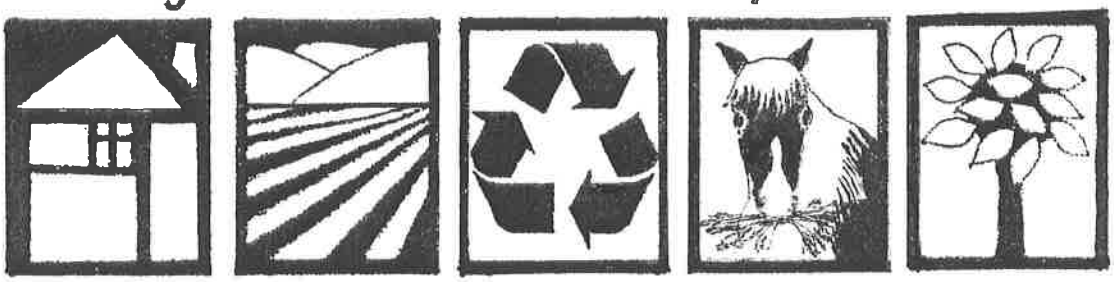
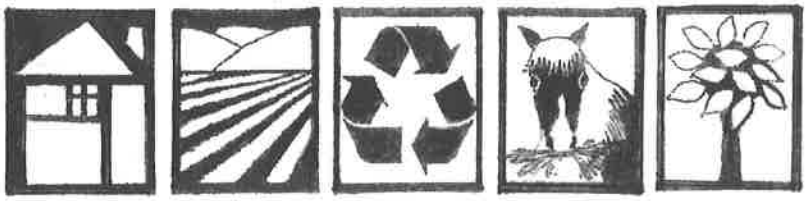
Bunyon Brothers / Perozzi



Green Waste Management Project

Perozzi Ranch • 4400 Orcutt Road • San Luis Obispo, CA 93401

Bunyon Brothers / Perozzi
Green Waste Management Project



Business Owner/Operator
Bunyon Brothers Tree Service
Ron Rinell
5345 Davenport Creek Road
San Luis Obispo, CA 93401
Phone: 805.547.1903

Property Owner
Perozzi Ranch Family Trust
Tim Perozzi
3972 Orcutt Road
San Luis Obispo, CA 93401
Phone: 805.441.0444

Design / Planning
Joseph Boud & Associates
1009 Morro Street, Suite 202
San Luis Obispo, CA 93401
Phone: 805.543.0565

Project Summary

The Bunyon Brothers/Perozzi Green Waste Management composting project will serve San Luis Obispo County's green waste needs by collecting and processing organic materials, such as tree waste, leaves, manure and similar feedstock into a soil amendment material. While not directly open to the public, compost materials will be delivered via public utility waste collection companies and subscribed private contractors.

This Project Description package describes in detail the compost operation and addresses all pertinent Physical, Capacity and Quality of Life Constraints with supplemental reports that include Botanical Survey, Cultural Resource investigation, Hydrologeologic Study, Traffic and Circulation Report, Aesthetic and Visual Resources analysis, Noise analysis, Odor Impact Minimization Plan and analysis, and Fire Hazard assessment.

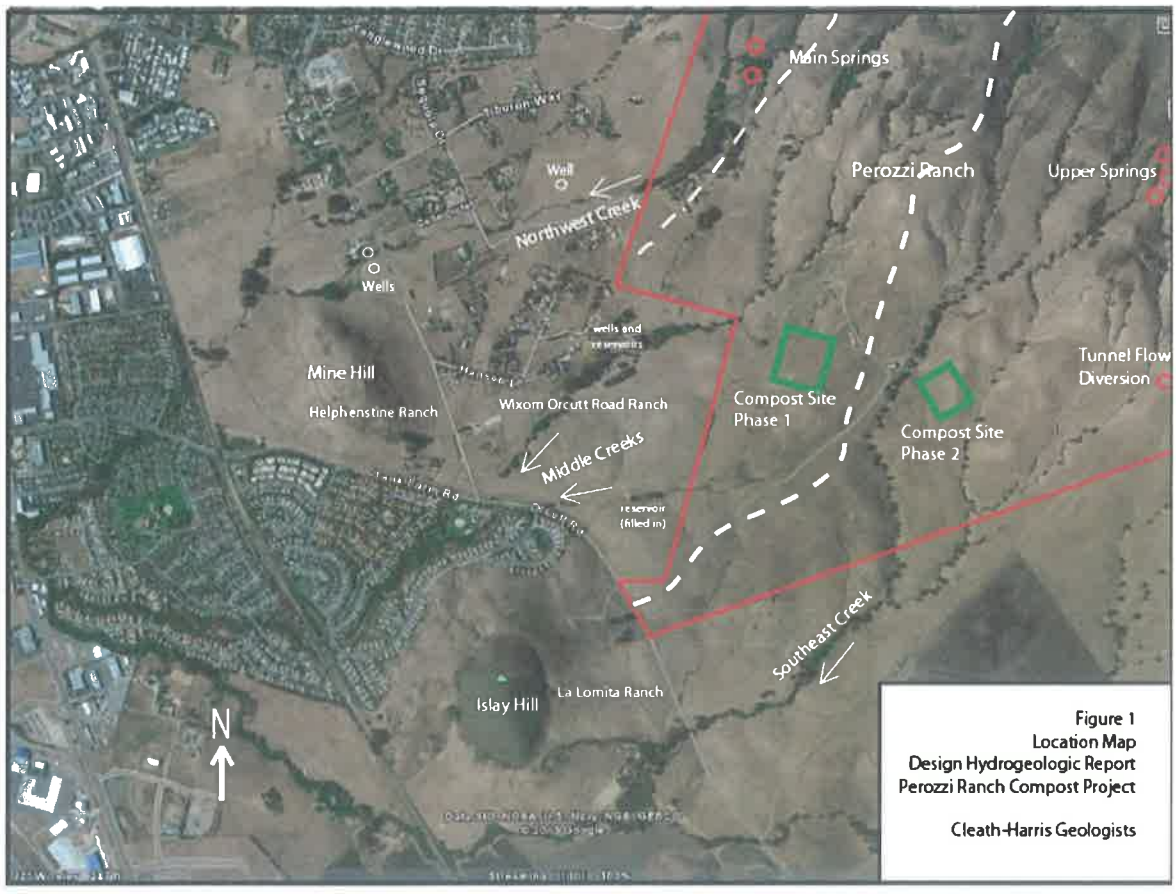
Green Waste Management

Green waste composting is an important and beneficial aspect of the County's solid waste management program because green waste constitutes the highest portion of the waste stream of any material. It is the same process that decays leaves and other organic debris in nature. Composting merely controls the conditions so that materials decompose faster.
The County's management plan makes it clear that diverting this material from landfills and processing it for end use is a high priority. Green waste is the easiest to separate and divert and can be easily, safely and effectively converted into a valuable end product.

The composting process reduces unnecessary landfill deposits, provides residents and businesses that generate green waste a disposal outlet and creates positive local economic benefit. The end product enhances the County's agricultural and horticultural sectors by providing a local, economical source of soil amendments.

Project Location

The project site is located on the 1100 acre Perozzi Ranch property south of the City of San Luis Obispo and east of Orcutt Road,. The topography and characteristics of the cattle ranch include gentle slopes and rolling hills of open grassland transitioning from the valley floor to the Santa Lucia Mountain Range defining the eastern boundary of the Edna Valley. The ranch is traversed by several seasonal unnamed drainage creeks that support sycamore dominated woodlands and scattered oak trees (APN 044-011-004 & 029).



Oblique photo: Approximate Scale 1"= 1300'

Site Locations and Physical Setting

The two composting sites are approximately four (4) acres in size and approximately one-half mile from the entrance gate at Orcutt Road. Each composting area is contained with an earthen berm and each includes a holding pond that would receive runoff from the composting areas. Site I is the location where Bunyon Brothers Tree Service presently has a State of California permit to allow a wood handling and wood chipping operation (see also Construction Documents in attached Appendix). Site II is undeveloped.

Each four-acre composting site area consists of mild sloping grassland clustered in the center of the ranch providing maximum setbacks from dry creek areas, riparian woodlands and property lines. These sites are distant from all populated areas and are surrounded by agriculture uses and open space. Signage and restricted entry access from Orcutt Road will identify authorized commercial users and will adequately prevent access by others.

Regulatory Permits and Processing Requirements

The Perozzi Ranch is designated Agriculture in the County's Land Use Element. Ag Processing in this designation requires a Conditional Use Permit. This application was accepted for processing on October 9, 2009. It is expected that referral agencies, such as State of California Regional Water Quality Control Board, State of California - Cal Recycle, State of California Air Pollution Control District and San Luis Obispo County Health Department, will also require individual permits and/or project review specific to their responsibility.

Composting Operation Summary

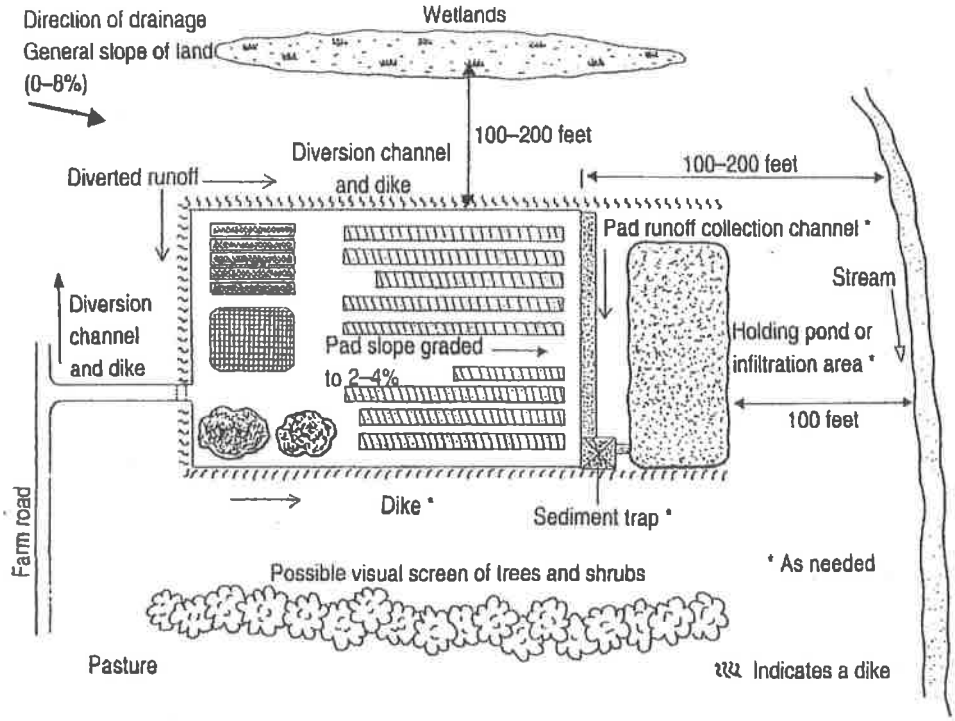
Composting material will be delivered through the Perozzi Ranch entrance at 4400 Orcutt Road, pass over a material scale to weigh loads, then directed to one of the two composting site locations. The material is visually checked for contaminants and undesirable foreign materials (ie. rocks, wire, metal, etc.) and then pushed into stockpiles and ground up on a fixed processing schedule utilizing a Tub Grinder to convert the material into mulch. To maximize the composting efficiency, the mulch recipe will include a variety of green waste materials to achieve a balanced supply of carbon and nitrogen to maximize the nutrients needed for microbial activity and growth.

After grinding, the material will be moved to the composting areas and formed into windrows approximately 200' long, 7' high and 15' wide with a volume of between 400-500 cubic yards. The windrows are then aerated to initiate biological activity and turned to enable oxygen levels to support aerobic activity and uniform composting within the windrow. The windrows are regularly checked for temperature to achieve the optimum range from 140° to 160°. This range provides the best habitat for microorganism activity and destroys pathogens and weed seeds.

The periodic watering and turning process continues for several weeks with the maximum water demand estimate, including dust control and incidental water uses, as 45,700 gallons per day. The accompanying Hydrogeologic Report discusses water demands, water supply and water impacts in detail (see Technical Appendix). As active composting slows, temperatures gradually drop to ambient air temperature, at which time a curing process begins that allows the compost to remain without turning and aeration. The compost material continues to break down until the last remaining nutrients are consumed by the last remaining organisms. Compost is judged to be "done" by characteristics related to its use and handling such as C:N ratio (carbon to nitrogen), oxygen demand, temperature and odor. Testing samples by a Soils Lab will be periodically

conducted in accordance with State of California CalRecycle Title 14 requirements to confirm compost chemical qualities and categories, and the absence of pathogens and metals. Any unacceptable compost materials will be redirected for further processing and/or removed to an approved landfill.

The finished material will then be transferred to the screening and blending area where it will be screened to various sizes, stockpiles, blended and prepared for distribution to commercial outlets and vendors. The period of active composting occurs for 42 days and the finished product is typically available within six months.



COMPOSTING SITE PLAN EXAMPLE

Composting Areas Site Improvements

Both of the two composting sites will be graded to create a 3% slope surface that will be surrounded on three sides with a landscaped earthen berm. The surface area within will be improved with a 6" gravel pad as will all access roads and working areas of the compost facility sites. The lower elevation of each compost site will be improved with a runoff collection channel and sediment trap that discharges into engineered retention basins to enable the capture of excess water runoff, leachate control and recycling of runoff water to the composting windrows (see Construction Documents in attached Appendix).

Equipment/Machinery Requirements

The machinery and equipment used for the composting operation will include the following:

- Weigh scale, located at the intersection of the roads to the two composting sites
- Tub Grinder, used to convert green waste to mulch
- Loader with thumb, used to feed green waste into the tub grinder and to manage mixed wood piles
- Front end Loader, used for managing raw green waste, forming and repositioning windrows, feeding the screener and loading finished compost product into vehicles
- Tractor assisted and/or self-powered windrow turners, (rotary drum with flails, elevating face conveyor, auger turner, etc.; To be determined at a later date)
- Dump truck, used to move material internally and maintain site area in an orderly and efficient condition
- Power screen Screener, with several screen sizes used to screen finished compost product
- Storage container(s), for storage of tools, equipment and supplies
- Water truck, for watering of roads, aeration of windrows (if not under irrigation) and fire protection
- Equipment Failure or Breakdown. Local equipment rental companies are located within two miles of the compost site in the event of any unforeseen equipment failure

Operation / Employee Requirements

The principal operators and owners are Ron Rinell and Tim Perozzi, both of whom have extensive knowledge of the tree industry, agriculture and business. They will have immediate oversight of all operations of the compost project. Site personnel will consist of one or two persons, depending on specific operation schedules and staffing needs.

The compost facility will operate six days a week between the hours of 9:00 am until 3:00 pm. Front gate signage will identify the facility, hours of operation, authorized users and emergency contact names and phone numbers.

Physical Constraints

A. Biological Resources

A Botanical Survey was prepared by V.L. Holland and is included in the Technical Appendix. All recommendations have been accommodated into the project design and operational standards.

B. Drainage, Flooding and Water Quality

As described in the section entitled Composting Site Improvements, erosion and sedimentation will be controlled by the construction of earthen berms, retention basins and road and compost area surfacing, along with a regular maintenance schedule of sediment collection and water recycling.

Contamination of soil and groundwater is not of concern due to the innocuous nature of the material. Leachate is non-toxic, non-hazardous and is projected to be statistically insignificant in properly managed compost operations. The composting material readily absorbs the applied water aeration, with excess water due to storm events captured in the retention basins.

C. Cultural Resources

A Phase 1 Archaeological Surface Survey was conducted by Heritage Discoveries, Inc. to determine the presence and significance of any archaeological/cultural resources. The complete report is contained in the Technical Appendix with the conclusion that no such resources were present.

Capacity Constraints

A. Groundwater Resources

A Design Level Hydrogeological Study has been prepared by Cleath-Harris Geologists, Inc. This study address the hydrologic budget (demand, supply and reliability) and water impacts of the project. The report concludes that there is sufficient water to meet the needs of the project and there will be no significant impacts from the project. It is contained in the Technical Appendix.

B. Traffic and Circulation

A Traffic and Circulation Study has been prepared by Associated Transportation Engineers who analyzed projected trip generation, level of service, sight distances and geometry with the conclusion that the project will not create any circulation or traffic impacts. The study is contained in the Technical Appendix.

Quality of Life Constraints

A. Aesthetic and Visual Resources

The Aesthetic and Visual Resources section assesses visual impacts that may result from the proposed project. This analysis determines if a change in the visual environment would occur, whether that change would be perceived as a positive or negative one, and the significance of any change to the existing setting. The focus of the analysis is on the potential of the project to result in impacts to visual resources, primarily as seen from public roadways and viewing areas.

Existing Conditions

As described in the Project Location section, the topography and characteristics of the ranch include gentle slopes and rolling hills of open grassland transitioning from the valley floor to the Santa Lucia Mountain Range defining the eastern boundary of the Edna Valley. The ranch is

traversed by several seasonal unnamed drainage creeks that support sycamore dominated woodlands and scattered oak trees. The Perozzi Ranch property has approximately 1200 feet of frontage along Orcutt Road and then angles eastward to the mountain ridges.

Land uses surrounding the compost project sites are Agricultural and Open Space, with urban development approximately 1½ miles to the west in the Arbors tract and suburban residential development approximately 2500 feet to the north along Hansen Lane. These two areas offer limited views of compost Site I, but are not dominant views and neither of these urban area have views of compost Site II. Orcutt Road has a glimpse of compost Site II from a northbound moving vehicle for a 4-5 second period.

Aesthetic and Visual Assessment

A substantial adverse impact would occur if the proposed project would significantly degrade the landscape as viewed from public roads or from other public areas. The degree of impact varies with factors such as viewing distance, duration, viewer sensitivity and the visual context of the surrounding area.

If this project altered the visual character of the area in a way that changed, detracted from or degraded the visual quality it could be considered to have a significant impact. Likewise, if the project were to increase or contribute to a substantial amount of point-source lighting visibility at night, or if the collective lumination of the project resulted in a noticeable spill-over effect into the nighttime sky it could be considered to have a significant impact.

Impact Assessment

The complete extent of potential visibility of the composting sites, with particular attention given to public roadways, were photographed and noted on aerial maps. Project visibility maps were prepared to show the extent to which the composting sites would be visible from key viewing areas. Photo-simulations were also prepared and selected to best show critical views to provide a good representation of the composting site(s) overall character. These project visibility maps and photo-simulations follow (see attached Technical Appendix).

Conclusion

Composting Site I has limited view from two residences along Hansen Lane and limited, distant views from 4 - 5 residences in the Arbors subdivision along Huckleberry Lane. Site II is not visible from these two urban areas. Compost Site I is not visible from Orcutt Road and Site II has a 4 -5 second view of the site when traveling northbound.

Each of the compost sites will be surrounded by a landscaped earthen berm and line of sight landscaping, consisting of native trees and shrubbery designed in a natural woodland habitat configuration. This landscaping treatment will screen compost Site I from its distant urban neighbors and compost Site II from the short duration view from Orcutt Road.

Neither site is proposed to provide any form of night lighting system or feature. Night illumination is not an issue.

B. Noise

Noise, by definition, is an unwanted sound. Noise sources and sound intensities, and how they are perceived by receivers, can vary significantly due to proximately to the noise source, time of day, ambient sounds, geographic location and duration of the noise event.

Noise producing activities associated with the composting operation include the movement of trucks between the ranch entrance and the compost areas, and the equipment used to stockpile,

load, grind or chip, spread onto compost windrows and subsequently turn and gather the finished product.

Due to their location on the Perozzi ranch, the two composting sites are considered "soft sites", meaning that operational activities will not contribute to noise perception at receiver points. The compost sites are more than 2,000 feet from the closest receiver location, the prevailing northwest wind pattern would carry operational noise away from populated areas and roadways and the natural topography of the sites provide additional noise attenuation shielding.

C. Odor/Vector Control

An Odor Impact Minimization Plan (OIMP), in accordance with the requirements of the State of California CalRecycle standards, has been prepared and is contained in the Technical Appendix. This plan addresses odor and vector control, and windblown dust, with project mitigations for each scenario.

The OIMP describes sources of odor during the composting process with specific recommendations during each phase (receiving, grinding, mixing, composting and curing). Though the subject of vectors is of minimal concern, the OIMP also addresses methods employed to avoid the conveyance of potential pathogens from beetles, flies, rats, vermin and birds. Likewise the plan addresses airborne dust and potential litter with mitigations.

Utilizing proper management techniques and adhering to recommendations contained in the plan, all concerns related to odor, vector control, dust and litter are mitigated. The OIMP is contained in the Technical Appendix.

D. Fire Hazard

Compost operations are, by nature, a low fire risk business because the material and method of processing involves regular aeration, temperature monitoring, turning and visual observation. There are no structural improvements proposed, all access roads and both composting sites will be improved with a Cal Fire approved road improvement related to width, grade and surfacing material and each composting site will be cleared of vegetation and grassland for a distance of 100 feet from the earthen berm perimeters. Each composting site also contains retention basins that can be utilized, if needed, with a submersible pump and fire hose.

The Perozzi Ranch has numerous improved springs, wells, reservoirs and water tanks that will be used to provide water to the composting sites for aeration and fire suppression (see Groundwater Resources summary above and Technical Appendix). Further, typical fire suppression equipment and machinery at the composting site includes a front-end loader and a water truck. Cellular phone service is unobstructed in the event of any event requiring emergence response communication for a fire event and/or other emergency.

TECHNICAL APPENDIX

TECHNICAL APPENDIX

Physical Constraints

Biological Resources
Botanical Report

Cultural Resources
Archaeological Survey

Capacity Constraints

Groundwater Resources
Hydrogeologic Study

Traffic and Circulation
Traffic Study

Quality of Life Constraints

Aesthetic and Visual Resources
Photo Simulation Study

Odor/Vector Control
Odor Impact Minimization Plan

Botanical Survey

BIOLOGICAL RESOURCES

BOTANICAL SURVEY

PROPOSED GREEN WASTE AND MULCHING SYSTEM
A.P.N.: 044-011-004: TWO PROPOSED SITES
NE OF THE ORCUTT RD/TANK FARM RD.INTERSECTION
SAN LUIS OBISPO COUNTY, CA

Prepared by

V.L. Holland, Ph. D.
Plant and Restoration Ecology
1697 El Cerrito CT
San Luis Obispo, CA 93401

Prepared for:

Ron Rinell
Bunyon Bros. Tree Service
3972 Orcutt Road
San Luis Obispo, CA 93401

November 21, 2005

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INTRODUCTION

The purpose of this study is to conduct a botanical survey of two sites on an 1100 acre ranch east of Orcutt Road (Figure 1). The proposed sites are located about 0.2 to 0.5 miles northeast of the Orcutt Road/Tank Farm Road Intersection in the County of San Luis Obispo. Both sites are covered by valley coastal grasslands and both border seasonal creeks lined with Riparian woodland vegetation. Site 1 is near the western boundary of the ranch and about 0.5 miles east of Orcutt Road. Site 2 is about 0.2 miles east of Site 1 (Figure 1). A large portion of Site 1 has been cleared and part of it is currently used to store firewood and mulch (Photo 1 and 2). Site 1 borders a small seasonal creek, which is just west of the site (Figure 1; Photos 1 and 2). There are areas on Site 1 where soil has been stored in piles between the wood piles and the seasonal creek (Photo 3). Small gullies have eroded around the disturbed areas on Site 1 and need installation of proper erosion control measures (Photo 4). Site 2 borders the creek along its western boundary and requires crossing a small seasonal creek for access (Figure 1). This site is covered by coastal valley grassland and is currently being used for grazing (Photo 6). The terrain of Site 1 is flat to somewhat sloping; however, there is a moderate to steep slope immediately along the creek and downslope from Site 1. Site 2 is flat to somewhat sloping and gradually slopes to the creek (Photo 7)

Figure 1. Aerial view of the 1100 acre ranch and the two sites proposed for a green waste and mulching system. Note that both sites are covered by grassland and border seasonal creeks.

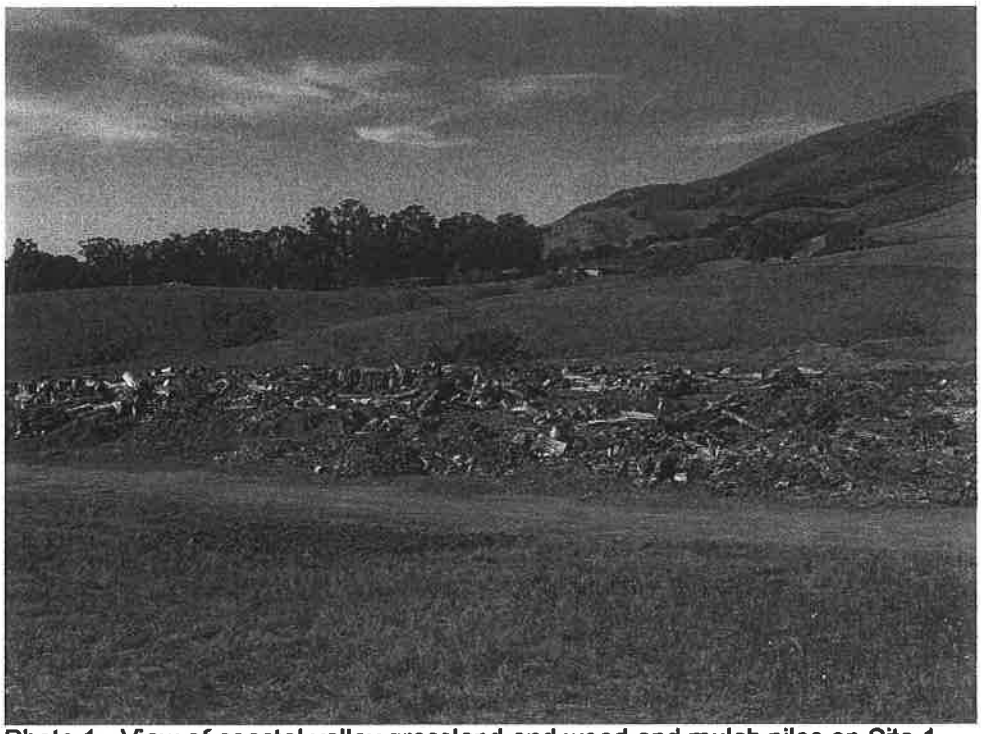

Photo 1. View of coastal valley grassland and wood and mulch piles on Site 1.

Photo 2. View of grassland and cleared area next to wood and mulch piles on Site 1. Some of the recently cleared areas have small grass seedlings (green area left of wood pile). Note the seasonal creek that borders the site beyond the woodpiles and cleared area.

Photo 3. View of piles of stored soil on Site 1 between the wood piles and the creek.

Photo 4. View of a small erosion gully on Site 1 that needs proper erosion control methods.

