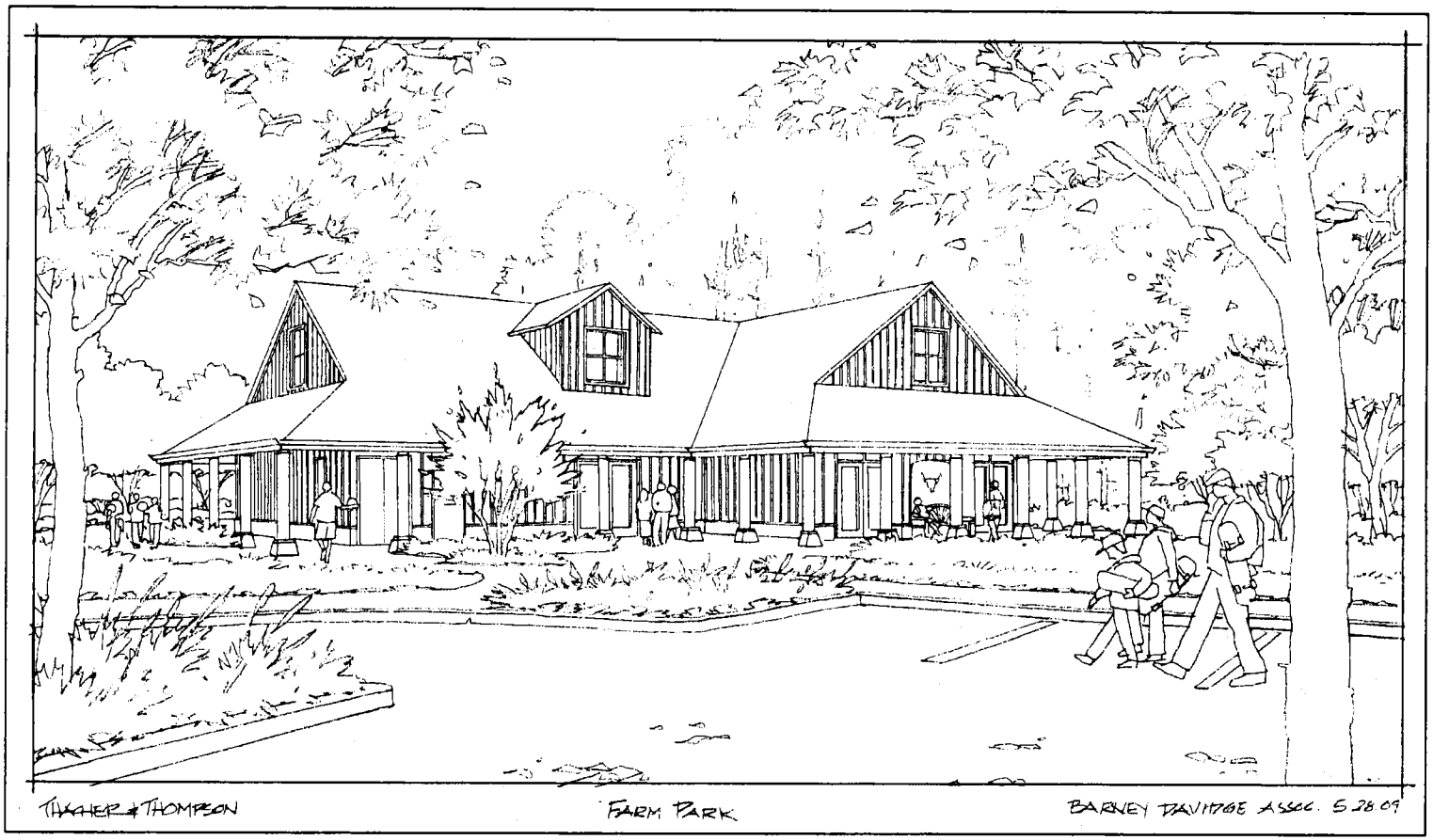
ATTACHMENT 2



VIEW FROM CUNNISON LANE

MIG
MOOSE MACDONALD GOLTSMAN, INC.

CONSULTANT:
THACHER & THOMPSON ARCHITECTS

PROJECT TEAM:
LANDSCAPE ARCHITECT
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
ECOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane
Santa Cruz County, CA.
95073

SHEET TITLE
COMMUNITY BUILDING
ARTIST SKETCH
TEE STREET

Development Permit Submittal

DATE	REVISIONS

STAMP

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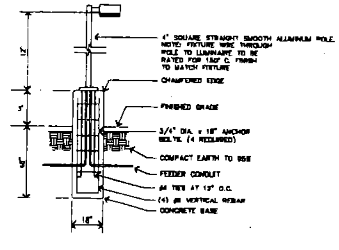
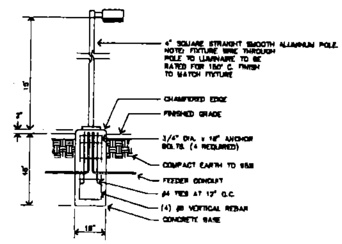
SM	10/31/2009
DATE	FILE NAME
10/31/2009	PLAN.DWG
DRAWN BY	SHEET
PS	A-3.0
JOB NO.	
30034	
SCALE	

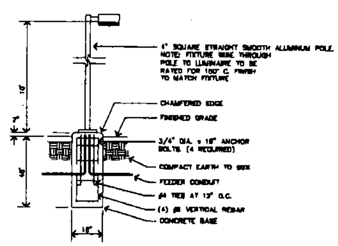
ATTACHMENT 2



1 LUMINAIRE TYPE "A"
NOT TO SCALE



2 LUMINAIRE TYPE "B"
NOT TO SCALE



3 LUMINAIRE TYPE "C"
NOT TO SCALE

SYMBOL LIST

Symbol	Description
□-●	POLE MOUNTED LUMINAIRE
▬	WALL MOUNTED LIGHTING FIXTURE
●	LOW VOLTAGE DOWNLIGHT IN TRELLIS STRUCTURE.

① FIXTURE SCHEDULE

TAG	MANUFACTURER	DESCRIPTION	LAMPING	WATTAGE
A	EMCO / DECA1813H175PSMH 120 BRPHS—POLE PER DETAIL	POLE MOUNTED METAL HALIDE PARKING LOT LUMINAIRE WITH TYP3 III OPTICS, AND INTERNAL HOUSE SHIELD WITH 12' POLE AND RAISED BASE	(1)175W MH MED.	210
B	EMCO / DECA1813H175PSMH 120 BRPHS—POLE PER DETAIL	SAME AS TYPE "A" EXCEPT WITHOUT HOUSE SHIELD	(1)175W MH MED.	210
C	EMCO / DECA1813H175PSMH 120 BRPHS—POLE PER DETAIL	SAME AS TYPE "A" EXCEPT WITHOUT HOUSE SHIELD, 15' POLE AND WITH LOWERED BASE	(1)175W MH MED.	210
D	EMCO / DECA1813H175PSMH 120 BRPHS—POLE PER DETAIL	SAME AS TYPE "C" FIXTURE EXCEPT W/ 14" SQUARE LUMINAIRE, 10'POLE, AND 100W LAMP	(1)100 MH MED.	130
E	VISION 3 LIGHTING / DL14—(*)—C1—3—MR12—75—120—11—L3—0—0	LOW VOLTAGE DOWNLIGHT WITH INTEGRAL TRANSFORMER MOUNTED ON TRELLIS STRUCTURE. VERIFY FINISH WITH ARCHITECT	(1)50W MR16 EXN	50
F	GARDCO / 104DMW32TRF120 BRP	WALL MOUNT EXTERIOR FLUORESCENT FIXTURE W/ INTEGRAL BATTERY BACKUP	(1)32W CFL	34
G	BEGA / 2463P	CAST ALUMINUM, WET LOCATION FLUORESCENT FIXTURE MOUNTED ON COLUMN. BRONZE FINISH.	(1)13W CF QUAD	17
H	BEGA / 2463P	CAST ALUMINUM, WET LOCATION FLUORESCENT FIXTURE MOUNTED ON COLUMN. BRONZE FINISH.	(1)42W CF TRIPLE	48

County Code 13.11.074(d)

(d) It shall be an objective of lighting design to relate to the site and building design and reduce offsite impacts.

Lighting.

(1) All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties. Light sources shall not be visible form adjacent properties. Light sources can be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into building design.

(2) 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.

(3) Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures. (Ord. 4836 §§ 111-118, 10/3/06)*

M I G
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PRIME DESIGN GROUP
ELECTRICAL ENGINEERING

PROJECT TEAM:

LANDSCAPE ARCHITECT
Moore Iacofano Goltsman, Inc.

ARCHITECT
Thacher & Thompson Architects

CIVIL ENGINEER
Mesiti-Miller Engineering, Inc.

STRUCTURAL ENGINEER
Mesiti-Miller Engineering, Inc.

ELECTRICAL ENGINEER
Prime Design Group, Inc.

ECOLOGICAL CONSULTANT
H.T. Harvey & Associates

ENVIRONMENTAL CONSULTANT
David J. Powers & Associates, Inc.

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane Santa Cruz County, CA, 95073

SHEET TITLE
ELECTRICAL LISTS SCHEDULES, AND DETAILS

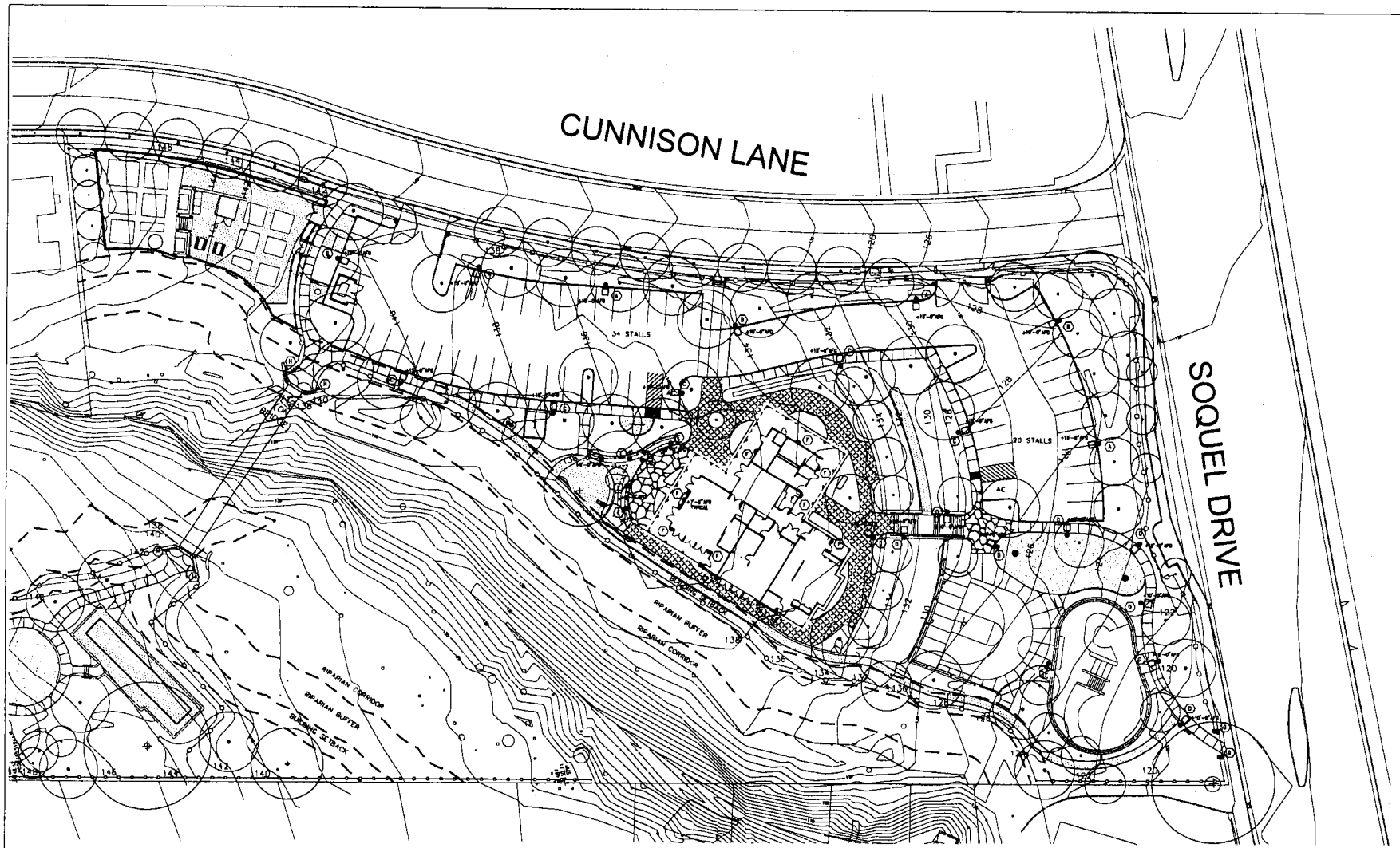
Schematic Design

DATE	REVISIONS

STAMP

CHECKED BY: DAA	DATE: 10/31/2009
DATE: 10/31/2009	FILE NAME
DRAWN BY: JDA	SHEET
JOB NO.: 30034	E1.0
SCALE	

ATTACHMENT 2



MIG
MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PRIME DESIGN GROUP
ELECTRICAL ENGINEERING SINCE 1980

PROJECT TEAM:
LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.
ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
ELECTRICAL ENGINEER
ECOLOGICAL CONSULTANT
ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane Santa Cruz County, CA, 95073

SHEET TITLE
LIGHTING SITE PLAN
CUNNISON LANE/ SOQUEL DRIVE

Schematic Design

DATE	REVISIONS

STAMP

CHECKED BY	DATE
DAA	10/31/2009
DATE 10/31/2009	FILE NAME
DRAWN BY JDA	SHEET E2.0
JOB NO. 30034	
SCALE 1"=20'-0"	

County Code 13.11.074(d)

(d) It shall be an objective of lighting design to relate to the site and building design and reduce offsite impacts.
Lighting.
(1) All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Light sources can be shielded by landscaping, structures, fixture design or other physical means. Building and security lighting shall be integrated into building design.
(2) 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 18 feet are allowed.
(3) Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures. (ord. 4836 §§ 111-116, 10/3/94)*

79/163

ATTACHMENT 2

County Code 13.11.074(d)

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Lighting.

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(2) All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light standards for a maximum height of 18 feet are allowed.

(3) Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures. (Ord. 4539 §§ 111-115, 10/3/1991)

MIG

MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PRIME DESIGN GROUP

PROJECT TEAM:

LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.

ARCHITECT

CIVIL ENGINEER

STRUCTURAL ENGINEER

ELECTRICAL ENGINEER

ECOLOGICAL CONSULTANT

ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane Santa Cruz County, CA. 95073

SHEET TITLE

LIGHTING SITE PLAN

TEE STREET

Schematic Design

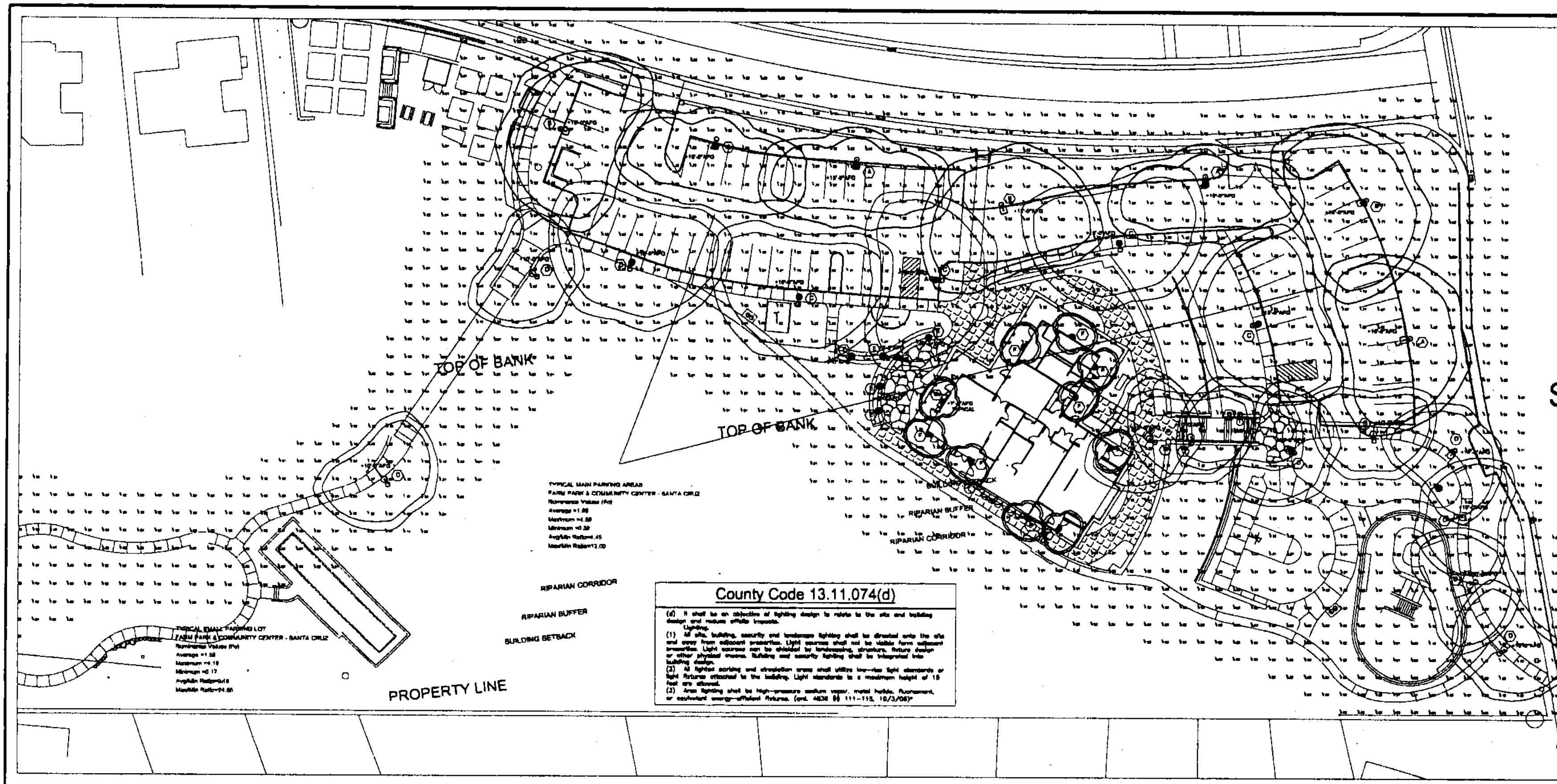
DATE	REVISIONS

STAMP

CHECKED BY	DATE
DAA	10/31/2009
DATE 10/31/2009	FILE NAME
DRAWN BY JDA	SHEET E2.1
JOB NO. 30034	
SCALE 1" = 20'-0"	

80/163

ATTACHMENT 2



County Code 13.11.074(d)

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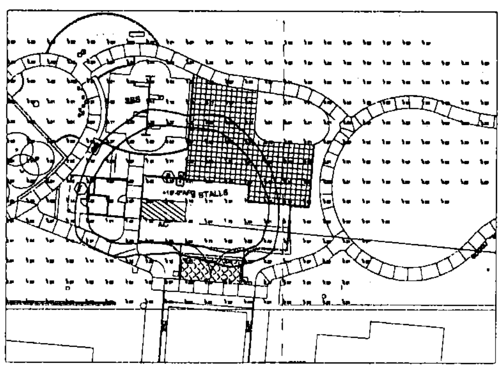
(3) Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures. (Ord. 4836 §§ 111-115, 10/3/06)

