

MONTECITO RANCH

APPENDIX K

MANURE MANAGEMENT AND
FLY/VECTOR CONTROL PLAN

for the

DRAFT ENVIRONMENTAL IMPACT REPORT

SP01-001; TM 5250RPL⁶; P04-045;

LOG NO. 01-09-013; SCH NO. 2002021132

MAY 2008

**MANURE MANAGEMENT AND
FLY/VECTOR CONTROL PLAN
FOR
MONTECITO RANCH
RURAL COUNTRY ESTATES**

*APPLICANT:
MONTECITO PROPERTIES, LLC
402 WEST BROADWAY, SUITE 1320
SAN DIEGO, CA 92101
CONTACT: DAVID DAVIS
619.696.7355*

*SUBMITTED TO:
COUNTY OF SAN DIEGO
DEPARTMENT OF PLANNING AND LAND USE
5201 RUFFIN ROAD
SAN DIEGO, CA 92123
CONTACT: WILLIAM STOCKS
858.694.2960*

*PREPARED BY:
DEVELOPMENT DESIGN SERVICES & GRAPHICACCESS INC.
2583 VIA MERANO
DEL MAR, CA 92014
CONTACT: ADAM GEVANTHOR
858.793.5450*

*HELIX ENVIRONMENTAL PLANNING, INC.
7578 EL CAJON BOULEVARD, SUITE 200
LA MESA, CA 91941
CONTACT: LISA CAPPER
619.462.1515*

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Background

This Manure Management Plan and Fly/Vector Prevention and Management Plan (Plan) has been created following similar plans approved by the San Diego County Department of Environmental Health, and Vector Surveillance and Control Program. It is an attempt to plan for the minimization of flies, mosquitoes, rodents and other pests that may breed in animal wastes, or be attracted to garbage associated with the proposed equestrian facilities, and vectors that could be attracted to the proposed wastewater reclamation facility. This plan is created to meet the requirements of the Vesting Site Plan 5250RPL5 for the Montecito Ranch Project and the associated Major Use Permits for the equestrian facilities within the Specific Plan Area (MUP 04-045) and the proposed wastewater reclamation facility (MUP ____).

The control and removal of animal manure and management of any pesticides used on the property is of interest to the County's Department of Public Works and Department of Health Services, and the Regional Water Quality Control Board. Enforcement of pesticide use is under the auspices of the County Agricultural Commissioner's Office. All pesticides used to reduce fly or mosquito breeding will be applied by a licensed, professional company.

Principles of Integrated Pest Management, IPM, will be used with little or no use of pesticides. Timely removal of manure and temporary storage measures will be the basis of fly prevention and odor reduction in the equestrian facilities.

Description of Facilities

An equestrian staging area is proposed within Montecito Ranch. A portion (approximately three acres) of the historic park site will be used as an area for equestrian facilities for day use visitors. A stone monument wall with signage and accent planting will provide identity as a gateway to the facility. A graded, decomposed granite parking area provides vehicular access and parking for 10 truck/trailers and 23 cars. Five 15' x 15' square pens, hitching posts, an 80' diameter pen and 100' x 150' arena with bleachers are provided in addition to an animal wash down area. Decomposed granite trails will provide access to the community trail network. A turf picnic pavilion with barbeque serves as a focal element for the facility. A service access drive provides a link to the Historic Park site and a landscaped berm adjoining Montecito Ranch Road will provide a screen buffer for the parking area and facilities. Equestrian style fencing will define the facility limits. This facility is a day-use only equestrian park, with no boarding capabilities.

The Montecito Ranch project includes an on-site wastewater reclamation facility (WRF) as one option for treating sewage generated by the project. The facility would generate tertiary treated effluent for re-use as irrigation water within the development. The wastewater reclamation facility would include a number of design measures to prevent fly/vector control problems, as noted below.