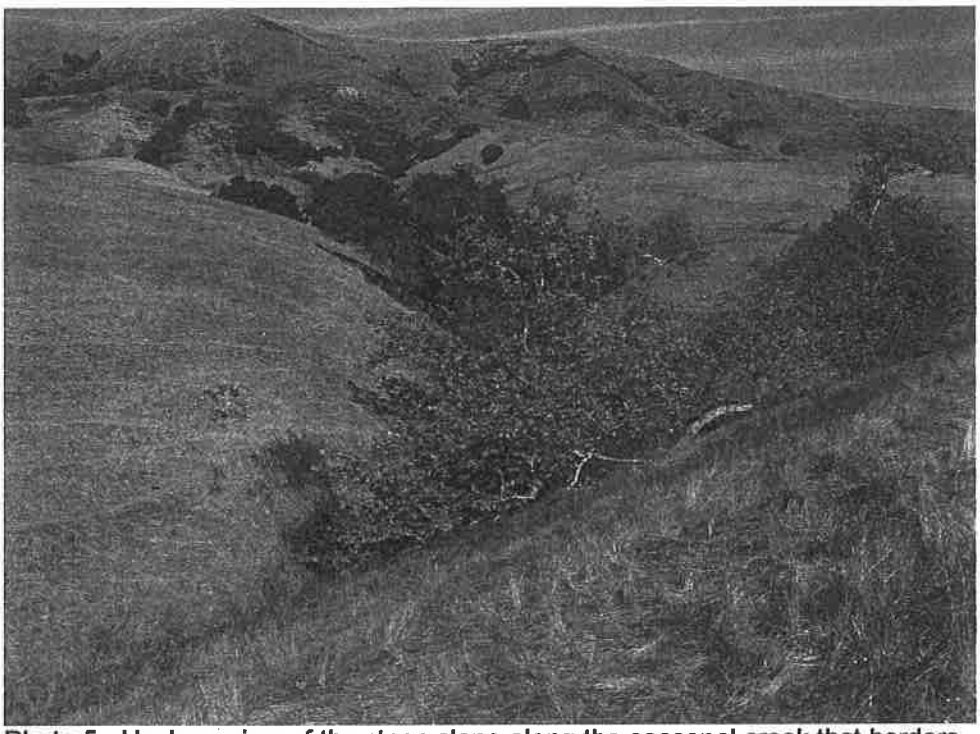

Photo 5. Upslope view of the steep slope along the seasonal creek that borders Site 1. Sycamores are the light green trees and coast live oaks the dark green.

METHODS AND MATERIALS

A field reconnaissance of the two proposed project sites was carried on October 19, 2005 (before the first rain) and November 21, 2005 (after the first rain) by Dr. V. L. Holland. Consistent with most biological survey methodology, a stratified sampling method was used to examine the entire site by sampling along meandering transects shaped by variations in vegetation, landform, soil, and/or hydrology. Survey intensity increased as species diversity increased. Species presence and relative abundance were noted with the goal of recording as many species as possible and carefully searching for any rare plants. To accomplish this, I surveyed the site until no new species were found. I also made notes about the composition and structure of the plant communities present on the sites.

References used to verify identifications included relevant floras (Hickman 1993 and Hoover 1970) and herbarium specimens housed at the Hoover Herbarium, Cal Poly State University. Nomenclature follows that of the Jepson Manual (Hickman, 1993).

During the time of my survey (October and November, 2005), most plants were represented as seedlings, immature plants, or as dried remains of last year's standing crop. Other plants were in flower and/or in identifiable condition during my surveys. Several plants could be identified as seedlings or from dried remains, but others could not. Therefore, while I am confident that the results of this study

present an accurate inventory of the plant species found on site in identifiable condition in October and November, 2005 (Appendix 1), I cannot state with absolute certainty that no sensitive plants occur on the site. Repeated surveys conducted during all seasons (especially the spring) and even over a few years would be necessary to provide an inventory nearing one-hundred percent completeness. However, I do not believe any rare plant species occur on the two sites based on my observations of the current disturbed site conditions and habitats (Tables 1 and 2).

EXISTING BOTANICAL RESOURCES

The diversity of vegetation and flora in the general vicinity of the study sites has developed in response local climate, topography, soils, parent materials, biotic components, fire, location of waterways and natural historical events. Past and present land-use and other human caused events have also resulted in changes in the vegetation.

The project sites are covered almost entirely by coastal valley grassland; however, both sites border the riparian woodland along the creeks (Figure 1). Therefore, these riparian areas are also discussed in this report.

The purpose of this study is to conduct a botanical survey of the vegetation and flora currently found on the two proposed project sites. Special attention was given to finding any rare, endangered, or sensitive species and habitats present on or near the sites. No rare plants were found.

1. Coastal Valley Grasslands

Coastal valley grasslands cover both study sites with the exception of the wood pile area and a largely barren area on Site 1 (Figure 1; Photos 1, 2, and 6). The dominant plants in these grasslands are various species of native and mostly introduced grasses and forbs. In general, the herbaceous plants that dominate grasslands may be annuals, perennials, or a mixture of the two depending on location and environmental conditions. The grasslands on the subject sites are mostly composed of introduced annuals.

California native grasslands were not found on the study sites. Native grasslands are grasslands in which the dominant plants are various species of California native perennial grasses that grow as individual bunches or tussocks rather than as continuous turf. Native grasses do occur on the hillsides near the study sites, but none were found on the study sites.

The present day California grasslands, including those on the study sites, have been modified to a greater extent than any other California plant community. Starting with the arrival of Europeans to California and later by the agricultural development in the state, most of the flora and characteristics of the California grasslands changed in many ways. Large areas of grassland have been fundamentally altered.

Agricultural practices have changed the character of the vegetation, disturbing the soil and opening it up for invading weedy species. Grazing of domesticated animals alters the vegetation in many ways. Highly palatable native plants have been reduced or eliminated. Many species of weedy plants that occur in the grasslands have been introduced to California from other parts of the world, especially from the Mediterranean region. Introduced species tolerant of grazing pressure, particularly annual grasses of Eurasian ancestry, have joined or displaced the native grasses over the years, creating a new kind of grassland community, the coastal valley grasslands.

Historically, the two study sites have been used as rangeland. Judging from what I observed this year, the ranch is somewhat heavily grazed. As a result, these grasslands are now mostly dominated by introduced grasses and forbs. The common species found in the grasslands on and around the two study sites are listed below.

Soils that support grassland communities range from loamy to fine clays, and this appears to be the case on the ranch. Parent materials are variable on the ranch resulting in variations in soil characteristics. Soil depth is also variable but often exceeds 50 cm. in the grasslands. Grassland soils generally have adequate winter and spring moisture to support grasses and other shallowly rooted plants but become too dry in the summer to support woody plants. Many of the grassland areas have clayey soils that form noticeable cracks in the summer due to shrink-swell native of these soils. In the more loamy soils, these cracks do not form. The upper layers of grassland soils tend to dry out completely during the summer and most of plant species go dormant.

The grasslands that cover both of the proposed project sites integrate with the riparian woodland along the seasonal creeks. Grassland species also occur as part of the herbaceous understory in the riparian woodland. As mentioned previously, the grasslands on the study sites are mostly dominated by introduced grasses and forbs with a few scattered natives. Common species are listed below.

Ambrosia psilostachya	Western ragweed	Introduced
Avena barbata	Slender wild oats	Introduced
Avena fatua	Common wild oats	Introduced
Bromus diandrus	Ripgut brome	Introduced
Bromus hordeaceus	Soft chess brome grass	Introduced
Bromus madritensis ssp. rubens	Red brome	Introduced
Centaurium calycosum	Purple star-thistle	Introduced
Eremocarpus setigerus	Turkey Mullen	Native
Erodium botrys	Storkbill filaree	Introduced
Erodium cicutarium	Redstem filaree	Introduced
Eschscholzia californica	California poppy	Native
Hemizonia congesta ssp. *luzuilfolia*	Hayfield tarweed	Native
Hirschfeldia incana	Perennial mustard	Introduced
Hordeum murinum ssp. leporinum	Foxtail barley	Introduced
Hypochaeris glabra	Smooth cat's ear	Introduced
Lolium multiflorum	Italian ryegrass	Native

Lotus spp.	Lotus	Native
Lupinus spp.	Lupine	Native
Medicago polymorpha	Bur-clover	Introduced
Rumex acetosella	Sour dock	Introduced
Silene gallica	Windmill pink	Introduced
Trifolium sp.	Annual clover	Varies
Vulpia myuros	Rattail fescue	Introduced

In the woodpiles, several introduced plants are growing, some introduced with the mulch. These include *Eucalyptus globulus* (Blue gum), *Ricinus communis* (Castor-bean), *Nicotiana glauca* (Tobacco tree), and *Acacia* spp.

Photo 6. View of the flat to rolling terrain and the coastal valley grassland on Site 2.

2. Riparian Woodland

Riparian woodland communities border most streams and drainages in California. These communities often consist of one or more species of deciduous trees and/or shrubs plus an assortment of other shrubs and herbs, many of which are restricted to the banks and flood plains of these waterways. Sometimes the trees of these communities are tall enough and dense enough to form a forest, and at other times the trees are more scattered forming an open woodland. The extent of the vegetation away from the watercourse depends on the size and nature of the banks and flood plains, the amount of water carried by the stream or present in a pond or lake, the depth and lateral extent of standing water and/or subterranean aquifers, and the amount of dissolved salt, especially in coastal streams. Additionally, historical patterns of land use often determine the actual extent of the riparian corridor.

Riparian vegetation on the ranch occurs along a series of seasonally creeks and comprises a small percentage of the total vegetation cover. The riparian woodlands along these creeks form a narrow band of woodland vegetation dominated by *Platanus racemosa* (Pacific sycamore). In addition to the sycamores, widely scattered *Salix lasiolepis* (arroyo willow) occur along the creek as do scattered shrubs and herbaceous plants. *Quercus agrifolia* (Coast live oak) occurs along the seasonal creek that borders Site 1, mostly in the upslope areas (Figure 1; Photos 5, and 7).

Vegetation along the creek channels is quite variable. In areas where water is retained in small pools, patches of freshwater marsh vegetation have become established. Many of these marsh species occur in scattered locations along the stream channel and sometimes occur under the sycamores. In other areas, the rocky, sandy stream channel is devoid of vegetation. Some of the common plants found in the riparian zone near the two project sites are listed below.

TREES		
Platanus racemosa	Pacific sycamore	Native
Quercus agrifolia	Coast live oak	Native
Salix lasiolepis	Arroyo willow	Native
Schinus molle	Peruvian pepper-tree	Introduced
SHRUBS		
Baccharis pilularis	Coyote bush	Native
Lonicera interrupta	Honeysuckle	Native
Rhamnus californica	Coffeeberry	Native
Toxicodendron diversilobum	Poison-oak	Native
HERBS ALONG CREEK BANKS		
Bromus carinatus	Brome grass	Native
Crypsis schoenoides	Matgrass	Introduced
Cynodon dactylon	Bermuda grass	Introduced
Cyperus eragrostis	Umbrella sedge	Native
Lythrum hyssopifolium	Loosestrife	Introduced
Muhlenbergia rigens	Deer grass	Native
Oxalis pescaprae	Bermuda-buttercup	Introduced
Pentagramma triangularis	Goldenback fern	Native
Polypogon monspeliensis	Rabbitfoot grass	Introduced
Rumex pulcher	Fiddle dock	Native
Tropaeolum majus	Garden nasturtium	Introduced
HERBS AROUND SMALL POOLS IN THE CREEK		
Agrostis viridis	Water bent grass	Introduced
Cyperus eragrostis	Umbrella sedge	Native
Eleocharis macrostachya	Spike-rush	Native
Juncus spp.	Rushes	Native
Polypogon interruptus	Ditch beard grass	Introduced
Polypogon monspeliensis	Rabbitfoot grass	Introduced

Photo 7. View of the Sycamore Riparian Woodland looking upslope from the creek crossing.

The stream deposits and soils of a creek channels and floodplain generally consist of interbedded layers of coarse and fine sediments. Because the streams are seasonal, the channels are scoured by the winter flows and completely dry out in the summer (except for a few small pools). This sometimes opens the channel to invasion by opportunistic weeds that grow in many different kinds of disturbed environments. Some of these common weeds are listed below.

Invasive weeds

Anagallis arvensis	scarlet pimpernel	Introduced
Hirschfeldia incana	perennial mustard	Introduced
Hordeum murinum ssp. *leporinum*	foxtail barley	Introduced
Lolium multiflorum	Italian ryegrass	Introduced
Sonchus asper	prickly sow-thistle	Introduced

RARE AND ENDANGERED PLANTS

A search of rare plants known to occur within the encompassing San Luis Obispo 7.5 minute Quadrangle and in the general vicinity of the ranch property was conducted using the 2005 California Department of Fish and Game Natural Diversity Data Base: Special Vascular Plants, Bryophytes, and Lichen List

(CNDDB) and the sixth edition of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* database, which is accessible via the internet (www.cnps.org). This search revealed 18 special status plant species (Table 1) with known or probable occurrence within the encompassing quadrangle and surrounding areas. These species are sufficiently rare to have been officially accorded special conservation status by CNPS, by California Fish and Game, and/or by the U. S. Fish and Wildlife Service.

Table 1. Rare and/or Endangered Plant Species in General Vicinity of the Study Site along with Their Status and Flowering Period.

Scientific Name	Common Name	CNPS List	RED Code	State List	Federal List
Calochortus clavatus ssp. *clavatus*	Club-haired mariposa lily	4	1-1-3	None	None
Calochortus obispoensis	San Luis mariposa lily	1B	2-2-3	None	None
Calystegia subacaulis var. *episcopalis*	San Luis County morning glory	1B	3-2-3	None	None
Castilleja densiflora ssp. *obispoensis*	Obispo Indian paintbrush	1B	2-2-3	None	None
Centromadia parryi var. *congdonii*	Congdon's Tarplant	1B	3-3-3	None	None
Cirsium fontinale var. *obispoense*	Chorro Creek bog thistle	1B	3-3-3	CE	FT
Chlorogalum pomeridianum var. *minus*	Dwarf soaproot	1B	2-2-3	None	None
Chorizanthe breweri	Brewer's spineflower	1B	3-1-3	None	None
Chorizanthe palmeri	Palmer's spineflower	4	1-2-3	None	None
Dudleya abramsii ssp. *murina*	San Luis Obispo dudleya	1B	2-1-3	None	None
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	1B	2-3-2	None	None
Eryngium aristatulum var. *hooveri*	Hoover's button-celery	1B	3-3-3	None	None
Layia jonesii	Jones' layia	1B	3-2-3	None	None
Lomatium parvifolium	Small-leaved lomatium	4	1-2-3	None	None
Perideridia pringlei	Pringle's yampah	4	1-1-3	None	None
Sanicula maritima	Adobe Sanicle	1B	3-3-3	Rare	None
Sanicula hoffmannii	Hoffmann's sanicle	4	1-1-3	None	None
Senecio aphanactis	Rayless groundsel	2	3-2-1	None	None

Table 1 continued on next page.

Table 1. Continued. Rare and/or Endangered Plant Species Status Key

California Native Plant Society	California Dept of Fish & Game	U. S. Dept of Fish and Wildlife
List 1—Plants of Highest Priority: **1A**—Plants Presumed Extinct in California **1B**—Plants Rare and Endangered in California and Elsewhere **List 2**—Plants Rare or Endangered in California, but More Common Elsewhere **List 3**—Plants about which More Information is Needed **List 4**—Plants of Limited Distribution (A Watch List) **R (Rarity)** 1. Rare but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time 2. Distributed in a limited number of occurrences, occasionally more if each occurrence is small 3. Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported **E (Endangerment)** 1. Not endangered 2. Endangered in a portion of its range 3. Endangered throughout its range **D (Distribution)** 1. More or less widespread outside California 2. Rare outside California 3. Endemic to California	**Endangered Species (CE)** Plant taxa whose prospects for survival are in immediate jeopardy from one or more causes **Threatened Species (CT)** Plant taxa not presently threatened with extinction, but likely to become endangered within the foreseeable future in the absence of special protection and management efforts **Rare Species (CR)** Plant taxa not presently threatened with extinction, but occurring in such small numbers throughout its range that they may become endangered if habitat conditions worsen	**Endangered Species (FE)** Taxa in danger of extinction throughout all or a significant portion of their range **Threatened Species (FT)** Taxa likely to become endangered within the foreseeable future throughout all or a significant portion of their range **Candidate Species (C)** Taxa for which the Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species, but such action has been delayed by other listing activity

GX	**Presumed Extinct**—Believed to be extinct throughout its range. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.	**G3**	**Vulnerable**—Vulnerable globally either because very rare and local throughout its range, found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction or elimination. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
GH	**Possibly Extinct**—Known from only historical occurrences, but may nevertheless still be extant; further searching needed.	**G4**	**Apparently Secure**—Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and over 10,000 individuals.
G1	**Critically Imperiled**—Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) or acres (<2,000) or linear miles (<10).	**G5**	**Secure**—Common, widespread, and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
G2	**Imperiled**—Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction or elimination. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or linear miles (10 to 50).	**T#**	**Infraspecific Taxon (trinomial)**—The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1.

Table 2. Rare and/or Endangered Plant Species in General Vicinity of the Study Site along with Their Status, Flowering Period, and Elevation Range.

Scientific Name	Common Name	Habitat Type	Flower Period	Elevation Range
Calochortus clavatus ssp. *clavatus*	Club-haired mariposa lily	Chprl, VFGrs, CmWld, CoScr, usually on serpentinite	May to June	75-1300
Calochortus obispoensis	San Luis mariposa lily	Chprl, VFGrs, CmWld, CoScr, usually on serpentinite	May to June	75-730
Calystegia subacaulis var. *episcopalis*	San Luis County morning glory	Chprl, VFGrs, CmWld, usually on serpentinite	April to May	60-500
Castilleja densiflora ssp. *obispoensis*	Obispo Indian paintbrush	VFGrs	April	10-400
Centromadia parryi var. *congdonii*	Congdon's Tarplant	VFGrs, usually in seasonally wet depressions	June to Nov.	1-230
Chlorogalum pomeridianum var. *minus*	Dwarf soaproot	Chprl , usually on serpentinite	May to August	305-1000
Chorizanthe breweri	Brewer's spineflower	Chprl, VFGrs, CmWld, CoScr, usually serpentinite	May to August	45-800
Chorizanthe palmeri	Palmer's spineflower	Chprl, VFGrs, CmWld, CoScr, usually serpentinite	May to August	60-700
Cirsium fontinale var. *obispoense*	Chorro Creek bog thistle	Chprl, CmWld, usually in serpentine wetlands	February to July	35-365
Dudleya abramsii ssp. *murina*	San Luis Obispo dudleya	Chprl, CmWld, usually on serpentinite	May to June	90-300
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	Chprl, VFGrs, CmWld, CoScr, usually on serpentinite	April to June	4-450
Eryngium aristatulum var. *hooveri*	Hoover's button-celery	Vernal pools	July	3-45
Layia jonesii	Jones' layia	Chprl, VFGrs, usually on serpentinite or clay soils	March to May	5-400
Lomatium parvifolium	Small-leaved lomatium	Chprl, VFGrs, CCFr, CoScr, Rip, usually on serpentinite	January to June	20-700
Perideridia pringlei	Pringle's yampah	Chprl, VFGrs, CoScr, usually on serpentinite	April to July	300-1800
Sanicula maritima	Adobe Sanicle	Chprl, VFGrs, usually in serpentinite seeps or clay seeps	February to May	30-240
Sanicula hoffmannii	Hoffmann's sanicle	Chprl, VFGrs, CmWld, CoScr, Rip, usually serpentinite or clay soils	March to May	30-300
Senecio aphanactis	Rayless groundsel	Chprl, VFGrs, CmWld, CoScr, usually on alkaline soils	January to April	15-800

Rip	Riparian
CCFrs	Closed-Cone Coniferous Forest
Chprl	Chaparral
CmWld	Cismontane Woodland
CoScr	Coastal Scrub
VFGrs	Valley And Foothill Grassland

Findings Regarding Special-Status Species

After intensive searches in likely habitats, I did not find any special status plant species on the study sites; however, many of them would not be in identifiable condition during October and November. Based on habitat requirements of many of the special status species listed in Table 1, I believe I can eliminate most

because their habitats are not present on the site (e.g., serpentinite soils, clay seeps, and alkaline soils). This leaves the possibility of three rare species on the sites, which are listed below.

Scientific Name	Common Name
Calystegia subacaulis var. *episcopalis*	San Luis County morning glory
Castilleja densiflora ssp. *obispoensis*	Obispo Indian paintbrush
Sanicula hoffmannii	Hoffmann's sanicle

I believe I can also rule out the presence of *Sanicula hoffmannii* and *Calystegia subacaulis* var. *episcopalis* because I should have been able to find these two species in identifiable condition vegetatively or as dried remains. I cannot completely rule out the possible presence of *Castilleja densiflora* ssp. *obispoensis*; however, the disturbed nature of the grasslands makes it's occurrence on the site unlikely.

SENSITIVE HABITATS AND COMMUNITIES

Over 90% of the wetlands, including riparian woodlands, in California have been destroyed. This entire habitat is considered to be sensitive and in need of protection. However, the Sycamore riparian woodlands are especially uncommon and sensitive. These areas on the ranch need to be protected. Therefore, adequate buffer zones along the riparian woodlands should be established to protect this sensitive habitat

SUMMARY

Overall the two study sites have been highly disturbed historically by grazing, clearing, wood piles, dirt piles, and other human related activities that the grasslands are now dominated by many invasive, introduced species. In many cases, the rare plant habitats for the species listed in Table 1 are not present on the project sites. However, I cannot completely rule out the possible presence of Obispo Indian paintbrush, even though I think its occurrence is highly unlikely.

There are some early signs of erosion on Site 1 that should be corrected before they get worse. Development plans for the site should include proper soil erosion control methods as prescribed by the County of San Luis Obispo.

The development should establish large enough buffer zones along the creeks and riparian woodland to prevent any negative impacts (e.g. sedimentation) from occurring in the riparian areas, which are sensitive habitats. On Site 1, no disturbances should occur on the steep slope along the creek. Development should be restricted to the flat, rolling areas east of the steep slopes along the creek. On Site 2, the buffer zone should be at least 50 to 100 feet from the canopy edge of the riparian woodland. The sycamore dominated riparian woodlands on the site are a rapidly decreasing biological resource in California, are considered sensitive and rare, and should be protected. Absolutely no disturbances should occur in this community.

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Appendix 1. List of Plants found during October and November, 2005 Botanical Survey of Site 1 proposed Green Waste and Mulching System Sites, A.P.N.: 044-011-004: San Luis Obispo County, CA

TREES

Eucalyptus globulus	Blue gum	Introduced
Nicotiana glauca	Tobacco tree	Introduced
Platanus racemosa	Pacific sycamore	Native
Quercus agrifolia	Coast live oak	Native
Salix lasiolepis	Arroyo willow	Native
Schinus molle	Peruvian pepper-tree	Introduced

SHRUBS

Acacia sp.	Acacia	Introduced
Artemisia californica	California sagebrush	Native
Baccharis pilularis	Coyote bush	Native
Lonicera interrupta	Honeysuckle	Native
Opuntia ficus-indica	Mission cactus	Introduced
Rhamnus californica	Coffeeberry	Native
Ricinus communis	Castor-bean	Introduced
Salvia mellifera	Black sage	Native
Toxicodendron diversilobum	Poison-oak	Native

HERBS

Achillea millefolium	Yarrow	Native
Agrostis viridis	Water bent grass	Introduced
Ambrosia psilostachya	Western ragweed	Introduced
Anagallis arvensis	Scarlet pimpernel	Introduce
Avena barbata	Slender wild oats	Introduced
Avena fatua	Common wild oats	Introduced
Brachypodium distachyon	False brome grass	Introduced
Brassica nigra	Black mustard	Introduced
Bromus carinatus	Brome grass	Native
Bromus diandrus	Ripgut brome	Introduced
Bromus hordeaceus	Soft chess brome grass	Introduced
Bromus madritensis ssp. rubens	Red brome	Introduced
Carduus pycnocephalus	Italian thistle	Introduced
Centaurea solstitialis ?	Yellow star-thistle	Introduced
Centaurium calycosum	Purple star-thistle	Introduced
Cirsium vulgare	Bull thistle	Introduced
Crypsis schoenoides	Matgrass	Introduced
Cynodon dactylon	Bermuda grass	Introduced
Cyperus eragrostis	Umbrella sedge	Native
Eleocharis macrostachya	Spike-rush	Native
Eremocarpus setigerus	Turkey Mullen	Native
Erodium botrys	Storkbill filaree	Introduced
Erodium cicutarium	Redstem filaree	Introduced
Eschscholzia californica	California poppy	Native
Euphorbia peplus	Petty spurge	Introduce
Continued on next page		

Euphorbia sp.	Golden spurge	Introduced
Filago gallica	Herba impia	Introduced
Gastridium ventricosum	Nit grass	Introduced
Hemizonia congesta ssp. *luzuilfolia*	Hayfield tarweed	Native
Hirschfeldia incana	Perennial mustard	Introduced
Hordeum murinum ssp. leporinum	Foxtail barley	Introduced
Hypochaeris glabra	Smooth cat's ear	Introduced
Juncus bufonius	Toad rush	Native
Juncus spp.	Rushes	Native
Lactuca saligna	Slender lettuce	Introduced
Lactuca serriola	Prickly lettuce	Introduced
Lolium multiflorum	Italian ryegrass	Native
Lotus spp.	Lotus	Native
Lupinus spp.	Lupine	Native
Lythrum hyssopifolium	Loosestrife	Introduced
Malva parviflora	Mallow	Introduced
Medicago polymorpha	Bur-clover	Introduced
Muhlenbergia rigens	Deer grass	Native
Oxalis albicans ssp. pilosa	Sorrel	Introduced
Oxalis pescaprae	Bermuda-buttercup	Introduced
Pentagramma triangularis	Goldenback fern	Native
Picris echioides	Bristly ox-tongue	Introduced
Plantago erecta	Plantain	Introduced
Plantago lanceolata	English plantain	Introduced
Polypogon interruptus	Ditch beard grass	Introduced
Polypogon monspeliensis	Rabbitfoot grass	Introduced
Portulaca oleracea	Purslane	Introduced
Rumex acetosella	Sour dock	Introduced
Rumex crispus	Curly dock	Introduced
Rumex pulcher	Fiddle dock	Native
Silene gallica	Windmill pink	Introduced
Sonchus asper	Prickly sow-thistle	Introduced
Sonchus oleraceus	Common sow-thistle	Introduced
Trifolium sp.	Annual clover	Varies
Tropaeolum majus	Garden nasturtium	Introduced
Verbena lasiostachys	Vervain	Introduced
Vulpia microstachys	Small fescue	Native
Vulpia myuros	Rattail fescue	Introduced

Appendix 1. List of Plants found during October and November, 2005 Botanical Survey of Site 2 proposed Green Waste and Mulching System Sites, A.P.N.: 044-011-004: San Luis Obispo County, CA

TREES

Platanus racemosa	Pacific sycamore	Native
Salix lasiolepis	Arroyo willow	Native

SHRUBS

Baccharis pilularis	Coyote bush	Native
Rhamnus californica	Coffeeberry	Native
Toxicodendron diversilobum	Poison-oak	Native

HERBS

Achillea millefolium	Yarrow	Native
Agrostis viridis	Water bent grass	Introduced
Ambrosia psilostachya	Western ragweed	Introduced
Anagallis arvensis	Scarlet pimpernel	Introduce
Avena barbata	Slender wild oats	Introduced
Avena fatua	Common wild oats	Introduced
Brachypodium distachyon	False brome grass	Introduced
Brassica nigra	Black mustard	Introduced
Bromus carinatus	Brome grass	Native
Bromus diandrus	Ripgut brome	Introduced
Bromus hordeaceus	Soft chess brome grass	Introduced
Bromus madritensis ssp. rubens	Red brome	Introduced
Centaurea solstitialis ?	Yellow star-thistle	Introduced
Centaurium calycosum	Purple star-thistle	Introduced
Cirsium vulgare	Bull thistle	Introduced
Cynodon dactylon	Bermuda grass	Introduced
Cyperus eragrostis	Umbrella sedge	Native
Eleocharis macrostachya	Spike-rush	Native
Eremocarpus setigerus	Turkey Mullen	Native
Erodium botrys	Storkbill filaree	Introduced
Erodium cicutarium	Redstem filaree	Introduced
Eschscholzia californica	California poppy	Native
Filago gallica	Herba impia	Introduced
Gastridium vemtricosum	Nit grass	Introduced
Hemizonia congesta ssp. *luzuilfolia*	Hayfield tarweed	Native
Hirschfeldia incana	Perennial mustard	Introduced
Hordeum murinum ssp. leporinum	Foxtail barley	Introduced
Hypochaeris glabra	Smooth cat's ear	Introduced
Juncus bufonius	Toad rush	Native
Juncus spp.	Rushes	Native
Lactuca saligna	Slender lettuce	Introduced
Lactuca serriola	Prickly lettuce	Introduced
Lolium multiflorum	Italian ryegrass	Native
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Lotus spp.	Lotus	Native
Lupinus spp.	Lupine	Native
Malva parviflora	Mallow	Introduced
Medicago polymorpha	Bur-clover	Introduced
Muhlenbergia rigens	Deer grass	Native
Oxalis pescaprae	Bermuda-buttercup	Introduced
Plantago erecta	Plantain	Introduced
Plantago lanceolata	English plantain	Introduced
Polypogon interruptus	Ditch beard grass	Introduced
Polypogon monspeliensis	Rabbitfoot grass	Introduced
Rumex acetosella	Sour dock	Introduced
Rumex crispus	Curly dock	Introduced
Rumex pulcher	Fiddle dock	Native
Silene gallica	Windmill pink	Introduced
Sonchus asper	Prickly sow-thistle	Introduced
Sonchus oleraceus	Common sow-thistle	Introduced
Trifolium sp.	Annual clover	Varies
Tropaeolum majus	Garden nasturtium	Introduced
Verbena lasiostachys	Vervain	Introduced
Vulpia microstachys	Small fescue	Native
Vulpia myuros	Rattail fescue	Introduced

Archaeological Survey

CULTURAL RESOURCES

An Archaeological Survey at Two Areas of the Perozzi Ranch, Orcutt Road, San Luis Obispo, San Luis Obispo County, California

Prepared for:

The Perozzi Family Trust
c/o Ron Rinell
3972 Orcutt Road
San Luis Obispo, CA 93401

Prepared by:

Thor Conway_____

Heritage Discoveries Inc.
793 East Foothill Blvd.
Suite A, PMB#108
San Luis Obispo, CA 93405-1699

Nov. 7, 2005

Summary of Findings

Plans have been prepared for a green waste project on one of two parcels located on the Perozzi ranch northeast of Orcutt Road in the east of the City of San Luis Obispo. The Phase I archaeological surface survey for cultural resources produced negative results. It is recommended that no further archaeological studies be required for this project.