Luminaire Location Summary

Project: FARM PARK & COMMUNITY CENTER - SANTA CRUZ

Lumina	Label	X	Y	Z	Orient	Tilt	Status
1	B	17622.881	-3040.801	16	268.474	0	On
4	C	17681.814	-2981.169	16	73.3	0	On
[illegible]	C	[illegible]	[illegible]	16	[illegible]	0	On
[illegible]	B	17648.407	[illegible]	16	[illegible]	0	On
7	A	18030.811	[illegible]	16	287.169	0	On
8	A	[illegible]	[illegible]	16	[illegible]	0	On
9	C	18123.[illegible]	[illegible]	16	180	0	On
10	B	18160.[illegible]	[illegible]	16	287.101	0	On
11	C	18204.814	[illegible]	16	102.[illegible]	0	On
12	C	[illegible]	[illegible]	16	18.[illegible]	0	On
13	A	[illegible]	[illegible]	16	[illegible]	0	On
14	B	18318.187	[illegible]	16	[illegible]	0	On
15	B	[illegible]	[illegible]	16	181.[illegible]	0	On
[illegible]	E	[illegible]	[illegible]	0	0	0	On
[illegible]	E	[illegible]	[illegible]	0	0	0	On
[illegible]	E	18163.[illegible]	[illegible]	0	0	0	On
[illegible]	E	[illegible]	[illegible]	0	0	0	On
[illegible]	E	[illegible]	[illegible]	0	0	0	On
[illegible]	E	[illegible]	[illegible]	0	0	0	On
31	F	18128.181	[illegible]	7.5	146.[illegible]	0	On
32	F	18118.[illegible]	[illegible]	7.5	[illegible]	0	On
33	F	18137.784	[illegible]	7.5	[illegible]	0	On
34	F	[illegible]	[illegible]	7.5	[illegible]	0	On
35	F	18177.[illegible]	[illegible]	7.5	[illegible]	0	On
36	F	[illegible]	[illegible]	7.5	377.842	0	On
37	F	18184.[illegible]	[illegible]	7.5	377.842	0	On
38	F	[illegible]	[illegible]	7.5	127.842	0	On
39	F	[illegible]	-3021.148	7.5	68.227	0	On
40	F	18161.78	[illegible]	7.5	148.[illegible]	0	On
2	D	17973.[illegible]	[illegible]	16	130.1	0	On
3	D	17940.17	[illegible]	16	160.[illegible]	0	On
16	D	18221.[illegible]	[illegible]	16	148.[illegible]	0	On
17	D	18237.[illegible]	[illegible]	16	80	0	On
18	D	[illegible]	[illegible]	16	270	0	On
19	D	[illegible]	[illegible]	16	187.[illegible]	0	On
20	D	18316.812	[illegible]	16	80	0	On
21	D	[illegible]	[illegible]	16	223.[illegible]	0	On
22	D	[illegible]	[illegible]	16	[illegible]	0	On
23	D	[illegible]	-3031.76	16	201.[illegible]	0	On
24	D	[illegible]	[illegible]	16	43.187	0	On

Total Quantity = 40



Luminaire Schedule

Project: FARM PARK & COMMUNITY CENTER - SANTA CRUZ

Symbol	Qty	Label	Arrangement	Lumens	LLF	LDD	LLD	BF	Arm	Description	Filename
	3	A	SINGLE	13800	0.675	0.9	0.75	1	1	EMCO DECA16 1 3H - 150PS MH HS @ 16' (17' PO	[illegible]
	5	B	SINGLE	13800	0.675	0.9	0.75	1	1	EMCO DECA16 1 3H - 150PS MH @ 16' (17' POLE)	[illegible]
	9	C	SINGLE	13800	0.675	0.9	0.75	1	1	EMCO DECA16 1 3H - 150PS MH @ 16' (16' POLE)	[illegible]
	11	D	SINGLE	9100	[illegible]	0.9	[illegible]	1	1	EMCO DECA14 1 3H - 100PS MH HS @ 16' (16' PO	[illegible]
	6	E	SINGLE	600	0.675	0.9	0.75	1	0	VISION 3 DL 1A- [illegible]	LAMP [illegible]
	10	F	SINGLE	2400	0.765	0.9	0.85	1	0	GARDCO 1043MMT - 32TRF @ 7.5'	[illegible]

Calculation Summary

Project: FARM PARK & COMMUNITY CENTER - SANTA CRUZ

Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts
ALL POINTS AS SHOWN	Illuminance	Fc	0.85	16.54	0.00	N.A.	N.A.	7146
TYPICAL MAIN PARKING AREAS	Illuminance	Fc	1.08	4.89	0.38	4.46	12.00	324
TYPICAL SMALL PARKING LOT	Illuminance	Fc	1.08	4.19	0.17	6.18	24.65	34

Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.

ALL VALUES SHOWN ARE MAINTAINED HORIZONTAL FOOTCANDLES AT GRADE

PHOTOMETRIC DATA USED AS INPUT FOR THESE CALCULATIONS IS BASED ON ESTABLISHED IES PROCEDURES AND PUBLISHED LAMP RATINGS. FIELD PERFORMANCE WILL DEPEND ON ACTUAL LAMP, BALLAST, ELECTRICAL, AND SITE CHARACTERISTICS.

Associated Lighting Representatives, Inc.

ALR

ASSOCIATED LIGHTING REPRESENTATIVES, INC
7777 PARDEE LANE
P.O. BOX 1268
OAKLAND, CA 94621
PHONE: (510) 638-0158 - FAX (510) 638-2908

REPORT FOR: PRIME DESIGN GROUP; DAVID AUBLE
BY: APPLICATIONS ENGINEERING: RAMON ZAPATA
SALES REPRESENTATIVE: ALR; STEVE HOLDAWAY

AGi32 lighting software

AGI32 VERSION 2.04 rev 801
AGI (C) 1999-2008 LIGHTING ANALYSTS, INC.
10440 BRADFORD ROAD - UNIT A
LITTLETON, CO 80127

PROJECT DESCRIPTION

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

SANTA CRUZ

8550HOL.DWG / 8550HOL.A32

SCALE	SHEET	DATE	REV
1" = 30'	1 OF 1	09.14.2009	X

M I G

MOORE IACOFANO GOLTSMAN, INC.

CONSULTANT:

PRIME DESIGN GROUP
ELECTRICAL ENGINEERING SINCE 1990

PROJECT TEAM:

LANDSCAPE ARCHITECT
MOORE IACOFANO GOLTSMAN, INC.

ARCHITECT

CIVIL ENGINEER

STRUCTURAL ENGINEER

ELECTRICAL ENGINEER
Prime Design Group, Inc.

ECOLOGICAL CONSULTANT

ENVIRONMENTAL CONSULTANT

FARM NEIGHBORHOOD PARK & COMMUNITY CENTER

Soquel Drive & Cunnison Lane Santa Cruz County, CA 95073

SHEET TITLE

PHOTOMETRICS

Schematic Design

DATE	REVISIONS

STAMP

CHECKED BY	DATE
DAA	10/31/2009
DATE	FILE NAME
10/31/2009	
DRAWN BY	SHEET
JDA	E3.0
JOB NO.	
30034	
SCALE	

ATTACHMENT 2

Project No. SC9704
23 November 2009

DAVID J. POWERS AND ASSOCIATES, INC.
1871 The Alameda, Suite 200
San Jose, California 95126

Attention: Julie Mier

Subject: Geotechnical Plan Review

Reference: Preliminary Drainage and Erosion Control Plans
Farm Neighborhood Park and Community Center
Soquel Drive and Cunnison Lane
Santa Cruz County, California

Dear Ms. Mier:

As requested, we have reviewed the geotechnical aspects of Preliminary Drainage and Erosion Control Plans prepared by Mesiti-Miller Engineering Inc. for the referenced project. Our Geotechnical Investigation for the project is dated 23 December 2008. The reviewed plan sheets include:

1. Sheet C-1.0, titled "On-Site Drainage Plan", dated 31 October 2009

2. Sheet C-1.1, titled "Off-Site Drainage Plan", dated 31 October 2009

3. Sheet C-3.0, titled "Erosion Control Plan", dated 31 October 2009

The plans indicate surface runoff and roof runoff from the garden areas, parking lots, driveways, play areas, grass pavers and sport courts will be directed via bioswales and stormdrain pipes to drain inlets and catch basins connected to subsurface detention systems with water quality treatment facilities. Roof runoff from the Community Building will be directed to a rainwater harvesting system with an overflow to the detention system

At the Tee Street side of the project, treated runoff water will be released to the stream channel via an outlet tee and energy dissipater per an instream repair plan designed by others. On the Soquel Drive side of the project, detained treated water from the project will be released to new storm drain inlets and pipes on Soquel Drive which connect to the existing storm drain system.

ATTACHMENT 3

RECOMMENDATIONS

The following geotechnical criteria and recommendations should be followed during project design and preparation of project plans and specifications:

Site Grading

1. The geotechnical 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 geotechnical engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-07.

3. Areas to be graded should be cleared of all obstructions including loose fill, building foundations, old pavement, concrete flatwork, bricks, old septic tanks, trees not designated to remain, or other unsuitable material. All unsuitable material should be removed offsite. Existing depressions or voids created during site clearing should be backfilled with engineered fill.

ATTACHMENT 3

4. Cleared areas should then be stripped of organic-laden topsoil. Stripping depth should be from 2 to 4 inches. Actual depth of stripping should be determined in the field by the geotechnical engineer. Strippings should be wasted off-site or stockpiled for use in landscaped areas if desired.

5. The building pads for the proposed Community Center and restroom building should be excavated to a depth of 24 inches below the bottom of proposed footings and redensified as engineered fill. Potentially expansive clay soil excavated during preparation of building pads should not be reused as engineered fill. The excavation should extend 5 feet beyond the building perimeters. The soil to be reused as structural fill and depth of the excavation should be approved in the field during construction by the geotechnical engineer or his representative.

6. In drive and parking areas, as a minimum, the top 8 inches of soil should be redensified as engineered fill. except where permeable pavements are planned.(see Permeable Pavements,. No. 38,). Where soft or over moist soil conditions are observed, additional excavation may also be necessary. The geotechnical engineer should determine the depth of overexcavation where soft soil is encountered during construction. The bottom of excavations must be observed and approved by the geotechnical engineer or his representative prior to placement and compaction of engineered fill.

7. The bottom of the excavations and other areas to receive engineered fill should be scarified to a depth of 8 inches, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. Portions of the site may need to be moisture conditioned to achieve suitable moisture content for compaction. These areas may then be brought to design grade with engineered fill.

8. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. The upper 8 inches of pavement subgrades should be compacted to a minimum of 95 percent relative compaction. The aggregate base below pavements should likewise be compacted to a minimum of 95 percent relative compaction.

9. If grading is performed during or shortly after the rainy season, the grading contractor may encounter compaction difficulty, such as pumping or bringing free water to the surface, in the upper surface sandy silt and sandy silt with clay. If compaction cannot be achieved after adjusting the soil moisture content, it may be necessary to over-excavate the subgrade soil and replace it with angular crushed rock to stabilize the subgrade. We estimate that the depth of over-excavation would be 12 to 24 inches under these adverse conditions.

10. Fills should be keyed and benched into firm soil or bedrock in areas where existing slope gradients exceed 7:1 (horizontal to vertical). Subdrains will be required in areas where keyways or benches expose potential seepage zones.

11. The top 12 inches of soil encountered in our borings appears acceptable for use as engineered fill, provided it is properly moisture conditioned. On the east side of the Community Center site and the restroom building site excavated clay soil should not be reused as structural fill. Materials used for engineered fill should be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches. Engineered fill should have a plasticity index (P.I.)< 15 but have sufficient binder so that footing and utility trenches will not collapse.

12. We estimate shrinkage factors of 15 to 25 percent for the on-site materials when used in engineered fill.

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

Community Center- Conventional Spread Footings

14. Conventional spread footings may be used to support the Community Center building and restroom building provided the entire building pads are redensified as engineered fill to a depth of 24 inches below the bottom of footings. The redensified zone should extend 5 feet beyond the building perimeters. Actual footing depths should be determined in accordance with anticipated use and applicable design standards. The footings should be reinforced as required by the structural designer based on the actual loads transmitted to the foundation.

15. Footings should be founded a minimum of 18 inches below the lowest adjacent grade. Perimeter footings should be at least 15 inches wide. Actual footing depths and widths should be determined in accordance with anticipated use and applicable design standards. The footings should be reinforced as required by the structural designer based on the actual loads transmitted to the foundation. As a minimum, the footings should have four (4) number 4 reinforcement bars; 2 in the top and 2 in the bottom.

16. The foundation trenches should be kept moist and be thoroughly cleaned of all slough or loose materials prior to pouring concrete. In addition, all footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 1½:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

17. Foundations designed in accordance with the above may be designed for an allowable soil bearing pressure of 2500 psf for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind loads.

18. Total and differential settlement under the proposed light building loads is anticipated to be less than 1 inch and ½ inch, respectively.

19. Lateral load resistance for structures supported on footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.33 is considered applicable.

Pedestrian Bridge - Pier and Grade Beam Foundation

20. The pedestrian bridge abutments should be founded on drilled cast-in-place reinforced concrete pier and grade beam foundations. Drilled piers should be designed for skin friction only. The piers should penetrate loose soil and be embedded a minimum of 8 feet into firm native soil. For pier design, the top 2 feet of soil in pier holes should be neglected.

21. The concrete piers should be a minimum of 18 inches in diameter and vertically reinforced the full length. The vertical reinforcement in the piers should be structurally tied to horizontal reinforced concrete grade beams. Reinforcing vertical steel for the concrete

piers should extend the full depth of the excavation to a point 3 inches above the bottom of the pier hole. The bottom of each hole should be cleaned of loose soil and debris prior to the installation of reinforcement.

22. The concrete piers should be designed for skin friction. The top 2 feet of soil should be neglected when calculating skin friction. An allowable skin friction of 600 psf per lineal foot may be used below a depth of 2 feet. This value may be increased by one-third to include the effects of short term wind and seismic loads. The bottom of all pier excavations should be a minimum of 15 feet horizontally from adjacent slope surfaces.

23. The piers and grade beams should be designed to resist an active force equivalent to a fluid weight of 50 pcf acting against the top 2 feet of soil in the pier and against portions of the grade beam embedded in the ground. Along concrete piers, the active force should be considered to act on a plane 1½ times the diameter of the pier hole.

24. Passive restraining earth pressures may be assumed to be equivalent to fluids weighing 425 pcf provided there is a minimum horizontal distance of 5 feet between the top of the zone of passive pressure and the adjacent slope surface. The passive resistance can be assumed to act on a plane 2 times the diameter of the piers.

ATTACHMENT 3

25. We recommend that the geotechnical engineer or his representative be present for excavation of spread footings and pier foundations to confirm anticipated soil conditions and footing depths and sizes. If significant variations in soil conditions are encountered, additional recommendations will be presented.

Seismic Design Criteria (CBC)

26. The 2007 California Building Code (CBC) provides site class definitions for seismic design of structures. Based on these definitions, the result of our investigation indicates the site is classified as **Site Class C**. The site is located at Longitude -121.9431 ° and Latitude 36.9886°. The following maximum considered earthquake and five percent damped design spectral response accelerations adjusted for site class effects should be used for seismic design based on Sections 1613.5.3 and 1613.5.4 of the 2007 CBC:

A. S_{MS} = 1.500

B. S_{M1} = 0.815

C. S_{DS} = 1.000

D. S_{D1} = 0.543

Soil Corrosivity

27. The results of soil corrosivity testing on near surface soil at the Community Center site are presented in the following table:

ATTACHMENT 3

TABLE 5

Corrosivity Test Results

Sample	Resistivity (Ohm-cm)	Chloride (mg/kg)	Sulfate (mg/kg)	pH
15-1-1	1465	<2	<5	7.7

The test results indicate the soil has a low potential for corrosion. A test summary is also presented in the appendix (see Figure 57 in Appendix B).

Retaining Walls

28. For retaining walls designed at the site, conventional spread footings may be used for the walls. For fully drained walls up to 8 feet high, the following design criteria should be used:

A. Active earth pressure for walls allowed to yield (up to ½ percent of wall height) is that exerted by an equivalent fluid weight of 40 pcf for a level backslope and 55 pcf for a 2:1 backslope.

B. Where walls are not allowed to yield (restrained condition), the walls should be designed to resist a uniformly distributed load (rectangular distribution) of 28H psf per foot for a level backslope and 38H psf per foot for a 2:1 backslope, where H is the total height of the wall.

C. A spread footing foundation system is recommended for retaining walls. The walls may be designed for an allowable bearing capacity of 2000 psf plus a one-third increase for wind and seismic loads.

D. Use a coefficient of friction of 0.33 between the base of the foundation and soil. A passive resistance of 300 pcf may be used below a depth of 12 inches.

E. For seismic design, a dynamic lateral force equal to $14H^2$ lbs should be added to the active pressure and applied at a point 0.6H above the heel of the wall (where H is the height of the wall).

F. In addition, the walls must be designed for any adjacent live or dead loads which will exert a force on the wall (compaction equipment, structures or traffic).

G. Retaining walls which act as interior building walls should be waterproofed.

H. The above lateral pressures are provided assuming the walls are fully drained to prevent development of hydrostatic pressure behind the walls. Drainage materials behind the wall should consist of Class 1, Type A permeable material (Caltrans Specification 68-1.025) or an approved equivalent. The drainage material should be at least 12 inches thick. The drains should extend from the base of the walls to

ATTACHMENT 3

within 12 inches of the top of the backfill. The top 12 inches of backfill behind the wall should be relatively impermeable native soil compacted in place. A perforated pipe should be placed (holes down) about 4 inches above the bottom of the wall and be tied to a suitable drain outlet.

l. Wall backfill should be compacted to a minimum of 90 percent relative compaction. The backfill material should be approved by the geotechnical engineer.

Slabs-on-Grade

29. In areas where 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. In order to minimize vapor transmission, a vapor retardant (minimum 10 mil thickness) 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.

30. Exterior concrete slab-on-grade subgrade soil should be proof rolled to provide a smooth, firm surface for slab support. Reinforcing 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 pre-

ATTACHMENT 3

moistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

Utility Trenches

31. Trenches must be properly shored and braced during construction or laid back at an appropriate angle to prevent sloughing and caving at sidewalls. The project plans and specifications should direct the attention of the contractor to all CAL OSHA and local safety requirements and codes dealing with excavations and trenches.

32. Utility trenches that are parallel to the sides of buildings should be placed so that they do not extend below an imaginary line sloping down and away at a 1½:1 (horizontal to vertical) slope from the bottom outside edge of all footings. The structural design professional should coordinate this requirement with the utility layout plans for the project.

33. Trenches should be backfilled with granular-type material and uniformly compacted by mechanical means to the relative compaction as required by County of Santa Cruz specifications, but not less than 95 percent under paved areas and 90 percent elsewhere. The relative compaction will be based on the maximum dry density obtained from a laboratory compaction test run in accordance with ASTM Procedure D1557-07.

34. We strongly recommend placing a three-foot (3') wide concrete plug in each trench which passes under the exterior foundations to reduce the potential for water intrusion in underfloor areas. Care should be taken not to damage utility lines.

35. Trenches should be capped with a minimum of 12 inches of compacted relatively impermeable soil.

Pavement Sections

36. For design of pavement sections, an R-Value=7 should be used for design of pavements in the lower parking lot and and an R-Value=30 should be used in the upper parking lot. California Bearing Ratio test results indicate the CBR= 25.6% at 95 percent relative compaction for soil in the upper parking lot. R-Value and CBR test results are included in Appendix B. For designed pavement sections to perform to their greatest efficiency, it is important that the following items be considered:

A. Properly moisture condition the subgrade and compact it to a minimum relative compaction of 93 to 95 percent at a moisture content of 1 to 3 percent over the optimum moisture content. If permeable pavements are designed, the subgrade should be prepared as recommended in No. 38,.Permeable pavements. If additional storm water storage capacity is needed, subgrade soil may be replaced with permeable angular aggregate rock. (1" maximum diameter

ATTACHMENT 3

B. Provide sufficient gradient to prevent ponding of water.

C. Use only quality materials of the type and thickness (minimum) specified. All base rock, unless otherwise noted, must meet State of California Standard Specifications for Class 2 Aggregate Base, and be angular in shape. If pervious concrete pavements are designed for the parking lots and driveways, permeable angular aggregate rock may be used in replacement of aggregate base.

D. Compact the base rock uniformly to a minimum of 95 percent relative compaction.

E. Place the asphaltic concrete only during periods of fair weather when the free air temperature is within a prescribed limit.

F. Provide a routine maintenance program.

Permeable Pavement

37. Permeable concrete pavements may be used for parking and drive areas. Percolation test results indicate the near surface soils at the site have low permeability. To provide additional storage volume and improve the infiltration of near surface soil, replacement of subgrade soil with permeable angular rock (1" maximum diameter) is acceptable. To prevent migration of rock into the subsoil and provide stability, we recommend a woven geotextile (US 200 or equivalent) be placed between the rock and soil. The subgrade soil should not be compacted prior to placement of the geotextile. The rock placed on the geotextile should be compacted in 4 inch lifts (maximum thickness) with a hand operated vibratory plate compactor.

ATTACHMENT 3

38. When the subgrade soil is excavated to achieve design elevations, care should be taken to prevent compaction of the soil. The subgrade soil should remain as undisturbed as possible to allow optimal infiltration. The subgrade should have a minimum gradient of 1 percent toward subdrains along parking lots and driveways which intercept storm water which does not infiltrate into the ground. Water from subdrains should be conveyed to trench drains or pits on the slopes below the parking lots.

Site Drainage

39. Proper drainage is essential to the project. Surface drainage should include provisions for positive gradients so that surface runoff is rapidly removed and not allowed to pond adjacent to foundations or pavements. Surface drainage should be directed away from the building foundations to collection systems which convey runoff to the on site storm water retention system or off site storm drain system.