Manure Management and Fly/Vector Control

The Plan is designed to:

- Minimize fly/mosquito and vector production

- Reduce odors
- Minimize public complaints
- Minimize manure content and sediment in storm water runoff

Equestrian Facilities

The following measures apply to the equestrian facility within Montecito Ranch.

Manure Management & Disposal

The respective facility manager will ensure that the following measures will be implemented at the equestrian facility:

- The arena and temporary holding pens will be cleaned weekly, with immediate disposal to a covered, roll-off commercial dumpster.
- Outside temporary holding pens will contain decomposed granite that is layered over thick asphalt felt.
- Manure storage bins would be placed onto impervious surfaces with appropriate berming.
- All waste will be disposed of directly to a commercial dumpster. No composting is proposed.
- Dumpsters will be emptied once a week and taken to the landfill or recycling area of the landfill.
- Prior to the known rainy seasons (September through March), cleaning efforts will be made to remove any excess accumulations of manure from premises to prevent fly breeding and reduce storm-water runoff. Good drainage is to be maintained to prevent standing pools of water and mosquito breeding.

Water Management Methods

The following guidelines will be implemented to provide effective reduction of fly and mosquito sources:

- Use non-leak valves on all water devices.
- The Montecito Ranch equestrian facility will provide a water spout for individual horse owners to utilize with their own buckets. No individual horse waterers or large troughs are proposed.
- Feed troughs and bins will not be provided because spilled feed attracts flies and makes a good breeding site.
- Properly grade earth surfaces in pens and arena corrals for drainage.
- Facility users will be requested to report all water leaks to prevent unnecessary wet manure areas or mosquito breeding areas.
- Regular inspections by maintenance personnel will ensure that all watering devices are working, have proper air-gap back-flow prevention and are not breeding mosquitoes. At this time there are no watering ponds or large water storage containers.

General Sanitation Management Methods

A general cleanup program shall supplement the manure and water management efforts. Good sanitary methods shall pay attention to the following items:

- Remove damp or spilled feed from around facility.
- Store all garbage, fruit and vegetable wastes and pet droppings in tight lid containers until off-grounds disposal is possible.
- The Park maintenance personnel or HOA maintenance department will control weeds in order to improve sun penetration and air movement so that the grounds remain dry and to avoid breeding of flies, rodents, mosquitoes and other potential pests (e.g., by removing breeding habitats).
- Yellow Jacket and fly traps will be used if those insects become a problem and are attracted to the garbage.

Feed Storage

- Feed and supplement storage will not be allowed.

Rodent Control

No rodent poisons are proposed, as they are dangerous to the animals. Snap traps or live traps will be used as necessary. If rodent baits are used in the future, they shall be contained in approved tamper resistant bait stations and used according to the label.

If severe rodent problems occur a licensed Private Pest Control Operator (PCO) may be employed.

Pesticides and Larvicides

No use of pesticides is planned in the equestrian park except for an insecticide (Py-Tech or similar product) to reduce fly and mosquito breeding, which will be applied by a licensed professional company. Hydrated lime may be used in some areas to reduce odors, with such applications also effective in reducing fly breeding.

Stormwater Management

The Proposed Project includes on-site detention basins to provide flow control. These basins would be designed to drain within 72 hours to prevent mosquito breeding, pursuant to County requirements. The project SWMP also identifies maintenance requirements for the described basins, including monthly inspections and trimming or removal of excess vegetation as needed for (among other reasons) vector control.

Wastewater Reclamation Facility

The proposed on-site WRF will implement a number of measures to reduce attraction of flies, mosquitoes and vectors in general. Vector attraction would be limited to two primary components of the reclamation process, the screening process at the headworks and at the wet weather storage pond. A number of operational procedures described below will minimize vector problems at the facility.

Headworks

Screened material will be removed from the facility two-to-three times per week. The screening process takes place indoors, with screened material disposed of in a commercial dumpster which is also housed indoors until transported off site. Routine removal of

material minimizes fly attraction/propagation.