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Introduction

Plans have been developed for a new green waste project at two parcels covering approximately 100 acres located north of Orcutt Road in the east of the City of San Luis Obispo (Figures 1). This report describes an archaeological surface survey completed in October 2005. The study was completed to determine whether prehistoric or significant historic cultural resources occurred within the project area in compliance with the City of San Luis Obispo's heritage guidelines.

Thor Conway, Heritage Discoveries Inc. of San Luis Obispo, California, completed the study. Thor Conway has thirty-eight years archaeological experience across North America including sixteen years in California. Ron Rinell in San Luis Obispo supplied project plans and background information.

The Cultural Heritage of San Luis Obispo

The cultural heritage of San Luis Obispo started several thousand years ago when the first Chumash settled along the streams and foothills that now lie within the community. The city's rich cultural heritage extends from the prehistoric era, when the Chumash were the sole inhabitants, to the historic period in the late 1700's when Spanish and Mexican influences greatly changed the aboriginal way of life. After the decline of the mission era in the 1830's, San Luis Obispo gradually grew into a thriving town. For a period of over sixty years, a large population of Chinese immigrants lived in a busy Chinatown. The arrival of the railroad accelerated the growth of the commercial and residential community which included many Americans from the mid-West and further east.

Despite being one of the main centers of settlement and commerce near the central coast of California, only limited archaeological studies have taken place in San Luis Obispo. The rich history and archaeological heritage of San Luis Obispo have begun to emerge through archaeological projects in the past decade. Various cultural resource management studies have documented more prehistoric settlements along the natural waterways in the community. Mission era settlement studies have continued, while the expansion of the community in the late 1800's and the parallel development of nearby ranches have been identified as heritage themes.

Sources Consulted

A search was made for pertinent background information relating to prehistoric and historic land use in and near the project area. Archaeological records from the Central Coast Information Center of the California Historical Resources Information System at the University of California at Santa Barbara included recorded archaeological sites and surveys within a one mile radius of the study area. The results showed that the specific study area had never been subject to an archaeological survey; but several surface surveys have taken place within a mile of the study area. One prehistoric site exists near the study area.

Ethnography

The entire San Luis Obispo area, including the project area, was home to the Northern Chumash, or *Obispeno*, for over 9,000 years. The earliest recorded visit to an *Obispeno* village took place in 1595 when the Spanish sailed into San Luis Obispo Bay under the command of Cermeno. He anchored in front of the premiere village named *Sepjato* which was located at the mouth of San Luis Obispo Creek on the hill now occupied by the San Luis Bay Inn. The Spanish account noted that these Indians "... are fishermen and there is fish and some shell–fish with which they sustain themselves"—a statement which applied to the descendants of this village who resided at the San Luis Obispo mission two hundred years later (Wagner, 1929: 161).

By the time of the Spanish expansion into California at the end of the 1700's, Chief Buchon lived at *Sepjato* and held the status of a grand–chief leader of several villages in the greater San Luis Obispo area from Avila to Pismo Beach to Morro Bay.

The area that became the community San Luis Obispo re–entered the historic era on September 1st, 1772 when the first mission was founded beside San Luis Obispo Creek. This first mission within Chumash territory gradually expanded in size and importance. In its first decade, some Obispeno Chumash were dissatisfied with the mission and attempted to burn it down (Kocher, 1972). The influence of the mission increased in the 1780's when Pedro Fages reported that the Indians at the San Luis Obispo mission "...have readily adapted themselves to what it was sought to teach them" (Englehardt, 1933: 39). Judging from the mission records listing the number of Indians recruited by this mission, in 1803 most of the numerous Obispeno Chumash groups had moved away from their traditional villages to the vicinity of the mission (King, 1984: 14).

Archaeology

Archaeologists have established a detailed cultural chronology based upon excavations and site surveys across the county (Greenwood, 1972; Gibson, 1979). Over 2,400 archaeological sites have been recorded in San Luis Obispo County, although many of these heritage resources have been destroyed or damaged by development.

The prehistory of the Northern Chumash follows the same chronological outline of three basic periods sub-divided into numerous phases established for the Santa Barbara region (King, 1981). The main periods-Early, Middle, and Late-cover over 9,000 years of social, economic, and technological adaptations to central and southern California's climate and resources.

The Early Period generally dates between 7,500 B.C. for the Northern Chumash, a site at Diablo canyon, CA-SLO-2, was dated to the era between 8,900 and 9,300 years ago (Greenwood, 1972). The important Lodge Hill site in Cambria also has a substantial Early Period component which has been radio-carbon dated to 8,000 years ago. It shows extensive use of local raw materials and coastal marine food resources (Pierce, 1979; Gibson, 1979b; Conway, 1995). At least 37 Early Period sites have been recorded in San Luis Obispo County (Gibson, 1994).

Early Period sites often contain milling stones and manos indicating extensive use of seed plants. A basic array of rectangular shell bead ornaments also occurs throughout the Early Period. Village life was organized with formal cemeteries and specialized resource sites being used.

The Middle Period of Chumash prehistory spans the centuries between 500 B.C. and 1150 A.D. At this point in time, Chumash society shifted into a very organized state with hereditary rights to political and religious power. Artifact types change in the Middle Period and shell ornaments become more diverse. An important economic adaptation, the use of acorns, is indicated by the decline in milling stones and the increased use of mortars and pestles. Populations in size and trade networks become very well established.

The Late Period covers the years between 1150 A.D. and 1805 A.D. Economic changes continued within the Chumash world. Bead jewelry indicates that there were divisions in wealth between family lines. Money was invented and extensively used as an indication of political as well as economic power. The long process of localized adaptation evident throughout Chumash prehistory

became even more established. With the arrival of the Spanish, especially after 1769 A.D., rapid changes altered Chumash political and economic achievements as well as reducing the size of the population. By the end of the Mission era, the Chumash continued to live on their ancestral lands; but their former cultural achievements were largely changed forever. Many contemporary Chumash maintain spiritual and cultural links to their rich heritage.

History

Despite being one of the main centers of settlement and commerce near the central coast of California, only limited archaeological studies have taken place in San Luis Obispo. The rich history of San Luis Obispo has begun to emerge through archaeological research in the past decade. Various cultural resource management projects have documented prehistoric and early historic Chumash settlements (Gibson, 1986), mission era settlement, the growth of the community in the late 1800's, and related heritage themes (Bertrando, 1994; Singer et al., 1990 & 1993) and local heritage themes including the mission era Chumash, Chinatown and the saloon era (Conway, 1995).

Historians have studied the growth and development of San Luis Obispo (Angel, 1883; Krieger, 1988). In addition, local histories concerning the economic development of San Luis Obispo and the importance of the Southern Pacific Railway in the expansion of the community and California were consulted (Best, 1964; Nicholson, 1980; Wilson & Taylor, 1952).

Archaeological Survey Methods

The Phase I archaeological work was designed to answer several basic questions about the presence or absence of prehistoric sites in the two adjacent study areas (Figure 1). The primary goals included:

1.) Determine the presence or absence or heritage resources within the study area.
2.) If archaeological sites are present, establish their surface boundaries.
3.) Generate planning recommendations for managing or mitigating potential impacts to heritage resources.

The Phase I study of the potential green waste project areas on the Perozzi ranch used basic archaeological field methods including a systematic surface survey at three meter intervals. Any archaeological materials found during the survey would be mapped onto the project plans.

Field Methods

A detailed archaeological surface survey was made of the approximately 100 acres in the two study areas on several days in October 2005 by walking the project area at three meter intervals. Thor Conway and Julie Conway of Heritage Discoveries Inc. of San Luis Obispo did the fieldwork and reporting. The project area lies immediately east of the City of San Luis Obispo (Figure 1). The study area is situated northeast of Orcutt Road. Surface visibility for the study area was good with 50% visibility for archaeological assessment.

The first study area is a moderately sloped field setting east of an unnamed drainage (Figure 1). The study area has been subject to past impacts including removal of native vegetation and placement of fill soils in some areas. Sufficient native soils were visible for the survey. The surface survey produced negative results for the presence of cultural resources.

The second study area is located immediately east of another unnamed drainage and east of the main access road on this part of the ranch (Figure 1). While parts of the study area lies within one hundred meters of a barn, no historic materials were present. The study area is open fields and cattle pastures. The topography varies from knolls and moderate slopes to level areas. Visibility was very good. The archaeological surface survey gave negative results for the presence of heritage resources in this area as well.

Findings & Conclusions

The Phase I archaeological surface surveys for a green waste project on a portion of the Perozzi ranch east of San Luis Obispo produced negative results for the presence of archaeological sites. It is recommended that no further archaeological studies be required for this project.

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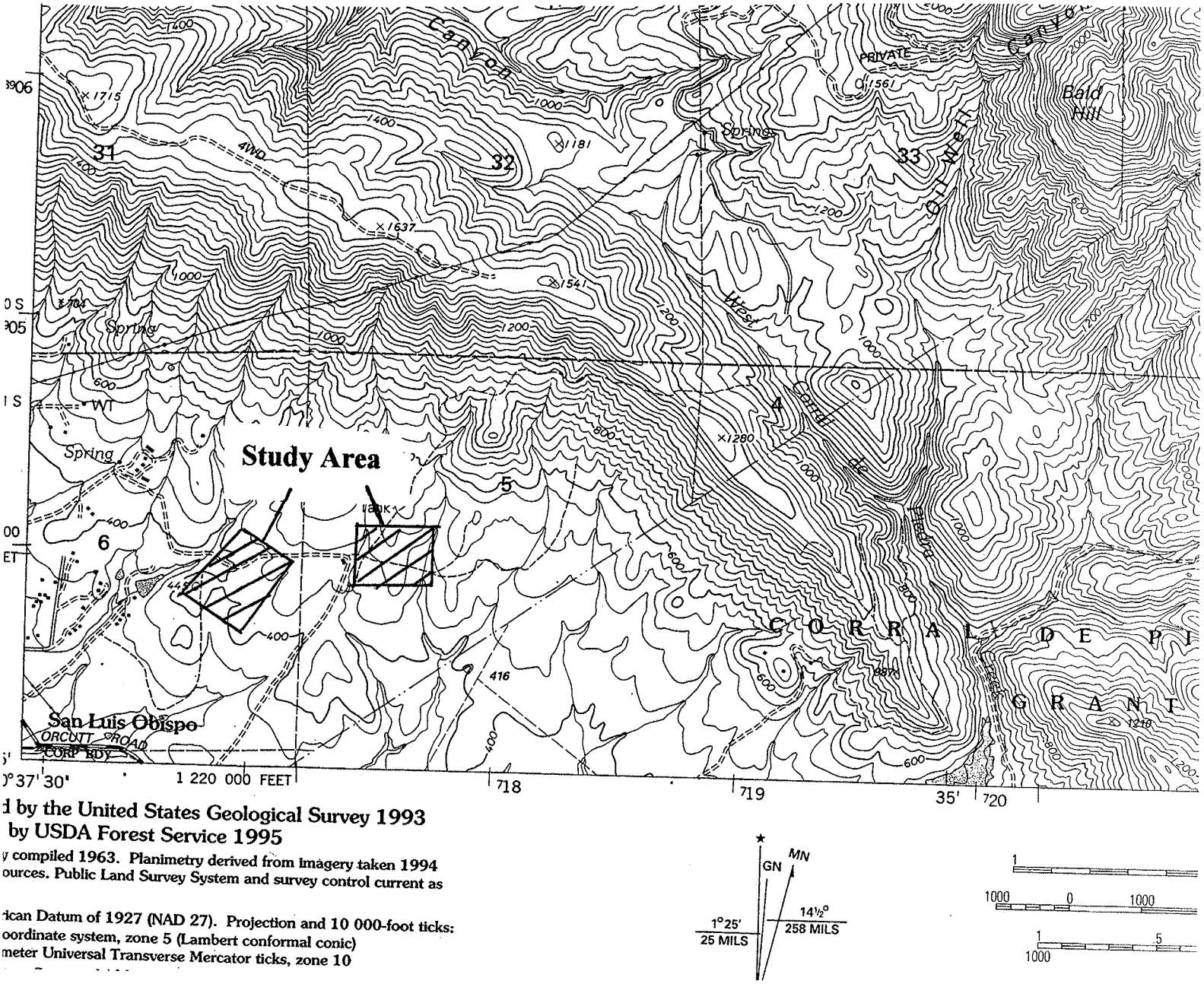

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Figure 1—Location of the archaeological survey area east of San Luis Obispo (Lopez Mountain, CA Quad.).

GROUNDWATER RESOURCES

"DESIGN LEVEL" HYDROGEOLOGIC STUDY

GREEN WASTE PROCESSING FACILITY

PEROZZI RANCH
4200 ORCUTT ROAD
SAN LUIS OBISPO
SAN LUIS OBISPO COUNTY, CALIFORNIA

FEBRUARY 2013

Cleath-Harris Geologists, Inc.
11545 Los Osos Valley Road, Suite C-3
San Luis Obispo, California 93405
(805) 543-1413

INTRODUCTION

Bunyon Brothers Tree Service proposes to establish a green waste processing facility at the Perozzi Ranch on Orcutt Road east of San Luis Obispo, parcels 044-011-004 & 029 (Figure 1). The ranch covers an area of 1100 acres. The two parcels within the ranch where the compost operations are to occur have an area of 567 acres. The proposed green waste processing facility is planned to process maximum load of 300 tons (500 cubic yards) per day of compostable material. Pursuant to the recommended scope for this report from the County Geologist, the water (hydrologic) budget for the project, the site water containment and reuse, and the project impacts on water resources are addressed in this "Design Level" hydrogeologic study.

The water demand for the project and the water supply sources that would serve this project were previously described in a report prepared by Cleath-Harris Geologists (CHG) dated November 8, 2010. report. In August 26, 2011, a water supply system diagram was provided to Bunyon Brothers and has been incorporated into the project plans prepared by Steel Building Engineering (2009, sheet C-1). The water supply sources include springs presented in these documents and two other springs that have since been developed.

This report revises the findings of this previous report based on new information. The new information includes additional spring flow measurements, information from the Cold Canyon Landfill presented in the Cold Canyon Landfill Expansion Environmental Impact Report (CCLE EIR; Morro Group, 2009) on dust control requirements, and a recommended water application plan for the composting operation by Steven Sherman, Master Composter, at California State Polytechnic University (included in the Appendix).

PROJECT DESCRIPTION

The proposed project design has been submitted by Bunyon Brothers. This design includes two composting areas, each with a holding pond that would receive runoff from the bermed composting areas. The total project area is approximately 5.5 acres of the 567 acres on the ranch parcels. The compostable material is placed in windrows that contain up to 500 cubic yards each. The compostable material is a combination of woody material, horse manure, and "grind". The period of active composting takes 42 days. After active composting of the feedstock, the compost is stored for six months to complete the overall composting process.

The project is proposed to be developed in two phases, with the influx of material increasing with time. As noted in the CCLE EIR, the amount of compostable material processed at CCLE prior to the proposed expansion was 100 tons per day. The proposed project is anticipated to have this same influx of material once the operation is established and to reach a maximum capacity of 300 tons per day.

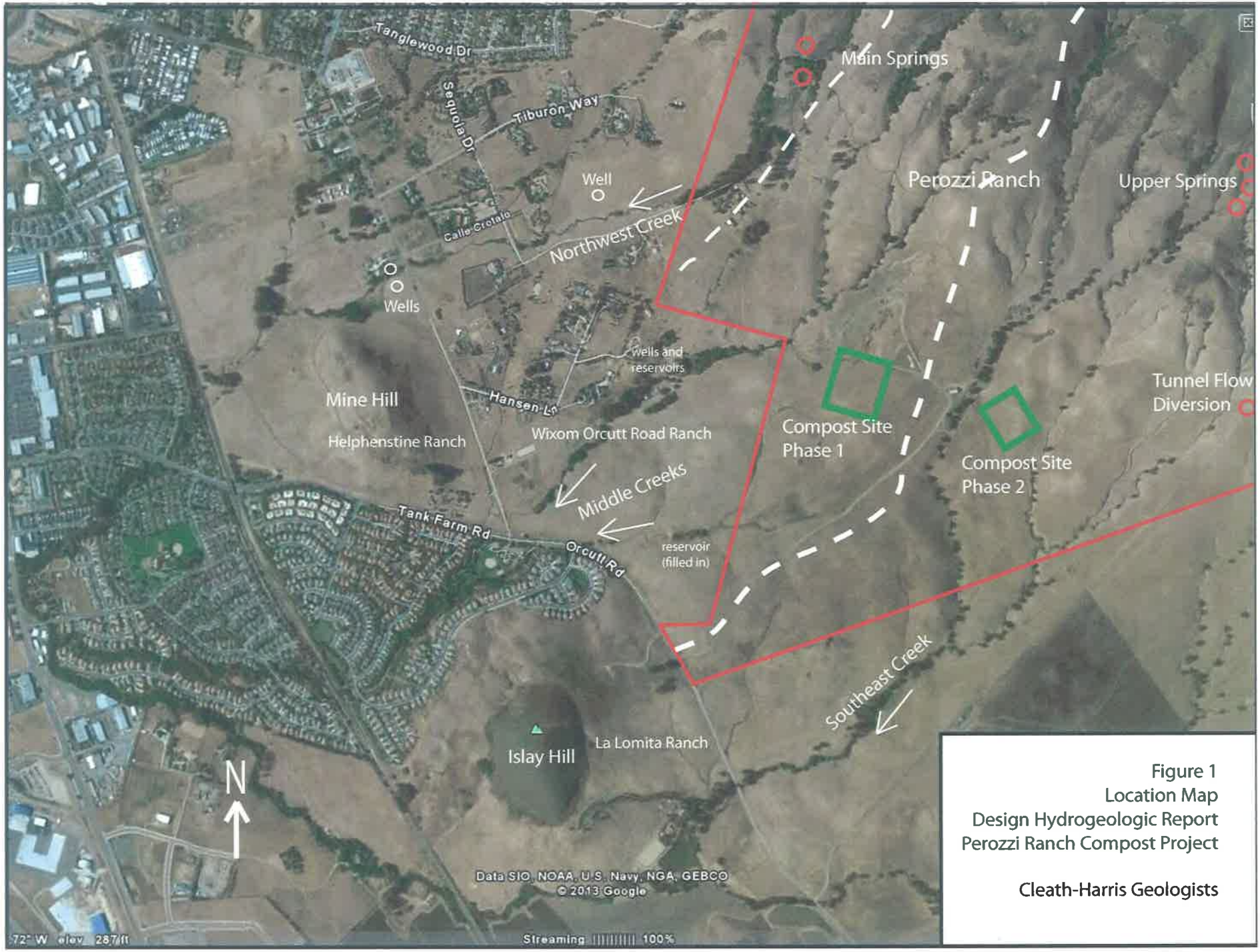

Figure 1
Location Map
Design Hydrogeologic Report
Perozzi Ranch Compost Project

Cleath-Harris Geologists

Oblique photo: Approximate Scale 1"= 1300'

For purposes of evaluating water system reliability and impacts, the full development of the project is assumed to occur. Water supply and demand are also evaluated under dry conditions that result in lower amounts of water from the proposed sources.

PROJECT WATER BUDGET

This study includes a water budget that quantifies (1) the water demand of the composting process and the domestic facilities; (2) the water supply sources; and (3) the recirculating system that handles wastewater and surface water runoff in the compost areas at buildout conditions during average and dry years.

This green waste processing facility would use on-site sources of water to meet the non-potable water demands of the project and would provide bottled water to meet drinking water uses. The on-site sources have been used for ranching purposes that have included stock watering, a residence and ranch buildings.

Water Demand

Water in the processing facilities is used for wetting the green waste, for dust control, and for employee potable water uses. In light of the absence of potable water sources, the potable water demands would be met by bottled water. Wastewater would be handled through chemical toilets with off-site disposal.

The previous water source study estimated the project water demand based on information from the Cold Canyon landfill composting operation. The water demand was projected at 40 acre-feet of water under buildout conditions (one acre-foot equals 325,851 gallons).

The proposed project is based on the composting procedures developed by Steven Sherman. Steven Sherman has been managing the composting operations at Cal Poly for many years and is a "master composter". Mr. Sherman has provided a schedule for watering the compostable feedstock, assuming no rainfall. Upon initial receipt of the daily delivered load of feedstock, 400 cubic yards of feedstock are placed as a windrow in the composting area (200 feet long by 15 feet wide by 7 feet high) and is wetted with 12,000 gallons of water. At the beginning of the next five weeks (Day 8, 15, 22, 29, and 36), 5,000 gallons of water are added to the feedstock to maintain moisture levels and offset evaporation. A new windrow is established each day and wetted, following the same procedure. After 42 days, the amount of water that is required will be at the maximum amount of 37,000 gallons per day, or 25.7 gallons per minute (gpm). This corresponds to one new windrow application of 12,000 gallons and five weekly applications of 5,000 gallons at those windrows that have reach days 8, 15, 22, 29 and 36. A spreadsheet is attached that illustrates the watering schedule.

As at Cold Canyon Landfill, some water will be required for dust suppression at the stockpiled compost and along traffic routes. The CCLE EIR estimated that this would require 8600 gallons per day (6 gpm) for a similar type of facility.

The domestic uses will be limited to hand washing and incidental uses. With one to two employees at the site, this water amount will be minimal. We estimate that this water demand would be approximately 100 gallons per day.

The total maximum daily water demand for the project is estimated at 45,700 gallons (31.7 gpm) or 51 acre-feet per year.

Rainfall Contribution

Annual water demand will vary depending on rainfall frequency and amounts. Rainfall in this area either falls on the windrows (that is mostly absorbed) or on hardscape that runoffs into the holding ponds. This rainfall absorption, and runoff collection and use reduce the water demand from the spring sources. This consideration was noted but not calculated in the water source report (CHG, 2010).

Average annual rainfall at the Perozzi Ranch gage is 21.95 inches per year. The total water from rainfall in the bermed compost area (5.5 acres) during an average year would be 10 acre-feet. Of this amount, a portion of the water will offset water demand for the project and a portion is lost to evaporation. For purposes of estimating the benefit from the use of rainfall for the project, we assume that the daily rainfall that equals or is less than 0.25 inches is lost to evaporation. Based on an analysis of the data for the San Luis Obispo County Airport rain gage, this reduction in rainfall amounts to approximately 1/3 of the total rainfall, leaving 2/3 of the rainfall that can be used for the project, or 6.6 acre-feet.

For a drought year, such as 1990 when 9.25 inches of rain occurred, 2.3 acre-feet (25 percent) of water from rainfall would have been available for use under the same conditions.

Reducing the total maximum daily demand by the available rainfall results in an average demand of 44.4 acre-feet per year in an average year and 48.7 acre-feet in a drought year.

Water Supply

The sources of water on the Perozzi Ranch are springs that flow out of the hill above the proposed project site. These have been described in the water source report (CHG 2010).

The annual spring diversion flow, based on the Fall 2010 measurements (34 gpm) and described in the water source report, would amount to 54.8 acre-feet per year. Spring flow can be expected to be higher during the other parts of the year, so this figure represents a minimum flow amount.

Additional springs exist on the ranch that can maintain water supply to the ranch for all other current water uses and to augment the project water sources. These springs include water from a pipeline that carries water from the State Water Project pipeline bore and two newly developed springs near the Upper Spring. These springs were visited this past fall and the flow from each spring was measured. The total flow from the two new springs is 2 gpm. The flow from the tunnel spring when it was allowed to flow for an extended duration during the construction of the tunnel was 6.7 gpm. This tunnel diversion has been sealed and is piped to a valve. The water is under a pressure of about 40 pounds per square inch, and when the valve is opened flow is at a much higher discharge rate. As the flow continues, the discharge rate will decline as pressure declines, ultimately dropping to a flow similar to that measured during the construction. Therefore, for purposes of estimating available flow from this source, the flow during pipeline construction is used. The total flow from these sources can be expected to be at least 8 gpm (12.9 acre-feet per year).

The total minimum flow from the observed springs on the ranch is estimated at 67.6 acre-feet per year.