40. Subdrains along parking lots should extend a minimum of 12 inches below the subgrade elevation. The subdrains should be a minimum of 12 inches wide and should have a minimum slope of 2 percent. The subdrains should be backfilled with Class 1, Type A permeable material (State of California Standard Specification No. 68-1.025). A four (4) inch diameter rigid perforated pipe should be placed within 3 inches of the bottom of the trench. The down slope end of subdrains should be connected to a solid pipe which conveys water downslope to trench drains or pits.

ATTACHMENT 3

41. Trench drains or pits should be a minimum of 18 inches wide and extend to a depth of 6 feet. The trenches or pits should be filled with ¾ inch diameter crushed rock (no fines) wrapped in filter fabric (Mirafi 140N or equivalent). The top 12 inches of the trench or pit should be compacted on site soil. Clean outs should be installed to allow monitoring of the trenches or pits and removal of sediments, if necessary.

42. Rain gutters and downspouts should be placed around roof eaves. Discharge from the rain gutters should be conveyed from downspouts via splash blocks or solid plastic pipe (minimum 3 inches diameter) and discharged away from foundations and improvements to collection facilities which convey runoff to the on site storm water retention system or off site storm drain system.

43. 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.

Erosion Control

44. Bare soil at the project site has potential for erosion. We recommend the following provisions be incorporated into the project plans.

A. All grading and soil disturbance shall be kept to a minimum.

B. No eroded soil will be allowed to leave the site.

ATTACHMENT 3

C. All bare soil should be seeded and mulched immediately after grading with barley, rye, grass and crimson clover.

Plan Review, Construction Observation, and Testing

45. Haro, Kasunich and Associates should be provided an opportunity to review project plans prior to construction to evaluate if our recommendations have been properly interpreted and implemented. We should also provide earthwork observations and testing and foundation excavation observations during construction. This allows us to confirm anticipated soil conditions and evaluate conformance with our recommendations and project plans. If we do not review the plans and provide observation and testing services during the earthwork phase of the project, we assume no responsibility for misinterpretation of our recommendations.

ATTACHMENT 3

LIMITATIONS AND UNIFORMITY OF CONDITIONS

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

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

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

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

THE FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER BIOTIC STUDY

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4 December 2009

Project # 2853-01

ATTACHMENT 4

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that would result in the regional decline of this species; (3) a relatively large number of individuals within a population that is considered rare or declining; (4) the species' metapopulation (e.g., if one of only a few known populations occurs in the impact zone, or if the species has extremely narrow habitat requirements); or (5) a habitat type or vegetation community in regional decline or that is endemic.

Impacts to species or habitats would be less than significant if they are expected to affect only a very small percentage of regional populations (for species) or the regional extent (of habitats) because the Project will affect only a small number/limited extent of the resource and/or because the resource is regionally abundant.

IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

Loss of California Annual Grassland and Ornamental/Landscaped Habitats

Approximately 1.71 acres of low-quality, disturbed California annual grassland and 1.20 acres of ornamental/landscaped habitat will be permanently impacted by the Project by conversion of these areas to park development elements such as buildings, play areas, parking, and other park features described above. The areas that will be impacted have already been disturbed by previous fill activities resulting from construction, clearing, and ongoing mowing. As such, these habitats provide only marginally suitable habitat for native plants. Wildlife species associated with the annual grassland and ornamental/landscaped habitats consist of common, regionally widespread species, many of which are well adapted to suburban areas such as the Project site. As a result, regional populations of these wildlife species, as well as the regional abundance of these habitat types in general, are very high, and the Project site represents only a very small fraction of the regional populations. Therefore, impacts to plants and wildlife associated with California annual grassland and landscaped/ornamental habitats on the site do not meet the CEQA standard of having a *substantial* adverse effect on these species' populations, and thus, impacts to these habitats are considered to be less than significant.

Loss of Maple-leaved Checkerbloom

While this species often occurs in disturbed areas, there is a low probability of occurrence on-site due to the predominance of non-native species and the degree of disturbance at the site. Maple-leaved checkerbloom was not observed during reconnaissance-level surveys of the Project site in 2008. If maple-leaved checkerbloom should occur on site, it would occur in such low abundance that the impact to this species would be negligible relative to the regional populations and would not reach the threshold of a *substantial* reduction in the population of this special-status species.

Furthermore, Project effects include removal of non-native woody species, thus creating disturbance that enhances this species' habitat, and Project restoration activities will create new habitat for this species as well. Therefore, due to the unlikelihood of occurrence, the low probability that a substantial number of individuals of this species would be adversely affected, and the potential benefits of the Project to this species, we feel that impacts to any individual maple-leaved checkerbloom plants that may occur on-site would be fully offset by the proposed

ATTACHMENT - 4

Project. Thus, no further surveys for this species are necessary, and Project impacts to this species are considered to be less-than-significant under CEQA.

Impacts to Foraging Special-Status Wildlife Species

Several special-status wildlife species may occur on the Project site only as rare visitors, migrants, or transients. These species may occasionally forage on the site, but they are not expected to breed there. These species include the bank swallow, western red bat, yellow warbler, and tricolored blackbird. The Project will have no effect on the breeding success of any of these species. Project activities may result in a very small and temporary reduction of foraging habitat available to these species locally, although foraging habitat for all four species will not change appreciably in the long term as a result of the Project. Due to the abundance of similar habitats locally and regionally and the infrequency with which most of these species occur on the Project site, the Project's impacts do not meet the CEQA standard of having a *substantial* adverse effect on these species' populations, and the Project will have a less than significant impact on these species.

SIGNIFICANT IMPACTS THAT CAN BE MITIGATED TO A LESS-THAN-SIGNIFICANT LEVEL

Impacts to Water Quality

Construction work, including grading during construction and excavation of small areas of the creek channel during the instream channel stabilization work, could mobilize soil during construction, resulting in the potential for decreased water quality along the creek channel downstream of the Project site.

Mitigation Measures for Impacts to Water Quality

The Project construction and instream channel stabilization construction will be designed and constructed to avoid impacts to water quality within the creek corridor. The incorporation of best management practices (BMPs) and construction methods to avoid impacts to water quality will reduce Project impacts to water quality to less than significant levels.

Mitigation Measure 1a. Best Management Practices. Erosion control and BMPs will be employed at the instream site and general construction throughout the Project site to avoid adverse water quality impacts from sediment transport during construction and to ensure that no debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material will be allowed to enter into or be placed where it may be washed by rainfall or runoff into the creek from the Project site during construction. Construction work in the creek channel will be limited to the dry season (15 April – 15 October) when no flow is expected and will include the installation of silt fencing to limit sediment from entering the creek channel during construction. These BMPs will also include measures to divert flow such as a temporary culvert or pipe in the event an unexpected flow event occurs.

Mitigation Measure 1b. All disturbed areas not developed or designed for other planting treatments will be seeded with an appropriate erosion control native seed mix and revegetated

with native plantings as described above in the *Overview and Assumptions* section of this impact assessment. The native plant palette and the erosion control seed mix will be developed in detail in the Project's Habitat Mitigation and Monitoring Plan.

Loss of Coast Live Oak Riparian Forest/Eucalyptus Trees

The existing habitat along the unnamed creek is highly degraded, with a mixture of native coast live oak and non-native eucalyptus species dominating the creek channel, interspersed with additional non-native species such as cotoneaster, tree-of-heaven, English ivy, cape ivy, periwinkle, and Himalayan blackberry along the creek channel (Figure 5). Overall, this existing vegetation provides low habitat functions and values, especially when compared with riparian habitats fully vegetated with native species).

Trimming of Coast Live Oak Trees for Pedestrian Bridge. The pedestrian bridge is located where it will minimize impacts to native coast live oak trees. However, to facilitate the placement of the pedestrian bridge and the abutments on either end of the bridge, coast live oak riparian forest/eucalyptus tree habitat may be impacted by pruning of trees within the grading footprint and along the bridge corridor of the proposed pedestrian bridge. The impacts to native coast live oak trees resulting from the trimming of trees within the pedestrian bridge impact area are 0.04 acres.

Tree Branch or Root Trimming During Trenching of Drainage Pipe. The drainage and detention system for the Tee Street side of the Project is designed to accommodate a 25-year flood event which will convey flow through a 12 to 18 inch pipe. The pipe will outflow into a crib wall structure on the creek bank (which is part of the instream stabilization features) where the water will infiltrate into a vegetated well drained soil/gravel mixture. The pipe will be located above the ordinary high water mark. The installation of the pipe will require trenching from the proposed catch basin across an area of coast live oak riparian forest/eucalyptus tree habitat. The pipe will be located to avoid and minimize impacts to existing trees and along the construction access route planned for the instream stabilization work described below. However, the construction work to install this pipe may require some minor trimming of overhead branches or roots.

Removal of Eucalyptus Trees Plus Removal of One Pine. As part of the Project goals for the restoration component of this project, and also to address safety issues relating to trees identified in arborist reports as having structural concerns, a number of non-native individual eucalyptus trees will be removed from within and adjacent to the unnamed creek. This non-native tree removal will include removal of the grove of eucalyptus trees located at the southwest corner of the property (Figure 5) (Belton 2007, H. T. Harvey & Associates 2009). In addition to these eucalyptus trees, one large leaning pine will be removed within the coast live oak riparian forest/eucalyptus tree habitat area. The total removal of these trees will result in 0.18 acres of impacts to trees within the coast live oak riparian forest/eucalyptus tree habitat. Removal of other non-native trees including cotoneaster and tree-of-heaven will not result in impacts as these are undesirable invasive species.

Removal of Understory Vegetation. The Project will remove some understory vegetation during tree trimming, bridge placement, trenching and instream restoration construction, and

eucalyptus removal. This understory vegetation comprises predominantly invasive non-native plants with low habitat value, and much of the disturbed areas will rapidly recolonize with the same groundcover species.

Mitigation Measures for Impacts to Coast Live Oak Riparian/Eucalyptus Forest

The Project has been designed to avoid and minimize impacts to native riparian vegetation along the creek channel. Mitigation measures are described below for impacts to coast live oak riparian/eucalyptus forest, and implementation of these measures will reduce impacts to this resource to a less than significant level.

Mitigation Measure 2a. Mitigation Plantings For Trimming of Coast Live Oak Riparian/Eucalyptus Forest. The impacts to coast live oak trees from the trimming within the area of the pedestrian bridge will be mitigated on an acreage basis at a ratio of 1:1 (mitigation:impact) by planting new coast live oak riparian forest habitat. Mitigation for impacts to replace Coast Live Oak Riparian/Eucalyptus Forest will occur on-site, within the restoration areas (See *Habitat Restoration Summary* and Table 5 below).

Mitigation Measure 2b. Tree Protection Zones and Protective Fencing. An arborist report has been prepared (H. T. Harvey & Associates 2009) that defines tree protection zones for each of the trees on the Project site and also details construction techniques to protect trees during construction. Trees slated for preservation will be prominently marked to avoid injury or accidental removal during construction and during tree removal/trimming activities. Any trees requiring trimming will be trimmed prior to construction to avoid additional damage to the tree or to adjacent trees. Vehicles and equipment will be kept away from the soil and sensitive rooting zones within the tree protection zones. Protective fencing will be installed under the supervision of the Project arborist prior to the onset of construction. Protective fencing will be a minimum of 4 ft in height and will remain in place until all construction is complete.

Mitigation Measure 2c. Tree Transplanting. Based on the current schematic design (MIG Design Team 2009) and the arborist report for the Project (H. T. Harvey and Associates 2009), approximately 8-12 healthy coast live oak trees (each with a diameter of 8 in or less) within the development area have been determined suitable for transplant into areas of the site slated for habitat mitigation . The placement of these trees into the mitigation areas will help to jump-start the development of the restoration areas. All transplanting activities will be supervised by the project arborist to ensure this work is done using sound ecological techniques and that no additional impacts to trees occurs to the coast live oak riparian forest/eucalyptus habitat. Oak trees that will be transplanted would therefore not require further mitigation.

Mitigation Measure 2d. Drainage Pipe/Construction Avoidance Measures. The layout of the drainage pipe shall be staked and verified in the field by the Project biologist as the most feasible alignment to avoid coast live oak root or branch pruning. The trenching and installation of the pipe will be supervised by the Project biologist (with assistance from a licensed arborist as needed) to ensure that this construction will avoid and/or minimize any impacts to the roots or canopy of adjacent trees. Any required root or branch pruning shall be done at the direction and using methods approved by the project biologist. The impacts to tree roots are not expected to adversely affect the survival of the trees, therefore no mitigation is proposed.

ATTACHMENT - 4

Mitigation Measure 2e. Non-native Woody Species Removal. In order to enhance the existing coast live oak riparian forest occurring on the site, non-native woody species including all tree-of-heaven and cotoneaster will be removed (no mitigation is proposed as they are undesirable invasive species). Individual non-native eucalyptus trees identified for removal for instream channel stabilization work and the grove of non-native eucalyptus trees at the southwest corner of the site will also be removed and these areas will be replanted with native plantings typical of a coast live oak riparian forest. The removal of non-native eucalyptus trees will be mitigated on an acreage basis at a ratio of 2:1(mitigation:impact) by planting new coast live oak riparian forest habitat. It should be noted that no mitigation is proposed for non-native groundcover plants, tree-of-heaven, and cotoneaster as these are invasive and undesirable species.

Loss of Coast Live Oak Habitat/Individual Coast Live Oak Trees

The coast live oak habitat is vegetated with a mixture of coast live oak interspersed with non-native groundcover species. None of these trees are located within the riparian area. Grading and installation of park elements will result in the removal of a number of these trees as well as a number of individual coast live oak that are located outside the Coast Live Oak Habitat (Table 4). The removal of any of those trees is considered significant. Although no trimming of these oak trees is planned during construction at this time we have included mitigation measures (Mitigation Measure 3a) if trimming of these trees is required during construction. As described above under Mitigation Measure 2c, some oak trees will be transplanted and will not require mitigation as they are not considered impacted.

Mitigation Measures for Impacts to Coast Live Oak Habitat/Individual Coast Live Oak Trees

Mitigation for loss of Coast Live Oak Habitat and Individual Coast Live Oak Trees includes planting replacement trees and habitat restoration and monitoring. Tables 3 and 4 provide a summary of the impacted trees, mitigation ratios and the associated mitigation for these trees. A summary of the habitat restoration mitigation is provided below in Table 5 and in the associated restoration description. The mitigation measures described below will reduce the impact to Coast Live Oak habitat to less than significant levels.

Mitigation Measure 3a. Planting of Coast Live Oak Trees. Any trees that will be impacted due to branch pruning will be mitigated at a ratio of 1:1 (area of impacts:mitigation area). Trees that will be removed will be replaced on a per stem basis (number of trees planted:number of trees removed). Table 3 provides a summary of tree size categories and the replacement ratios for trees which will be removed.

Table 3. Summary of Oak Tree Replacement Ratios

SIZE OF TREE REMOVED (DBH, IN INCHES)[1]	REPLACEMENT RATIO (NUMBER OF TREES PLANTED:NUMBER OF TREES REMOVED)
Removed 6-11"	2:1

ATTACHMENT 4

Removed 12-17"	3:1
Removed 18-24"	4:1
Removed >24"	5:1

[1]dbh is defined as the diameter of the tree at breast height, or the diameter of the tree at 4.5 feet above existing grade.

Based on the replacement ratios in Table 3, and the size and number of trees impacted (Table 4), 43 trees are required to mitigate for tree removal. Based on 16-foot on-center plant spacing for replacement trees, the area required for replacement tree planting is approximately 0.25 acres (Table 4). Most of these trees will be located within the restoration area, but some of the replacement trees will also be located within the developed park areas.

Table 4. Oak Tree Impacts and Mitigation

TREE (OR GROUP) TAG NUMBER[1]	COMMON NAME	SPECIES	SIZE CLASS (DBH)	NUMBER OF TREES IMPACTED	NUMBER OF TREES REQUIRED FOR MITIGATION[2]
1[3]	coast live oak	*Quercus agrifolia*	12-17"	1	3
57	coast live oak	*Quercus agrifolia*	6-11"	3	6
58	coast live oak	*Quercus agrifolia*	6-11"	2	6
58	coast live oak	*Quercus agrifolia*	12-17"	1	3
211[3]	coast live oak	*Quercus agrifolia*	12-17"	1	3
220[3]	coast live oak	*Quercus agrifolia*	18-24"	1	4
221[3]	coast live oak	*Quercus agrifolia*	12-17"	5	15
223[3]	coast live oak	*Quercus agrifolia*	12-17	1	3
Total Number of Trees Impacted				**15**	--
Total Number of Trees Required For Mitigation					**43 (+/- 0.25 acres)**

[1]Tree tag numbers are derived from the arborist report (H. T. Harvey & Associates 2009) and may describe several trees in a close grouping.
[2]Refer to Table 3 for ratios
[3]This tree is located outside the Coast Live Oak Habitat area.

Impacts to Aquatic Habitat and Coast Live Oak Riparian Forest/ Eucalyptus Resulting from Instream Channel Stabilization Work

The existing aquatic habitat can be described as a degraded, ephemeral creek characterized by incision, with areas of unstable and slumping banks. The instream channel stabilization work has been designed to enhance and improve the structure of the aquatic habitat over the long-term and minimize the potential for bank instability and erosion along the creek channel.

The construction of the instream channel stabilization will impact 0.08 acres of the aquatic habitat and creekbank. Several non-native trees that are located within the channel stabilization work area, including a eucalyptus tree and a pine tree will be removed during construction of the weir structures. Construction in this area will also include site grading and removal of primarily non-native understory.

ATTACHMENT 4

Mitigation Measures for Impacts to Aquatic Habitat and Coast Live Oak Riparian Forest/ Eucalyptus Resulting from Instream Channel Stabilization Work

The mitigation measures described here will reduce the temporary impacts to aquatic habitat and creek banks from the instream channel stabilization work to a less than significant level.

Mitigation Measure 4a. Channel Repair and Stabilization. The instream channel restoration work will focus on repair and stabilization of three existing drops in the channel bed which are currently supported by a mixture of logs, roots, and debris (including car tires, pieces of outdoor furniture, and other trash). If left unchecked, the upstream migration of these features could further incise the channel and produce additional bank stability concerns. The planned channel repair will stabilize these features over the design-life of the Project (many decades), reducing the long-term potential for bank instability, in addition to increasing the habitat quality and the aesthetics of the creek corridor. The goal of the restoration and stabilization work is to mimic the existing character of healthy local ephemeral coastal drainages in the area by utilizing wood harvested on-site for grade and erosion control features rather than rock or other hard reinforcement. Wood placement for instream stabilization will be entirely deliberate while providing the appearance of a network of fallen trees. These features will resist movement and enhance ecologic function.

The three existing drop features will be reconfigured using logs and rootwads removed from the banks and adjacent terraces as part of the revegetation work. Logs and only a few local rocks will be used to construct steps or weirs that discourage runoff from eroding channel banks and prevent upstream migration of channel incision. The logs will be keyed into the adjacent channel banks and will be arranged in a loose network with other placed logs to prevent destabilization. Local logs and rootwads will also be placed longitudinally in lightly regraded areas where channel banks have become oversteepened from past slumping. These longitudinal logs will discourage bank erosion and support the growth of new and existing plantings. A small redwood crib wall will be constructed to reinforce an oversteepened bank at the upstream end of the stream restoration envelope, where decaying rootwads of non-native eucalyptus will be removed.

Mitigation Measure 4b. Best Management Practices. Mitigation measures for impacts to aquatic habitat will include those described above under Mitigation Measures for Impacts to Water Quality. In summary, these include performing monitoring by a Project biologist during construction, construction work during the dry season, use of BMPS, and implementation of erosion control measures during construction.

Mitigation Measure 4c. Revegetation of Channel Slopes. This impact footprint from the channel stabilization work will be fully restored/mitigated at a ratio of 1:1. The non-native trees which will be removed as part of this work will be mitigated at a ratio of 2:1. Mitigation measures to restore the impact footprint will include revegetation of the channel slopes with native vegetation which is characteristic of coast live oak riparian forests. The revegetation is designed to stabilize the channel slopes, increase channel stability, and enhance the riparian and aquatic habitat. Native vegetation will consist of species designed to provide multi-level canopy structure as described above in the Overview and Assumptions section of this report.

ATTACHMENT 4

Habitat Restoration Summary

Table 5 summarizes impacts and mitigation for the sensitive habitat areas occurring on the Project. Mitigation will occur within the habitat restoration areas as shown on the Project's schematic design drawings (MIG Design Team 2009). The areas chosen for mitigation are contiguous with existing riparian habitat and will be maintained and protected from future disturbance to promote the development of high quality habitat along the creek corridor. The primary location of mitigation is within the footprint of grading and construction access for the instream restoration and eucalyptus removal areas, as well adjacent to the proposed development features within the pedestrian bridge and coast live oak impact areas. Also the project will utilize the 10-20 foot riparian buffers and 10 foot building setbacks along the edge of the existing riparian corridor on both sides of the channel for mitigation as required.