Wet Weather Storage Area

Wet weather storage ponds are proposed at the WRF to store approximately 84 days of tertiary treated water as a result of wet weather and reduced demand for irrigation. The wet weather storage ponds would be able to hold approximately 9,240,000 gallons of water. The stored water would be used after the wet weather period has ended. During wet weather years, water will be pumped into the pond beginning around November and ending in February or March, with the water completely used/drained by approximately the end of June. Thus, during wet weather years, the pond could maintain water for up to eight months. It is not expected that the wet weather storage will be used every year and it may be dry for up to two to three years at a time. The following measures will be implemented to reduce attraction of flies, mosquitoes, rodents and other vectors:

- Synthetic pesticides (e.g., methoprene and cyromazine), biochemical pesticides (i.e., *Bacillus thuringiensis israeliensis*), and/or biological controls (e.g., mosquito fish) will be applied by a licensed, professional company to the wet weather storage area to control attraction/propagation of mosquitoes.
- Chlorine addition to the treated water will be increased for long-term storage, reducing attraction to flies and mosquitoes.
- The wet weather storage ponds will be disked annually in the Fall to remove vegetation within and around the perimeter of the pond to limit rodent housing.
- Vector control is not necessary for the emergency wastewater storage area. Emergency storage will occur in a covered concrete tank, with storage lasting no longer than 48 hours. Short-term storage would not invite vectors.

Any changes to the fly/vector plan should be made with consultation and approval of San Diego Department of Environmental Health Services, Vector Control.

VESTING SITE PLAN MONTECITO RANCH "B" DESIGNATOR SITE PLAN (S 06-)

WORK TO BE DONE
THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE COUNTY OF SAN DIEGO.
STANDARD SPECIFICATIONS:
1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREEN BOOK" (2006 EDITION), INCLUDING THE REGIONAL AND COUNTY OF SAN DIEGO SUPPLEMENT AMENDMENT.
2. SAN DIEGO COUNTY GRADING ORDINANCE.
3. CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," (PWS'S MUTO 2003 EDITION).
4. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS (MAY 2006).
STANDARD DRAWINGS:
1. THE CURRENT SAN DIEGO AREA REGIONAL STANDARD DRAWINGS.
2. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLAN (MAY 2006).

LEGEND

DESCRIPTION	SYMBOL
BOUNDARY DATA PER TABLE (SHEET 2)	(1) (2)
SUBDIVISION BOUNDARY	---
PROPOSED LOT LINE	---
PROPOSED RIGHT-OF-WAY	---
ACCESS RIGHTS RELINQUISHMENT	---
EXISTING RIGHT-OF-WAY	---
PROPOSED EASEMENT LINE	---
PROPOSED SOUND WALL	---
PROPOSED TRAIL	---
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
PROPOSED SLOPE (2:1 UNLESS OTHERWISE SHOWN)	---
BIOLOGICAL RESOURCES	---
PROPOSED FUEL MANAGEMENT ZONE	---
PROPOSED SEWER MAIN W/MANHOLE	---
PROPOSED SEWER FORCE MAIN W/MANHOLE	---
PROPOSED STORM DRAIN	---
PROPOSED STORM DRAIN INLET, CLEANOUT, CATCH BASIN OR DEFLATION BASIN & RISER	---
PROPOSED STORM DRAIN HEADWALL W/ RIP RAP DISSIPATOR	---
PROPOSED BROW DITCH	---
PROPOSED FIRE HYDRANT	---
PROPOSED WATER LINE	---
PROPOSED RECLAIMED WATER LINE	---
DRAINAGE INUNDATION (BASINS GREATER THAN 25 ACRES)	---
TREATED WATER SPRAY FIELD (W.W. OPTION 2 - ONLY)	---