Reliability of Water Supply

Based on the project water budget calculations (the Fall season measured spring flows and the water demand developed by Steve Sherman), the springs provide a reliable source of water to meet the demands with a 40 percent higher flow rate than the maximum demand under buildout conditions during a drought year (67.6 acre-feet produced water/48.7 acre-feet demand). This water supply is independent of the sources for the ranch uses.

WATER RESOURCE IMPACTS FROM PROJECT

The project areas and water supply sources are not in a groundwater basin. The water resources utilized and impacted by the proposed project are surface waters. These surface waters are described and the potential impacts from the project are assessed herein. The potential impacts from the project related to water resources include a reduction of water supply available to downstream users and water quality degradation of stream flow.

Description of Potentially Impacted Streams

The Perozzi Ranch is drained by seasonally flowing creeks that are tributaries of the Eastern Fork of San Luis Obispo Creek. There are four unnamed creek watersheds on the ranch that are within the project area. For purposes of this assessment, these unnamed creeks are called the Northwest Creek, the Middle Creeks, and the Southeast Creek (Figure 1). These tributary creeks join together downstream of the property near Broad Street (State Route 227) south of Tank Farm Road. The proposed project water supply comes from springs that are in the watershed

areas that drain to the Northwest and Southeast Creeks and from runoff at the compost areas that are within the watersheds of the Middle and Southeast Creeks.

Northwest Creek

The main spring area serving the project is in the watershed of the Northwest Creek. The main springs drain either directly to a small ranch reservoir or to a partially buried cement block reservoir that overflows into the small ranch reservoir. Overflow and seepage through the ranch reservoir results in an area of saturated soils that weeps water into the Northwest Creek channel.

The Northwestern Creek downstream of the ranch reservoir was observed on January 30, 2013. The stream was flowing at about 10-15 gallons per minute in the creek from downstream of the wet area below the dam to the Perozzi Ranch property line. There is an inactive stream flow diversion downstream of the property line that formerly provided water for stockwatering but this is no longer in use. Downstream of the property line to the Orcutt Road culvert, there were no areas of stream flow in this creek but there were puddles and ponds observed in creek bed depressions. Bedrock was exposed along the creek bed in several places, suggesting that there is minimal underflow occurring beneath the creek channel along the observed reach of the stream channel. The creek channel corridor downstream from the Perozzi Ranch has no sycamore trees and very few areas of willows. There is a windrow of eucalyptus on the Perozzi Ranch reach of the creek.

Southwest from Orcutt Road, the northwest creek channel courses across the ranch land northwest of Mine Hill.

Middle Creeks

There are two creeks that drain smaller watersheds within the middle of the Perozzi Ranch. The northwestern "middle creek" is the larger of the two and drains a watershed area that reaches the top of the serpentinite hill, where springs issue into the upper hillside drainageways. The southeastern middle creek drains a much smaller watershed in the lower portion of the ranch. There are only minor seeps within the southwestern "middle creek". The two "middle creeks" come together a few hundred feet west of Orcutt Road and flow through the gap between Mine Hill and Islay Hill. No springs within these watersheds are diverted for the project but the Phase 1 composting site is located within these watersheds. The holding pond for the Phase 1 composting area retains project runoff water within the watersheds of the "middle creeks". The compost area is separated from the riparian corridors along these creeks by a containment berm.

Southeast Creek

The Southeast Creek receives water from several hillside tributaries on the ranch. Several springs issue from the serpentinite hill into these tributaries. These tributaries come together into

the Southeast Creek a short distance downstream from the ranch property line and flows through the valley south of Islay Hill. The proposed project facilities within the Southeast Creek watershed include the Upper Springs, the Tunnel Diversion, and the Compost Site for Phase 2.

Impacts to Downstream Surface Water Users

There are only a few parcels where surface water can be used before the streams flow into the City limits, where water supply is met by the municipal water system.

Northwest Creek

The Northwest Creek flows from the Perozzi Ranch into the Perozzi Tract, thence onto the Helphenstine property before entering the City limits.

The Perozzi Tract residential development is served by its own mutual water company (Afuera del Chorro Mutual Water Company) that provides water from deep wells. The closest well to the Northwest Creek in the Perozzi Tract is a few hundred feet from the creek. This well produces high boron water from fractured rock at depth and is reportedly not in use (personal communication with Tim Perozzi). There does not appear to be any significant impact to the water company wells in light of the fact that the deep wells are completed into Franciscan Assemblage bedrock a few hundred feet or more distant from the creek.

Downstream of Orcutt Road and upstream from the City limits along the railroad right of way, there are a couple of properties that use shallow wells for residential use that are adjacent to the Northwest Creek. The stream flow likely recharges these shallow domestic wells. Based on the observations made on this creek during this current winter, the duration of Northwest Creek flow at Orcutt Road that results in groundwater recharge is primarily from runoff during rainfall events. Therefore, the contribution to recharge to the shallow groundwater tapped by wells at Orcutt Road from the base stream flow originating in the main springs on the Perozzi Ranch should not be significant.

Middle Creeks

The Middle Creeks include the northwestern creek that flows through the Wixom Orcutt Road Ranch, through a corner of the Helphenstine property and into the City at Orcutt Road and a southeastern creek that flows from the compost area on the Perozzi Ranch, thence downstream across the Wixom Orcutt Road Ranch (APN 044-411-019) and into the City at Orcutt Road. The Wixom Orcutt Road Ranch where these intermittent streams traverse down-stream of the Perozzi Ranch obtains water from wells and reservoirs. There are two hand dug wells (10 and 19 feet deep, respectively) and two drilled wells (120 and 312 feet deep, respectively). There are also two reservoirs on forks of the northwestern creek and one sediment-filled reservoir on the southeastern creek. The only reductions in flow relate to retained water caught on the Phase I 3-

acre compost area. In light of the fact that the only change in flow to the water on the Wixom and Helphenstine properties is that drainage on the compost area (approximately 2.5 acres) is contained, there does not appear to be a significant impact to the Wixom Orcutt Road Ranch.

Southeast Creek

The Southeast Creek flows from the Perozzi Ranch across a property east of Orcutt Road and thence onto the La Lomita Ranch property. Within the watershed of this creek, the proposed project would tap the Upper Springs (three springs from up on the hill) and the tunnel flow diversion to an existing rock lined water reservoir and thence to the two compost sites, one of which is in the same watershed area. The tunnel flow diversion is a horizontal well, tapping groundwater deep in the hill. The water from the tunnel flow diversion is water that does not naturally flow into the creek from springs and therefore it's use should have no influence on spring-fed stream flow. The use of the Upper Springs will reduce flow in the Southeast Creek, when there is sufficient flow in the creek from these springs to get down to the property line. There are also other springs on the hillside that flow into this creek. The proposed project could use up to 4 gpm of water from these springs. Based on observations in the Northwest Creek and a review of aerial photography from previous years, this amount of water would probably not be enough to make it to the Perozzi property boundary before being lost to evaporation and percolation. The Phase 2 compost site is in the southeastern creek watershed. Drainage on this 2.5-acre compost area will be retained and result in a very small reduction in runoff to the down-stream users.

Considering the source of the tunnel flow diversion, the relatively low amount of water diverted from the Upper Springs and the limited area of the Phase 2 Compost area, the impact to stream flow in the Southeast Creek and downstream water users should not be significant.

Water Quality Impacts

Water quality impacts could include the degradation of waters adjacent to or underlying the compost areas due to migration of minerals from the compost materials off of the project compost areas. Salts may be concentrated on the project area from domestic uses and the minerals in the spring water that is applied on the compost areas. The compost materials include woody material and horse manure that contain carbon, nitrogen, phosphorous, potassium, other minerals/salts, and zinc and iron micronutrients. All surface water on the compost areas will be contained in the holding ponds. The compost pile areas are underlain by shallow soils on Franciscan Assemblage bedrock. The clayey soils (Los Osos-Diablo complex, 5-9 percent slopes) have slow permeability that will restrict the percolation of surface water. The Franciscan Assemblage bedrock is comprised of low permeability consolidated metasedimentary rocks that are not water-bearing. The produced compost (that contains the minerals from the composted materials) will trucked off-site to customers and dispersed. Therefore, no significant water quality impacts to surface water or groundwater will occur from this project.

CONCLUSION

In response to the County's request for a Design Level Hydrogeologic Study that includes a water balance and a water impact study, Cleath-Harris Geologists has prepared this document. Based on the hydrologic balance and the proposed project demand, there is sufficient water to meet the needs of the project. The impacts to down-stream water users are not significant. There will be no significant water quality impacts from the project.

Sincerely,

Timothy S. Cleath, CHg #81
President

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APPENDIX

Bunyon Bros. Tree Service

12/31/12

Ron Rinell

Recommendations for volume of water needed to start and sustain a 500-cubic yard windrow of feedstock for 6 weeks.

To initiate the composting process, on day one, add 12,000 gallons of water to the 500-cubic yard windrow of feedstock. Every 7 days later, increase the volume of water by 5,000 gallons.

Day 1 - Add 12,000 gallons of water to the composting windrow.

Day 8 - Add 5,000 gallons of water to the composting windrow.

Day 15 - Add 5,000 gallons of water to the composting windrow.

Day 22 - Add 5,000 gallons of water to the composting windrow.

Day 29 - Add 5,000 gallons of water to the composting windrow

Day 36 - Add 5,000 gallons of water to the composting windrow.

This recommendation is based on my experience and the methods I use at Cal Poly State University San Luis Obispo, CA Compost Operations.

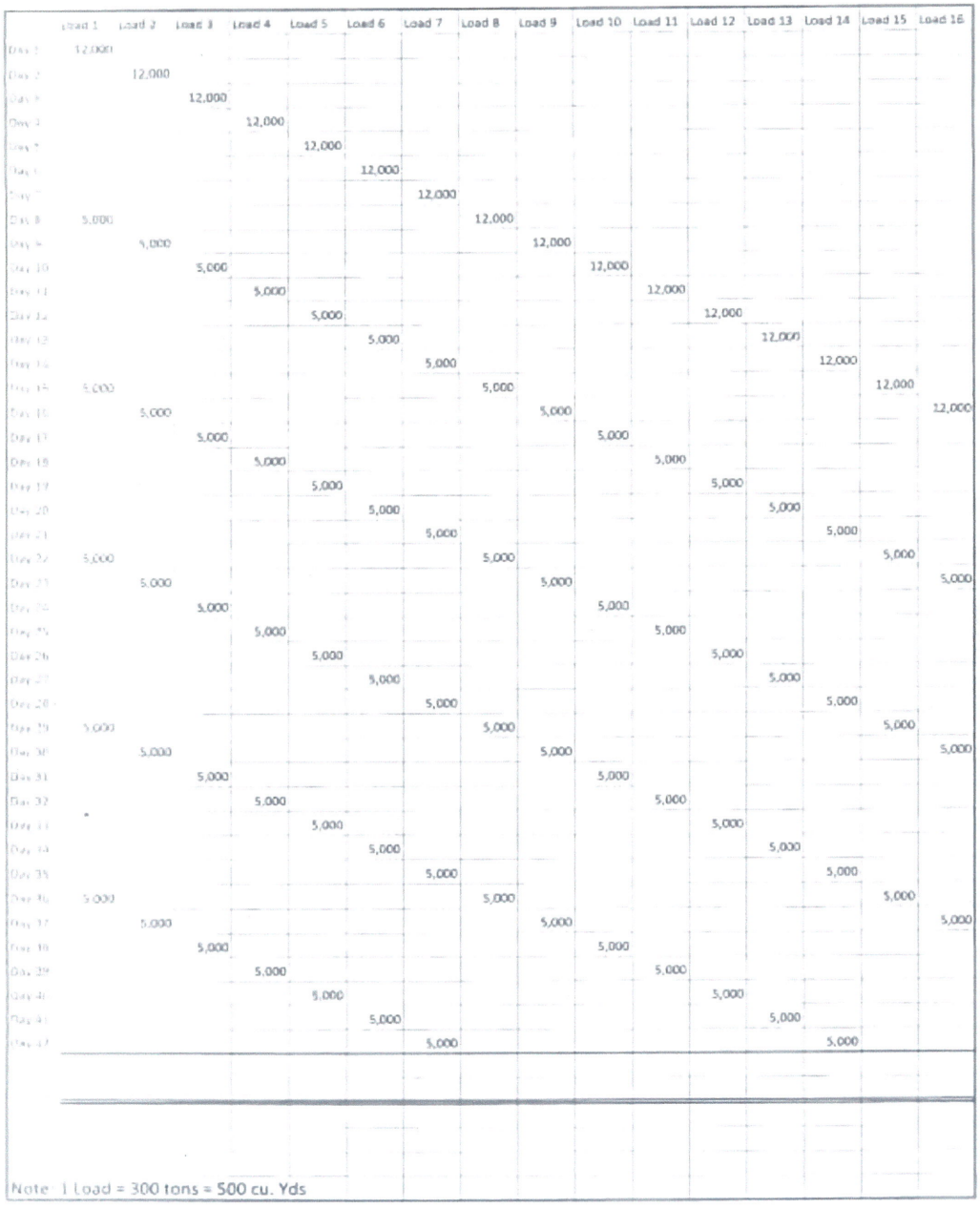
Steven E. Sherman

Master Composter, Compost Consultant, University of Main Compost School, Composting Site Manager, Cal Poly State University, San Luis Obispo, CA

design level by

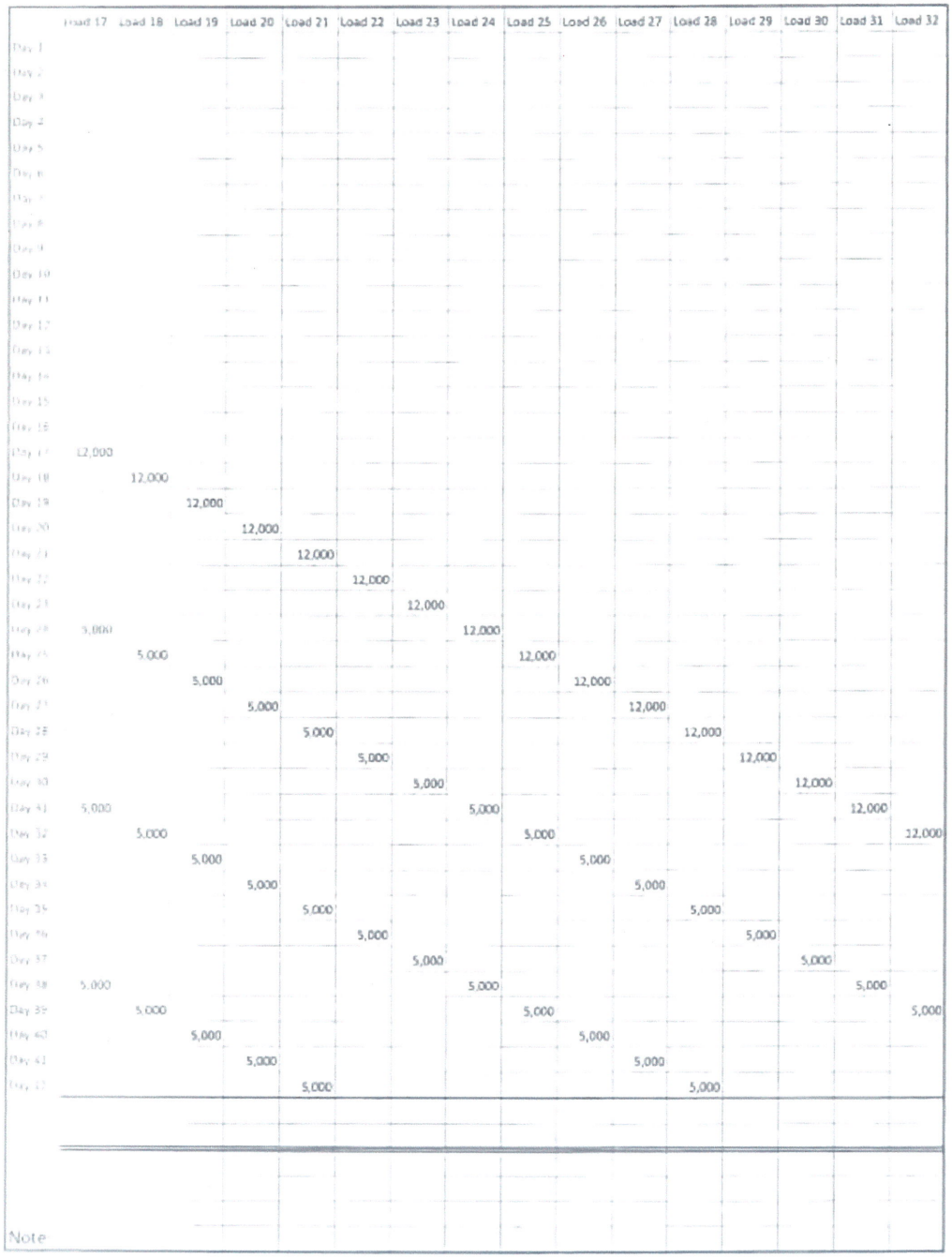
Green Waste

Water Usage in Gallons Per Day at Peak Performance



Green Waste

Water Usage in Gallons Per Day at Peak Performance



Green Waste

Water Usage in Gallons Per Day at Peak Performance

	Load 33	Load 34	Load 35	Load 36	Load 37	Load 38	Load 39	Load 40	Load 41	Load 42	TOTAL
Day 1											12,000
Day 2											12,000
Day 3											12,000
Day 4											12,000
Day 5											12,000
Day 6											12,000
Day 7											12,000
Day 8											17,000
Day 9											17,000
Day 10											17,000
Day 11											17,000
Day 12											17,000
Day 13											17,000
Day 14											17,000
Day 15											22,000
Day 16											22,000
Day 17											22,000
Day 18											22,000
Day 19											22,000
Day 20											22,000
Day 21											22,000
Day 22											27,000
Day 23											27,000
Day 24											27,000
Day 25											27,000
Day 26											27,000
Day 27											27,000
Day 28											27,000
Day 29											32,000
Day 30											32,000
Day 31											32,000
Day 32											32,000
Day 33	12,000										32,000
Day 34		12,000									32,000
Day 35			12,000								32,000
Day 36				12,000							37,000
Day 37					12,000						37,000
Day 38						12,000					37,000
Day 39							12,000				37,000
Day 40	5,000							12,000			37,000
Day 41		5,000							12000		37,000
Day 42			5,000							12000	37,000
											1,029,000

Note

design level hy

TRAFFIC AND CIRCULATION

ASSOCIATED TRANSPORTATION ENGINEERS
100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • FAX (805) 682-8509

Since 1978

Richard L. Pool, P.E.
Scott A. Schell, AICP, PTP

November 28, 2012 12097L01.WP

Joseph Boud
Joseph Boud & Associates
1009 Morro Street, Suite 202
San Luis Obispo, CA 93401

TRAFFIC STUDY FOR THE BUNYON BROTHERS/PEROZZI COMPOSTING FACILITY PROJECT, COUNTY OF SAN LUIS OBISPO

Associated Transportation Engineers (ATE) has prepared the following traffic study for the Bunyon Brothers/Perozzi Composting Facility Project proposed in San Luis Obispo County. It is understood that the study will be submitted to the County for review.

PROJECT DESCRIPTION

The Bunyon Brothers/Perozzi Composting Facility Project site is located at 4400 Orcutt Road in the County of San Luis Obispo. Figure 1 shows the location of the site within the San Luis Obispo area. The project is requesting to receive a maximum of 300 tons per day of green waste material for composting. The composting operation would serve incoming tree waste from Bunyon Brothers Tree Service, other tree trimming contractors, as well as green waste from local municipal waste collectors. The finished product would include compost soil amendment, firewood and wood mulch. The project is proposed to operate 6 days per week (Monday-Saturday) and would be staffed by 2 employees. Hours of operations are proposed between 9 A.M. and 3 P.M. Access is proposed via an existing driveway connection on Orcutt Road. Figure 2 shows the existing driveway connection.

SCOPE OF WORK

The scope of work addressed in this traffic study was developed based on input provided by County staff (Glenn Marshall, Public Works). The County requested analyses of the following:

- Existing Conditions along Orcutt Road
- Project Trip Generation
- Percentage of Trucks on Orcutt Road (existing and proposed)
- Driveway Sight Distance Analysis
- Orcutt Road Left-Turn Lane Warrant Analysis

EXISTING CONDITIONS

Access to the site would be taken from an existing driveway connection on Orcutt Road. Orcutt Road extends easterly from Broad Street to Johnson Road and then turns southerly and extends between Johnson Road and Tank Farm Road. Orcutt Road continues southeasterly to its terminus at Lopez Drive near the Lopez Reservoir. As shown on Figure 1, the project's driveway connects to this segment of Orcutt Road. Orcutt Road is a two-lane facility adjacent to the site with standard 12-foot lanes and 8-foot shoulders.

Traffic volumes and vehicle speeds were measured on the segment of Orcutt Road adjacent to the site in November 2012 for this study (data attached). The traffic counts show that Orcutt Road carries about 3,200 average daily trips (ADT), with about 270 vehicles per hour during the A.M. peak hour (1-hour with highest traffic volume between 7 A.M. and 9 A.M) and 335 vehicles per hour during the P.M. peak hour (1-hour with highest traffic volume between 4 P.M. and 6 P.M). The traffic counts show that less than 1% of the volume is comprised of trucks with 3 or more axles. Based on standard engineering design capacities, the existing traffic volumes show that Orcutt Road operates at LOS A adjacent to the site. Field review also found that traffic is relatively light on Orcutt Road and speeds are free flow, also indicating LOS A operations. The speed data shows an average speed of 42-43 MPH with an 85th percentile speed of 50 MPH (85% of vehicles travel at 50 MPH or less).

PROJECT TRIP GENERATION

Trip generation estimates were developed for the Bunyon Brothers/Perozzi Composting Facility Project using the trip generation analyses included in the Cold Canyon Landfill Expansion Project.[1] The EIR prepared for the Cold Canyon Landfill Expansion Project includes traffic analyses of a composting facility similar to the proposed Bunyon Brothers/Perozzi composting facility (import of green waste from contractors and municipal waste haulers and export of finished product). Ultimately, the composting element of the Cold Canyon Landfill Expansion Project was removed from the landfill expansion project.

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[1] Cold Canyon Landfill Expansion FEIR, SWCA Environmental Consultants, May 2012.

The Cold Canyon Landfill Expansion Project FEIR estimated a total of 192 ADT for the composting component proposed on that site (including employees, import of materials, and export of finished product). The trip generation analysis prepared for the Cold Canyon Landfill composting facility was based on a maximum import of 450 tons per day, while the Bunyon Brothers/Perozzi composting facility is proposed with a maximum of 300 tons per day. The traffic forecast for the Cold Canyon Landfill composting facility equates to a trip rate of 0.43 trips per ton. Applying this trip rate to the 300 ton per day maximum allowable tonnage proposed for the Bunyon Brothers/Perozzi composting facility equates to 129 ADT (0.43 trips per ton x 300 tons per day = 129 daily trips). The Cold Canyon Landfill Expansion Project traffic analysis shows that about 10% of the traffic would occur during the A.M. peak period and 5% would occur during the P.M. peak period. Table 1 shows the trip generation estimates for the Bunyon Brothers/Perozzi composting facility assuming import of 300 tons per day.

Table 1
Project Trip Generation

Land Use	Trip Generation		
	Average Daily Trips	A.M. Peak Hour Trips	P.M. Peak Hour Trips
Composting Operation	129(a)	13(b)	7(c)

(a) Average daily trip generation based on 300 TPD, as derived from trip generation analyses contained in Cold Canyon Landfill FEIR. Trips include employees plus import of waste material plus export of finished product.
(b) A.M. hours trip generation = 10% of daily trips, as derived from trip generation analyses contained in Cold Canyon Landfill FEIR.
(c) P.M. hours trip generation = 5% of daily trips, as derived from trip generation analyses contained in Cold Canyon Landfill FEIR.

As shown in Table 1, the proposed project is estimated to generate 129 ADT, with 13 trips occurring in the A.M. peak hour period and 7 trips occurring in the P.M. peak hour period.

As noted, the hours of operations at the Bunyon Brothers/Perozzi composting facility are proposed from 9 A.M. to 3 P.M. — which are outside of the A.M. and P.M. peak traffic hours (A.M. peak hour = 1-hour with highest traffic volume between 7 A.M. and 9 A.M; P.M. peak hour = 1-hour with highest traffic volume between 4 P.M. and 6 P.M.). Although the peak hour trip generation estimates shown in Table 1 may be overstated, they are used in the following impact analysis in order to provide a conservative analysis as well as to allow flexibility in the hours of operations at the Bunyon Brothers/Perozzi composting facility.

The Cold Canyon Landfill FEIR also includes a breakdown of the vehicle types for the composting operation. The analysis shows that 21% of the daily traffic would be "Small" vehicles (passenger vehicles and pickup trucks) and 79% of the daily traffic would be "Medium" or "Large" vehicles (Medium = trucks with trailers and/or small commercial trucks (2 or 3 axle); Large = municipal waste trucks (typically 3 axle) and trucks with more than 3 axles). Table 1 shows the vehicle type breakdown for the Bunyon Brothers/Perozzi Composting Facility Project.

Table 2
Project Trip Types

Trip Type	%	Average Daily Trips
Small Vehicles(a)	21%	27
Medium and Large Vehicles(b)	79%	102
Total		129

(a) Small vehicles include passenger vehicles and pickup trucks = 21% of total daily trips, as derived from trip generation analyses contained in Cold Canyon Landfill FEIR.

(b) Medium vehicles include trucks with trailers and/or small commercial trucks (2 or 3 axle); Large vehicles include municipal waste trucks (typically 3 axle) and trucks with more than 3 axles), as derived from trip generation analyses contained in Cold Canyon Landfill FEIR.

ORCUTT ROAD LEVELS OF SERVICE

Orcutt Road currently carries 3,200 ADT, with less than 1% comprised of 3-axle (or more) trucks and operates at LOS A. The project would add 129 ADT to the segment of Orcutt Road adjacent to the site, increasing volumes to 3,329 ADT. The increase in traffic would not significantly degrade the level of service along Orcutt Road and it would continue to operate at LOS A. Further, the addition 102 truck trips (mostly 2- and 3-axle medium and large vehicles) would not significantly increase the level of truck traffic on Orcutt Road. Truck traffic would increase to about 3% under Existing + Project conditions.

ORCUTT ROAD/PROJECT DRIVEWAY LEVELS OF SERVICE

Peak hour levels of service were calculated for the Orcutt Road/Project Driveway intersection using the Existing + Project volumes shown on Figure 3. The trip estimates shown in Table 1 were used for the analysis (13 A.M. peak hour trips and 7 P.M. peak hour trips). The analysis also assumes that 90% of the project-generated trips would be to/from the north (to/from the San Luis Obispo area) and 10% would be to/from the south. Table 3 shows the Existing + Project A.M. and P.M. peak hour levels for the intersection.

Table 3
Existing + Project Driveway Operations

Intersection	Delay / LOS	
	A.M. Peak Hour	P.M. Peak Hour
Orcutt Road/Project Driveway		
Inbound Left Turn	8.8 Sec / LOS A	8.4 Sec / LOS A
Inbound Right Turn	0.0 Sec / LOS A	0.0 Sec / LOS A
Outbound Left+Right Turn	10.8 Sec / LOS A	10.3 Sec / LOS B

(a) LOS based on average delay per vehicle in seconds using HCM 2010 method.