The mitigation will comprise restoration of high quality coast live oak riparian habitat via planting a multilayer canopy of native trees and shrubs. The specific plant species list will be defined with the development of the Mitigation and Monitoring Plan. However, the restoration tree and shrub plantings will comprise species typically found in a coast live oak riparian forest such as coast live oak, blue elderberry, California buckeye, California hazelnut, California rose, sticky monkeyflower, and California blackberry. Such species will develop into a multi-storied canopy that will provide an increase in native riparian habitat along this section of the unnamed creek corridor. The channel stabilization features will also add to the structure of the creek and stabilize and halt the potential for future erosion and incision of the channel in this portion of the channel.

Table 5. Summary of Impacts and Mitigation for Sensitive Habitat /Coast Live Oak Trees

HABITAT TYPE	IMPACT	IMPACT AREA (ACRES)	MITIGATION RATIO (IMPACT:MITIGATION)	MITIGATION AREA (ACRES)
Coast live oak riparian forest/eucalyptus	Coast live oak tree trimming at pedestrian bridge impact area	0.04	3:1	0.12
California annual grassland, developed/ornamental, coast live oak	Loss of individual coast live oak trees	n/a	See Table 4	0.25
Coast live oak riparian forest/eucalyptus	Eucalyptus removal	0.17	2:1	0.34
Coast live oak riparian forest/eucalyptus, ephemeral aquatic	Instream channel stabilization	0.09	1:1	0.09
	Total Mitigation	0.30		0.8

To ensure the success of the mitigation measures outlined in this report, a Riparian Habitat Mitigation and Monitoring Plan will be prepared by a qualified restoration ecologist during the regulatory agency permitting phase and will provide the following information:

- Brief summary of the proposed project

This measure is not mandatory, as an additional pre-construction survey and other measures will be performed as described below. However, implementing this measure will allow for bat exclusion prior to the breeding season, thus minimizing the potential bat-related constraints to the timing of construction.

Mitigation Measure 5b. Because the aforementioned survey will be conducted prior to the breeding season, several months may pass between that survey and the initiation of construction or demolition in a given area. Therefore, another pre-construction/pre-demolition survey for roosting bats, following the methods described above, will be conducted within 15 days prior to the commencement of these activities in a given area to determine whether bats have occupied a roost in or near the Project's impact areas. This survey, which would be conducted using the methods described for Measure 5a, would be facilitated considerably by information (e.g., on potential roosts) gathered during the previous survey.

Mitigation Measure 5c. If a maternity roost of any bat species is present, the bat biologist will determine the extent of a construction-free buffer around the active roost that will be maintained. This buffer would be maintained from 1 April until the young are flying, typically after 31 August.

Mitigation Measure 5d. If a roost of any kind is found in a tree or structure that will not be disturbed by construction, or that can be avoided, the roost structure will not be impacted if feasible.

Mitigation Measure 5e. If a day roost is found in a tree or structure that is to be removed, individual bats will be safely evicted under the direction of a qualified bat biologist. Eviction of bats will occur at night, so that bats will have less potential for predation compared to daytime roost abandonment. Eviction will occur between 1 September and 15 October and/or between 15 February and 15 March but will not occur during long periods of inclement or cold weather (as determined by the bat biologist) when prey are not available or bats are in torpor. If feasible, one-way doors will be used to evict bats from roosts. If use of a one-way door is not feasible, or the exact location of the roost entrance is not known, the roosts that need to be removed should first be disturbed by removal of some of the trees' limbs or portions of the structure (e.g. wooden water tanks) not containing the bats. Such disturbance will occur at dusk to allow bats to escape during the darker hours. These trees or structures would then be removed the following day. All of these activities will be performed under the supervision of the bat biologist.

Mitigation Measure 5f. Although Project activities that require removal of or work near a pallid bat maternity roost site would occur during the nonbreeding season, such activities may result in the removal or abandonment of such a roost site. If a roost site that is used as a maternity roost by pallid bats is removed or abandoned as a result of Project activities, an alternative roost will be constructed. The design and placement of this structure will be determined by a qualified bat biologist based on the location of the original roost and the habitat conditions in the vicinity. This bat structure will be erected at least one month prior to removal of the original roost structure, or as soon as possible after a roost site is determined to have been abandoned as a result of Project activities.

Mitigation Measure 5g. In some circumstances, it may be beneficial to allow roosting bats to continue using a roost while construction is occurring on or near the roost site. For example, if a tree found to contain a day roost is located near the construction area but will not be removed, a qualified bat biologist (in consultation with the CDFG) will determine whether the bats should be evicted or whether they should remain in place. If it is determined that the risks to bats from eviction (e.g., increased predation or exposure, or competition for roost sites) are greater than the risk of colony abandonment, then the bats will not be evicted.

ATTACHMENT 4

H. T. HARVEY & ASSOCIATES
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THE FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER MITIGATION AND MONITORING PLAN

Prepared by:

H. T. Harvey & Associates

Prepared for:

MIG
800 Hearst Avenue
Berkeley, California 94710

4 December 2009

Project # 2853-01

ATTACHMENT – 5

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MITIGATION/RESTORATION DESIGN

MITIGATION SUMMARY

The project will be conducting 4 types of restoration in different areas:

1. **Oak Riparian Mitigation**- The primary focus of this document is the oak riparian mitigation area (Figure 3) which is mitigation for impacts to sensitive and regulated habitats. The instream restoration area is included within this mitigation area. This mitigation element is for project impacts to the jurisdiction of CDFG, RWQCB, and the County (the County requires mitigation for impacts at the bridge and other infrastructure improvements but not for the impacts relating to instream restoration work)
2. **Oak Tree Replacement Mitigation**- There will be oak replanting outside the mitigation area to compensate for oak trees removed from areas outside sensitive and regulated habitats. This mitigation is for impacts to trees only regulated under CEQA.
3. **County of Santa Cruz Riparian Exception Buffer Plantings**- The project will be restoring native plants in within the riparian buffer areas shown on Figure 3.
4. **Additional Park Restoration Plantings**- The Park project will be installing native plants extensively throughout the site to enhance habitat values.

The oak riparian mitigation areas are contiguous with existing riparian habitat and will be maintained and protected from future disturbance to promote the development of high quality habitat along the creek corridor. This mitigation area was also specifically expanded to include full restoration in the area where the grove of non-native eucalyptus trees and a large pine tree will be removed.

The mitigation will comprise restoration of high quality coast live oak riparian habitat via planting a multilayer canopy of native trees and shrubs. The mitigation plantings will comprise species typically found in a coast live oak riparian forest such as coast live oak, blue elderberry (*Sambucus mexicana*), California buckeye (*Aesculus californica*), California hazelnut (*Corylus cornuta*), California rose (*Rosa californica*), sticky monkeyflower (*Mimulus aurantiacus*) , and California blackberry (*Rubus ursinus*). Such species will develop into a multi-storied canopy that will provide an increase in native riparian habitat along this section of the creek corridor. Integral to the riparian mitigation area is the creek stabilization work, which will reduce current and future physical instability in the creek channel and banks, reduce sedimentation related water quality impacts, and reduce vegetation loss due to creek erosion.

ATTACHMENT 5

H. T. HARVEY & ASSOCIATES
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THE FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER ARBORIST REPORT

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4 December 2009

Project Number 2853-01

RECOMMENDATIONS

TREE PRESERVATION AND IMPACT MINIMIZATION

Approximate tree preservation zones were identified for each tree on the Project site and depicted on Figure 1 in Appendix B. Areas were divided into those along the unnamed creek restoration area (with the assumption these areas will largely be undeveloped), areas in proximity to proposed development that have potential for preservation, and areas in close proximity to proposed development that will likely result in tree removals. These zones represent a rough, general estimation of the critical root zones for each tree if the tree were a candidate for preservation. The preservation zones were determined by establishing a radius around each individual tree of one foot of protection for every inch of trunk diameter (a 10 inch diameter tree would have a tree preservation radius of 10 feet). The tree protection zones described in this report have been determined on a tree by tree basis differently and separately from protection buffers associated with the overall Riparian Corridor as defined by County of Santa Cruz code and/or by the California Department of Fish and Game. Those protection buffers will be separately addressed in the Riparian Exception permit application.

Once the Project plans have moved past the schematic design phase, we recommend that trees identified for preservation be evaluated more closely and an optimum tree protection area be determined for each tree by factoring tree species, age, tolerance to disturbance, and trunk diameter (British Standards Institute, 1991 in Harris, Clark, and Matheny, 1999). In contrast, the method used in this report was to produce a quick and general estimate of potential areas required for preservation and was based solely on trunk diameter. The sensitivity or tolerance to construction and construction related disturbance will vary depending on the factors outlined above and a certified arborist should review the construction documents for this project to ensure that any necessary tree preservation measures are included in the development of the plans and specifications for this Project.

Root removal and soil compaction are the most important factors to consider for construction in the vicinity of existing trees. Grading cut and fill within the rooting zone of a tree can cause root loss and wounding, in addition to altering the soil structure, aeration, and moisture holding capacity of the soil. Grading alterations adjacent to existing trees can also alter the hydrologic conditions affecting the tree. The amount of soil excavation and compaction vary greatly with the design of footings and foundations. Custom footings, cantilever structures, and discontinuous footings (piers) should be considered near trees that will be preserved. Trenching can cause serious root injury and should be avoided within the rooting zone of trees, or tunneling or other more sensitive methods (i.e., hydraulic or pneumatic trenching) should be considered where activities cannot be avoided near trees. Trenching, grading, and placement of impervious surfaces should be avoided within the tree preservation zones to the greatest extent feasible. Activities adjacent to the tree preservation zone (including but not limited to clearing, grading, trenching, and pruning) should be monitored by a certified arborist.

ATTACHMENT 6

We recommend that Project alternatives be considered that avoid construction disturbance within the tree preservation zones or explore sensitive/alternative construction methods and potential relocation, where feasible and where avoidance is not a viable alternative.

Trees to be preserved should be prominently marked to avoid injury or accidental removal during construction and tree removal activities. Any trees that require pruning should be trimmed prior to construction to avoid additional damage to the tree. Care should be taken to avoid damaging adjacent trees during any tree removals or construction. They should be cut near the ground and their stumps ground in place rather than pulled to avoid injuring roots of trees to be preserved. Vehicles and equipment should be kept away from the soil and sensitive rooting zones within the tree preservation zones. Protective fencing should be installed along the limit of the tree preservation zones to protect the integrity of the trees and to ensure that soils, low branches, and trunks are not damaged from materials and equipment moving around the site. There are a handful of locations where construction activity will be required within, or limited access will be required through, the tree preservation zones. In these locations protective fencing may be temporally relocated under the direction of a qualified biologist or arborist. Per the biologists or arborists opinion such work may need to be monitored by the Project biologist or arborist to help protect the health of the tree(s). Protective fencing should be a minimum of 4 feet in height consisting of a sturdy but open material. Fencing should be installed prior to the onset of construction, and inspections of fencing by the Project arborist may be required. No construction materials, debris, solvents, or other toxic liquids should be stored or allowed within the protective fencing. Fencing is to remain in place until all construction has been completed.

During Project construction, future planting or replanting/restoration of areas that are outside of the temporary protective fencing should have mulch applied to a depth of 4-6 inches to protect the soils from construction traffic, material storage, and equipment parking. New landscaping/restoration plantings installed within the tree preservation zone of any existing tree should be designed to replicate the environment to that which existed prior to construction. Irrigation frequency and quantity should not be significantly altered (as determined by the Project biologist or arborist) around existing trees to be preserved.

In addition to tree protection measures, attempts will be made to preserve any trees suitable for transplant into the proposed restoration area. Based on the current schematic design (MIG 2009), approximately 8-12 healthy coast live oak trees, each with a diameter of 6 in or less may be transplanted into areas of the site slated for habitat restoration.

EVALUATION OF TREE HAZARDS AND RECOMMENDATIONS FOR TREE REMOVALS

Trees 1 and 27 are both coast live oaks that appear to have had the grade raised around their trunks. A closer inspection (root crown excavation) should be conducted to determine the preservation suitability of Tree 27. Tree 1 is less suitable for preservation and will need to be removed due to its poor condition and location in the building construction area as projected on the schematic design plan.

Trees 48 and 53 are both coast live oaks with signs of bacterial infection (bleeding cracks and cankers noted on trunk and large lateral branches). Since they are along the creek restoration

- Summary of habitat impacts and proposed mitigation ratios
- Brief description of the functions and values of the regulated habitats and biological resources in the impact areas
- Quantification of regulated habitat impacts
- Map showing the habitat impact locations
- Basis for proposed mitigation ratios
- Description of the primary goals of the mitigation
- Location of mitigation and description of existing physical and biotic site conditions
- Mitigation design
    - Existing and proposed hydrology of the site
    - Site preparation elements
    - Conceptual planting, irrigation, and maintenance plans
- Monitoring Plan (including monitoring schedule, final and performance criteria, monitoring methods, data analysis, and reporting requirements)
- Remedial measures/adaptive management plan for mitigation elements that do not meet performance or final success criteria.

Potential Impacts to Roosting Bats

Several large oaks along the creek have numerous cavities and exfoliating bark and could provide suitable roosting habitat for the pallid bat, a California species of special concern, as well as for other non-special-status bat species. These large oaks will be left intact. The cavities in the roofs of the two large tanks remaining on the property could provide roosting habitat. The eucalyptus trees provide potential habitat for western red bats and California myotis. Even if trees being used as roosts remain intact, bat colonies could be disturbed by the noise and vibrations associated with construction, potentially resulting in roost abandonment. Abandonment of a pallid bat roost, particularly a maternity roost, could result in the mortality of adult and/or young bats. Bats disturbed during the daytime could be subject to increased predation as they attempt to find new roosts. Removal of an active pallid bat maternity roost, disturbance of an active non-breeding pallid bat roost during the daytime, or loss of a large roost of non-special-status bats would result in a significant impact under CEQA. In order to reduce potential impacts to less than significant levels, the following mitigation measures will be undertaken:

Mitigation Measure 5a (recommended but optional). If feasible, a survey for roosting bats will be conducted prior to the beginning of the breeding season (i.e., prior to 1 March) in the year in which Project activities are scheduled to occur so that adequate measures can be implemented to evict the bats during the nonbreeding season. This survey will include an assessment of all trees and structures (e.g. the 2 large wooden water tanks) on and in the vicinity of the Project for their potential use by roosting bats. Any such trees that are identified by a qualified bat biologist as being high-potential roost sites will be surveyed more intensively. The survey should be conducted by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit allowing the biologist to handle and collect bats). If suitable roost sites are found but a visual survey is not adequate to determine presence or absence of bats (which would be particularly likely in the case of potential roost trees), acoustical equipment will be used to determine occupancy.

ATTACHMENT 6

area, away from proposed high use areas indicated on the schematic design, they pose a minimal safety risk. If earthwork or other disturbing activities take place within the indicated preservation zones, the safety of these tress should be reevaluated. These trees should continue to be inspected periodically to ensure their status does not decline to a state of higher safety risk.

Trees 33 and 41 are both coast live oaks and have multiple trunks with the potential for branch failure if the trunks split apart, but both are located along the creek restoration area and not expected to pose a greater than normal hazard based on the current schematic design. While such structural flaws in tress are normal, these trees should continue to be checked periodically to ensure their structural status does not decline to a state of higher safety risk.

Trees 37, 41, and 52 are all coast live oaks with notable trunk leans. They are all located along the outward edges of the creek restoration area. Trees 37 and 41 are leaning in the direction of the proposed community garden. Tree 53 is adjacent to the location of the proposed pedestrian bridge. If preserved, these trees should be inspected periodically to ensure their structural status does not decline to a state of higher safety risk. However, under the current schematic design structural pruning or removal of Trees 31, 32, 47, and 52 may be required. The necessity to trim or remove these trees will be dependent on the placement of the bridge per the final schematic design specifications. Tree 45 is a Monterey pine with a notable lean along the creek restoration area. We recommend removal of this tree to ensure public safety.

On the current schematic design, Tree 202 is a magnolia (*Magnolia grandiflora*), and is located adjacent to the proposed community center building and associated pedestrian use areas. Based on the current schematic design, the grading footprint for these structures will require removal of this tree.

Trees 203 through 211, 220, and 223 are located in the area of the proposed community center building, associated parking areas, proposed play areas, and other infrastructure as shown on the current schematic design and these trees will likely be removed.

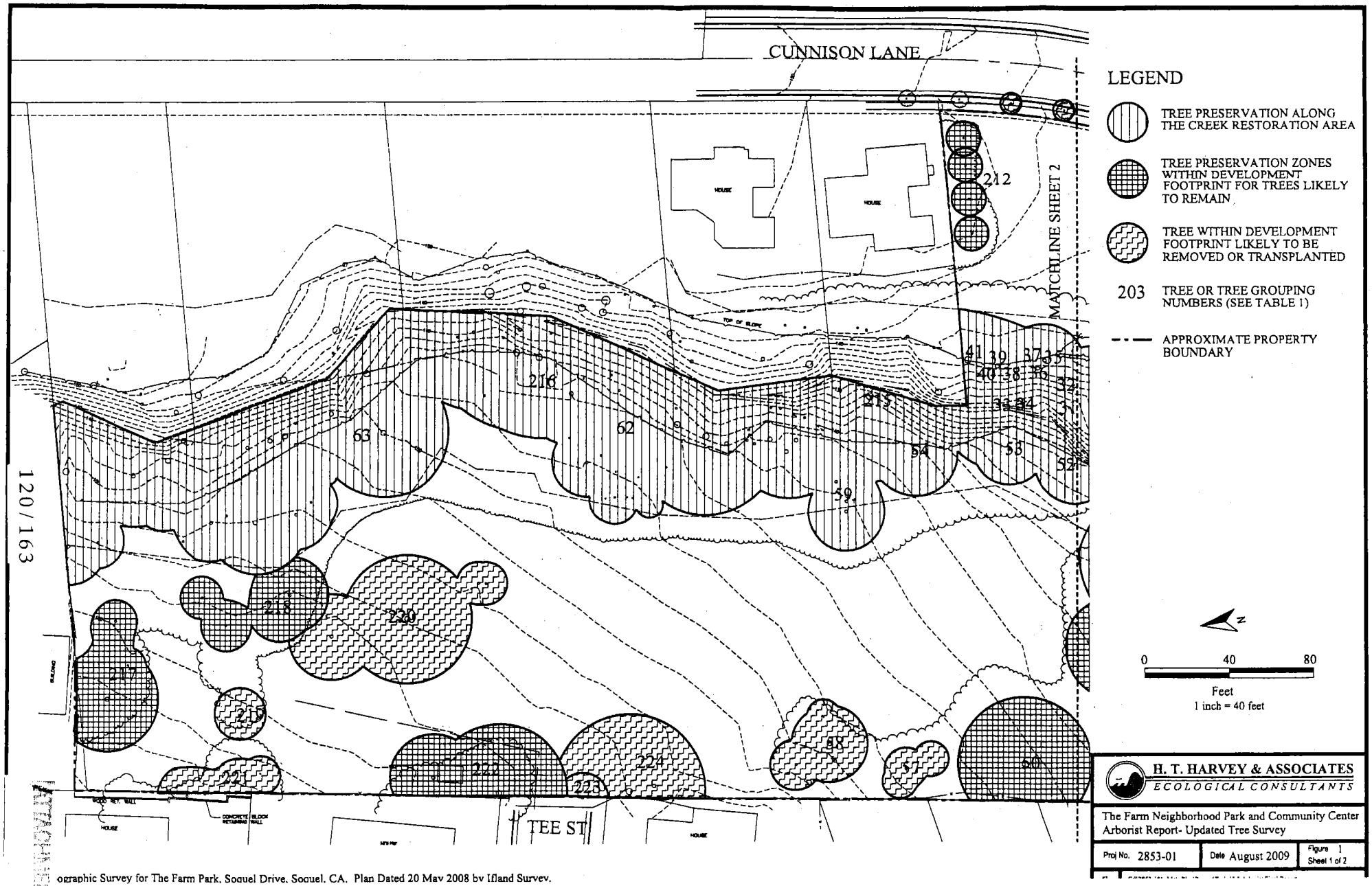
In the report by Belton (2007), he recommended the removal of numerous large eucalyptus trees on the project site, reasoning that these larger trees are competitive with the oak understory for resources such as light, water, and nutrients. He recommends the removal of large eucalyptus trees based on the premise that this removal would enhance the health survivability and re-establishment of the oak woodland. His recommendation particularly applies to Tree group 42. In addition, he states that trees 200, 201, and group 220 include eucalyptus which have weak wood and present the potential for high rates of failure. Tree 200 overhangs Soquel Drive and the gas station parking lot and building abutting the Project site. This tree is currently surrounded by paved surfaces on three sides and has a limited rooting zone. Any new changes in grade within the limited rooting zone could become hazardous. Per Belton, both trees (200 and 201) are located near high use areas and should be removed due to their potential for failure and potential risk to humans or property. These 2 trees are along the property line and may be partially located on adjacent lots. Prior to proceeding with the removal of trees 200 and 201 it is recommended that the County have the property line staked by a surveyor in this area and coordinate as needed with adjacent property owners. Tree groups 42 and 216 consist of eucalyptus trees growing in limited access areas and do not pose as great a hazard to public

safety as the eucalyptus in higher use areas. The trees in Group 42 are currently under consideration for removal to achieve the goals of the park to restore oak woodland habitat. A large coast live oak (Tree 26) has a heavy, leaning structure and fruiting bodies of a Ganoderma heart rot fungus present at the base of the trunk near grade (Belton 2007). This tree has partially fallen over and is now supported by an adjacent blue gum eucalyptus tree in the southern end of tree group 46. At the minimum, the eucalyptus stems above the area of contact with the oak should be removed because they are vulnerable to failure as they get larger over time. The safety and practicality of retaining both this eucalyptus and this oak should be addressed as the final schematic design is developed to ensure that neither tree contributes to the potential for damage to humans or property.