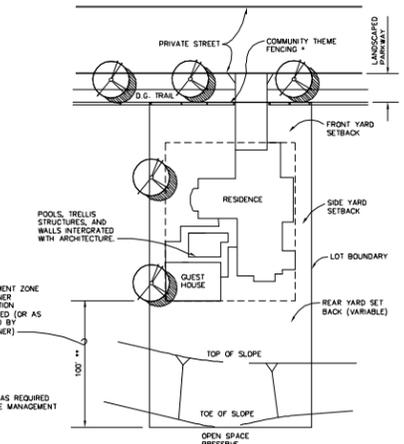
LEGAL DESCRIPTION:
OF PORTIONS OF THE TOWN OF RANCHO, MAP NO. 644; PORTIONS OF RANCHO SANTA MARIA MAP NO. 863; PORTIONS OF WEEK END VILLAS, MAP NO. 1452; AND LOT 1, SECTION 8, TOWNSHIP 13 SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA. (NOTE: THOSE PORTIONS OF MAP NO. 863 SHOWN HEREIN ARE PORTIONS OF SECTIONS 4, 5, 7, 8, 9, AND 12, TOWNSHIP 13 SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE EXTENSION OF THE U.S. GOVERNMENT SYSTEM OF SURVEYS OVER SAID RANCHO SANTA MARIA REPORTED TO HAVE BEEN MADE BY G. N. SAMPFORD IN MAY, 1884.)

OWNER:
MONTECITO RANCH, LLC
A CALIFORNIA LIMITED LIABILITY COMPANY
402 WEST BROADWAY, SUITE 2215
SAN DIEGO, CA 92101-3542
TELEPHONE: (619) 696-1355

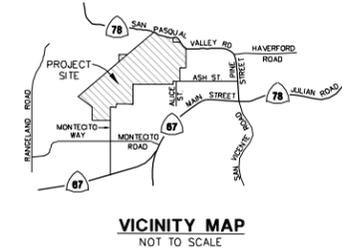
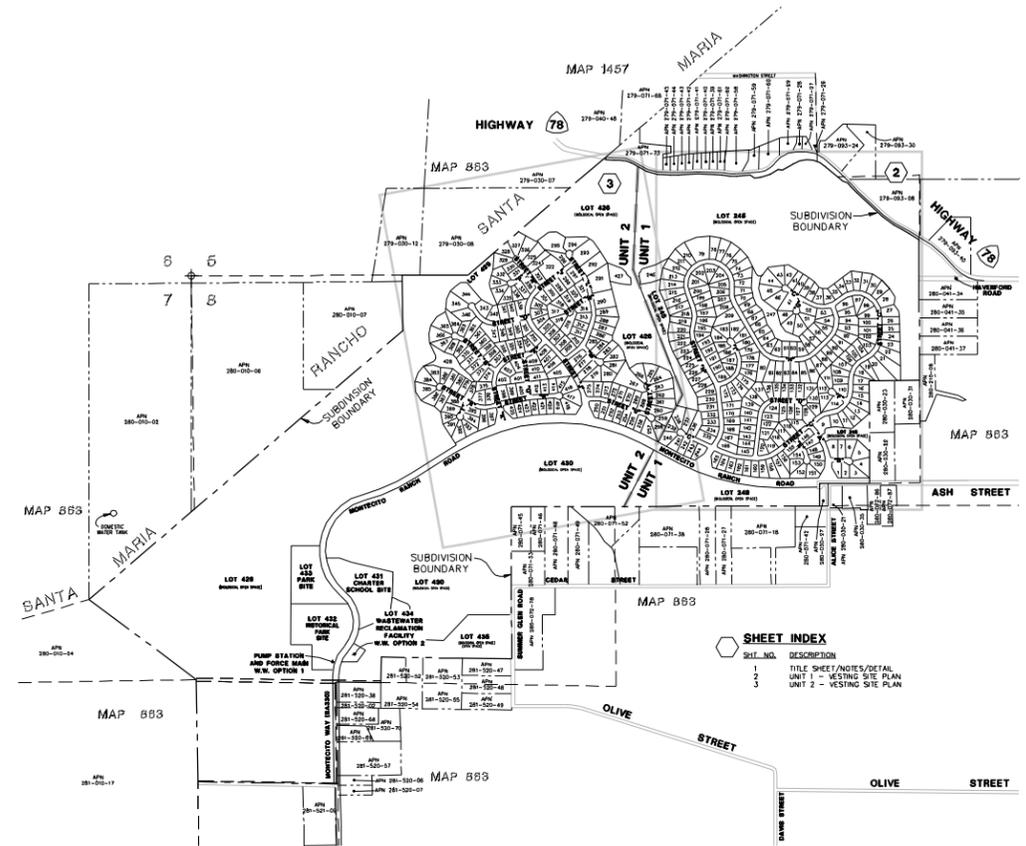
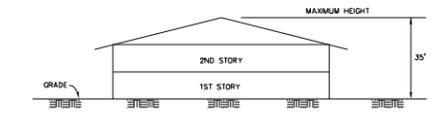
ENGINEER OF WORK