As shown, the Orcutt Road/Project Driveway intersection is forecast to operate at LOS A during the A.M. peak hour and LOS A-B during the P.M. peak hour under Existing + Project conditions. The analysis shows that there are more than ample gaps in the Orcutt Road traffic stream for vehicles to enter/exit the driveway.

ORCUTT ROAD/PROJECT DRIVEWAY SIGHT DISTANCES

Drivers of vehicles departing the project driveway intersection should have an unobstructed view along Orcutt Road sufficient in length to permit them to anticipate and avoid potential conflicts. The unobstructed views form triangular areas known as "sight triangles". Any obstructions (e.g. buildings, hedges, trees, bushes, walls, fences, etc.) within the sight triangles that interfere with the view of a approaching vehicles should be removed.

The County's sight distance standards were used to determine minimum sight distance requirements at the driveway.[2] A copy of the County's sight distance criteria is attached for reference. Speed surveys taken on Orcutt Road adjacent to the project driveway found an average speed of 43 MPH with an 85th percentile speed of 50 MPH for northbound vehicles; and an average speed of 42 MPH with an 85th percentile speed of 50 MPH for southbound vehicles. The County's sight distance criteria shows that the minimum required sight distance is 430 feet based on the 85th percentile speed of 50 MPH. Figures 4 and 5 show the view of sight lines from the driveway along Orcutt Road to the north and south. The sight distances to the north was measured at more than 600 feet (measurement to nearest 10 feet) and the sight distances to the south was measured at more than 540 feet. Thus, the sight distances at the driveway exceed the County's minimum criteria.

---

2 Intersection & Driveway Sight Distance, Drawing A-5a, San Luis Obispo County Department of Public Works & Transportation, Adopted 2011.

ORCUTT ROAD/PROJECT DRIVEWAY LEFT-TURN LANE WARRANTS

The need for left-turn channelization on Orcutt Road for vehicles entering the project driveway was assessed using County criteria. The warrant table contained in the AASHTO "Green Book"[3] was used to determine the need for a left-turn lane on Orcutt Road, pursuant to the County requirements. The table establishes guidelines for determining the need for a left-turn lane based on the mix of left-turn and through volumes. The left-turn lane warrant table is attached showing the Existing + Project peak hour traffic volumes. The results shows that the traffic volumes are well below the left-turn lane warrant criteria, indicating that a separate left-turn lane is not warranted on Orcutt Road for vehicles entering the project driveway.

ORCUTT ROAD/PROJECT DRIVEWAY GEOMETRY

The width of the project driveway is 28-30 feet between the Orcutt Road and the existing gate present at the project access and there is flaring at the driveway connection to Orcutt Road (see Figure 2). The driveway would allow for two-way traffic flow (i.e. simultaneous inbound and outbound movements) and would not require widening for inbound/outbound movements. The existing gate is located about 60 from the edge of Orcutt Road. The applicant has indicated that the gate would be open during business hours. Thus, there would be no queuing at the gate for entering and exiting vehicles.

Associated Transportation Engineers,

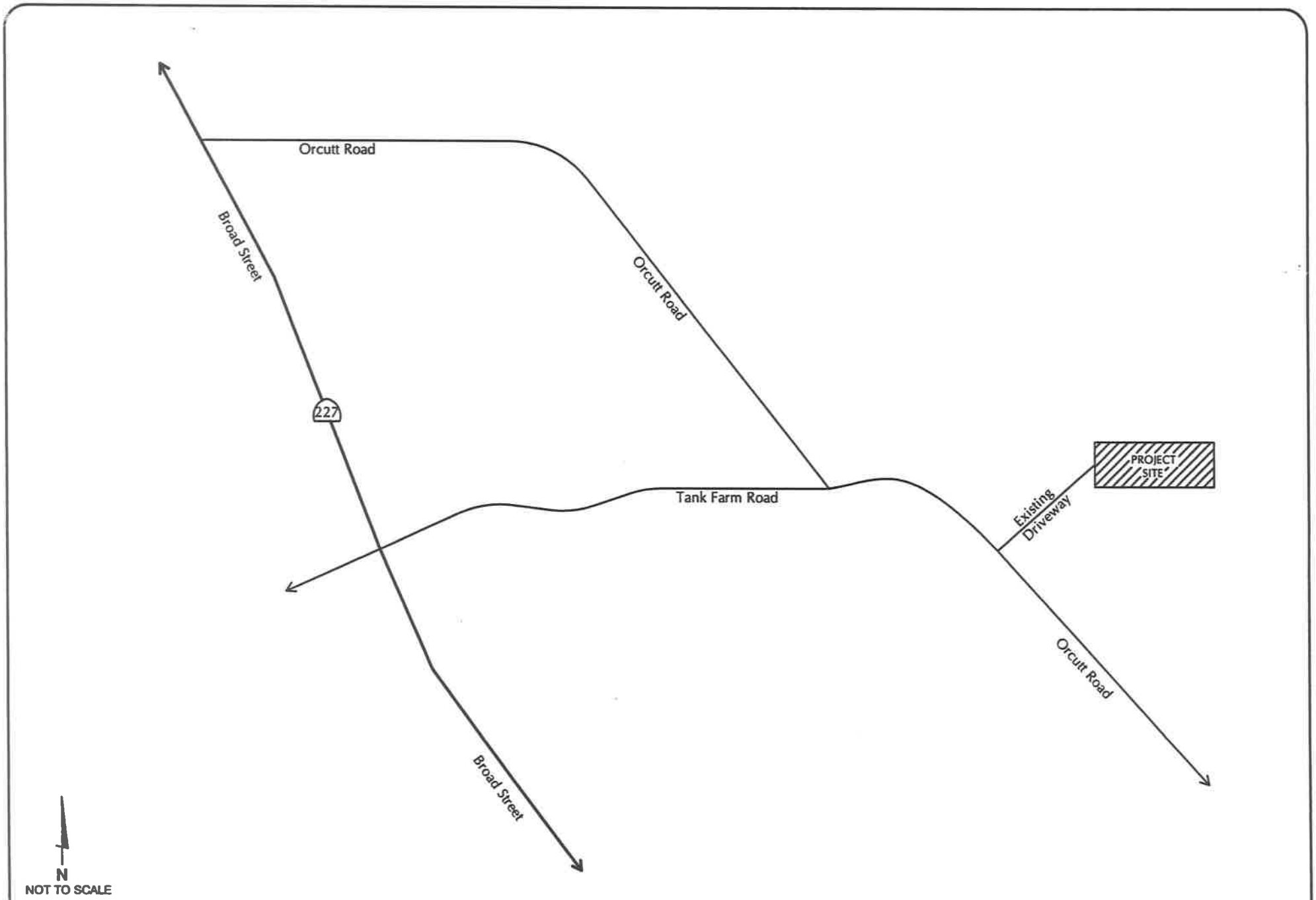
Scott A. Schell, AICP, PTP
Principle Transportation Planner

Justin S. Link, PE
Project Engineer

SAS/JSL/DLD

attachments

[3] A Policy on Geometric Design of Highway and Streets, American Association of State Highway and Transportation Officials, 6th Edition, 2011.



ASSOCIATED TRANSPORTATION ENGINEERS

PROJECT SITE LOCATION

FIGURE 1

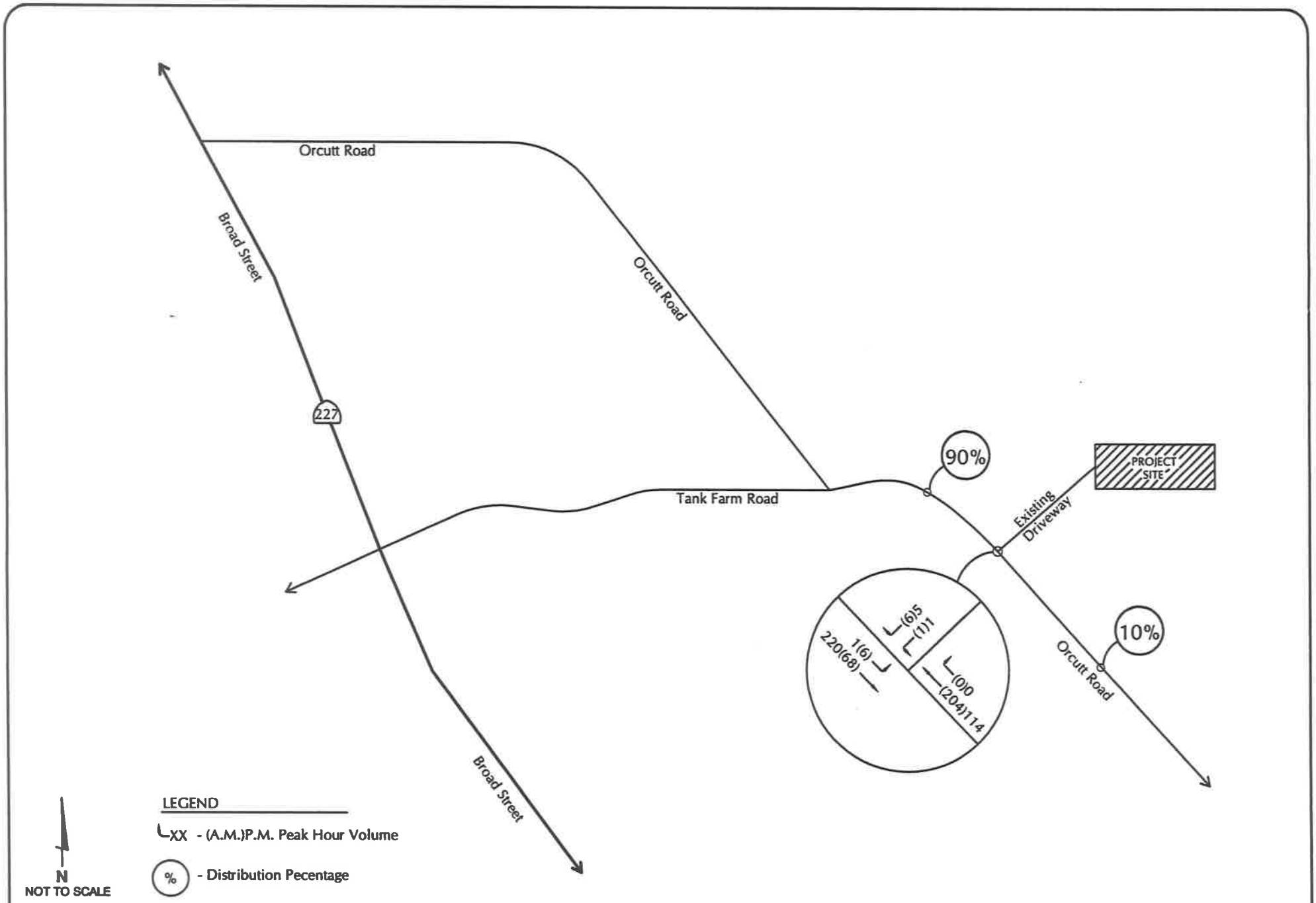
MMF - #12097

Associated
Transportation
Engineers

ORCUTT ROAD/PROJECT DRIVEWAY CONNECTION

FIGURE 2

MMF - #12097



ASSOCIATED TRANSPORTATION ENGINEERS

ORCUTT ROAD/PROJECT DRIVEWAY - EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 3

MMF - #12097

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DLD*	Intersection	*ORCUTT ROAD/PROJECT DWY*
Agency/Co.	*ATE*	Jurisdiction	*SLO COUNTY*
Date Performed	*11/21/2012*	Analysis Year	*EXISTING + PROJECT*
Analysis Time Period	*AM PEAK*		

Project Description	
East/West Street: *PROJECT DRIVEWAY*	North/South Street: *ORCUTT ROAD*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*204*	*0*	*6*	*68*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*221*	*0*	*6*	*73*	*0*
Percent Heavy Vehicles	*0*	--	--	*90*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*1*		*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*1.00*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*1*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*90*	*0*	*90*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*6*		*7*				
C (m) (veh/h)		*964*		*623*				
v/c		*0.01*		*0.01*				
95% queue length		*0.02*		*0.03*				
Control Delay (s/veh)		*8.8*		*10.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.8*					
Approach LOS	--	--	*B*					

AVD = 9.9 SEC = LOS A

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DLD*	Intersection	*ORCUTT ROAD/PROJECT DWY*
Agency/Co.	*ATE*	Jurisdiction	*SLO COUNTY*
Date Performed	*11/21/2012*	Analysis Year	*EXISTING + PROJECT*
Analysis Time Period	*PM PEAK*		

Project Description	
East/West Street: *PROJECT DRIVEWAY*	North/South Street: *ORCUTT ROAD*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*114*	*0*	*1*	*220*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*123*	*0*	*1*	*239*	*0*
Percent Heavy Vehicles	*0*	--	--	*90*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*1*		*5*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*1.00*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*1*	*0*	*5*
Percent Heavy Vehicles	*0*	*0*	*0*	*90*	*0*	*90*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*1*		*6*				
C (m) (veh/h)		*1061*		*681*				
v/c		*0.00*		*0.01*				
95% queue length		*0.00*		*0.03*				
Control Delay (s/veh)		*8.4*		*10.3*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.3*					
Approach LOS	--	--	*B*					

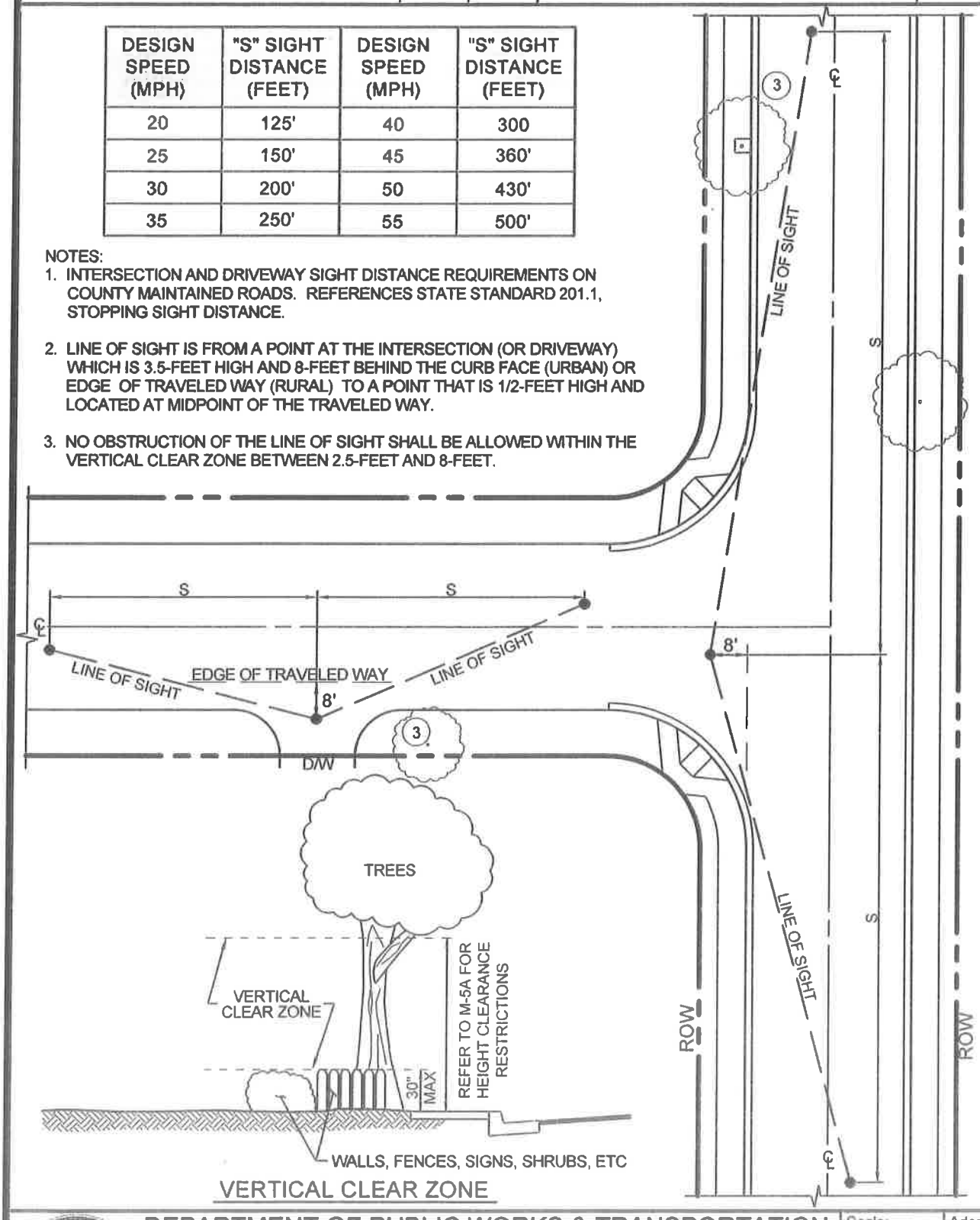
Ave = 10.1 = LOS B

Revisions					
Description	Approved	Date	Description	Approved	Date
SIGHT DISTANCE LINES	REM	NOV 07	D/W SIGHT DIST. SAME AS INTERSECTION	GDM	JAN 11
SIGHT DISTANCE CHANGED TO CALTRANS STD	GDM	NOV 08			

DESIGN SPEED (MPH)	"S" SIGHT DISTANCE (FEET)	DESIGN SPEED (MPH)	"S" SIGHT DISTANCE (FEET)
20	125'	40	300
25	150'	45	360'
30	200'	50	430'
35	250'	55	500'

NOTES:

1. INTERSECTION AND DRIVEWAY SIGHT DISTANCE REQUIREMENTS ON COUNTY MAINTAINED ROADS. REFERENCES STATE STANDARD 201.1, STOPPING SIGHT DISTANCE.
2. LINE OF SIGHT IS FROM A POINT AT THE INTERSECTION (OR DRIVEWAY) WHICH IS 3.5-FEET HIGH AND 8-FEET BEHIND THE CURB FACE (URBAN) OR EDGE OF TRAVELED WAY (RURAL) TO A POINT THAT IS 1/2-FEET HIGH AND LOCATED AT MIDPOINT OF THE TRAVELED WAY.
3. NO OBSTRUCTION OF THE LINE OF SIGHT SHALL BE ALLOWED WITHIN THE VERTICAL CLEAR ZONE BETWEEN 2.5-FEET AND 8-FEET.



DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

INTERSECTION & DRIVEWAY SIGHT DISTANCE

Scale:	Adopted:
1"=30'	2011

Drawing No: A-5a

Sheet No: 1 OF 1

Table 9-23. Guide for Left-Turn Lanes on Two-Lane Highways (*10*)

Metric					U.S. Customary				
Opposing Volume (veh/h)	Advancing Volume (veh/h)				Opposing Volume (veh/h)	Advancing Volume (veh/h)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns		5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
60-km/h Operating Speed					40-mph Operating Speed				
800	330	240	180	160	800	330	240	180	160
600	410	305	225	200	600	410	305	225	200
400	510	380	275	245	400	510	380	275	245
200	640	470	350	305	200	640	470	350	305
100	720	515	390	340	100	720	515	390	340
80-km/h Operating Speed					50-mph Operating Speed				
800	280	210	165	135	800	280	210	165	135
600	350	260	195	170	600	350	260	195	170
400	430	320	240	210	400	430	320	240	210
200	550	400	300	270	200	550	400	300	270
100	615	445	335	295	100	615	445	335	295
100-km/h Operating Speed					60-mph Operating Speed				
800	230	170	125	115	800	230	170	125	115
600	290	210	160	140	600	290	210	160	140
400	365	270	200	175	400	365	270	200	175
200	450	330	250	215	200	450	330	250	215
100	505	370	275	240	100	505	370	275	240

ORCUTT ROAD / PROJECT DRIVEWAY

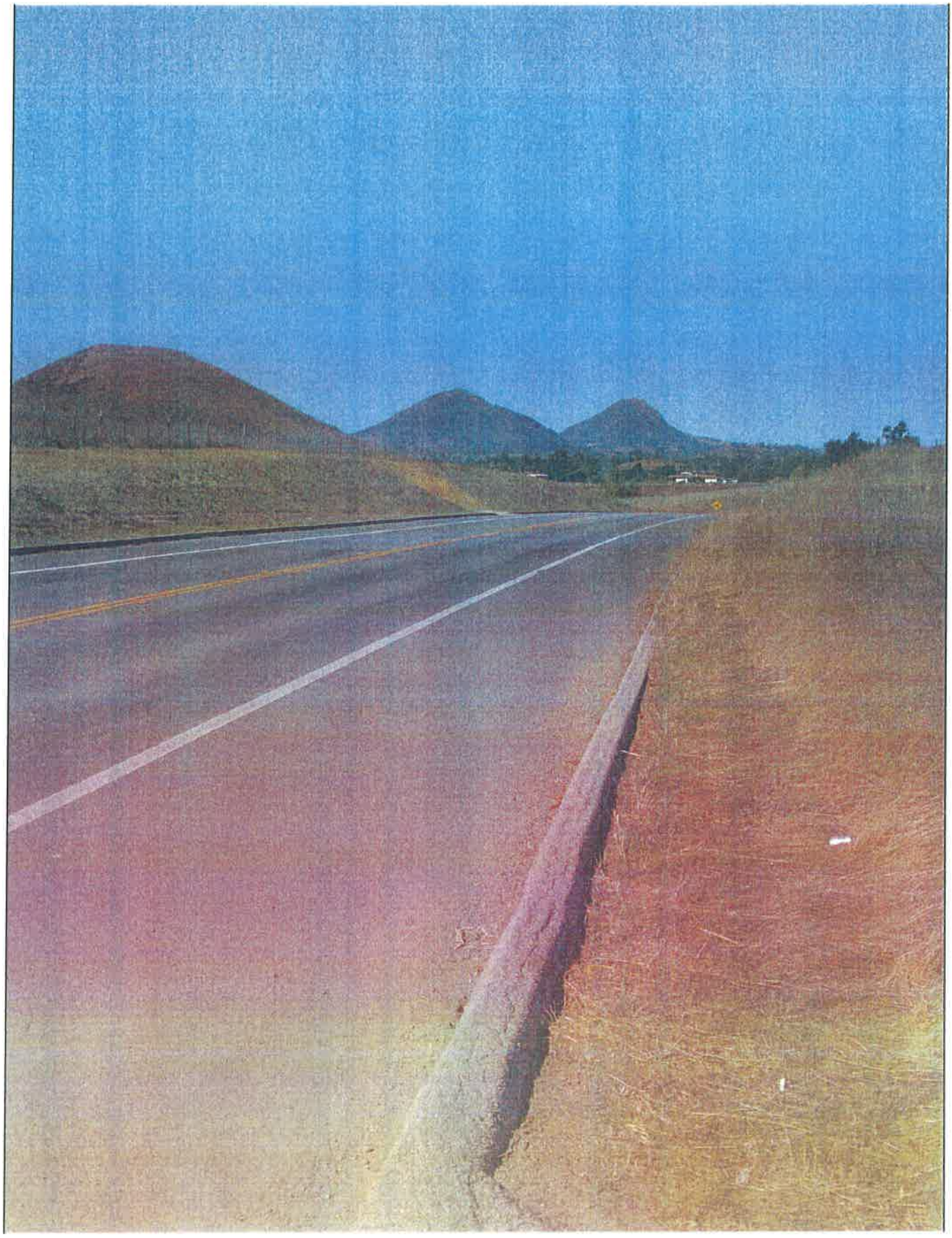
EXISTING + PROJECT AM. PEAK HOUR

ADVANCING VOLUME = 74 (8% LEFT TURNS)

OPPOSING VOLUME = 204

OPERATING SPEED = 50 MPH

WARRANT MET? = NO



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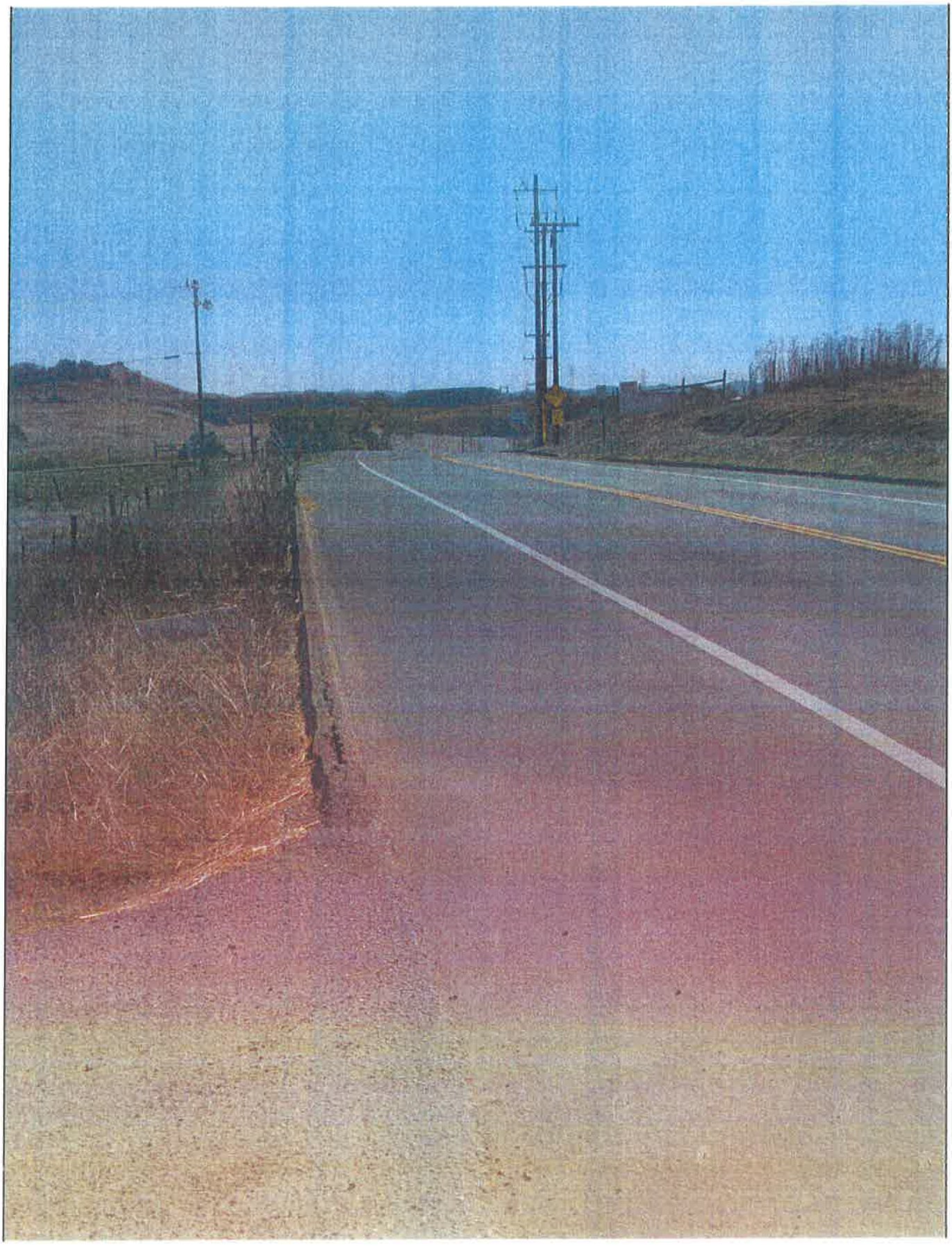
ORCUTT ROAD/PROJECT DRIVEWAY
SIGHT DISTANCE LOOKING TO THE NORTH