Trees in groups 219-221, 223, 224, 57 and 58 are within the proposed project development footprint. Based on the current design of the Project, significant grade and surfacing changes will likely occur within the critical rooting zone of these trees and their removal will be necessary. Tree 215 (coast live oak) is in fairly good condition but has some dead wood.

Trees in group 213 have been reported to have fire blight, as well these trees may be in conflict with planned site improvements and therefore are likely to be removed. These street trees are located in the County Right of Way therefore additional coordination will be needed prior to proceeding with any removal.

As mentioned above, native oak and other desirable tree species can benefit by the careful removal of non-native vegetation that is growing in close proximity to their root collars and trunks. Of particular concern are blue gum eucalyptus stump sprouts, root suckers, and seedlings. In addition, vines growing in the canopies should also be removed.



ographic Survey for The Farm Park, Soquel Drive, Soquel, CA. Plan Dated 20 May 2008 by Ifland Survey.

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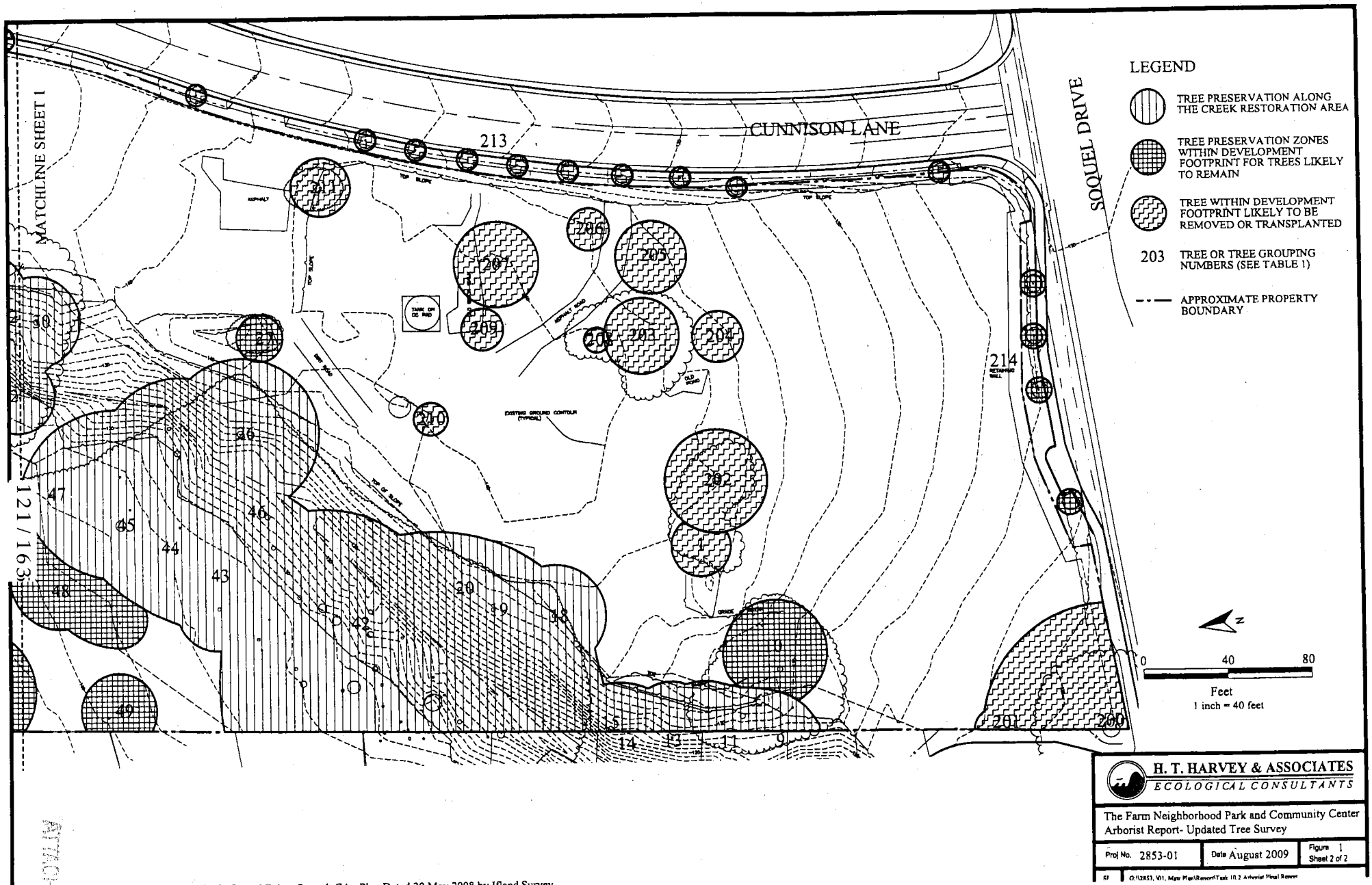

Ba raphic Survey for The Farm Park, Soquel Drive, Soquel, CA. Plan Dated 20 May 2008 by Ifland Survey.

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

The Farm Neighborhood Park and Community Center
Arborist Report- Updated Tree Survey

Proj No. 2853-01	Date August 2009	Figure 1 Sheet 2 of 2

SF O:\2853_V01_Main Plan\Report\Task 10.2 Arborist Final Report

THE FARM PARK AND COMMUNITY CENTER NOISE STUDY REPORT SANTA CRUZ COUNTY, CALIFORNIA

October 31, 2008
Revised July 27, 2009

♦ ♦ ♦

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ATTACHMENT 7

conditions by 15 to 20 dBA. The hourly average noise level (L_{eq}) depends upon the amplitude of the noise and the duration of time the noise persists. In a smaller dog park, there would typically be fewer dogs present resulting in less time dogs would be barking. It was assumed that 5 to 6 dogs continuously present at the park for an hour would represent a credible worst case. At the nearest adjacent residence, worst-case hourly average noise levels are calculated to range from 50 to 55 dBA L_{eq}. Average noise levels generated by the dog park would exceed existing average noise levels by up to 8 dBA L_{eq}.

Distant Receivers. Residents in the Fairway Drive neighborhood located about 4800 feet north of the project site expressed concern regarding sound propagation from the park into their neighborhood. A sensitivity analysis was conducted to determine whether or not noise levels from the park activities could affect these residences. To complete this analysis, noise from all the activities were summed together and set to a reference distance of 50 feet. In the Fairway Drive neighborhood to the north, the noise level resulting exclusively from park activities is calculated to be 17 dBA L_{eq}, more than 20 dBA below existing ambient noise levels. The highest intermittent noise levels generated at the park would result from groups of children. Maximum intermittent noise levels are calculated to be less than 25 dBA L_{max}, more than 10 dBA below existing background noise levels. These sources would be inaudible, causing no impact upon the residents.

Mitigation:

The following mitigation measures shall be incorporated into the design of the project to reduce potential noise impacts to less than significant levels:

Construct six- to eight-foot solid wood fences at the residential property lines west and north of the park site. A six-foot wood fence would be sufficient along the west property line of the park south of Tee Street. An eight-foot fence would be necessary along the west property line north of Tee Street and along the north property line of the park to reduce maximum noise levels generated in the neighborhood play area. The neighbor has requested a portion of this barrier be reduced to three to four feet and entered an agreement with the County stipulating that noise from the park would not disturb them.

- To be an effective noise barrier, the proposed fences must be constructed solidly over the face and at the base of the barrier. Openings or gaps between barrier materials or the ground substantially decrease the effectiveness of a noise barrier. Suitable materials for barrier construction should have a minimum surface weight of 3 lbs./ft.^{2} (such as one-inch thick wood). The proposed barriers should be located as shown on Figure 4. With the proposed barriers, sounds would occasionally be heard at the nearest residential land uses, but noise levels would not substantially exceed existing levels.

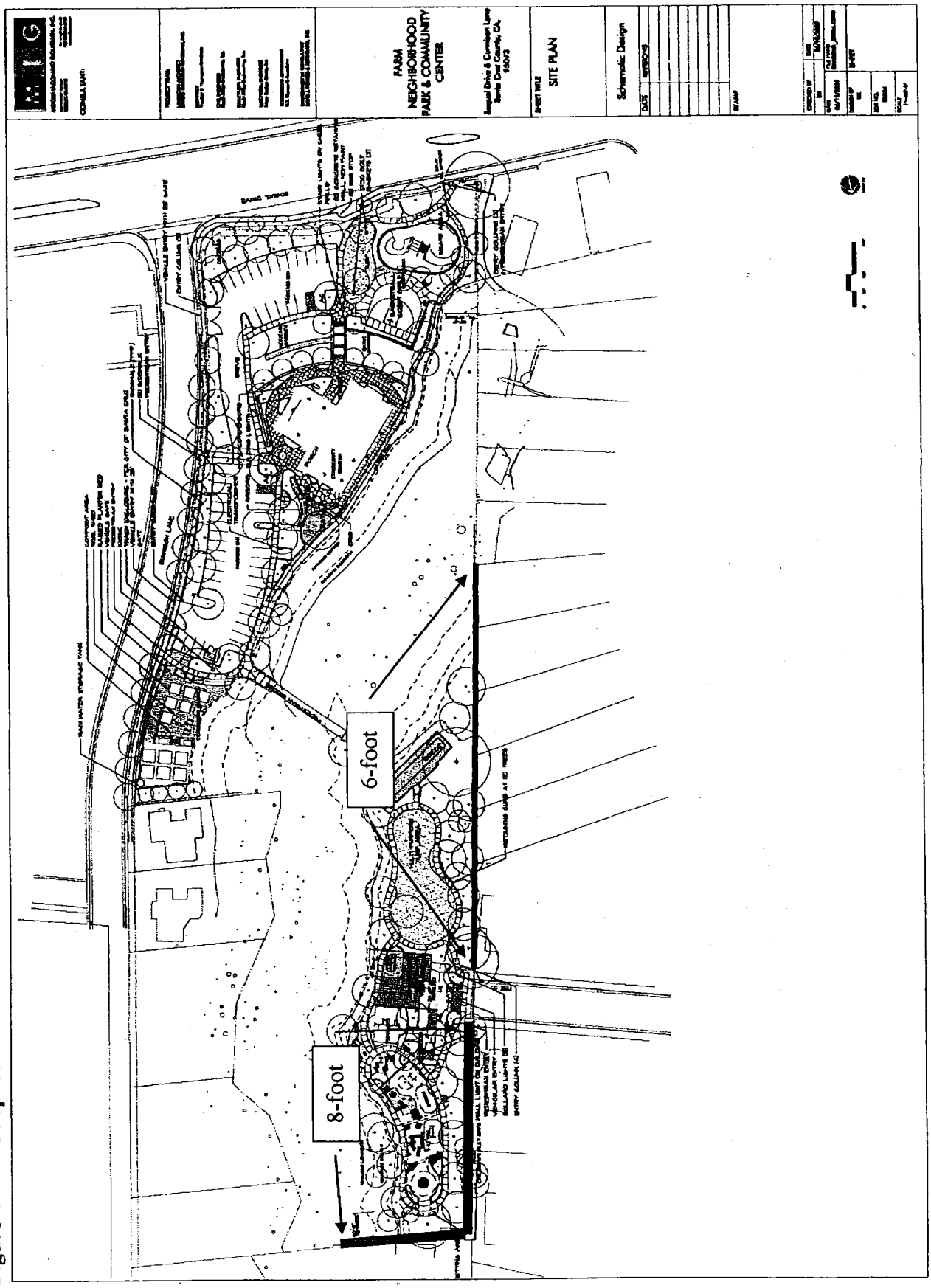


Figure 4 Proposed Noise Barrier Fences

ATTACHMENT 7

Impact 3: **Off-Site Traffic Noise Increases.** Project traffic would not substantially increase traffic noise levels along area roadways. **This is a less-than-significant impact.**

Traffic generated by the project would not cause noise levels to substantially increase on the roadways serving the site. Future traffic noise level projections indicate that traffic noise levels in the project vicinity would increase by 0 dBA L_{dn} (less than 0.5 dBA L_{dn}) along Soquel Drive and Cunnison Lane. Noise levels along local roadways may increase slightly as a result of occasional intermittent project traffic. The relatively low traffic volumes associated with the project would result in a less-than-significant noise impact.

Impact 4: **Construction Noise.** The project site is bordered by existing residential land uses to the west, east, and north, and across Soquel Drive to the south. Noise generated by construction activities at the site would not be expected to adversely affect adjacent land uses provided standard construction noise controls are implemented at the site and the cumulative duration of significant noise-producing activities is limited to one year or less. **This is a less-than-significant impact with the incorporation of standard construction noise controls.**

Construction activities generate considerable amounts of noise. Construction-related noise levels are normally highest during the demolition phase and during the construction of project infrastructure. These phases of construction require heavy equipment that normally generates the highest noise levels over extended periods of time. Typical hourly average construction generated noise levels are about 81 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Construction-related noise levels are normally less during building erection, finishing, and landscaping phases. There would be variations in construction noise levels on a day-to-day basis depending on the actual activities occurring at the site. Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Construction noise impacts primarily occur when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. Where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least 5 dBA L_{eq} at noise-sensitive uses in the project vicinity for a period greater than one year, the impact would be considered significant.

Exterior noise levels at the nearest residential receivers would be approximately 73 to 81 dBA $L_{eq(hr)}$ when construction occurs at the play/ sports area. Grading, roadway improvements and construction of project infrastructure would likely be completed first. The total construction duration would not last for more than 12 months. Noise generated by grading, infrastructure improvements and the construction of the project nearest the perimeter of the project site would not exceed ambient noise levels at receivers to the northeast by more than 5 dBA L_{eq} for a period of greater than one year.

ATTACHMENT 7

Significant noise impacts do not normally occur when standard construction noise control measures are enforced at the project site and when the duration of the noise generating construction period at a particular receiver or group of receivers is limited to one construction season (typically one year) or less. Construction noises associated with projects of this type are disturbances that are necessary for the construction or repair of buildings and structures in urban areas. Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life.

The following standard controls are assumed to be included in the project:

- Noise-generating activities at the construction site or in areas adjacent to the construction site associated with the project in any way should be restricted to the hours of 8:00 a.m. to 6:00 p.m., Monday through Friday. No construction activities should occur on weekends or holidays.

- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

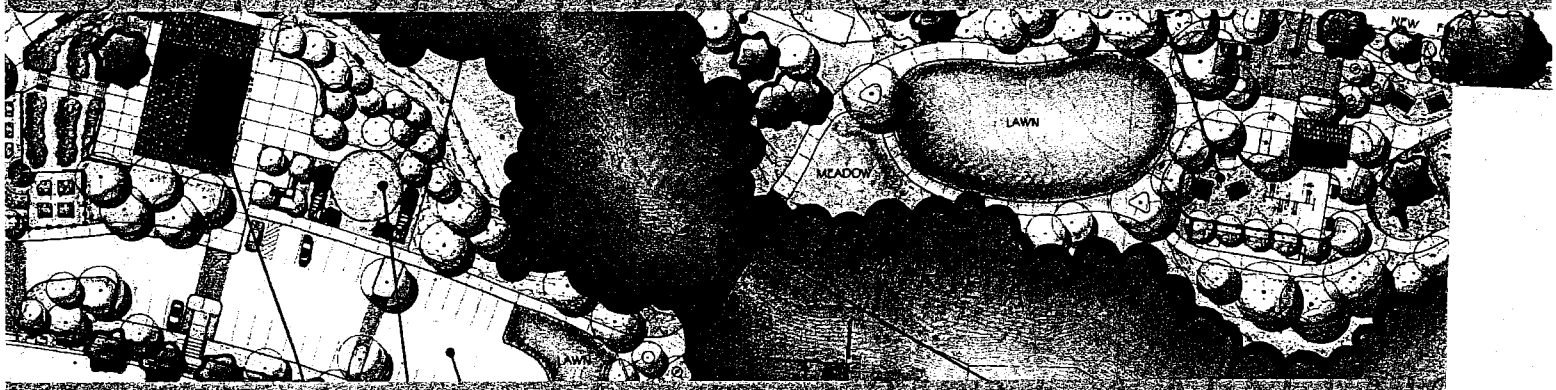
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with the adjacent noise sensitive facilities so that construction activities can be scheduled to minimize noise disturbances.

- Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., starting to early, bad muffler, etc.) and will require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

With the incorporation of these standard measures, the noise impact resulting from project construction would be considered less-than-significant. No additional measures are required.

Draft Transportation Impact Analysis

The Farm: Park and Community Center



FEHR & PEERS
TRANSPORTATION CONSULTANTS

160 W. Santa Clara St., Ste. 675
San Jose, CA 95113

SJ08-1045

February 12, 2010

ATTACHMENT 8

EXECUTIVE SUMMARY

This report presents the results of the transportation impact analysis (TIA) for the proposed Farm Park and Community Center located in Soquel, Santa Cruz County, California. The project includes 2.7-acres of active parklands and a community center building with two classrooms and meeting room. About 2.8 acres of the site is a protected riparian corridor that is not actively used and would not generate any additional traffic.

The purpose of the TIA is to identify potential significant adverse impacts of the proposed project on the surrounding transportation system and to recommend mitigation measures, if needed. Project impacts were evaluated following the guidelines of the Santa Cruz County.

PROJECT TRIP ESTIMATES

Trip generation estimates for the community center and park were estimated based on a preliminary building space program and trip generation observations at local parks. The proposed park and community center is estimated to generate 94 new PM peak-hour trips on a typical day – when the community center is occupied and the outdoor areas are in use. Project trip generation was estimated for the evening (PM) peak hour since this is expected to be the busiest period at the park, based on the preliminary activity schedule. Substantially fewer trips are expected during the AM peak; therefore, the AM peak hour was not analyzed. The park may generate more trips on weekends; however, roadway volumes during the weekend are typically lower than weekday commute conditions, so the evening peak period analysis represents peak travel conditions.

INTERSECTION IMPACTS

Based on impact criteria defined by Santa Cruz County, the project is expected to have a ***less-than-significant*** project-level and cumulative-level impact at the three study intersections – Soquel Drive/Porter Street, Soquel Drive/Cunnison Lane, and Soquel Drive/Park Avenue – during the PM peak hour.

BICYCLE, PEDESTRIAN, AND TRANSIT IMPACTS

The park and community center is anticipated to increase bike, pedestrian, and transit usage; however, the project will not impact existing or planned facilities or transit service. The site is served by bicycle lanes on Soquel Drive and sidewalks on Soquel Drive and Cunnison Lane. The bicycle lanes and the sidewalks near the project site can reasonably accommodate additional demand. The existing transit service can reasonably accommodate the anticipated demand. Thus, the proposed park and community center will have a ***less-than-significant*** impact on the existing pedestrian, bicycle, and transit network.

PARKING

Adequate project parking will be provided for outdoor recreation areas on the site. The Parks Department will monitor scheduling of the community center with the CLASS site reservation system to ensure that the demands of the community center rooms do not exceed the total parking supply on the site. The CLASS system has the ability to cap the number of people that can reserve and use particular rooms in the community center. Parking demand is related to the number of visitors to the site, so this type of reservation system and monitoring will be effective in managing parking demand. Therefore, based on the Parks' Department's programming of the building uses, and use of the CLASS system, described in the Parks Department's Programming Statement (Appendix D), the proposed park and community center will be able to provide sufficient parking for all of its on-site uses. **Table E-1** summarizes projected parking demand at the site under different scenarios that the Parks Department has proposed for the site.

TABLE E-1
FARM PARK AND COMMUNITY CENTER PARKING DEMAND ESTIMATES

Site Use	Number of Vehicle Parking Spaces				
	Weekday Scenarios			*Weekend Scenarios*	
	A	*B*	*C*	*D*	*E*
Outdoor Recreation	13	13	13	21	21
Classroom 1 *(18 students + 1 instructor)*	14	14	-	14	-
Classroom 2 *(12 students + 1 instructor)*	9	9	-	9	9
Assembly Room (18 per. Meeting)[2]	-	-	-	14	-
Assembly Room (26 per. Reception)[2]	20	-	-	-	20
Assembly Room (31 per. Class)	-	22	-	-	-
Assembly Room (56 per. Reception)	-	-	39	-	-
Total Demand	***56***	***58***	***52***	***58***	***48***
Total Supply	***58***	***58***	***58***	***58***	***58***

Notes:
1 Based on information developed in Tables 15 and 16.
2 Parking demand estimates developed using the mode split presented in Table 15.
Fehr & Peers; October, 2008.

ATTACHMENT 8

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Sheila Mcdaniel
Application No.: 09-0407
APN: 037-101-58

Date: November 15, 2010
Time: 09:48:00
Page: 1

Environmental Planning Completeness Comments

========= REVIEW ON JANUARY 8, 2010 BY CAROLYN I BANTI =========

++ Completeness ++ Soils and Grading ++ First Review ++

1. The soils report references the "Farm Community Park Entire Stream Evaluation and Analysis", by H.T. Harvey and Balance Hydrologics, which has not been submitted for review. The soils report cannot be reviewed until all technical reports have been submitted for review. Please submit the missing report.

2. Project grading volumes are in excess of 2000 cubic yards. Per County Code Section 16.20.060, the project will require grading plans prepared and signed by a civil engineer. Please prepare and submit these for review.

3. It was noted during preliminary review of the submitted plans that creek restoration plans include re-grading of the slope above the channel, the extent and grade of which are labeled -to be determined- on Sheet L-6.2. This grading must be determined and shown on the grading plans in order to complete preliminary grading review.

4. After plans have been prepared that are acceptable to all reviewing agencies, please submit a geotechnical plan review letter from the soils engineer that states the project plans are in conformance with the recommendations of the soils report. The plan review letter must reference the grading, drainage and erosion control plan sheets in addition to all other pertinent plan sheets.

Please note: Additional items may follow, pending review of the materials submitted in response to first review comments. ========= UPDATED ON JANUARY 8, 2010 BY ROBERT S LOVELAND =========

1. The grading plan (Sheet L-1.0) shows grading activity being completed within the "Building Setback" (Tee Street Area). Please revise to locate all grading activity outside this area. ========= UPDATED ON OCTOBER 27, 2010 BY ROBERT S LOVELAND =========

Comment below by: Carolyn Banti

As requested in first review comments, please submit the Farm Community Park Entire Stream Evaluation and Analysis, by H.T. Harvey and Balance Hydrologics for review. As previously noted, the soils report cannot be formally reviewed until all technical reports have been submitted for review.

Comment below by: Bob Loveland

Comment 1 above: Has been addressed.

Environmental Planning Miscellaneous Comments

========= REVIEW ON JANUARY 8, 2010 BY CAROLYN I BANTI =========

ATTACHMENT 9

++ Compliance Comments ++ Soils and Grading ++ First Review ++

1. It appears that project grading volumes and site disturbance may be minimized by utilizing alternate site design approaches that would not require major grading, as required by County Code Section 16.20.010, General Plan Objectives and GP Policy Sections 6.3.9 and 8.2.2. Please contact Carolyn Banti at (831) 454-5121 to arrange a meeting to discuss the current design methodology and possible alternatives to minimize grading.

Please note: Additional items may follow, pending review of the materials submitted in response to first review comments.

++ Conditions of Approval ++ Soils and Grading ++ First Review ++

1. A preconstruction meeting will be held prior to the commencement of grading operations, and another before to the commencement of in-stream work. Required attendees will be determined prior to the meeting. Please contact Carolyn Banti at (831) 454-5121 to schedule the meeting.

2. Please submit two copies of the soils report at the time of building permit application. The soils report must be updated since it is more than 3 years old, and must include updated seismic design parameters to reflect those required by the most current version of the building code.

3. Erosion control plans to be submitted for this project must be approved by a Certified Professional in Erosion and Sediment Control (CPESC), and must include the following: (a) construction schedule detailing construction/earthwork tasks and durations, (b) phased erosion control plan showing the location and types of erosion control measures to be implemented during each phase of construction/earthwork operations, (c) temporary drainage plans for each phase of construction/earthwork operations including detailed plans of all surface and subsurface drainage devices, runoff calculations and other calculations demonstrating the adequacy of drainage structures, (d) CPESC inspection schedule for certification of proper installation and maintenance of erosion control measures.

4. Winter grading will not be approved for this project. Grading must commence by June 1 or delayed until the following year such that grading operations will cease by October 15.

5. Submit civil engineered grading/drainage plans with the building permit application.

Please Note: The conditions of approval are preliminary and may be modified when above completeness and compliance comments have been addressed.
========= UPDATED ON NOVEMBER 5, 2010 BY CAROLYN I BANTI =========
6. The hydrology report by Mesiti Miller has been received by environmental planning, but has not been formally accepted. To our knowledge, no other hydrology report exists for the project area. The Mesiti Miller report did not include an analysis of scour in the vicinity of the bridge abutments, which must be included in the updated soils report submitted with the building and grading permit application.

Dpw Drainage Completeness Comments

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

========= REVIEW ON JANUARY 11, 2010 BY ALYSON B TOM ========= Application with plans dated 10/31/09, on site analysis dated 8/4/09 and off site analysis dated 7/11/09 has been received. The following items should be addressed in a complete application.

Please contact Alyson Tom of the Stormwater Management Division to set up a meeting to review stormwater design solutions potential for this project.
========= UPDATED ON OCTOBER 19, 2010 BY ALYSON B TOM ========= Application with civil plans dated 9/15/10 has been received. Please see previous miscellaneous comments for issues to be addressed prior to building permit approval.

Dpw Drainage Miscellaneous Comments

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

========= REVIEW ON JANUARY 11, 2010 BY ALYSON B TOM ========= Please address the following prior to map recordation/building permit issuance:

1) Provide final details and analysis for the retention and detention systems. The evaluation of the detention and retention systems orifice and bypass design should be consistent with the areas, impervious and pervious, that are proposed to drain to the facilities.

2) The drainage report includes a recommendation for perforated pipes with gravel trench. This concept should be included in the final design for the main pipe and/or bypass pipe sections to include open bottomed or perforated pipes. Low flows will bypass the detention pipe sections and so a perforated detention pipe will be of little benefit.

3) Provide final details and analysis for the proposed bio swales. Include specifications for soil and vegetative design.

4) The drainage report indicates that the Tee Street stormwater mitigations will be met with a landscape solution including a rain garden with underground gravel storage however the plans show a buried detention pipe. Please update the plans to correspond with the landscape solution described in the report. This report also indicates specific maintenance requirements for the system. These requirements should be included in both the final plans and recorded maintenance agreement. Can the outlet location for the system be moved to the flat area near the riparian buffer/corridor limits? This would provide for additional filtering prior to discharge to the channel.

5) While the December 2008 Geotechnical Report indicates areas of low permeability soils on the project site the report also suggests that permeable pavement is acceptable with the inclusion of a rock underdrain and geotextile. Permeable pavements should be considered for the final design.

6) The off site analysis provided was for the pre and post development 25 year storm scenarios. Please provide an analysis for the post development 10 year storm as well as many of the CDC requirements are for the 10 year storm. Please also include a gutter analysis for the sections where there is overflow out of the pipe system demonstrating a safe traffic situation.

7) The designer should consider future maintenance requirements, as well as safe overflow conditions when designing stormwater mitigations and should include these on the final project plans and recorded maintenance agreements.

8) Please submit a review letter from the Geotechnical engineer approving of the stormwater management/drainage plan. The letter should refer to dated plans.

9) Please provide permanent markings at each inlet that read: "NO DUMPING DRAINS TO BAY. NO TIRE DESECHO AL MAR", or equivalent. The property owner is responsible for maintaining these markings.

10) If structural water quality treatment, detention, or retention is proposed, recorded maintenance agreement(s) are required. A sample agreement which can be updated for use on this project is provided in the County Design Criteria. This agreement should be signed, notorized, and recorded, and a copy of the recorded agreement should be submitted to the County Department of Public Works prior to building permit submittal.

11) Submit detailed plans and supporting calculations demonstrating that the on-site storm water system meets design criteria requirements (capacity, safe overflow, freeboard, velocity, etc.). Include analysis for gutter spread for the required design and safe overflow storm events where applicable. Describe how runoff will be controlled at the top of slopes, particularly at the slope above Soquel Drive. Provide a drainage detail for proposed pathways - runoff should sheet flow off so it is not directly connected off site.

12) Coordinate drainage plans with other site plans including grading and landscaping (ex: should trees be planted above the proposed detention pipe?).

13) This project will be inspected by DPW staff. Once all other reviewing agencies have approved the project provide a copy of the reproducible civil plan sheets with the DPW signature block along with an engineer-s estimate for the drainage related items and a 2% ($610 minimum) deposit for inspection fees. Allow approximately 1-2 weeks for review and signature of the reproducible plans.

14) Please submit a review letter from the Geotechnical engineer approving of the final stormwater management/drainage plan. The letter should refer to dated plans.

15) Construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. For more information see: http://www.waterboards.ca.gov/water-issues/programs/stormwater/constructionml

16) Zone 5 impact fees 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.You may be eligible for fee credits for pre-existing impervious areas to be demolished. To be entitled for credits for pre-existing impervious areas, please submit documentation of permitted structures to establish eligibility. Documentations such as assessor-s records, surveys records, or other official records that will help establish and determine the dates they were built, the structure footprint, or to confirm if a building permit was previously issued is accepted. Confirm that the areas being used for credit were not already used in previous development applications (ex: Tr 1335).
========= UPDATED ON OCTOBER 19, 2010 BY ALYSON B TOM ========= See previous comments.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON DECEMBER 22, 2009 BY DAVID GARIBOTTI =========
Show driveways plan views and centerline profiles. Show existing roadside improvements, ie. curb, gutter, sidewalk, valley gutter, bus stop, light standards, utility poles. Indicate type and location of existing and proposed underground utilities.
========= UPDATED ON JANUARY 6, 2010 BY DAVID GARIBOTTI =========
========= UPDATED ON OCTOBER 20, 2010 BY DAVID GARIBOTTI =========
There are no existing sidewalks on Tee St. Please note and revise for construction.

Dpw Driveway/Encroachment Miscellaneous Comments

========= REVIEW ON DECEMBER 22, 2009 BY DAVID GARIBOTTI ========= Driveways to conform to County Design Criteria Standards. Encroachment permit required for all off-site work in the County road right-of-way. Civil engineered plans required for curb, gutter and sidewalk.
========= UPDATED ON OCTOBER 21, 2010 BY DAVID GARIBOTTI ========= Please bubble any future revisions.

Dpw Road Engineering Completeness Comments

========= REVIEW ON JANUARY 12, 2010 BY RODOLFO N RIVAS =========
Applicant will need to address the following comments:

Transportation Impact Analysis prepared by Fehr & Peers dated September 30, 2009:

1) Include traffic signal warrant analysis for Cunnison Lane/Soquel Drive intersection. 2) Include calculations regarding project effect on v/c ratio (critical) at intersections. 3) Synchro traffic volumes used for LOS calculations; have discrepancies with traffic volumes from figures showing peak-hour volumes.

Improvements Plan:

1) Provide detail for driveways on Cunnison Lane. 2) Parking stalls appear to be blocked by entrance gates on Tee St. as well as on parking area on Cunnison Lane.
========= UPDATED ON OCTOBER 18, 2010 BY RODOLFO N RIVAS =========
NO COMMENT
========= UPDATED ON OCTOBER 18, 2010 BY RODOLFO N RIVAS =========

========= UPDATED ON OCTOBER 18, 2010 BY RODOLFO N RIVAS =========

Dpw Road Engineering Miscellaneous Comments

========= REVIEW ON JANUARY 12, 2010 BY RODOLFO N RIVAS =========
NO COMMENT
========= UPDATED ON OCTOBER 18, 2010 BY RODOLFO N RIVAS =========
NO COMMENT

Dpw Sanitation Completeness Comments

Environmental Compliance Unit Review Comments Farm Neighborhood Park and Community Center Application No: 09-0407 1st Review Summary Statement: The County of Santa Cruz Environmental Compliance Unit can not approve plan this time. Please see completeness, policy compliance, and information it listed below. Completeness Items: Plans received illustrate a ceramics studio. Due to the sediment load from ceramics process, the District is requiring the facility to install pretre nt on the sinks used to drain wastewater generated from washing/molding of clay. Plans must indicate the size of the sediment trap prior to approval he Sanitation District. Please submit plans with the trap specifications an lustrate the plumbing lines and fixtures connected to the sediment trap. Policy Compliance Items: All plans for the ceramics studio must illustrate fixtures, trap size and d n before they can be approved by the Sanitation District. Information Items: Ceramics Studio: 1. Due to the sediment load from the ceramics process, the District is requiri he facility to install pretreatment on the sinks used to drain wastewater f washing/molding of the clay. 2. Glazes cannot be discharged to the sewer. 3. Oil based paints cannot be discharged to the sewer. Working water containing clay should be collected in a bucket and the clay ld be allowed to settle out. Decant the water and dispose of solids in the h. Equipment should also be rinsed in this bucket before rinsing in the sin 4. Screens must be used in each sink to remove solids. Any questions regarding these criteria or to schedule an inspection should irected to the Santa Cruz County Sanitation District Environmental Complian nit at (831) 477-3907 All re-submittals shall be made through the Planning Department. Materials t with Public Works will not be processed or returned. See Miscellaneous comments. Engineering Division Review Comments No. 1 Review Summary Statement; Appl. No. 09-040 ; APN: 37-101-58 & -59: Sewer service is available for this project provided that the following com eness issues are addressed. The Proposal is out of compliance with Distric County sanitation policies and the County Design Criteria (CDC) Part 4, Sa ry Sewer Design, June 2006 edition, and also lacks sufficient information f omplete evaluation. The District/County Sanitation Engineering and Environ al Compliance sections cannot recommend approval of the project as proposed This review notice is effective for one year from the issuance date to allo e applicant the time to receive tentative map, development or other discret ry permit approval. If after this time frame this project has not received roval from the Planning Department, a new availability letter must be obtai by the applicant. Once a tentative map is approved this letter shall apply il 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 Distric aff and meeting County -Design Criteria- standards (unless a variance is al lowed), is required. District approval of the proposed discretionary perm s withheld until the plan meets all requirements. The following items need be shown on the plans: Show proposed

sewer lateral length, pipe material, and slope noted (minimum . Drinking fountains and trash container floor drain shall be located under c or shall not be connected to sewer. Floor drain area shall be sloped or b d so that surface water does not enter sewer system. Provide elevations for top and bottom of pipes where utilities and sewer ma ateral crossings occur. Where less than 1 feet of vertical separation occu a concrete/rebar saddle shall be included in details. Include District-s -General Notes- on plans. Contact staff for electronic . The laterals serving the bathrooms and community center shall have a sewer flow or backflow prevention device installed on them per Fig. SS-14 of the gn Criteria. The proposed buildings (bathroom and community center) shall include the in lation of a water sub-meter per District policy to determine quantity of do ic and interior water for the purpose of calculating annual sewer service c harges. The use of the sub-meter shall be a requirement and condition of a val for this permit application and shall be included with the Planning Dep ent-s permit conditions. A note to this effect shall be included on plans. Sheet C-2.0 indicates sewer lateral for park is connected to adjacent prope s lateral. Contact District staff for copy of inspection record (lateral f ark site enters directly into manhole). Any questions regarding the above criteria should be directed to Diane Rome the Sanitation Engineering division at (831) 454-2160. There are no Sanitation engineering miscellaneous comments.
========= UPDATED ON FEBRUARY 2, 2010 BY DIANE ROMEO ========= Please add note to plan sheet that "New lateral shall be allowed only in the event that the existing manhole is not currently connected to the manhole and shall be verified in the field prior to modifiying manhole for new connection. The new lateral connection shall be made per SS-7 of Design Criteria and in- side and outside shall be water proofed by application of "Thoroseal" or approved equal if inflow or infiltration is anticipated. Existing connection at hamhole that is to be abandoned shall be completely repaired on inside and outside of manhole." Please show manhole and lateral elevations reflecting matching fop of pipe requirement.
========= UPDATED ON OCTOBER 15, 2010 BY DIANE ROMEO ========= Engineering Division Review Comments No. 2 Review Summary Statement; Appl. No. 09-040 ; APN: 37-101-58 & -59: 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 of 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 plans will be approved by the District when the following items are shown on the plans: Sheet C-2.0 shall be revised to have 4- lateral connection removed from sewer manhole and relocated to sewer main. The 4- lateral from the trash enclosure shall be connected on-site to the lateral for the community building. The Sanitation District Environmental Review division must be allowed to review plans for the sediment trap(s) prior to issuance

of a permit and to inspect the installation. Any questions regarding the above criteria should be directed to Diane Romeo of the Sanitation Engineering division at (831) 454-2160. There are no Sanitation engineering miscellaneous comments.

Dpw Sanitation Miscellaneous Comments

The Sanitation District Environmental Review division must be allowed to re plans for the sediment trap(s) prior to issuance of a permit and to inspec e installation. There are no Sanitation Engineering miscellaneous comments.

SOQUEL CREEK WATER DISTRICT

Board of Directors
Dr. Thomas R. LaHue, *President*
Bruce Daniels, *Vice President*
Dr. Don Hoernschemeyer
Dr. Bruce Jaffe
Daniel F. Kriege

Laura D. Brown, *General Manager*

September 28, 2010

Ms. Sheryl Bailey
County of Santa Cruz
Redevelopment Agency
701 Ocean Street, Room 510
Santa Cruz, CA 95060

SUBJECT: Renewal of Conditional Water Service Application for The Farm, Soquel APNs 037-101-58 & 59

Dear Ms. Bailey:

In response to the subject application, the Board of Directors of the Soquel Creek Water District at their regular meeting of September 7, 2010 voted to grant you a Renewal of a Conditional Will Serve Letter for The Farm Neighborhood Park and Community Center project in Soquel so that you may proceed through the appropriate planning entity. An Unconditional Will Serve Letter cannot be granted until such time as you are granted a Final Discretionary Permit on your project. At that time, an Unconditional Will Serve Letter will be granted subject to your meeting the requirements of the District's Water Demand Offset Program and any additional conservation requirements of the District prior to obtaining the actual connection to the District facilities subject to the provisions set forth below.

Possible Infrastructure Check List	yes	no
1. LAFCO Annexation required		X
2. Water Main Extension required off-site		X
3. On-site water system required		X
4. New water storage tank required		X
5. Booster Pump Station required		X
6. Adequate pressure	X	
7. Adequate flow	X	
8. Frontage on a water main	X	
9. Other requirements that may be added as a result of policy changes.	X	

This present indication to serve is valid for a two-year period from the date of this letter; however, it should not be taken as a guarantee that service will be available to the project in the future or that additional conditions, not otherwise listed in this letter, will not be imposed by the District prior to granting water service. Instead, this present indication to serve is intended to acknowledge th

ATTACHMENT 10

MAIL TO: P.O 138 / 163 Capitola, CA 95010
5180 Soquel Drive • TEL: 831-475-8500 • FAX: 831-475-4291 • WEBSITE: www.soquelcreekwater.org

conditions, water service would be available on condition that the developer agrees to provide the following items without cost to the District:

1) Destroys any wells on the property in accordance with State Bulletin No. 74;
2) Satisfies all conditions imposed by the District to assure necessary water pressure, flow and quality;
3) Satisfies all conditions of Resolution No. 03-31 Establishing a Water Demand Offset Policy for New Development, which states that all applicants for new water service shall be required to offset expected water use of their respective development by a 1.2 to 1 ratio by retrofitting existing developed property within the Soquel Creek Water District service area so that any new development has a "zero impact" on the District's groundwater supply. The required offset amount shall be as determined by the District, and credits may be purchased from the District when the project has received approval from the land use agency;
4) Satisfies all conditions for water conservation required by the District under the current water use efficiency ordinances as set forth in the enclosures to this letter;
5) Completes LAFCO annexation requirements, if applicable;
6) All units shall be individually metered with a minimum size of 5/8-inch by ¾-inch standard domestic water meters;
7) A memorandum of the terms of this letter shall be recorded with the County Recorder of the County of Santa Cruz to insure that any future property owners are notified of the conditions set forth herein.

Future conditions which negatively affect the District's ability to serve the proposed development include, but are not limited to, a determination by the District that existing and anticipated water supplies are insufficient to continue adequate and reliable service to existing customers while extending new service to your development. In that case, service may be denied.

You are hereby put on notice that the Board of Directors of the Soquel Creek Water District may adopt additional policies to mitigate the impact of new development on the local groundwater basins, which are currently the District's only source of supply. Such actions are being considered because of concerns about existing conditions that threaten the groundwater basins and the lack of a supplemental supply source that would restore and maintain healthy aquifers. The Board may adopt additional mandatory mitigation measures to further address the impact of development on existing water supplies, such as the impact of impervious construction on groundwater recharge. Possible new conditions of service that may be considered include designing and installing facilities or fixtures on-site or at a specified location as prescribed and approved by the District which would restore

groundwater recharge potential as determined by the District. The proposed project would be subject to this and any other conditions of service that the District may adopt prior to granting water service. As policies are developed, the information will be made available at the District Office.