FIGURE 4

MMF - #12097



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ORCUTT ROAD/PROJECT DRIVEWAY
SIGHT DISTANCE LOOKING TO THE SOUTH

FIGURE 5

MMF - #12097

Prepared by National Data & Surveying Services

CLASSIFICATION

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001

Summary

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6
05:00	2	18	4	0	1	0	0	0	1	0	0	0	0	26
06:00	3	80	16	2	6	0	0	0	0	0	0	0	0	107
07:00	0	208	34	2	27	1	0	0	0	0	0	0	0	272
08:00	0	193	36	2	30	1	0	0	0	0	0	0	0	262
09:00	1	110	31	0	19	0	0	0	2	0	0	0	0	163
10:00	0	112	26	0	27	1	0	0	3	0	0	0	0	169
11:00	2	134	26	0	18	1	0	2	0	0	0	0	0	183
12:00 PM	1	138	40	0	33	0	0	0	0	0	0	0	0	212
13:00	7	136	37	4	24	1	0	1	2	0	0	0	0	212
14:00	1	145	36	1	25	0	0	0	1	0	0	0	0	209
15:00	2	218	38	4	17	0	0	0	1	0	0	0	0	280
16:00	7	221	35	3	20	0	0	2	1	0	0	0	0	289
17:00	4	273	45	0	12	0	0	0	0	0	0	0	0	334
18:00	0	143	21	0	14	0	0	0	0	0	0	0	0	178
19:00	1	75	11	0	5	0	0	0	1	0	0	0	0	93
20:00	1	72	12	0	1	0	0	0	0	0	0	0	0	86
21:00	1	41	6	0	5	0	0	0	0	0	0	0	0	53
22:00	0	31	3	0	2	0	0	0	0	0	0	0	0	36
23:00	0	13	1	0	0	0	0	0	1	0	0	0	0	15
Totals	33	2381	459	18	287	5		5	13					3201
% of Totals	1%	74%	14%	1%	9%	0%		0%	0%					100%
AM Volumes	8	875	174	6	129	4	0	2	6	0	0	0	0	1204
% AM	0%	27%	5%	0%	4%	0%		0%	0%					38%
AM Peak Hour	06:00	07:00	08:00	06:00	08:00	07:00		11:00	10:00					07:00
Volume	3	208	36	2	30	1		2	3					272
PM Volumes	25	1506	285	12	158	1	0	3	7	0	0	0	0	1997
% PM	1%	47%	9%	0%	5%	0%		0%	0%					62%
PM Peak Hour	13:00	17:00	17:00	13:00	12:00	13:00		16:00	13:00					17:00
Volume	7	273	45	4	33	1		2	2					334

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	534	17%	424	13%	623	19%	1620	51%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6
05:00	1	14	4	0	1	0	0	0	0	0	0	0	0	20
06:00	2	52	9	1	3	0	0	0	0	0	0	0	0	67
07:00	0	169	23	1	11	0	0	0	0	0	0	0	0	204
08:00	0	139	24	0	19	0	0	0	0	0	0	0	0	182
09:00	0	72	16	0	8	0	0	0	2	0	0	0	0	98
10:00	0	70	15	0	13	0	0	0	2	0	0	0	0	100
11:00	2	72	15	0	10	1	0	1	0	0	0	0	0	101
12:00 PM	0	70	21	0	12	0	0	0	0	0	0	0	0	103
13:00	4	75	22	1	8	1	0	1	1	0	0	0	0	113
14:00	1	65	11	0	14	0	0	0	0	0	0	0	0	91
15:00	0	100	15	1	13	0	0	0	1	0	0	0	0	130
16:00	1	95	14	2	9	0	0	1	1	0	0	0	0	123
17:00	3	91	18	0	2	0	0	0	0	0	0	0	0	114
18:00	0	53	7	0	6	0	0	0	0	0	0	0	0	66
19:00	0	21	3	0	3	0	0	0	1	0	0	0	0	28
20:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
21:00	1	10	0	0	0	0	0	0	0	0	0	0	0	11
22:00	0	10	1	0	1	0	0	0	0	0	0	0	0	12
23:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Totals	15	1204	220	6	134	2		3	8					1592
% of Totals	1%	76%	14%	0%	8%	0%		0%	1%					100%
AM Volumes	5	598	106	2	66	1	0	1	4	0	0	0	0	783
% AM	0%	38%	7%	0%	4%	0%		0%	0%					49%
AM Peak Hour	06:00	07:00	08:00	06:00	08:00	11:00		11:00	09:00					07:00
Volume	2	169	24	1	19	1		1	2					204
PM Volumes	10	606	114	4	68	1	0	2	4	0	0	0	0	809
% PM	1%	38%	7%	0%	4%	0%		0%	0%					51%
PM Peak Hour	13:00	15:00	13:00	16:00	14:00	13:00		13:00	13:00					15:00
Volume	4	100	22	2	14	1		1	1					130

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	386	24%	216	14%	237	15%	753	47%

Classification Definitions

1 Motorcycles	4 Buses	7 > =4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001s

South Bound

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	4	0	0	0	0	0	0	1	0	0	0	0	6
06:00	1	28	7	1	3	0	0	0	0	0	0	0	0	40
07:00	0	39	11	1	16	1	0	0	0	0	0	0	0	68
08:00	0	54	12	2	11	1	0	0	0	0	0	0	0	80
09:00	1	38	15	0	11	0	0	0	0	0	0	0	0	65
10:00	0	42	11	0	14	1	0	0	1	0	0	0	0	69
11:00	0	62	11	0	8	0	0	1	0	0	0	0	0	82
12:00 PM	1	68	19	0	21	0	0	0	0	0	0	0	0	109
13:00	3	61	15	3	16	0	0	0	1	0	0	0	0	99
14:00	0	80	25	1	11	0	0	0	1	0	0	0	0	118
15:00	2	118	23	3	4	0	0	0	0	0	0	0	0	150
16:00	6	126	21	1	11	0	0	1	0	0	0	0	0	166
17:00	1	182	27	0	10	0	0	0	0	0	0	0	0	220
18:00	0	90	14	0	8	0	0	0	0	0	0	0	0	112
19:00	1	54	8	0	2	0	0	0	0	0	0	0	0	65
20:00	1	60	10	0	1	0	0	0	0	0	0	0	0	72
21:00	0	31	6	0	5	0	0	0	0	0	0	0	0	42
22:00	0	21	2	0	1	0	0	0	0	0	0	0	0	24
23:00	0	9	1	0	0	0	0	0	1	0	0	0	0	11
Totals	18	1177	239	12	153	3		2	5					1609
% of Totals	1%	73%	15%	1%	10%	0%		0%	0%					100%
AM Volumes	3	277	68	4	63	3	0	1	2	0	0	0	0	421
% AM	0%	17%	4%	0%	4%	0%		0%	0%					26%
AM Peak Hour	05:00	11:00	09:00	08:00	07:00	07:00		11:00	05:00					11:00
Volume	1	62	15	2	16	1		1	1					82
PM Volumes	15	900	171	8	90	0	0	1	3	0	0	0	0	1188
% PM	1%	56%	11%	0%	6%			0%	0%					74%
PM Peak Hour	16:00	17:00	17:00	13:00	12:00			16:00	13:00					17:00
Volume	6	182	27	3	21			1	1					220

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	148	9%	208	13%	386	24%	867	54%

Classification Definitions

1 Motorcycles	4 Buses	7 > =4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

SPEED

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	4
01:00	0	0	0	0	1	4	2	2	0	0	0	0	0	9
02:00	0	0	0	0	0	1	0	0	1	0	0	0	0	2
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
04:00	0	0	0	0	1	1	1	1	2	0	0	0	0	6
05:00	1	0	0	1	4	3	5	6	2	2	2	0	0	26
06:00	0	1	0	4	14	15	29	20	17	7	0	0	0	107
07:00	0	1	0	4	18	72	80	56	34	6	1	0	0	272
08:00	0	0	0	4	14	58	73	65	35	11	2	0	0	262
09:00	1	0	2	2	17	36	38	32	23	8	4	0	0	163
10:00	0	0	0	5	10	41	43	42	18	9	1	0	0	169
11:00	0	2	2	2	23	44	45	38	19	6	2	0	0	183
12:00 PM	1	2	0	3	32	49	59	40	20	6	0	0	0	212
13:00	1	3	3	5	23	57	57	36	24	3	0	0	0	212
14:00	0	1	0	1	31	44	66	35	22	8	1	0	0	209
15:00	0	2	0	7	20	69	95	51	25	10	1	0	0	280
16:00	2	3	2	3	21	70	84	52	45	6	1	0	0	289
17:00	1	1	2	5	23	79	111	72	35	5	0	0	0	334
18:00	0	0	0	3	22	37	55	35	18	7	1	0	0	178
19:00	1	0	0	0	8	29	23	19	13	0	0	0	0	93
20:00	0	0	0	4	22	19	25	9	5	1	1	0	0	86
21:00	0	0	0	2	7	15	15	8	3	3	0	0	0	53
22:00	0	0	0	2	5	15	4	8	2	0	0	0	0	36
23:00	0	0	0	0	3	4	2	0	4	2	0	0	0	15
Totals	8	16	11	57	320	764	912	629	367	100	17			3201
% of Totals	0%	0%	0%	2%	10%	24%	28%	20%	11%	3%	1%			100%

AM Volumes	2	4	4	22	103	277	316	264	151	49	12	0	0	1204
% AM	0%	0%	0%	1%	3%	9%	10%	8%	5%	2%	0%			38%
AM Peak Hour	05:00	11:00	09:00	10:00	11:00	07:00	07:00	08:00	08:00	08:00	09:00			07:00
Volume	1	2	2	5	23	72	80	65	35	11	4			272
PM Volumes	6	12	7	35	217	487	596	365	216	51	5	0	0	1997
% PM	0%	0%	0%	1%	7%	15%	19%	11%	7%	2%	0%			62%
PM Peak Hour	16:00	13:00	13:00	15:00	12:00	17:00	17:00	17:00	16:00	15:00	14:00			17:00
Volume	2	3	3	7	32	79	111	72	45	10	1			334

Directional Peak Periods All Speeds	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	534	17%	424	13%	623	19%	1620	51%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Orcutt Rd	Summary	35	42	42	50	54	3201

Prepared by National Data & Surveying Services

SPEED

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001n

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
01:00	0	0	0	0	1	1	0	2	0	0	0	0	0	4
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	1	1	1	1	2	0	0	0	0	6
05:00	0	0	0	1	3	1	4	5	2	2	2	0	0	20
06:00	0	0	0	2	9	6	20	15	10	5	0	0	0	67
07:00	0	1	0	2	11	52	62	43	27	5	1	0	0	204
08:00	0	0	0	1	9	37	50	48	27	9	1	0	0	182
09:00	0	0	1	1	7	15	23	25	16	7	3	0	0	98
10:00	0	0	0	2	5	26	29	26	10	2	0	0	0	100
11:00	0	2	2	1	7	21	27	25	14	2	0	0	0	101
12:00 PM	0	2	0	3	17	17	34	21	8	1	0	0	0	103
13:00	1	1	2	4	10	35	27	22	10	1	0	0	0	113
14:00	0	1	0	0	15	18	34	16	7	0	0	0	0	91
15:00	0	0	0	3	12	34	42	22	17	0	0	0	0	130
16:00	0	1	0	2	7	26	37	29	18	3	0	0	0	123
17:00	1	1	1	4	5	26	31	29	14	2	0	0	0	114
18:00	0	0	0	0	8	15	17	11	10	4	1	0	0	66
19:00	0	0	0	0	2	8	7	6	5	0	0	0	0	28
20:00	0	0	0	0	1	5	3	3	2	0	0	0	0	14
21:00	0	0	0	1	1	2	3	3	0	1	0	0	0	11
22:00	0	0	0	0	2	4	2	4	0	0	0	0	0	12
23:00	0	0	0	0	1	0	0	0	1	2	0	0	0	4
Totals	2	9	6	27	134	350	453	357	200	46	8			1592
% of Totals	0%	1%	0%	2%	8%	22%	28%	22%	13%	3%	1%			100%

AM Volumes	0	3	3	10	53	160	216	191	108	32	7	0	0	783
% AM		0%	0%	1%	3%	10%	14%	12%	7%	2%	0%			49%
AM Peak Hour		11:00	11:00	06:00	07:00	07:00	07:00	08:00	07:00	08:00	09:00			07:00
Volume		2	2	2	11	52	62	48	27	9	3			204
PM Volumes	2	6	3	17	81	190	237	166	92	14	1	0	0	809
% PM	0%	0%	0%	1%	5%	12%	15%	10%	6%	1%	0%			51%
PM Peak Hour	13:00	12:00	13:00	13:00	12:00	13:00	15:00	16:00	16:00	18:00	18:00			15:00
Volume	1	2	2	4	17	35	42	29	18	4	1			130

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds	Volume	%	Volume	%	Volume	%	Volume	%
	386	24%	216	14%	237	15%	753	47%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Orcutt Rd	North Bound	36	43	43	50	54	1592
Orcutt Rd	South Bound	35	42	42	50	54	1609

Prepared by National Data & Surveying Services

SPEED

Orcutt Rd n/o 4400 Orcutt Rd

Day: Thursday
Date: 11/8/2012

City: San Luis Obispo
Project #: CA12_8089_001s

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	1	1	0	1	0	0	0	0	0	3
01:00	0	0	0	0	0	3	2	0	0	0	0	0	0	5
02:00	0	0	0	0	0	1	0	0	1	0	0	0	0	2
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	1	2	1	1	0	0	0	0	0	6
06:00	0	1	0	2	5	9	9	5	7	2	0	0	0	40
07:00	0	0	0	2	7	20	18	13	7	1	0	0	0	68
08:00	0	0	0	3	5	21	23	17	8	2	1	0	0	80
09:00	1	0	1	1	10	21	15	7	7	1	1	0	0	65
10:00	0	0	0	3	5	15	14	16	8	7	1	0	0	69
11:00	0	0	0	1	16	23	18	13	5	4	2	0	0	82
12:00 PM	1	0	0	0	15	32	25	19	12	5	0	0	0	109
13:00	0	2	1	1	13	22	30	14	14	2	0	0	0	99
14:00	0	0	0	1	16	26	32	19	15	8	1	0	0	118
15:00	0	2	0	4	8	35	53	29	8	10	1	0	0	150
16:00	2	2	2	1	14	44	47	23	27	3	1	0	0	166
17:00	0	0	1	1	18	53	80	43	21	3	0	0	0	220
18:00	0	0	0	3	14	22	38	24	8	3	0	0	0	112
19:00	1	0	0	0	6	21	16	13	8	0	0	0	0	65
20:00	0	0	0	4	21	14	22	6	3	1	1	0	0	72
21:00	0	0	0	1	6	13	12	5	3	2	0	0	0	42
22:00	0	0	0	2	3	11	2	4	2	0	0	0	0	24
23:00	0	0	0	0	2	4	2	0	3	0	0	0	0	11
Totals	6	7	5	30	186	414	459	272	167	54	9			1609
% of Totals	0%	0%	0%	2%	12%	26%	29%	17%	10%	3%	1%			100%

AM Volumes	2	1	1	12	50	117	100	73	43	17	5	0	0	421
% AM	0%	0%	0%	1%	3%	7%	6%	5%	3%	1%	0%			26%
AM Peak Hour	05:00	06:00	09:00	08:00	11:00	11:00	08:00	08:00	08:00	10:00	11:00			11:00
Volume	1	1	1	3	16	23	23	17	8	7	2			82
PM Volumes	4	6	4	18	136	297	359	199	124	37	4	0	0	1188
% PM	0%	0%	0%	1%	8%	18%	22%	12%	8%	2%	0%			74%
PM Peak Hour	16:00	13:00	16:00	15:00	20:00	17:00	17:00	17:00	16:00	15:00	14:00			17:00
Volume	2	2	2	4	21	53	80	43	27	10	1			220

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds	Volume	%	Volume	%	Volume	%	Volume	%
	148	9%	208	13%	386	24%	867	54%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Orcutt Rd	North Bound	36	43	43	50	54	1592
Orcutt Rd	South Bound	35	42	42	50	54	1609

Photo Simulation Study

AESTHETIC & VISUAL RESOURCES

Bunyon Brothers / Perozzi
Green Waste Management Project

View from Site I to Hansen Lane (approx. 2500')

Same view with proposed landscaping

Bunyon Brothers / Perozzi
Green Waste Management Project

View of Hansen Lane from Site I
(photo image is zoomed 600 per cent)

Same view with landscaping

Bunyon Brothers / Perozzi
Green Waste Management Project

View of Site I from Arbors development (above easterly bank of lots on Huckleberry Lane)

Same view with proposed landscaping

Bunyon Brothers / Perozzi
Green Waste Management Project

View of Site I from Arbors development (above the end of Huckleberry Lane cul de sac)

Same view with proposed landscaping

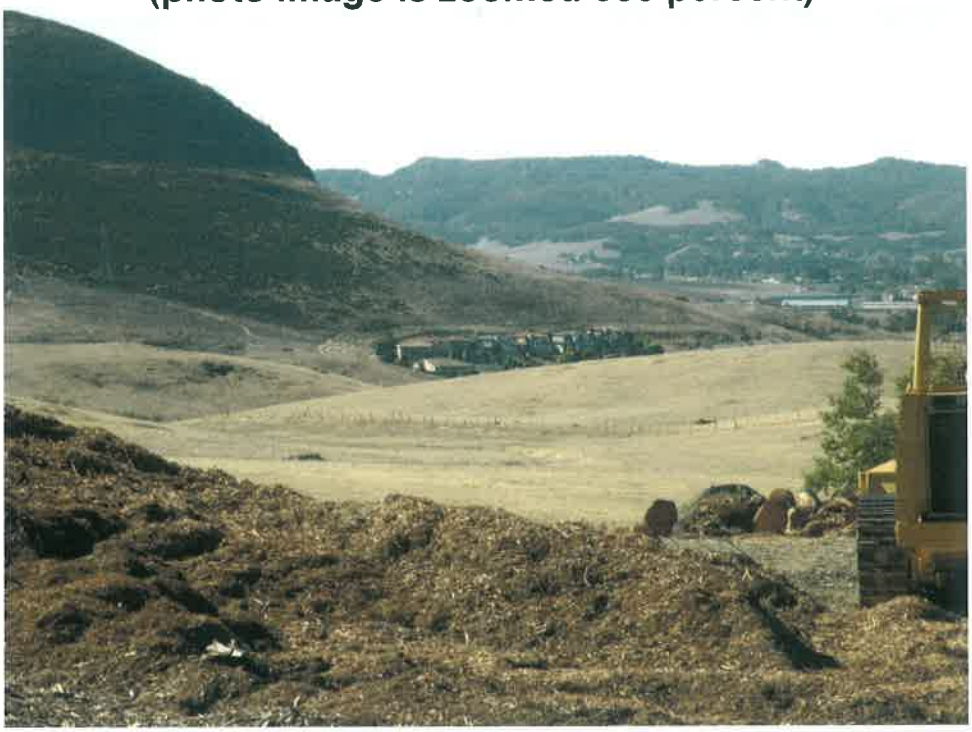
Bunyon Brothers / Perozzi
Green Waste Management Project

View from Site I to Arbors development

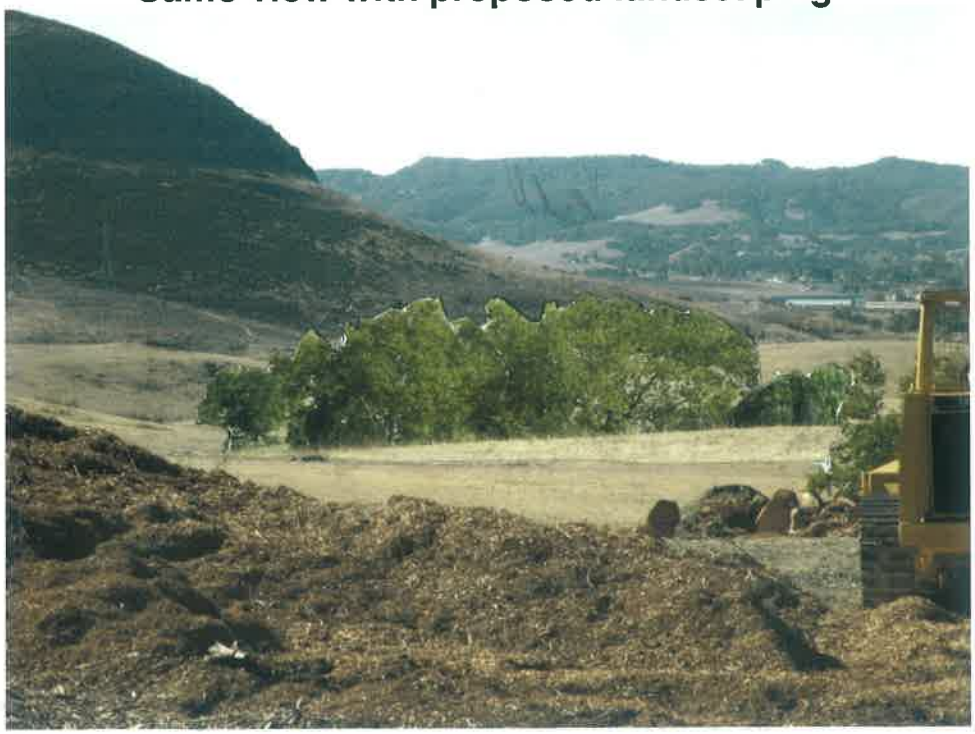
Same view with proposed landscaping

Bunyon Brothers / Perozzi
Green Waste Management Project

View of Arbors development from Site I (photo image is zoomed 600 percent)

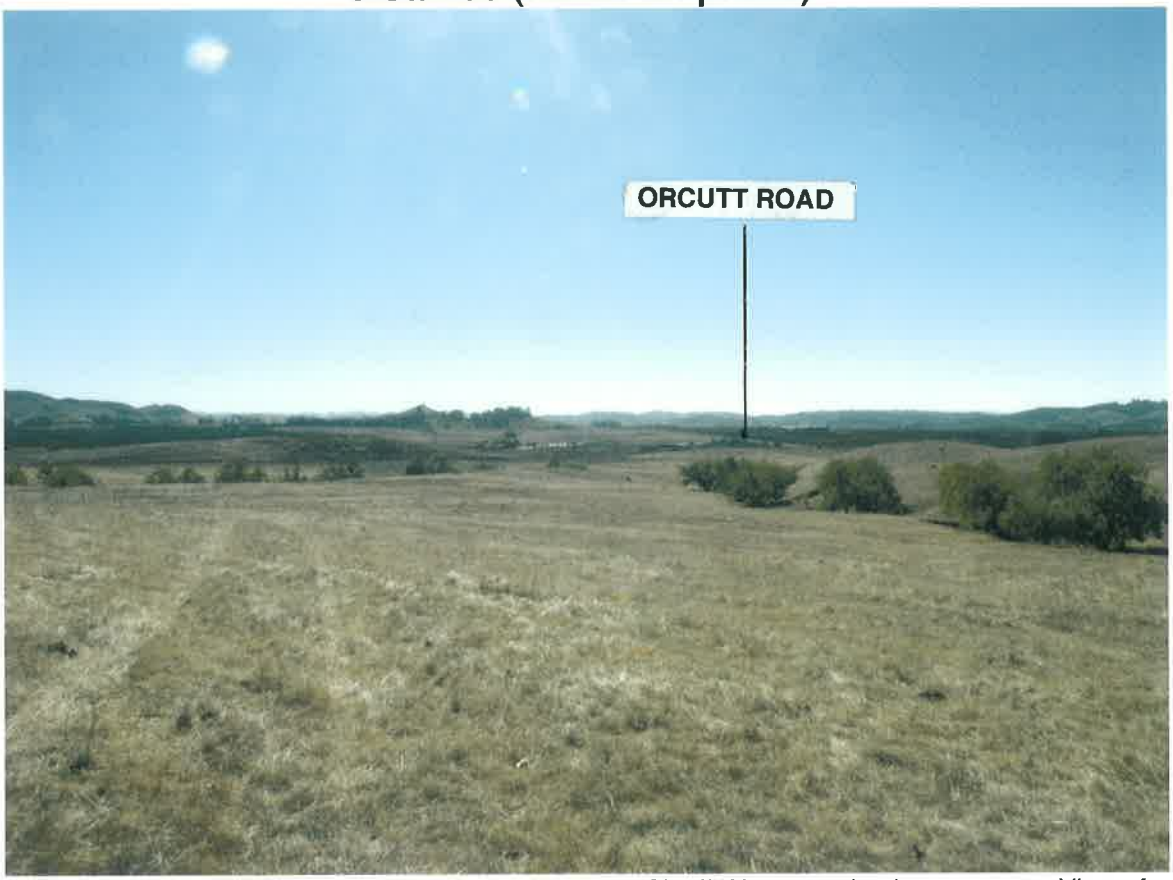


Same view with proposed landscaping



Bunyon Brothers / Perozzi
Green Waste Management Project

View of Site II toward the southwest, with Orcutt Road in distance (noted on photo)



Note: Orcutt Road is approximately 2.25 miles from Site II; No screening is necessary; View of Site II from Orcutt Road is mostly obscured, distant and not prolonged (approx. 1-2 seconds)

Odor Impact Minimalization Plan

ODOR / VECTOR CONTROL

BUNYON BROTHERS/PEROZZI
ODOR IMPACT MINIMIZATION PLAN

Purpose/Context of the OIMP

This Odor Impact Minimization Plan (OIMP) is intended to provide guidance to on-site personnel in the handling, storage, and removal of compostable materials, in accordance with Title 14, California Code of Regulations Section 17863.4. This OIMP will be maintained on-site and revised as necessary to reflect any changes in the design or operation of this site. A copy of the revisions will be provided to the enforcement agency within 30 days of the changes. In addition, this OIMP will be reviewed annually to determine if any revisions are necessary.

This site receives Contractor collected green waste, Yard trimmings, and Agricultural material from sources such as orchards and crop residues and horse manure. No more than 500 cubic yards per day will be delivered and no more than the carrying capacity of the two-four acre compost sites of compost, or chipped and ground material is on-site at any one time. The manure waste is integrated into the composting process within a maximum of two days after receipt. The compostable green waste materials will be stockpiled and chipped/ground when a feasible quantity of material is accumulated, projected to be 3-5 days. The complete compost cycle, from delivery to chipping, mixing, creating windrows and curing is approximately four months, following which the finished products are moved off-site.

I. Odor Monitoring Protocol

A. Proximity of Odor Receptors

The closest receptors at the compost facility that may be exposed to operational odors are the site personnel and green waste material delivery drivers. On-site personnel are also responsible for monitoring and detecting objectionable odors, to immediately take appropriate mitigation action.

The closest off-site receptors are the suburban residential neighborhood along Hansen Way, approximately 1½ mile to the northwest. A second urban neighborhood with urban residential density is named "The Arbors" and located approximately 2 ½ miles southwest of the composting sites. All other proximate land is vacant agricultural and/or open space.

B. Odor Impacts

Each operating day the operator evaluates on-site odors and operations for potential release of objectionable odors. This includes temperature probes and personal observation.