Sincerely,
SOQUEL CREEK WATER DISTRICT

Michael Wilson, P.E.
Acting Engineering Manager

Enclosures:
1. Overview of the Soquel Creek Water District's Water Use Efficiency Requirements for Public Development
2. Indoor Water Use Efficiency Checklist
3. Landscape Project Application Submittal Requirements Package for Public Development

SANTA CRUZ COUNTY SANITATION DISTRICT

INTER-OFFICE CORRESPONDENCE

DATE: August 16, 2010

TO: Santa Cruz County Redevelopment Agency, ATTENTION: SHERYL BAILEY

FROM: Santa Cruz County Sanitation District

SUBJECT: SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT

APN: 37-101-58 & -59 APPLICATION NO.: Pre-application

PARCEL ADDRESS: Northwest Corner Cunnison Lane & Soquel Drive

PROJECT DESCRIPTION: Construct Community Center and Neighborhood Park

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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.

•Item 1) 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.

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 use in capacity and waste pretreatment requirements before this discretionary permit application can be approved.

The proposed buildings shall include the installation of a water sub-meter per District policy to determine quantity of domestic and interior water for the purpose of calculating annual sewer service charges. The use of the sub-meter shall be a requirement and condition of approval for this permit application and shall be included with the Planning Department's permit conditions.

ATTACHMENT 11

Attach an approved (signed by the Sanitation and Drainage District) copy of the sewer system plan to the building permit submittal. A condition of the development permit shall be that Public Works has approved and signed the civil drawings for the land division improvement prior to submission for building permits. Failure to get approvals for improvement plans will delay issuance of building permit.

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

•Item 2) Santa Cruz County Sanitation District Environmental Compliance Division Requirements for parks/community recreation centers include:

If a recreation room is intended with a kitchen, then you must submit a set of plans to be reviewed by the Environmental Compliance Division.

- A minimum of a 70-pound interior grease trap is required if a community kitchen is intended. Prior to approval of plans, the District must be allowed to review any proposed plans for grease interceptors. Plans must illustrate the size and location of the grease interceptor prior to approval.
- A dishwasher is not permitted unless an exterior 350-lb. minimum exterior grease interceptor is installed.
- All sinks and floor drains must be routed through a grease interceptor with the exception of hand washing sinks and bathroom drains.
- Floor drains must be installed with screens that prevent solids from blocking the facility's pipes and from entering the sanitary sewer.
- Garbage grinders are strictly prohibited in commercial/industrial kitchens.
- All grease interceptors will meet the Santa Cruz County Design Criteria
- If connecting to an existing interceptor, the District must be allowed to inspect and verify that it is in proper working condition and is properly sized for the facility. Upon approval by the District, the new facility will be allowed to connect to the existing interceptor.

Requirements for vehicle washing and/or carwash fundraising events:

All car washing activities are strictly prohibited unless there is proper pretreatment of the wastewater.

- If the community center plans to wash fleet vehicles or hold carwash fundraisers on their property then, the wastewater generated by car wash activities must be collected and treated before being discharged to the sanitary sewer. All car washing activities must be conducted in a District-approved wash pad area. The wash pad area must be sloped and

bermed to prevent discharge to the storm drain and to prevent excess storm water from running to the pad area drain.

- The wastewater must be treated through a minimum 1500-gallon clarifier as specified in the Santa Cruz County design Criteria. In addition, the clarifier must be completely pumped out at least once a year or as often as deemed necessary by the District.

The Sanitation District must be allowed to review plans for the grease interceptor(s) and clarifier and to inspect the installation. Any questions regarding these criteria should be directed to the Santa Cruz County Sanitation District Environmental Compliance Unit (831) 477-3907.

(for Rachel Lather)
Rachél Lather
Sanitation Engineer

DR/dls:135

c: Engineer: Rodney Cahill
Misiti Miller Engineers
224 Walnut Street, Suite B
Santa Cruz, CA 95060

(REV. 3-01)

ATTACHMENT 11

PROGRAM STATEMENT – FARM PARK

Introduction
The Mission Statement of the Santa Cruz County Department of Parks, Open Space & Cultural Services is to provide safe, well-designed and maintained parks and a wide variety of recreational and cultural opportunities for our diverse community.

Background
Currently, the department provides a variety of active and passive outdoor recreational opportunities including hiking trails, open space, beach access points, basketball and tennis courts, swimming and other aquatic programs (e.g. water polo), skate parks, rentable sports fields, community garden spaces, picnic sites, and dog parks. The County has a total of 57 parks, five of which have a Community Center. All five of these Community Centers are utilized on weekdays for meeting space and on most weekends (May-October) for weddings and receptions; there is little opportunity for programming community classes and workshops at these five centers.

Programming Goals
The Farm Park will provide a variety of recreational and educational opportunities for both nearby residents and the community at large, all in one location. While many local residents will likely walk, bike or skate to the park, others will arrive in vehicles or via public transit. The total number of spaces allotted for park users is 58 parking spaces. A matrix (attached) shows the parking available for various park uses with maximum capacity on weekends, days, and evenings, for both outdoor activities and community center programs and rentals. This matrix was developed based on the preliminary parking study prepared by Fehr and Peers in October of 2008. Parks staff will use this matrix to "program" the community center (i.e. schedule classroom use and book reservations for the assembly room) in order to maintain adequate on-site parking commensurate with the parking needs for both the outdoor park features and the community center.

Outdoor Park Features: The Farm Park will be open everyday, from dawn to dusk. The entire exterior of the Farm will be fenced. The skate feature will also be fenced, and will have a locking gate. Pedestrian access to the skate feature, the pedestrian bridge and the pedestrian gates on the Tee Street side of the park will be limited, from approximately 8:00 a.m. to dusk. Should a community building class begin earlier than 8:00 a.m., the instructor will open the driveway gate so attendees can access the park via car. The driveway gates will be locked at dusk or when the community building closes. Use of the various park features will vary based upon the seasonal conditions and also will decrease during the school year (Sept.-May), during early mornings (7-10 a.m.) and at nighttime (7-10 p.m.). The use of the outdoor park features will be dependent upon the natural lighting available and this varies with the seasons. Parking used for the outdoor features is expected to be a maximum of 13 cars on weekdays and 21 cars on weekends (preliminary Fehr & Peers transportation analysis, Oct. 2008)

Skate Element
The skate element is designed for skaters with beginning-level skills. It will appeal to young and pre-teen children within walking distance to the park. Older teens and adults who typically drive or skate to a "destination" skate park (e.g. the 15,000-square-foot skate park at Mike Fox Park in Santa Cruz) would find the skate element at the Farm Park too tame for their interest and skill level, and would not likely frequent the site. Expected hours of use will be M-F from school-release (appox. 3:00 p.m.) to between 6:00-9:00 p.m., depending on the season. Sa-Su use expected to be from

10:00 a.m. to between 6:00-9:00 p.m., depending on the season. M-F daytime use will be similar to weekend use hours during summer months and school break periods.

½ Basketball Court
The ½ basketball court will offer an opportunity for the neighborhood community practice their game and shoot some hoops. The ½ court will not draw the size and type group that full-courts do. . Expected hours of use will be M-F from school-release (appox. 3:00 p.m.) to between 6:00-9:00 p.m., depending on the season. Sa-Su use expected to be from 10:00 a.m. to between 6:00-9:00 p.m., depending on the season. M-F daytime use time will be similar to weekend use hours during summer months and school break periods.

Bocci Ball Court
The bocci ball court will be used primarily by those visiting the park for other reasons (e.g. picnics, assembly room rentals). Expected hours of use will be M-F from school-release (appox. 3:00 p.m.) to between 6:00-9:00 p.m., depending on the season. Sa-Su use expected to be from 10:00 a.m. to between 6:00-9:00 p.m., depending on the season. M-F daytime use time will be similar to weekend use hours during summer months and school break periods.

Play Area
Neighborhood families with toddlers, as well as local school-age children of up to 12 years in age, will walk to the park to enjoy the play area. The play area will be comprised of three sections, one of which will be for tots, and two for school-age children. Adjacent tables and benches will give parents a place to sit and watch their children, or for the whole family to enjoy a picnic. Expected hours of use will be mornings (parents with small children), and afternoons and weekend days by school-age children who live near the park.

Community Gardens
A lottery system will determine the lucky gardeners who will enjoy planting flowers and vegetables in one of the spacious (approx. 6'x8') garden beds; at least two of the garden beds will be accessible to park visitors who use a wheelchair. One of the beds will be used as a demonstration garden, for classes and interpretive programs. A picnic table, information kiosk, and garden shed round out the amenities. Open every day, dawn to dusk. Anticipate early morning and early evening use M-F, and all day on weekends. Use of the community gardens decrease during winter months.

Picnic Areas
Several small picnic areas, scattered throughout the park, will be used primarily by neighboring families for weekend picnics and small gatherings, and as a lunch spot on weekdays by those working nearby. The picnic areas will not be rented out; they will be available on a first-come, first-served basis.

Community Center: The Community Center is comprised of a small office and three multi-purpose main rooms: An Assembly Room (Rm. 100) and two multi-purpose classrooms, Rooms 200 and 300. The Community Center will serve a variety of purposes: from meeting space for community groups, to an assembly room for individuals to host small receptions or hold workshops, to appropriately outfitted 2-D and 3-D art classrooms for visual arts or other types of classes for all ages. Walls in the lobby area will be outfitted with a hanging system so the walls may be used as a gallery space. Soquel history will be featured in a wall kiosk in the lobby entryway.

The Farm Park Community Center will be open everyday (except selected holidays), from 8 a.m.-10 p.m., though classes in the Center may be scheduled as early as 7:00 a.m. Use of the various park features will decrease during the school year (Sept.-May), during early mornings (7-10 a.m.) and at nighttime (7-10 p.m.) and also during the winter when there is less natural light. Parking used for the Community Center varies based on which of the three rooms are used, and at what occupancy, at any given time. The maximum allowable parking for the Community Center is 45 cars on weekdays and 37 cars on weekends (preliminary Fehr & Peers transportation analysis, Oct. 2008). Parking for the site has been carefully developed in order for the on-site parking to be commensurate with the parking needs of both the outdoor park features and Community Center programming. The park site-plan provides 58 on-site parking spaces (fifty four on the Cunnison Lane side and four on the Tee Street side), with the appropriate number of accessible parking spaces.

The priority in programming the Community Center's three rooms is: first priority, County Parks organized programs and classes; second priority, community groups (girl scouts, AA, local non-profits, etc.); and third priority, individuals (for wedding receptions, parties, etc.). The maximum group size allowed for any given class, workshop or rental will vary based other scheduled Community Center activities and expected outdoor park use, and whether the assembly room activity is proposed for a weekday or weekend; details are shown in the attached matrix. The uses proposed for the community center will not exceed the available number of parking spaces. The number of available parking spaces has been determined based on a preliminary parking study by Fehr and Peers, Oct. 2008, which determined the required number of parking spaces for the outdoor park uses: The parking matrix, attached, was developed based on the information provided by Fehr and Peers in October 2008.

The Community Center at the Farm Park will be utilized as other Parks Department facilities are, but it will not accommodate large wedding and reception gatherings. The maximum capacity for an 800 SF room, using the same fire-code regulations as at the other county parks (1:15 SF), is 56 people. The adjacent outdoor patio may be used by groups renting the assembly room, but the maximum allowable persons will not increase.

Assembly Room - Room 100

The approximately 800 SF Assembly Room will be used both for Parks Department programs and as a rental space for individuals and community groups. Rental of the Assembly Room includes a small kitchen space, outdoor patio area with barbeque, tables and chairs, and AV equipment.

The Assembly Room will be reservable up to one year in advance using the Parks registration / reservations program, called "CLASS." The maximum number of participants for a given time of day will be entered into the CLASS system so customers know in advance how many people may attend their event or meeting. The maximum Assembly Room occupancy will be determined based upon the parking needs of the outdoor park features and classroom use (preliminary Fehr & Peers transportation analysis, Oct. 2008). Some examples of Assembly Room uses:

Parks Department organized classes:
- Exercise classes (yoga, senior stretching)
- Parent & Me classes (Music Together)
- Language class

Community use examples:
- Scouting meeting
- AA meeting

Cultural Council Associates meeting

Reservations taken from individuals for:
Wedding reception
Local business retreat or training session
Family reunion

Classrooms (Rooms 200 and 300)
The Farm Park Community Center will offer county residents of all ages the opportunity to participate in high-quality visual art classes and workshops, as well as other types of classes and workshops, at a reasonable cost. The closest facility providing classes for the public, Cabrillo College, serves primarily recent high-school graduates; the classes at the Farm Park would serve primarily older adults and seniors (age 30+), as well as school-age (5-17 years) and pre-school children (ages 3-5). These appropriately-equipped classrooms will draw top-notch instructors and a steady stream of students, providing a much-needed revenue source for the Parks Department, while performing a valuable community service.

Classroom 1 (Rm. 200)
This classroom will be programmed with a variety classes for all ages and abilities. There will be adequate storage for on-going art projects (5-6 concurrent classes taught during the same calendar period but at different times of the day) and for supplies (cabinets, closet, AV equipment). A vented spray box will allow for application of fixatives (and other fume-producing sprays) inside the classroom. The building design includes an outdoor patio area where students can look to the riparian corridor for inspiration or to set up an easel and paint. Max.group size in approximately 900 SF of space, at 50 SF/student, is 19. (18 students and 1 teacher). Class offerings will vary depending on the season and age group served. Types of classes include:

Visual Arts: aqueous-medium painting, drawing and mixed-media, collage/assemblage, printmaking, fiber arts, digital media, etc.
Crafts: mosaic, jewelry making, mask-making, scrapbooking, camp crafts, etc.
Language Classes
Tax-prep Workshops
Parent & Child Classes (e.g. music together)
Interpretive Workshops

Classroom 2 (Rm. 300)
This classroom will be programmed with a variety of sculpture and ceramics classes for all ages and abilities. The class offerings will vary depending on the season and age group served. There will be at least six wheels and one kiln. Storage space will be provided for on-going work and classroom supplies, such as clay, glazes, firing tools/equipment. Max.group size in approximately 600 SF of space, at 50 SF/student, is 13. (12 students and 1 teacher).

Office
When the Assembly Room is rented to a group for a party or reception, an attendant will staff the office. The attached parking matrix includes one teacher or facility attendant for all Assembly Room uses. If a class is scheduled in the Assembly Room, then the parking space will be used by a teacher; a facility attendant will not required as teachers will be issued a key to open the room.

Farm Park - Parking Matrix - Weekdays

Non-Holidays Fall/Winter/Spring	Weekday	Morning	7 AM - 10 AM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly	Exercise Class (e.g. yoga, pilates)	30	22	22
Outdoor Park Use [2]				13
			Total	35

Non-Holidays Fall/Winter/Spring	Weekday	Daytime	10 AM - 3 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class or Assembly	30	22	22
Classroom Rm 300	Pottery or Sculpture Class - Adults	12	9	9
Classroom Rm 200	Workshop or Class - Adults	18	14	14
Outdoor Park Use [2]				13
			Total	58

Non-Holidays Fall/Winter/Spring	Weekday	Afternoon & Early Evening	3 PM - 7 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly	Meeting, Class or Small Assembly	30	22	22
Classroom Rm 300	Pottery or Sculpture Class - children	12	9	9
Classroom Rm 200	Workshop or Class - teens	18	14	14
Outdoor Park Use [2]				13
			Total	58

Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly	Meeting, Class or Assembly	30	22	22
Classroom Rm 300	Pottery or Sculpture Class - Adults	12	9	9
Classroom Rm 200	Workshop or Class - Adults	18	14	14
Outdoor Park Use [2]				13
			Total	58

(1) reference table 14 F&P traffic report - includes one teacher

(2) reference F&P traffic report - outdoor park uses 13 spaces weekdays; 21 weekends

ATTACHMENT 12

Summer & School Breaks	Weekday	Morning	7 AM - 10 AM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly	Exercise Class (e.g. yoga, pilates)	30	22	22
Outdoor Park Use [2]				13
			Total	35

Summer & School Breaks	Weekday	Daytime	10 AM - 3 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Parent & Me Class (e.g. Music Together)	28	21	21
Classroom Rm 200	Workshop or Class	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Outdoor Park Use [2]				13
			Total	57

Summer & School Breaks	Weekday	Afternoon & Early Evening	3 PM - 7 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly	Meeting, Class or Small Assembly	26	19	19
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Classroom Rm 200	Workshop or Class - all ages	18	14	14
Outdoor Park Use [2]				13
			Total	55

Room Description	Activity Decription	Number of Participants	Mode Split [1]	Estimated Parking Demand
Assembly	Meeting, Class or Assembly	30	22	22
Classroom Rm 300	Pottery or Sculpture Class - Adults	12	9	9
Classroom Rm 200	Workshop or Class - adults	18	14	14
Outdoor Park Use [2]				13
			Total	58

(1) reference table 14 F&P traffic report - includes one teacher

(2) reference F&P traffic report - outdoor park uses 13 spaces weekdays; 21 weekends

Farm Park - Parking Matrix - Weekends

Non-Holidays Fall/Winter/Spring	Weekends	Morning	7 AM - 10 AM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Exercise Class (e.g. yoga, pilates)	30	22	22
Outdoor Park Use[2]				21
			Total	43

Non-Holidays Fall/Winter/Spring	Weekends	Daytime	10 AM - 3 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class	18	14	14
Classroom Rm 200	Workshop or Class - all ages	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Outdoor Park Use[2]				21
			Total	58

Non-Holidays Fall/Winter/Spring	Weekends	Afternoon & Early Evening	3 PM - 7 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class	18	14	14
Classroom Rm 200	Workshop or Class - all ages	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Outdoor Park Use[2]				21
			Total	58

Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Assembly	20	14	14
Classroom Rm 200	Workshop or Class - adults	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - adults	12	9	9
Outdoor Park Use[2]				21
			Total	58

(1) reference table 14 F&P traffic report - includes one teacher

(2) reference F&P traffic report - outdoor park uses 13 spaces weekdays; 21 weekends

ATTACHMENT 12

Summer & School Breaks	Weekends	Morning	7 AM - 10 AM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Exercise Class (e.g. yoga, pilates)	30	22	22
Outdoor Park Use [2]				21
			Total	43

Summer & School Breaks	Weekends	Daytime	10 AM - 3 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class or Small Assembly	18	14	14
Classroom Rm 200	Workshop or Class - all ages	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Outdoor Park Use [2]				21
			Total	58

Summer & School Breaks	Weekends	Afternoon & Early Evening	3 PM - 7 PM	
Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class or Small Assembly	18	14	14
Classroom Rm 200	Workshop or Class - all ages	18	14	14
Classroom Rm 300	Pottery or Sculpture Class - all ages	12	9	9
Outdoor Park Use [2]				21
			Total	58

Room Description	*Activity Decription*	*Number of Participants*	*Mode Split [1]*	*Estimated Parking Demand*
Assembly Rm 100	Meeting, Class or Assembly	52	37	37
Outdoor Park Use [2]				21
			Total	58

(1) reference table 14 F&P traffic report - includes one teacher

(2) reference F&P traffic report - outdoor park uses 13 spaces weekdays; 21 weekends

STREAM HYDROLOGY AND HYDRAULICS
FINAL REPORT
TASK 10.10

For

FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER SCHEMATIC DESIGN

SANTA CRUZ COUNTY
CALIFORNIA

Prepared for:
Moore Iacofano Goltsman, Inc.
800 Hearst Avenue
Berkeley, CA 94710
Ph: 510-845-7549

Prepared by:
Mesiti-Miller Engineering, Inc.
224 Walnut Avenue, Suite B
Santa Cruz, CA 95060
Ph: 831-426-3186

Project No. 7141
July 29, 2009

Designer's Attest:

The following report has been prepared under the supervision of the undersigned, who hereby certifies that he is a Registered Civil Engineer in the State of California.

Prepared by:

Rodney Cahill

Rodney T. Cahill, RCE No. 67728

REGISTERED PROFESSIONAL ENGINEER
RODNEY T. CAHILL
67728
Expires 6-30-11
CIVIL
STATE OF CALIFORNIA

7.29.09
(Date)

ATTACHMENT 13

4 Walnut Avenue, Suite B • Santa Cruz, CA 95060 • Phone 831-426-3186 • Fax 831-426-6607

Task 10.10 - Stream Hydrology and Hydraulics Final Report

1. Introduction

a. Purpose

Mesiti-Miller Engineering, Inc. prepared this report at the request of Moore Iacofano Goltsman Inc. (MIG) for submittal to the Planning Department as part of the Development Permit Application for the Farm Neighborhood Park and Community Center Project Schematic Design.