If questionable or objectionable on-site odors are detected by site personnel, operations personnel will implement the following protocol:

1. Investigate and determine the likely source of the odor.
2. Access the effectiveness of available on-site management practices to resolve the odor event and immediately take steps to reduce the odor-generating capacity of on-site material. (Possible on-site odor sources and management techniques for this site are shown in Table 1.)
3. Determine if the odor traveled off-site by surveying the site perimeter and noting existing wind patterns.
4. If it is determined possible odors impacts occurred, appropriate regulatory agency and/or neighbors contact is made.
5. Record the event for further operational review.

II. Meteorological Conditions (Including Seasonal Variations)

A. Wind Velocity

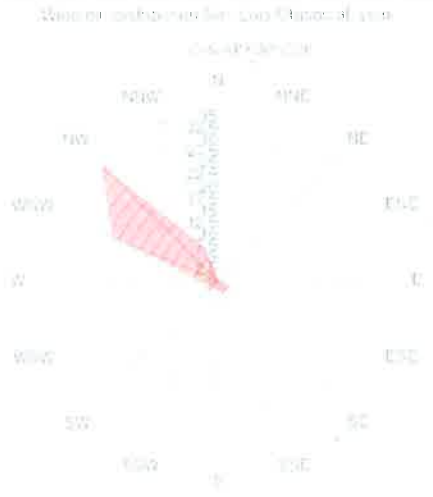
Historical wind data indicates prevailing wind is from the northwest/west-northwest with annual average wind speeds ranging from 8-12 mph. Wind velocity typically increases during the months of March through June with the strongest wind speeds in the month of April. The average yearly wind days exceeding Beaufort force 4 is 28; Average annual wind speed is 8 mph. Occasional easterly "Santa Ana" wind events occur, but are intermittent and infrequent (see Appendix A).

B. Wind Direction

The annual Wind and Weather statistic table and compass graphic follows:

San Luis Obispo (SLUISOBP)
Statistics based on observations taken between 11/2006 - 9/2012 daily from 7am to 7pm local time.

Month of year	Jan 01	Feb 02	Mar 03	Apr 04	May 05	Jun 06	Jul 07	Aug 08	Sep 09	Oct 10	Nov 11	Dec 12	SUM 1-12
Dominant Wind dir.	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Wind probability > = 4 Beaufort (%)	21	21	36	46	43	38	25	27	22	27	18	19	**28**
Average Wind speed (mph)	8	8	10	12	10	10	8	8	8	8	7	7	**8**
Average air temp. (°F)	59	57	59	60	64	66	68	68	69	66	60	57	**62**
Select month (Help)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year



Wind direction
Distribution (%)

III. Complaint Response Protocol

In the event of significant odors where a complaint has been filed, the protocol is for the operator to inspect the location of a received complaint to determine if an offensive odor is present. The operator will attempt to characterize the odor so that they can trace it back to a specific operational phase of the facility.

If the complaint is confirmed, the operator will implement one or more of the management practices listed in Table 1. If Table 1 mitigations are not possible, the operator will immediately load out any odoriferous material to a permitted landfill.

In the event that the complaint cannot be verified in this manner, the operator will continue to perform self-monitoring and continue the Best Management Practices (BMPs) described in the operating document. The operator shall implement additional or enhanced BMPs to minimize the likelihood of future odor detection.

The operator will contact the complainant (if known) after corrective actions are taken to assess success of the action. Results and actions will be documented in the Site Operations Log, which serves as the facility's permanent record.

IV. Operating Procedures (and Design Concerns) to Minimize Odors

In order to minimize the development of conditions that could lead to odor problems, the compostable material handling areas of the site were designed based on the nature and quantity of materials to be received and stored, climatological factors, adjacent land use, grading, and drainage controls.

The Bunyon Brothers/Perozzi Green Waste project is operated to manage all odor-producing areas of the facility to minimize the development of conditions that could lead to off-site odor problems as discussed in the following paragraphs.

The primary sources of odors at this site occur during the receiving and initial handling period. As a result, site personnel assess materials upon receipt for odor generation potential. Site personnel have been trained to manage all compostable material handling in a manner that minimizes the development of conditions that could lead to objectionable odors.

A. Aeration

The facility was designed as a traditional turned windrow composting operation utilizing natural aeration, enhanced by the porosity provided by compost material particle size and regular turning to reestablish windrow porosity. Water is added by either a water truck, or mechanical turner with irrigation system. Water is used to minimize airborne emission production that will also minimize dust transport (and other airborne emissions) that reduces odor molecule transport significantly.

B. Moisture Content of Materials and Moisture Management

Most of the material received consists of collected green waste, yard trimmings, agricultural material from sources such as orchards and crop residues and horse manure. Optimum moisture content ranges from 40-65%.

Since the moisture content generally decreases as composting proceeds, the starting moisture content should be well above 40%. For many mixtures, materials that are too dry (such as leaves) are blended with materials that are dense and wet (green waste) to achieve this optimum moisture content.

C. Feedstock Characteristics and Quality

Principal materials used in the composting facility include:

- Horse manure – usually contains large amounts of bedding, therefore dry with a high C:N ratio. Low odor potential, decomposes quickly.

- Crop residues – Generally moderate to high moisture and moderate C:N ratio, depending upon the age and amount of fruit and seeds that are present.
- Leaves – Relatively dry, high in carbon with good degradability if shredded. Moderate moisture absorption and low odor potential.
- Wood chips & bark – Dry and high in carbon. Large particle size provides excellent structure but poor degradability. Must be screened from final compost but can be reused.
- Grass clippings – Moderately wet to dry. Slightly low C:N ratio. Decompose quickly, but tends to have high odor potential if not property mixed with other materials.

Incoming materials are checked for physical contaminants and undesirable foreign materials (rocks, metal, etc.) and then stockpiled for 3-5 days prior to grinding, mixing and formed into windrows. Contaminants are removed to appropriate landfill facilities.

D. Airborne Emission Controls

In order to reduce airborne emissions, regular application of water from a water truck and/or mechanical turner with irrigation system is used. Pads, working areas and roadways will also be regularly watered, as needed.

E. Drainage Controls

The site's drainage is directed to a runoff collection channel and sediment trap that discharges into engineered designed retention basins that have been designed to accept facility water, excess water runoff from 100 year storm events, and also provide leachate control and the ability to recycle water to the composting windrows.

F. Pad Maintenance

Grading. Each of the two composting sites will be graded to create a 3% slope surface that will be surrounded on three sides with a landscaped earthen berm. The surface area within will be improved with a 6" gravel or red rock pad, as will all access roads and working areas of the compost facility sites (See Appendix: Plan Documents, Sheets C-1 & C-2).

Aisles. Windrow aisles can be sources of odor if raw, uncomposted material is left for excessive amounts of time without being exposed to the high temperatures of composting. The facility will practice good housekeeping methods, which include regular patrolling of windrow aisles to clean any spilled materials.

Windrows. Odors emanating from windrows typically indicate problems in the initial mixing, turning frequency, pile porosity and/or moisture content of the pile. The compost facility strives to create windrows with appropriate carbon to nitrogen levels (initially 30:1), adequate initial mixing and adequate moisture within the windrows (45-60%). Windrows will be turned regularly on a prescribed schedule to satisfy the initial pathogen reduction 15-day period, then turned as windrow core temperatures dictate and as specified by CA Title 14, Section 17868.3 to maintain a pathogen reduction temperature of 131°F and a minimum of five turns. Any odors detected from the windrows will be corrected using one or more of the techniques described in Table 1.

G. Process/wastewater Controls

As discussed in the above Section E – Drainage Controls, drainage within the compost site is contained within an earthen berm and directed to a collection channel and sedimentation trap, then discharged into drainage basins that have been sized to withstand unusual storm events as well as contain excess process water and leachates.

H. Material Processing, Handling and Storage Practices

1. Processing

a. Feedstock

The initial receipt and handling of materials will determine the stockpile residency, with 3-5 days estimated. Some materials may require immediate mixing with high carbon, relatively dry, woody material while others may be stockpiled until a large enough accumulation of material is built-up to feasibility permit grinding, mixing and formation into windrows.

b. Processed Material

Material that has been received will be placed in like category stockpiles for a 3-5 day period, or as indicated above; less time if the material has the potential to create odor problems. Following grinding and mixing, the windrows are formed, watered and turned for approximately one month during this "active composting" period, then stockpiled for an additional three months before distributed to markets.

2. Pile Geometry

a. Feedstock

Each of the four-acre composting sites will contain windrows between 100' – 450' long, 8' high and 15' wide with aisle dimension width determined by ease of maneuvering operational equipment (back-up, turn around, etc.).

Recognizing that material will arrive at varying times of the week and season, there will likely be variations in windrow length as individual windrows must be uniformly managed for maximum efficiency and compost effectiveness.

b. Processed Material

Curing piles have the potential to create odors if material that is not stable and reached a peak active composting period is moved to curing too soon, or if the pile is made too high (above 12 feet). The facility only moves compost into curing piles that has undergone thorough decomposition and is ready for curing. All curing piles will be maintained at or below 12 feet in height.

The remote location of the compost areas within the 1100-acre ranch and the significant distance and downwind patterns will minimize and/or negate receptor odor problems.

I. Weather Event Impacts

Historical weather and climatological data was obtained from the San Luis Obispo airport data bank located approximately four miles west of the Bunyon Brothers/Perozzi composting site. Comprehensive weather charts and data are contained in Appendix A and summarized as follows.

Temperature. San Luis Obispo has a Mediterranean climate with dry warm summers and mild winters. Over the course of a year, the temperature typically varies from 40° to 79° and rarely below 33° or above 90°.
Clouds. The median cloud cover ranges from 11% (mostly clear) to 42% (partly cloudy). The clearer part of the year begins around September 30, the cloudier around January 20.
Precipitation. The probability that precipitation will be observed at this location throughout the year varies, with mid February most likely and August least likely. Over the year, the most common forms of precipitation are light rain, moderate rain and drizzle. Light rain is observed 39% of those days, moderate rain 33%, and drizzle 13% of days with precipitation. Heavy rain occurs only 9% of the time. Total average rainfall is 24 inches per year.
Humidity. The relative humidity typically ranges from 40% (comfortable) to 96% (very humid) over the course of a year, rarely dropping below 17% (dry) and/or reaching as high as 100% (humid).
Dew Point. Dew point for humans directly relates to whether perspiration will evaporate from the skin, thereby cooling the body. For a composting operation, it correlates to favorable microorganism growing habitat. Over the course of a year, the dew point typically varies from 34°F (dry) to 57°F (comfortable).

Wind. Discussed in Section II A & B, Wind Velocity and Wind Direction, the prevailing wind direction is from the northwest, west northwest, at an average of 8 mph. Over the course of a year, wind direction from the east, southeast occurs around 10% of the time usually in the form of "Santa Ana" wind events.

The above meteorological criteria would have the most impact on the composting facility and potential odor transmission. As discussed elsewhere, the design of the facility, its distance from odor receptors and prevailing wind and weather conditions would not negatively compromise the composting facility operations.

J. Contingency Plans

1. Fire Prevention

Daily monitoring of high-risk piles minimizes the potential of fire resulting from compost combustion. The facility design includes areas near the chipping/grinding zones for spreading and wetting of burning material in the unlikely event of a fire. Equipment on-site includes a water truck and several tractor/loaders, as well as a submersible pump and fire hose that can be activated in the retention basins for water suppression purposes.

2. Water Supply

The February 2013 Hydrogeologic Report, prepared by Cleath-Harris Geologists, Inc., discusses the water demand and water sources for the composting project. Water demand includes dust control and incidental uses. The sources of water on the Perozzi Ranch are from springs that flow out of the hills above the project site and are collected and stored in a variety of reservoirs, tanks and cisterns. Total minimum flow from these water sources is estimated at 67.8 acre-feet per year. The total water demand for the composting project, at maximum operation, is estimated as 44.4 acre-feet per year in an average rainfall year and 48.7 acre-feet in a drought year.

3. Equipment

The machinery and equipment used for the composting operation will include the following list. This equipment can be immediately employed to respond to any emergency.

- Weigh scale or Conversion Factor Assessment, located at the intersection of the roads to the two composting sites or evaluated by the operator at the composting drop off locations
- Tub Grinder, used to convert green waste to mulch
- Loader with thumb, used to feed green waste into the tub grinder and to manage mixed wood piles

- Front end Loader, used for managing raw green waste, forming and repositioning windrows, feeding the screener and loading finished compost product into vehicles
- Tractor assisted and/or self-powered windrow turners, (rotary drum with flails, elevating face conveyor, auger turner, etc.; To be determined at a later date)
- Dump truck, used to move material internally and maintain site area in an orderly and efficient condition
- Power screen Screener, with several screen sizes used to screen finished compost product
- Storage container(s), for storage of tools, equipment and supplies
- Water truck, for watering of roads and aeration of windrows if not under irrigation

4. Power

Each of the two compost sites will be provided with a 4,000-watt portable generator with emergency lighting systems. The composting operation is a day light only facility that does not require a utility grid power supply. Adequate fuel supply for generators and equipment will be available at all times.

5. Personnel

The principal operators and owners are Ron Rinell (Phone: 805.547.1903) and Tim Perozzi (Phone: 805.441.0444), both of whom have extensive knowledge of the tree industry, agriculture and business. They will have immediate oversight of all operations of the compost project. Other site personnel will consist of one or two persons, depending on specific operation schedules and staffing needs.

Ron Rinell and Tim Perozzi's residences and business headquarters are within a few minutes of the compost facility and can be immediately contacted, as cellular phone service is unobstructed.

K. Personnel Training

Compost employees are skilled equipment operators of all the machinery on the site. In addition, existing and new staff will be provided regular training and in-service updates. Regular safety meetings will be conducted and documented in the facility and employee log record. Training sessions will also include Load Checking, Screening Techniques, Load Rejection Protocol, OIMP Plan requirements and Personal Protection Equipment Use.

L. Load Enclosure / Tarping

In accordance with the San Luis Obispo County waste management transport standards, all incoming exposed loads will be tarped or arriving in fully enclosed chipper hauler trucks. Deliveries failing to observe County and State standards will be given one warning reminder, second offense subject to a delivery fine and repeat offenders removed from the compost facility material supply contract.

Table 1

Sources of Odor and Possible Management Techniques

Odor Source Location	Possible Cause	Management Approach
Feedstock Receiving	Material exceptionally odorous upon receipt	Add carbon source at grinding and "nibble" at odorous pile
	Odorous material remaining unprocessed on receiving pad (mix sitting too long prior to processing)	Augment material processing efforts
Aisles / Access Roads	Storm water allowed to pond in improperly graded areas	Absorb ponded water with wood chips/other absorbent, fill depressions, improve grading and/or drainage control
	Unprocessed material in aisles	Clean aisles of spilled material and treat with carbon source
Stockpiles / Windrows	Ammonia odor (high nitrogen level)	Add additional wood chips (or other carbon source), recombine pile
	Sulfur Odor (anaerobic conditions)	Increase turning frequency, check temperatures, add bulking agent
	Varying odors in pile	Turn windrows to achieve even mixing, check temperatures, porosity, fiber-length, bulk density, and moisture content, adjust windrow constituents, geometry, and/or configuration
	Odors generated after turning	Increase turning frequency, increase pile porosity, add odor-absorbing amendment (like wood chips, sawdust, wood ash)
	Long retention time	Remove chipped and ground material more frequently
Curing Piles / Product Storage Areas	Odors present at time of loading (temperatures above 122°F)	Decrease pile size, increase windrow time prior to moving to curing piles or product storage

Appendix A

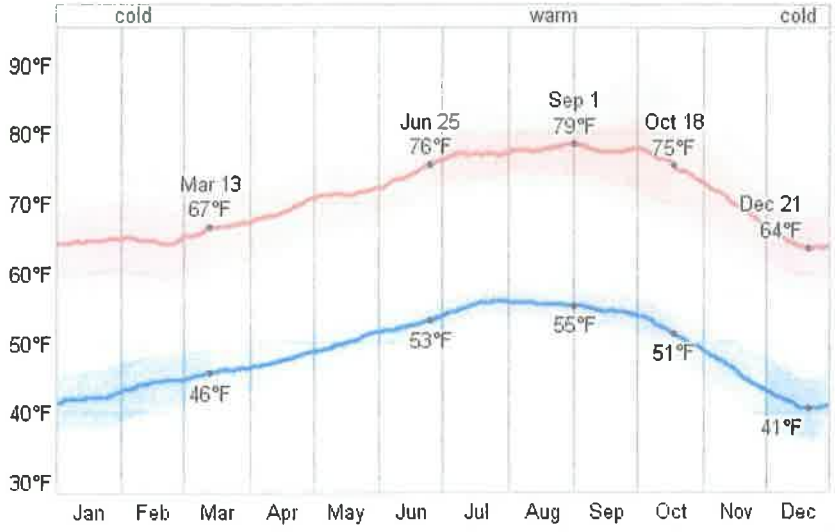
Location

The following weather data was collected at the San Luis Obispo County Regional Airport weather station over the course of an average year. It is based on the historical records from 1984 to 2012. The San Luis Obispo Airport is approximately four miles west of the Bunyon Brothers/Perozzi Compost facility site.

Temperature

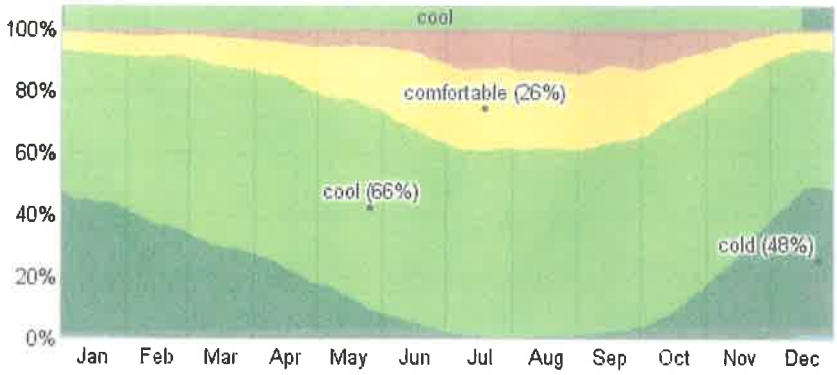
Over the course of a year, the temperature typically varies from 40°F to 79°F abd us rarely below 33° or above 90F.

Daily High and Low Temperature



(The daily average low (blue) and high (red) temperature with percentile bends (inner band from 25th to 75th percentile, outer band from 10th to 90th percentile).

Fraction of Time Spent In Various Temperature Bands

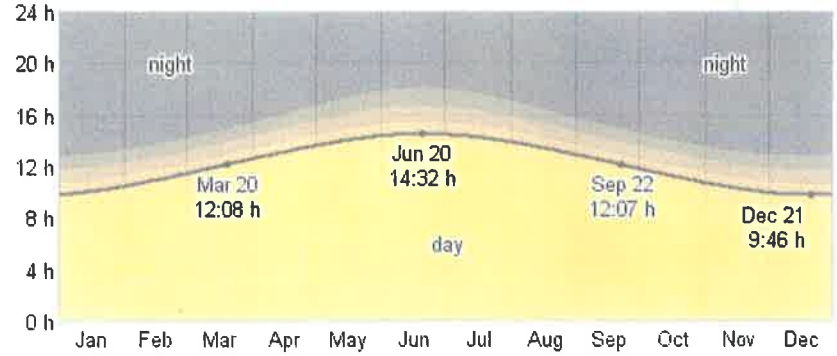


The average fraction of time spent in various temperature bands: frigid (below 15%°F), freezing (15°F to 32°F), cold ·32° to 50°F), cool (50°F to 65°F), comfortable (65°F to 75°F), warm (75°F to 85°F), hot (85°F to 100°F) and sweltering (above 100°F).

Sun

The length of day varies significantly over the course of the year. The shortest day is December 21; the longest day is June 20.

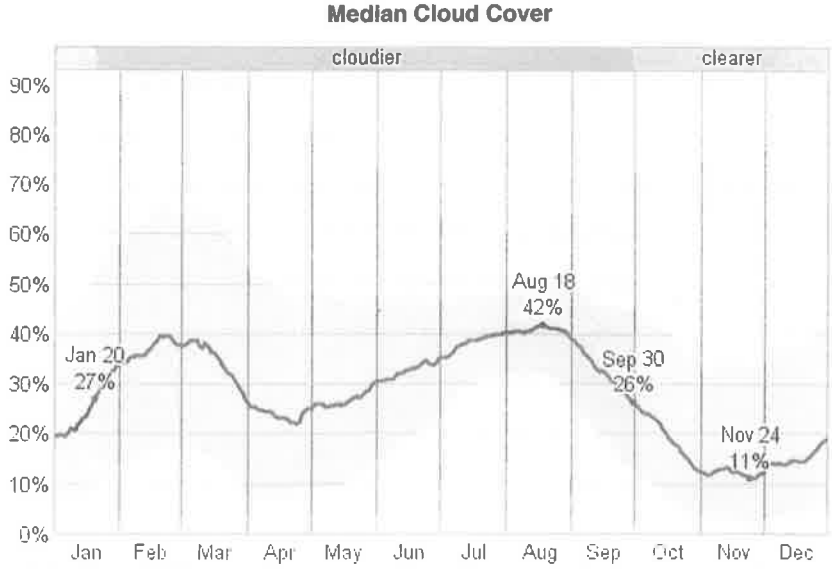
Sun



The number of hours during which the Sun is visible (black line), with various degrees of daylight, twilight, and night, indicated by the color bands.

Clouds

The median cloud cover ranges from 11% (partly cloudy) to 42% (partly cloudy).



The median daily cloud cover (black line) with percentile bands (inner band from 40th to 60th percentile, out band from 25th to 75th percentile).

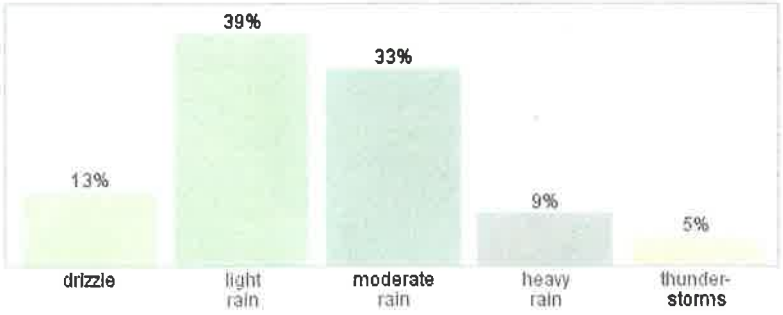
Precipitation

The probability that precipitation will be observed at this location varies throughout the year. Precipitation is most likely around February 15, occurring in 33% of days. Precipitation is least likely around August 20, occurring in 5% of days. Over the entire year, the most common forms of precipitation are light rain, moderate rain, and drizzle.

Probability of Precipitation at Some Point of the Day

The fraction of days in which various types of precipitation are observed. If more than one type of precipitation is reported in a given day, the more severe precipitation is counted. For example, if light rain is observed in the same day as a thunderstorm, that day counts towards the thunderstorm totals. The order of severity is from the top down in this graph, with the most severe at the bottom.

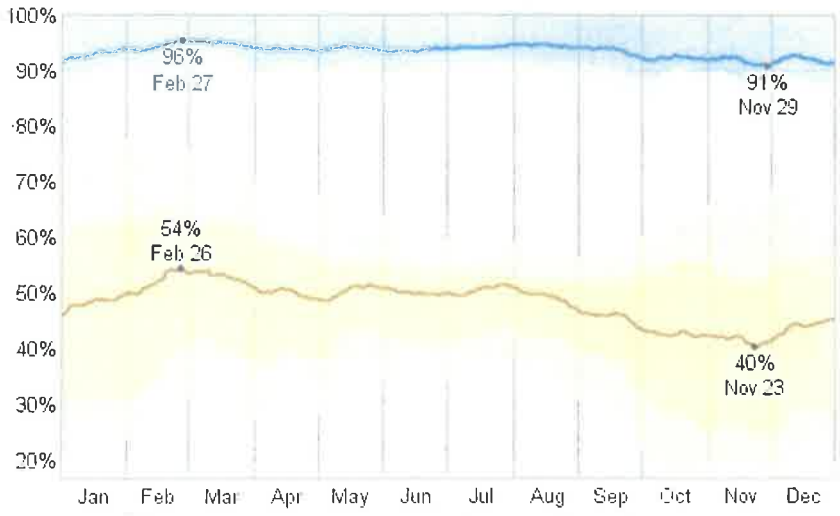
Types of Precipitation Throughout the Year



Humidity

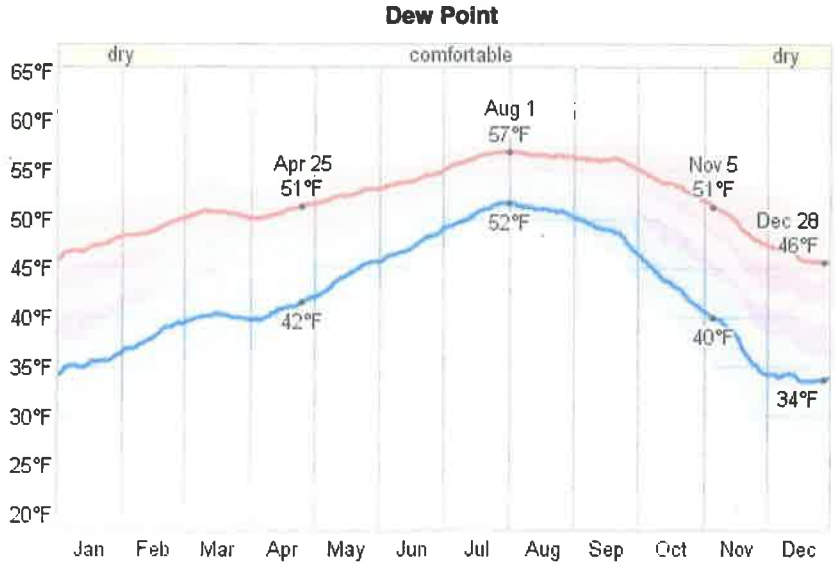
The relative humidity typically ranges from 40% (comfortable) to 96% (very humid) over the course of the year, rarely dropping below 17% (dry) and reaching as high as 100% (very humid).

Relative Humidity



Dew Point

Dew point is often a better measure of how comfortable a person will find the weather than relative humidity because it more directly relates to whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel dryer and higher dew points feel more humid. For a composting operation, it correlates to favorable microorganism growing habitat. Over the course of a year, the dew point typically varies from 34°F (dry) to 57°F (comfortable).

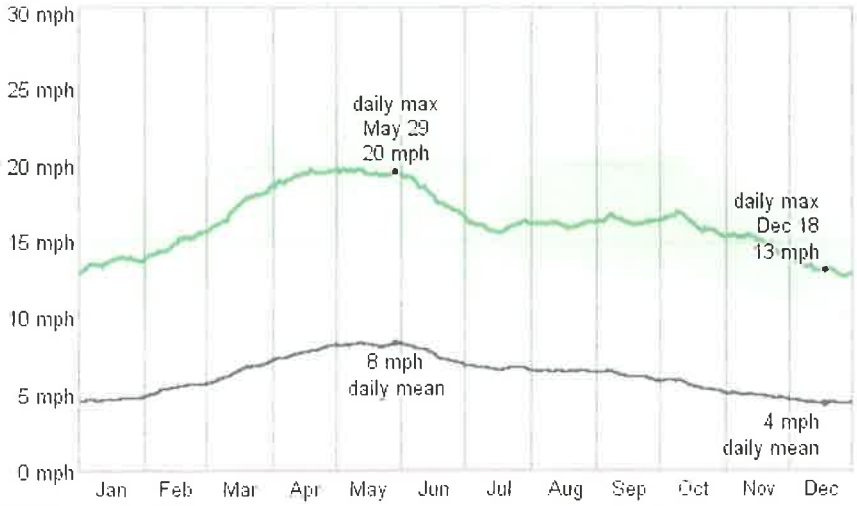


The daily average low (blue) and high (red) dew point with percentile bands (inner band from 25th to 75th percentile, outer band from 10th to 90th percentile).