The purpose of this report is to evaluate the hydrology and hydraulics of the creek that bisects the Farm Neighborhood Park site, determine the design water surface elevation for the proposed pedestrian bridge, recommend a minimum freeboard, and report the findings and recommendations. The study involved a hydrologic analysis to quantify the runoff rate and the development of a hydraulic computer model to determine the water surface elevation at the proposed bridge site.

b. Project Description

The proposed project is a neighborhood park and community center on the north side of Soquel Drive, approximately midway between Porter Street and Park Avenue in Santa Cruz, California (Figure 1). The unnamed creek that bisects the site is a tributary to Nobel Creek and Soquel Creek. The proposed pedestrian bridge will span approximately 80-100 feet and connect the two sides of the park together.

The project site is located outside the limits of study to determine the Special Flood Hazard Area: the area subject to flooding by the 1% annual chance flood according to the Federal Emergency Management Agency (FEMA (b), 2006). Site-specific hydrologic calculations and a hydraulic model were prepared to develop design water surface elevations.

2. Hydrology and Hydraulics

a. Hydrology

Hydrologic calculations were prepared using the Rational Method in accordance with the County Design Criteria (Santa Cruz County, 2006). The watershed area above the Soquel Drive culvert is about 121.54 acres (Figure 2). The creek is an intermittent stream extending 4,631 feet upstream from the Soquel Creek culvert to the most remote point in the watershed near Fairway Drive. The elevation of the most remote point in the watershed is about 286 feet above the entrance to the Soquel Drive culvert. The resulting time of concentration is 16 minutes (Fig SWM-4). We estimated the 100-year runoff rate using a spreadsheet with precipitation data and runoff coefficients obtained from the County Design Criteria (Table 1).

- The estimated 100-year peak runoff rate is 178 cfs.

b. Hydraulic Analysis

We modeled two hydraulic scenarios to determine the design water surface elevation; the first case based on unobstructed flow through the Soquel Drive culvert, the second case considered the culvert clogged with debris so that water would build up and flow across Soquel Drive.

We generated cross sections of the creek at 100-foot intervals based on site-specific topographic survey information (Gary Ifland and Associates, 2008) in AutoCAD Civil 3D (Autodesk, 2008). We input approximate section properties such as invert elevation, top of bank elevation (left and right), and base width into HEC-RAS 4.0.0 water surface profile computer program (USACE, 2008). We prepared a map with cross section locations (Figure 3).

The Soquel Drive culvert is a compound structure made up of concrete pipes, concrete arches, and junction structures. We simplified the culvert for modelling purposes into an equivalent 287 feet long, 48 inch diameter culvert.

In the clogged design case we reduced the culvert diameter to 4 inches. We input the approximate land surface geometry above the culvert so that we could investigate the effects of flow passing over the roadway on the water surface elevation at the proposed bridge. We obstructed the fenced area around the gas station and reduced the weir coefficient to 2.0 to account for complex flow paths around fences and across the roadway. This is less than the typical range (2.5-3.1) recommended for a broad crested spillway, and results in a slower the rate of flow than the typical coefficient.

For an 80 foot span bridge, the proposed deck elevation is about 144 on the western side and 142 on the eastern side (Sheet S-1.0). We added the proposed bridge to the model at Station 10+00 with a thickness of 10 feet to account for the truss height.

A channel roughness value (Manning's n) was chosen based on field observations and comparison with the range of channel roughness values used in the Flood Insurance Study for adjacent watersheds; 0.015 to 0.050 (FEMA (a), 2006). The selected roughness value used in the model was 0.035. The downstream boundary condition was set to normal depth based on the mean slope of the Soquel Drive culvert, 3%. The upstream boundary condition was set to normal depth based on the mean slope of the upper reach of channel, 7%. We extended the model a sufficient distance each side of the proposed bridge site to normalize the effects of these assumptions.

We kept the expansion/contraction coefficients for most cross sections at the default values, 0.1/0.3. We increased the coefficients to 0.3/0.5 to account for energy losses each side of the culvert. We kept the default channel coefficients at the proposed bridge location since the bridge will be elevated above the water surface.

c. Estimated water surface elevation

Water surface elevation profiles and a cross section view were presented in Figures 4 and 5. This table is a summary of the results of our analysis:

Table 2 – Design Water Surface Elevation

Design Case #	Design Case	100-year Design Water Surface Elevation at Proposed Bridge Site
1	Unobstructed Flow	124.1
2	Clogged Culvert	126.3

We recommend using the clogged culvert design case in the bridge design since there is a chance that debris from the watershed could clog the trash rack located on the entrance to the Soquel Drive culvert.

3. Design Recommendations

a. Minimum freeboard recommendation

We recommend three feet of freeboard be provided between the design water surface elevation and the lower chord of the bridge superstructure to allow for unaccounted factors. These might include unusual hydrologic events, future development in the watershed, unforeseen bank failure, the accumulation of silt or debris, simplifications made in the study, and variations of coefficients used in the analysis (USACE, 1991).

Table 3 – Design Water Surface Elevation

Design Case #	Design Case	100-year Design Water Surface Elevation at Proposed Bridge Site + 3 feet of Freeboard
2	Clogged Culvert	129.3

4. Conclusion

a. Bridge Design

The lower chord elevation of the proposed bridge (138 feet) is approximately 12 feet above the 100-year design water surface elevation (126.3 feet). The proposed bridge elevation provides approximately 9 feet of additional clearance on top of the minimum recommended freeboard.

ON-SITE STORM DRAINAGE
FINAL REPORT

TASK 10.8

For

FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER
SCHEMATIC DESIGN

SANTA CRUZ COUNTY
CALIFORNIA

Prepared for:
Moore Iacofano Goltsman, Inc.
800 Hearst Avenue
Berkeley, CA 94710
Ph: 510-845-7549

Prepared by:
Mesiti-Miller Engineering, Inc.
224 Walnut Avenue, Suite B
Santa Cruz, CA 95060
Ph: 831-426-3186

Project No. 7141
August 4th, 2009

Designer's Attest:

The following report has been prepared under the supervision of the undersigned, who hereby certifies that he is a Registered Civil Engineer in the State of California.

Prepared by: Rodney Cahill

Rodney T. Cahill, RCE No. 67728

REGISTERED PROFESSIONAL ENGINEER
RODNEY T. CAHILL
67728
Expires 6-30-11
CIVIL
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ATTACHMENT 14

224 Walnut Avenue, Suite B • Santa Cruz, CA 95060 • Phone 831-

Task 10.8 – On-site Storm Drainage Final Report

1. Introduction

A. Purpose

Mesiti-Miller Engineering, Inc. (MME) prepared this drainage report at the request of Moore Iacofano Goltsman, Inc. (MIG) for the Farm Neighborhood Park and Community Center project. The purpose of this drainage report is to summarize existing and proposed on-site drainage conditions for Development Permit Application in conjunction with the Schematic Design Plans. Recommendations for detention and/or retention are included in accordance with County of Santa Cruz Department of Public Works (DPW) Drainage Section Standards.

B. Project Description

The project site is approximately 5.5 acres and consists of two adjoining parcels located on the north side of Soquel Drive, approximately midway between Porter Street and Park Avenue in Santa Cruz County, California. A 3.75-acre parcel is located on the corner of Soquel Drive and Cunnison Lane at 5555 Soquel Drive (APN 37-101-58). A 1.77-acre parcel is located at 5540 Tee Street (APN 37-101-59).

The proposed project is a neighborhood park that features a community building, a restroom building, parking, a community garden, walking trails, a pedestrian bridge, play equipment, and sporting elements.

2. Pre-development Drainage Conditions

A. Hydrology

About 70 percent of the project site or about 3.7 acres drains toward an unnamed creek that bi-sects the site. Runoff flows through a culvert under Soquel Drive and continues down an open channel and into Noble Gulch, then into Soquel Creek, and outlets into Monterey Bay at Capitola Village. The remaining 1.7 acres or 30 percent of the south-eastern part of the site drains to a street storm drainage network in Soquel Drive and Cunnison Lane. This network discharges through a junction box below the sidewalk in front of the gas station/convenience store into the afore-mentioned culvert below Soquel Drive. In this way, 100% of the site drains into the culvert under Soquel Drive (Figure 1).

We prepared on-site hydrologic calculations using the rational method for the 10-year storm event, per DPW standards. We divided the site into six sub-watersheds to determine the amount of runoff flowing to six different inlets, or points of concentration (Figure 1). A weighted coefficient of runoff was determined for each sub-watershed by considering the watershed drainage characteristics and the relative effect of any existing impervious areas. We used runoff coefficients and antecedent moisture condition factors given in the County Design Criteria (CDC).

We accounted for only the impervious areas with recorded permits or that were areas constructed prior to Zone 5 incorporation in 1969, per DPW standards. To do this we reviewed the archived building permits for the parcels, the available assessor's records, and the pre-existing maps prepared by Gary Ifland and Associates[1] and determined which structures, parking areas, gravel areas, and paved walkways would count toward the existing impervious area.

Rainfall intensity was determined using the equation given in Figure SWM-3 of the CDC. Since a stormwater detention system is required to mitigate the post-development increase in impervious area we selected a minimum time of concentration of 15 minutes in accordance with the CDC for detention system sizing.

We summarized pre-development flow calculations and coefficients for each sub-watershed in Table 1 and prepared a diagram of pre-development on-site drainage boundaries in Figure 1. Detailed hydrologic calculations were included in Appendix A.

B. Hydraulics

We investigated existing conditions on-site hydraulic conditions on a qualitative basis by visiting the site, inspecting the site topographic survey and regional aerial survey, and reviewing our hydrology calculations.

With the notable exception of the flow in the creek, on-site runoff is low-volume, low-flow, shallow, and well-distributed or sheet flow. For a separate analysis of the creek traversing the site, refer to the Stream Hydrology and Hydraulics Report[2].

We observed a small drainage swale originating from an existing drainage inlet in the south-east corner of Tee Street that traverses the site in a south-easterly direction. Neighbors informed us that during some storms, stormwater will overflow on to the site and sheet slowly across the meadow and down into the creek. We analyzed the catch basin inlet capacity, inflow pipe capacity, and outflow pipe capacity to assess the existing storm drainage system in Tee Street. The results showed the existing drainage pipes and inlet are large enough to carry the design flows. We investigated the land condition downstream of the drainage swale and did not find any evidence of soil or bank erosion. As a result, we estimate stormwater run-on occurs infrequently, possibly due to obstruction of the inlet, and does not pose any significant risk of erosion to the project.

3. Post-development Drainage Conditions

A. Hydrology

A post-development weighted coefficient of runoff was determined for each sub watershed by considering the watershed drainage characteristics and the relative effect of impervious areas (Appendix A). This enabled us to calculate the post-development peak flow for each watershed and compare to pre-development conditions. Pre- and post-development hydrologic and hydraulic calculations were summarized in Table 1. Post-development drainage area boundaries were drawn in Figure 2.

We measured post-development impervious areas to determine the increase in impervious area in each watershed (Table 4). We slightly overestimated the post-development impervious areas shown in the Schematic Design Site Plan[3] to provide design flexibility in the final design phase (Figure 2). These areas should be refined before building permit submittal.

Table 4 – Impervious Areas

Sub-Watershed	Pre-development Impervious Area (square feet)	Post-development Impervious Area (square feet)	Net New Impervious Area (square feet)
1	49,002	66,260	17,259
2	5,731	3,463	-2,268
3	2,313	160	-2,153
4	3,487	23,083	19,596
5	505	20,259	19,754
6	4,327	12,639	8,313
Total	**65,365**	**125,864**	**60,501**

Our preliminary measurements show that the proposed impervious areas exceed the existing impervious areas by approximately **60,501** square feet. As a result, detention facilities are required to mitigate hydrologic changes and maintain post-development runoff at pre-development rates.

B. Hydraulics

We prepared the Schematic Design On-Site Drainage Plan (Figure C-1.0) to demonstrate recommended post-development drainage conditions. Key objectives of the drainage plan were to slow down, infiltrate, and filter stormwater. To do this we diverted drainage from parking and hardscape areas into vegetated areas, bioswales, rain gardens, or lawn areas prior to collection and routing through the proposed sub-surface drainage system. There are two different drainage systems developed for the project to suit the opportunities and constraints of the two parcels. The higher development density on the Cunnison Lane parcel required a traditional drainage design approach whereas the availability of open space on the Tee Street parcel allowed for a lower intensity drainage design technique.

The Cunnison Lane drainage system conveys stormwater from all impervious areas to a sub-surface detention/retention pipe via a treatment train consisting of bioswales and

a hydrodynamic separator to meet DPW and LEED design criteria. The proposed detention/retention facility is a large diameter pipe and outlet control structure designed to meter release rates. We recommend retaining some runoff on-site by providing perforations in the detention pipe that will allow some runoff to infiltrate into a surrounding gravel trench. Retention is required to to satisfy LEED stormwater quantity control credit criteria although DPW does not require retention facilities since the site is outside of County-identified groundwater recharge watersheds. We recommend consulting with the Geotechnical Engineer during the Design Development phase to finalize retention details. We worked with grading designers to slope parking areas toward landscaped bioswales adjacent to the parking lots where possible before routing to the hydrodynamic separation unit and sub-surface detention/retention facility. The hydrodynamic separator unit will require annual vacuum cleaning and a signed maintenance agreement per DPW guidelines.

The Tee Street drainage system features a detention/retention rain garden system to allow stormwater to percolate through the lower portion of the recreational turf into the groundwater. Pre-treatment will occur by filtration across the grassy slope and through a loamy sand layer. Detention volume will be provided within the voids of a crushed rock layer below the loamy sand layer. Perforated sub-drains below the rain garden and a surface spillway will provide safe overflow for when very heavy storm events exceed the infiltration capacity of the soil. This system will be invisible from the surface, except for a slight depression in the turf surface, and will be dry within 48 hours after a 10-year rain storm. The garden will be walk-able during rain events since the loamy sand and crushed rock substrate will have low clay content. Good maintenance will keep the watershed free of loose soil and maintain minimal sediment supply to the percolation area. The upslope turf area will naturally filter runoff sheet flowing into the rain garden so that the system will tolerate some unexpected sediment. Schematic Design On-site Drainage Plans show a swale to pick up potential off-site run-on from Tee Street and safely convey stormwater around the on-site retention/detention facility and toward the creek.

Since site grading and drainage design is currently in schematic form a precise hydraulic study of pipes and drainage structures is premature at this point. We did however calculate the approximate size of detention and retention facilities based on currently planned impervious surfaces in order to gain an appreciation of how they will fit into the landscape. We calculated detention volume requirements for the 10-year storm with a 15 minute time of concentration based on net new impervious area per DPW Standards (Table 2). We considered existing gravel driveways to be 50% impervious, per Drainage Section Standards. We provided detailed detention and retention calculations in Appendix B. For preliminary purposes we calculated retention volumes using the DPW-recommended modified rational method for a 2-year, 2-hour storm (Appendix B). We summarized retention volumes in Table 3. In final calculations we will examine the 1-year and 2-year, 24-hour storms in accordance with LEED requirements using TR-55 methodology that is more suited to detention and retention facility sizing. We do not expect LEED requirements to result in larger or more costly detention or retention facilities. These Best Management Practices (BMPs) will release stormwater downstream at a rate less than the pre-development rate for the 1-year 24 hour, 2-year 24 hour, and 10-year peak storms. In addition BMPs will filter and remove 80% of Total Suspended Solids from 90% of the average annual rainfall in accordance with LEED standards. Since the rain water harvesting

tank could possibly be full during the peak design storm, rainwater harvesting did not affect the sizing of the detention system per DPW criteria. Refer to the Irrigation Water Supply Report[4] for further discussion on rainwater harvesting.

C. LEED Credits

The following drainage-related Leadership in Environmental and Energy Design (LEED) Credits are available for the project[5]:

1. LEED Sustainable Sites Credit 6.1 Stormwater Design, Quantity Control – 1 point: *Implement a stormwater management plan that prevents the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one- and two-year, 24-hour design storms.*

   Groundwater conditions over the winter season are unknown at the site. Since the volume control part of this requirement will require mid-sized on-site infiltration measures, a seasonal groundwater investigation is required to determine the feasibility of achieving this credit. Infiltration design is controlled by the 2-year, 24-hour design storm for Santa Cruz, or 3.5 inches[6]. For reference, this is less stringent and results in smaller facilities than the DPW standard for projects in water supply watersheds (not applicable to this project). The rate control/detention part of this requirement is more easily satisfied and less stringent than the DPW Standards for 10-year, 10-minute storms. To achieve this credit a mid-sized infiltration/retention system is required. These systems commonly include perforated pipes, gravel trenches, ponds, or drainage structures.

2. LEED Sustainable Sites Credit 6.2 Stormwater Design, Quality Control – 1 point: *Implement a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable best management practices (BMPs). BMPs used to treat runoff must be capable of removing 80% of the average annual post development total suspended solids (TSS) load based on existing monitoring reports.*

   We can design bio-filtration and hydrodynamic separation systems to comply with this credit. 90% of the average annual rainfall for semi-arid watersheds is about 1 inch.

[1] Gary Ifland and Associates, Pre-1991 Plan for The Farm Park, 2008
[2] MME, Stream Hydrology and Hydraulics Final Report, 29 July 2009
[3] MIG, Schematic Design, Site Plan, 19 June 2009
[4] MME, Irrigation Water Supply Draft Report, 29 July 2009
[5] U.S Green Building Council, LEED for New Construction and Major Renovations, Version 2.2, October 2005.
[6] National Oceans and Atmosphere Administration, NOAA Atlas 2, Volume XI Precipitation Frequency Atlas of the Western United States, 1973

Mesiti-Miller Engineering, Inc.
Civil and Structural Engineering

OFF-SITE STORM DRAINAGE
FINAL REPORT
TASK 10.9

For

FARM NEIGHBORHOOD PARK AND COMMUNITY CENTER
SCHEMATIC DESIGN

SANTA CRUZ COUNTY
CALIFORNIA

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Project No. 7141
July 11th, 2009

Designer's Attest:

The following report has been prepared under the supervision of the undersigned, who hereby certifies that he is a Registered Civil Engineer in the State of California.

Prepared by:

Rodney Cahill

REGISTERED PROFESSIONAL ENGINEER
RODNEY T. CAHILL
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Rodney T. Cahill, RCE No. 67728 — 7/11/2009 (Date)

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4. Summary of Off-Site Upgrade Recommendations

Soquel Drive East and Soquel Junction

We recommend the following upgrades to the off-site drainage system in Soquel Drive downstream of the Project site in connection with the Farm Park Project. The schematic design for off-site drainage improvement is included (Sheet C-1.1).

1. Replace 62 linear feet of 18" diameter pipe with 24" diameter pipe at a deeper elevation and steeper slope (P-9)
2. Replace 328 linear feet of 18" diameter pipes with 36" diameter pipes at deeper elevations and steeper slopes (P-10, P-11, P-12)
3. Replace two 7 feet sections of 18" diameter pipe with a 36" diameter pipe (P-13).
4. Replace three existing inlets with Caltrans Type GOL-10 combination inlets (I-5, I-6, I-7).
5. Replace one existing junction structure (J-5) with a Caltrans Type GOL-10 combination inlet (I-17).
6. Replace one existing manhole (J-6) to suit new pipe elevations and diameters.
7. Adjust/replace one existing junction structure (J-1) to suit new pipe elevation and diameter.

Soquel Drive West and Hardin Way

To prevent overflow across Soquel Drive we recommend upgrades to the Hardin Way and West Soquel Drive drainage systems. This work would be separate from the Farm Park Project in that the Project site is separate and does not contribute runoff to the Hardin Way and West Soquel Drive drainage systems.

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[i] Santa Cruz County, Design Criteria Containing Standards for the Construction of Streets, Stormwater Systems, Sanitary Systems, Water Systems, Driveways within the Unincorporated Portion of Santa Cruz County, June 2006

[ii] Santa Cruz County Public Works Department, Volume 1 Zone 5 Master Drainage Plan, 20 October 1998

[iii] Santa Cruz County Planning Department, Application # 06-0595, letter to Santa Cruz Redevelopment Agency, 12 February, 2007

[iv] California Department of Transportation, Highway Design Manual, Chapter 830 Roadway Drainage, September 1 2006

[v] Gary Ifland and Associates, Topographic Survey for Farm Park, May 20 2008

[vi] Sheryl Bailey, Santa Cruz County Redevelopment Agency, Email to Rodney Cahill, dated June 30, 2009 12:13 PM

[vii] Dolan v. City of Tigard, 512 U.S 374, 129 L. Ed 2d 304, 114 S. Ct. 2309 (1994)

[viii] Dolan v. City of Tigard, 512 U.S 374, 129 L. Ed 2d 304, 114 S. Ct. 2309 (1994)

[ix] California Department of Transportation, Highway Design Manual, Chapter 830 Roadway Drainage, September 1 2006

[x] Mesiti-Miller Engineering Inc., Notes from Meeting with DPW Drainage, May 15 2008