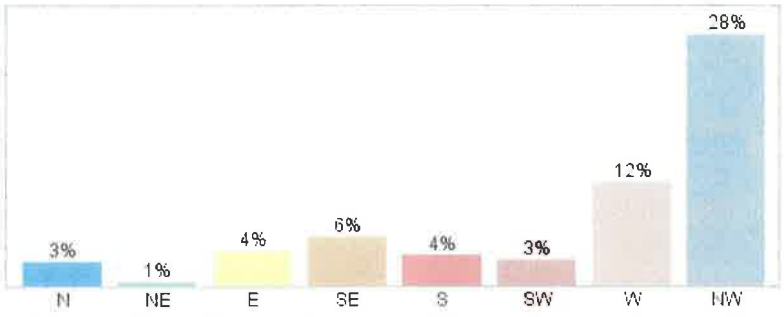
Wind

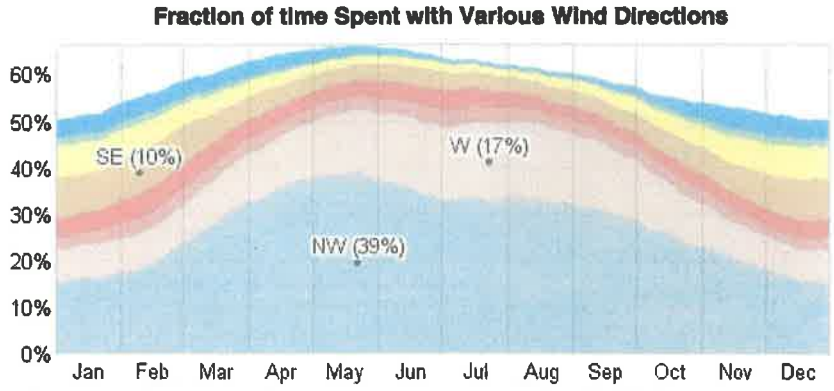
Over the course of the year typical wind speeds vary from 0 mph to 20 mph (calm to fresh breeze), rarely exceeding 27 mph (strong breeze).

Wind Speed



Wind Direction Over the Entire Year





The fraction of time spent with the wind blowing from the various directions and wind direction are shown in the above two graphs. Values do not always sum to 100% because the wind direction is undefined when the wind speed is zero.

Plans and Documents

Bunyon Brothers / Perozzi

Green Waste Management Project

Perozzi Ranch 4400 Orcutt Road San Luis Obispo, CA 93401

AREA MAPS

SITE MAP
SCALE: 1" = 1,000'

AERIAL MAP
N.T.S.

VICINITY MAP
N.T.S.

PROJECT DESCRIPTION

THE BUNYON BROTHERS/ PEROZZI GREEN WASTE MANAGEMENT COMPOSTING PROJECT WILL SERVE SAN LUIS OBISPO COUNTY'S GREEN WASTE NEEDS BY COLLECTING & PROCESSING ORGANIC MATERIALS SUCH AS TREE WASTE, LEAVES, MANURE AND SIMILAR FEEDSTOCK INTO A SOIL AMENDMENT MATERIAL.

PROJECT DATA

SITE AREA: 5±7 ACRES
RANCH AREA: ± 100 ACRES

COMMERCIAL COMPOSTING FACILITY AREAS:

	AREA OF DISTURBANCE	EARTHWORK CUT	EARTHWORK FILL
PHASE I:	3 ACRES of 4 ACRE AREA	0	0
PHASE II:	2.5 ACRES of 4 ACRE AREA	0	0

HOLDING POND AREAS:

	AREA OF DISTURBANCE CAPACITY	AREA OF DISTURBANCE VOLUME	EARTHWORK CUT	EARTHWORK FILL
PHASE I:	5 AC-FT.	9,680 CY	0	2,400 CY
PHASE II:	6 AC-FT.	7,941 CY	0	3,959 CY
TOTAL:	11 AC-FT.	17,741 CY	0	6,359 CY

EARTHWORK AT POND IS LIMITED TO A PERIMETER BERM. EXISTING NATURAL SLOPE CONTOURS WILL BE UTILIZED TO CREATE THE HOLDING PONDS.

DIRECTORY

BUSINESS OWNER/ APPLICANT:
BUNYON BROTHERS TREE SERVICE
RON RINELL
5345 DEVENPORT CREEK RD
SAN LUIS OBISPO, CA 93401
PH: (805) 547-1920

PROPERTY OWNER:
PEROZZI RANCH FAMILY TRUST
TIM PEROZZI
3972 ORCUTT RD.
SAN LUIS OBISPO, CA 93401
PH: (805) 441-0444

DESIGN & PLANNING:
JOSEPH BOUD & ASSOCIATES
JOE BOUD
1008 MORRO ST, STE 202
SAN LUIS OBISPO, CA 93401
(805) 543-0565

ENGINEERING:
STEEL BUILDING ENGINEERING, INC.
ROBERT ADAMES
PO BOX 3618
SAN LUIS OBISPO, CA 93403
(805) 546-8427

DRAFTING SERVICE:
JOSHUA S. BLAIR DRAFTING & DESIGN
JOSH BLAIR
PO BOX 798
PISMO BEACH, CA 93448
(520) 474-4301

SHEET INDEX

GENERAL NOTES

APPLICABLE CODES:
2010 CBC CALIFORNIA BUILDING CODE
2010 CPC- CALIFORNIA PLUMBING CODE
2010 CMC- CALIFORNIA MECHANICAL CODE
2010 CEC- CALIFORNIA ELECTRICAL CODE
2010 LUO- COUNTY OF SLO LAND USE ORDINANCE
2010 TITLE 19- COUNTY OF SLO BUILDING & CONSTRUCTION ORDINANCE

EROSION CONTROL NOTES:

1. THE SITE SHALL BE MAINTAINED SO TO PREVENT FLOW OF SEDIMENTS FROM THE PROJECT.
2. ALL AREAS OVER 5% GRADE WHICH ARE DISTURBED BY GRADING ACTIVITIES SHALL BE HYDROSEEDED WITH AN APPROVED PERENNIAL MIX PRIOR TO FINAL ACCEPTANCE. AREAS WITH ESTABLISHED GROWTH AT THE TIME OF FINAL ACCEPTANCE NEED NOT BE HYDROSEEDED.
3. EROSION CONTROL SEDIMENT CONTROL MEASURES SHALL BE PROVIDED FOR ANY SITE WORK PERFORMED DURING THE RAINY SEASON (OCTOBER 15 THROUGH APRIL 15) SEE ATTACHED STRAW BALE DETAIL.
4. EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AFTER CONSTRUCTION IS COMPLETED UNTIL PERMANENT MEASURES ARE IN PLACE.
5. DURING RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF SOIL AND DEBRIS.
6. ALL EROSION PROTECTION MEASURES SHALL BE INSPECTED AND REPAIRED AS NECESSARY AT THE END OF EACH WORK DAY AND AFTER EACH RAINFALL EVENT.
7. AN EROSION CONTROL PLAN WILL BE REQUIRED TO BE SUBMITTED AND APPROVED AND IMPLEMENTED SHOULD GRADING OCCUR BETWEEN OCTOBER 15 AND APRIL 15.

REVISIONS:
1
2

Legal Description:
APN: 044-011-004 & 029
, COUNTY OF SLO

BUNYON BROTHERS / PEROZZI
GREEN WASTE MANAGEMENT PROJECT
PEROZZI RANCH / 4400 ORCUTT ROAD
SAN LUIS OBISPO, CA 93401

Applicant Information:
BUNYON BROTHERS / PEROZZI
Ron Rinell Tim Perozzi
5345 Devenport Creek Rd.
San Luis Obispo, CA 94301

JOSEPH BOUD
& ASSOCIATES
Design and Planning Services
1009 Morro Street, Suite 202
San Luis Obispo, CA 93401
E: jboud@slo.global.net
T: 805-543-0565
F: 805-543-2187

DATE: 5-07-13
SCALE: AS NOTED
DRAWN BY: JBB
SHEET: T1

GENERAL COUNTY NOTES:
1. No construction shall be started without plans approved by the County Building Department. The County shall be notified at least 24 hours prior to starting of construction and of the time and location of the preconstruction conference. Any construction done without approved plans or prior notification to the County will be rejected and will be at the contractor's and/or owner's risk.
2. All construction work and installations shall conform to the County of San Luis Obispo Standards and Specifications and all work shall be subject to the approval of the County.
3. Soils tests shall be done in accordance with the County Standards and Specifications Section 11-351.1403 and 11-351.1404. All tests must be made within 15 days prior to placing material. The test results shall clearly indicate the location and source of the material.
4. Compaction tests shall be made on subgrade material and material as specified by the Engineer. Said tests shall be made prior to the placing of the next material.
5. Subgrade material shall be compacted to a relative compaction of 95% in the zone between finished subgrade elevation and one foot below. All material in fill sections below the zone mentioned above shall be compacted to 90% relative compaction.
6. A registered Civil Engineer must certify that the improvements when completed are in accordance with the plans prior to the request for a final inspection. As-built plans are to be prepared after construction is completed. The civil engineer certifying the improvements and preparing as-built plans will be present when the final inspection is made.
7. An inspection agreement is required prior to the start of construction.
8. All utility companies must be notified prior to the start of construction.
9. A County Encroachment Permit is required for all work done within the County right-of-way.
10. The County Inspector acting on behalf of the County Building Department may require revisions in the plans to solve unforeseen problems that may arise in the field. All revisions shall be subject to the approval of the developer's engineer.
11. The structural section shall be based on soils tests made at the time of construction and on a Traffic Index of for all roads.
12. Hydroseeding shall be placed on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection.
13. For any public improvement to be maintained by the county, if environmental permits from the U.S. Army Corps of Engineers, the California Regional Water Quality Control Board/State Water Resources Control Board, or the California Department of Fish & Game are required, the developer shall:
a. submit a copy of all such completed permits to the County OR
b. document that the regulatory agencies determined that said permit is not required: prior to acceptance of the completed improvements for county maintenance and release of improvement security. Any mitigation monitoring required by said permits will remain the responsibility of the developer.

GRADING NOTES:
1. All grading construction shall conform to the applicable codes as noted under "applicable codes" heading.
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4. Estimated earth quantities: CUT: FILL:
Note: Exact shrinkage, consolidation, and subsidence factors and losses due to clearing operations are not included. Estimated earthwork quantities are based upon the difference between existing ground surface and proposed finish grades, or sub grades as shown on the plan, and should vary according to these factors. The contractor shall be responsible for site inspection and quantity take off, and shall bid accordingly.
5. Soils engineer to determine the soil is suitable to support the intended structure. Such report including progress and/or compaction reports shall be submitted to the field inspector prior to final inspection when a soils report is obtained. The County policy regarding Pad Certification shall be followed. When applicable, the Engineer shall observe the grading operation(s) and provide the field inspector with required compaction reports and a report stating that the grading performed has been observed and is in conformance with the UBC and County Ordinances.
6. No CUT or FILL slopes will be constructed steeper than two horizontal to one vertical (2:1).
7. Dust Control is to be maintained at all times during construction.
8. Areas of FILL shall be scarified, benched and recompacted prior to replacing FILL and observed by a Soil or Civil Engineer.
9. FILL material will be recompacted to 90% of maximum density.
10. Remove any deleterious material encountered before placing FILL.
11. All disturbed areas shall be Hydro Seeded or planted with approved erosion control vegetation as soon as practical after construction is complete.
12. Minimum setback to creeks and bluffs shall be maintained. Minimum setback of two feet from all property lines will be maintained for all grading.
13. Minimum slope away from buildings shall be 2% for the first three feet around perimeter.
14. The contractor shall be responsible for the protection of all existing survey markers during construction. All such monuments or markers disturbed shall be reset at the contractor's expense.
15. All contractors and subcontractors working within the right of way shall have an appropriate contractor's license, a local business license, and shall obtain an encroachment permit.
16. Engineering reports for CUT or FILL slope steeper than 2:1 shall be submitted to the Field Inspector.

TREE PROTECTION NOTES:
1. No oak tree shall be removed without prior County approval.
2. Trees within 20 feet of grading or trenching shall be protected by placement of protection fencing as indicated.
3. Protective fencing shall be four feet high chain link or safety fence, and shall be placed at the dripline unless otherwise indicated.
4. Trenching and excavation within tree driplines shall be hand dug or bored to minimize root disturbance. Any root encountered 1" diameter or greater, shall be hand cut and appropriately treated.
5. Pruning of lower limbs in the construction area shall occur prior to construction activities to minimize damage.

APPLICABLE CODES:
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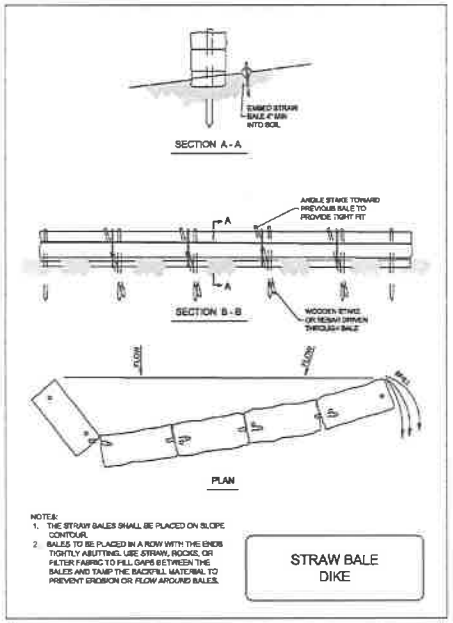
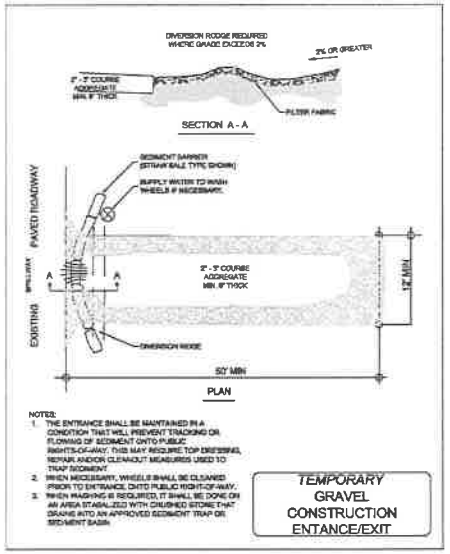
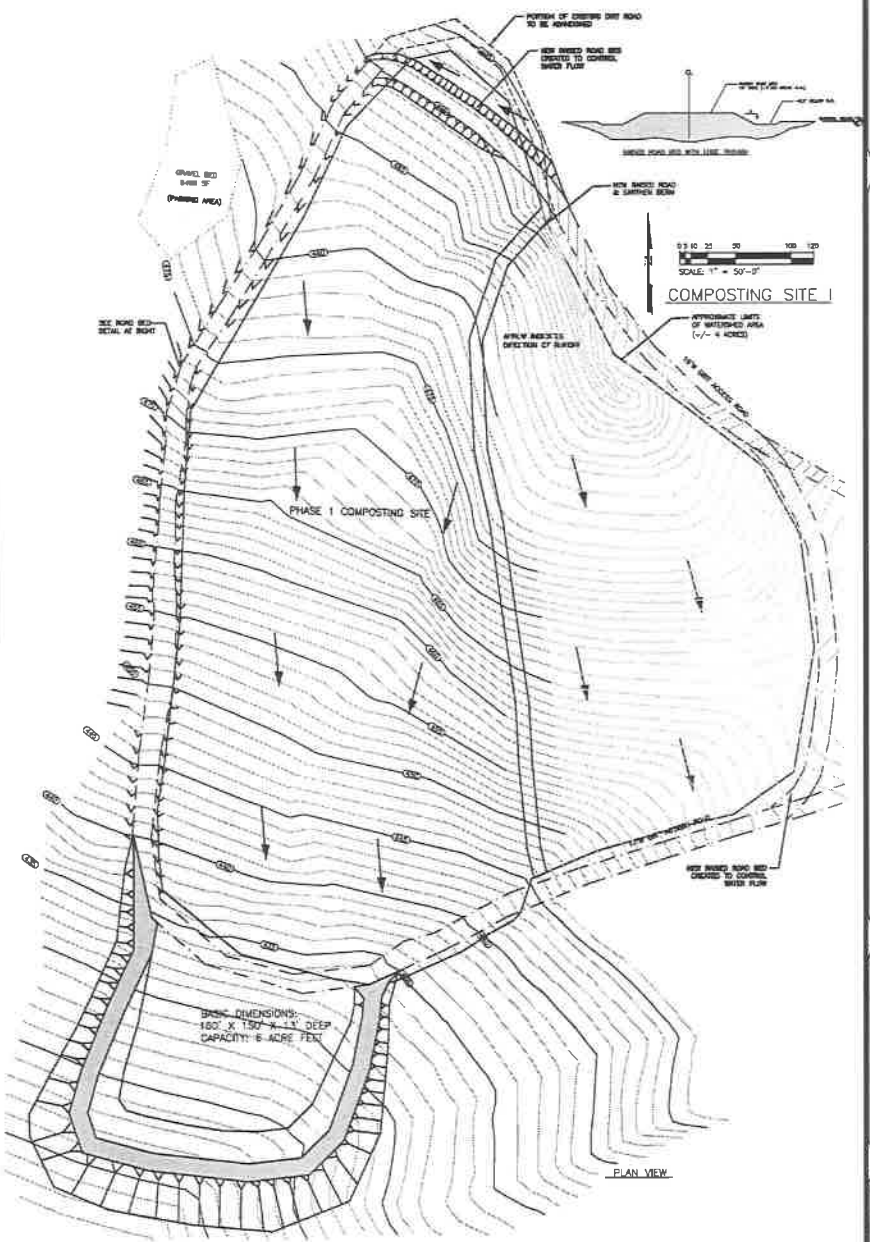


STRAW BALE DIKE



TEMPORARY GRAVEL CONSTRUCTION ENTANCE/EXIT



STEEL BUILDING ENGINEERING
P.O. BOX 3656 • SAN LUIS OBISPO, CA 93403
(805) 544-4277 • FAX (805) 782-0990

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SAN LUIS OBISPO, CA 93401

Applicant Information:
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Ron Pérrozi/ Tim Perrozi
8340 Davenport Creek Rd.
San Luis Obispo, CA 93401

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Design and Planning Services
1069 Morro Street, Suite 202
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E: jboud@sbcglobal.net
P: 805.543.1565
F: 805.543.2197

DATE: 3-07-13
SCALE: AS NOTED
DRAWN BY: JEB
SHEET: C-1

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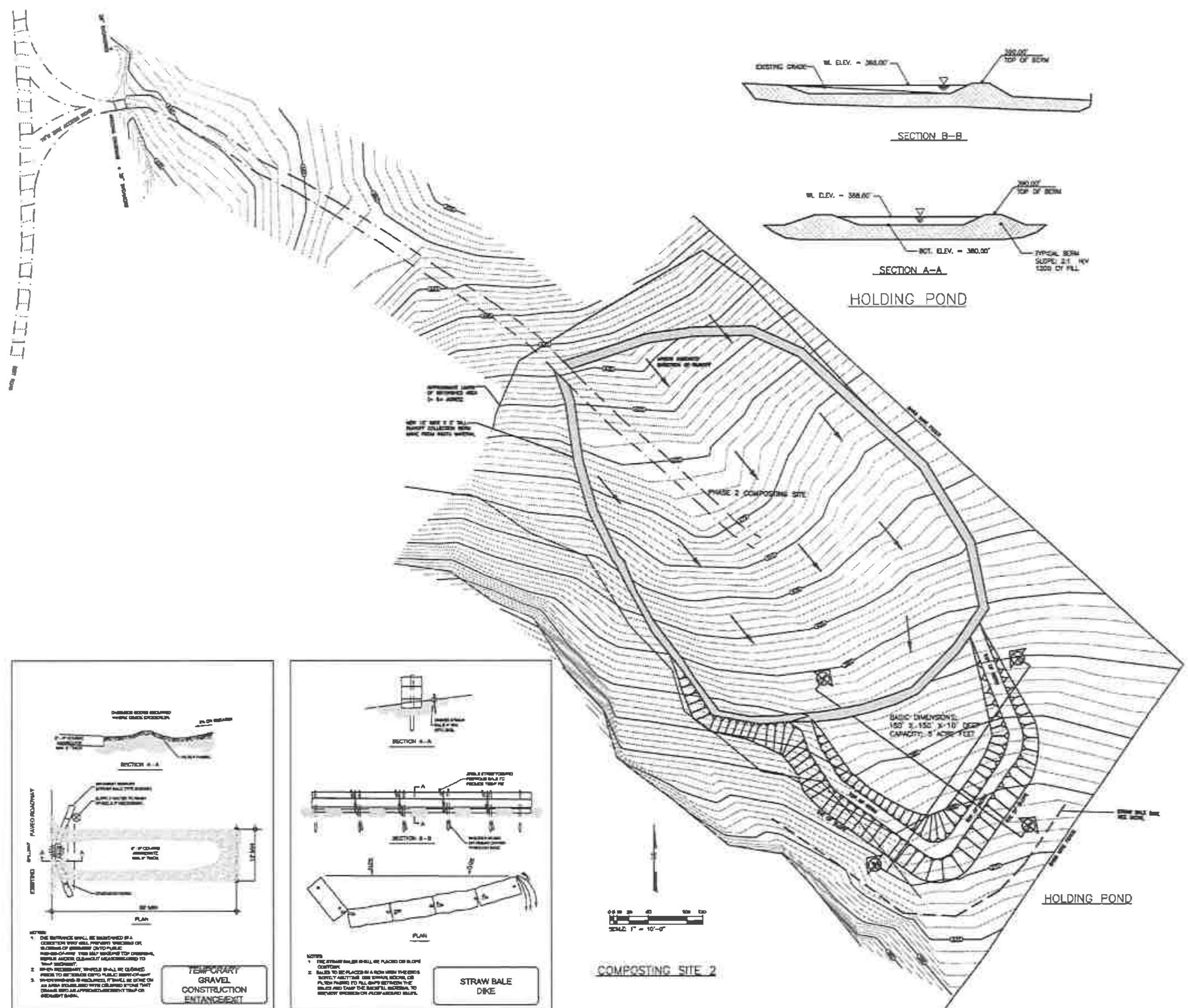

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DATE: 3-07-13
SCALE: AS NOTED
DRAWN BY: JSB
SHEET: C-2

CalRecycle

Facility/Site Summary Details: Bunyon Bros Greenwaste (40-AA-0048)

For this facility,please contact Local Enforcement Agency (LEA) below
CalRecycle Contact: Randy Friedlander
Phone Number: (916) 341-6718

Search New Facility

Detail Inspection Enforcement Maps Documents

Identification:		**Local Enforcement Agency (LEA):**
Location:	Bunyon Bros Greenwaste 4400 block Orcutt Road North Side San Luis Obispo, CA 93401	CalRecycle Enforcement Agency CalRecycle Enforcement Agency Compliance Evaluation & Enforcement Div 1001 I St Sacramento, CA 95814 Phone: Fax:
Latitude:	35.25063	
Longitude:	-120.61711	
GIS Confidence:	Map	
US EPA FRS ID:	Not Available	

Operator/Business Owner:	**Land Owner(s):**
Ron Rinell 5345 Davenport Creek Road San Luis Obispo, CA 93401 Phone: (805) 547-1903 Fax: (805) 544-2071	Tim Perozzi 3830 Sequoia Dr. San Luis Obispo, CA 93401 Phone: (805) 441-0444 Fax:

Surrounding Land Use:

Residential

Permit Details:

Current - Permit or EA Notification Issue Date: **June 29 , 2010 Type: Notification** View Document

Unit Specifications:

Data Dictionary

Unit: 01

Activity:	Composting Operation (Green Waste)	Inspection Frequency:	Quarterly
Classification:	Solid Waste Operation	Max.Permitted Throughput:	200.00 Cu Yards/day
Category:	Composting	Permitted Capacity:	5,000 Cu Yards/year
Regulatory Status:	Notification	Total Acreage:	12.0000 Acres

Operational Status:	Active
Operational Type:	Not Available
Closure Date:	
Closure Type:	Not Available
Waste Type:	Green Materials

Top of Page | Page: 1 of 1

Last updated: Data updated continuously.
Solid Waste Information System(SWIS), http://www.CalRecycle.ca.gov/SWFacilities/Directory/
Cody Oquendo, Cody.Oquendo@CalRecycle.ca.gov (916) 341-6719

State of California
Department of Resources Recycling and Recovery (CalRecycle)
169 (Rev 4/04)

ENFORCEMENT AGENCY NOTIFICATION

Enforcement Agency:	Calrecycle	Official Use Only	
		SWIS Number:	40-AA-0048
County:	San Luis Obispo	Date Received:	6/29/10

I. GENERAL INFORMATION

Operation Name:	Bunyon Bros Form Green Waste						
Address:	Orcutt Rd.	City:	San Luis Obispo	State:	CA	Zip:	93401
Phone:	805-547-1903	Fax:	805-544-2071				
Operator Name:	Ron Rinell						
Address:	5345 Davenport Creek Rd	City:	San Luis Obispo	State:	CA	Zip:	93401
Phone:	805-547-1903	Fax:	805-544-2071				
Land Owner:	Tim Perozzi						
Address:	3830 Sequoia Dr	City:	San Luis Obispo	State:	CA	Zip:	93401
Phone:	805-441-0444	Fax:					

II. OPERATION INFORMATION

Authorizing Eligibility (State Section of 14 CCR Division 7, Chapter 3 or 3.1): See back for more details	17857.1 Green Materials Compost operations				
Type(s) of Waste/Material Handled:	green materials				
Volume of Waste/Material Handled:					
Peak Loading:	200 ☒ Cubic Yards or ☐ Tons	Annual Loading:	5000 ☒ Cubic Yards or ☐ Tons		
Days and Hours of Operation:	M-F 7-3:30	Operation Acreage:	12		
Brief Description of the Operation:	Chipping and grinding of green materials not to exceed 12,500 cubic yards on site at any time.				

III. DOCUMENTATION OF LOCAL NOTIFICATION (check one and submit with EA Notification)

☐	Proof of Compliance with the California Environmental Quality Act (CEQA).
☐	Correspondence from the local planning department that compliance with CEQA is not required for the operation to obtain local land use approval.
☒	Written notice to the local planning department of the operator's intent to commence operations.

IV. OWNER/OPERATOR CERTIFICATION

I hereby certify under penalty of perjury that the information provided is true and accurate to the best of my knowledge and belief.

Signature of Land Owner:		Date:	6/25/10
Signature of Operator:		Date:	6/25/10

* Completion of this form is not required by regulation; however, it will provide the enforcement agency with the information required by 14 CCR 18103.1.
- A separate Notification is required for each eligible operation.

35.250631 -120.617115