MARK E. STEVENS DATE: R.C.E. 35502



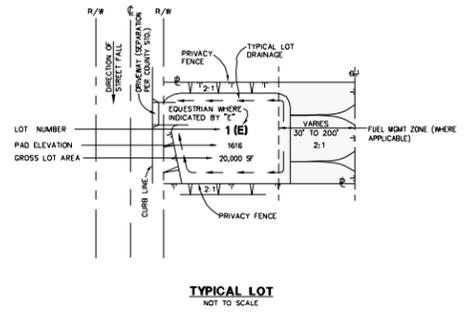
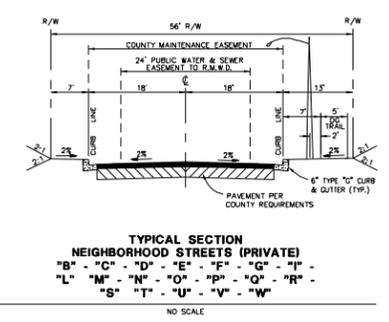
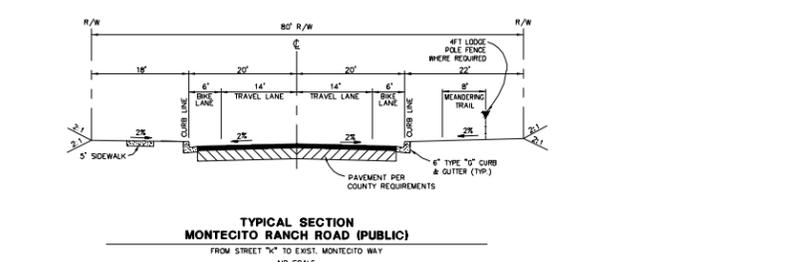
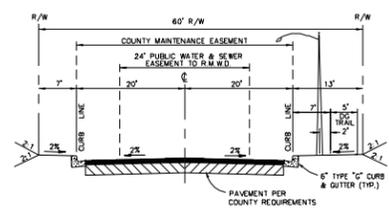
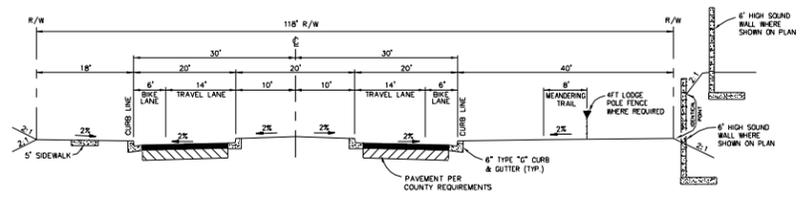
TYPICAL RESIDENTIAL LOT CONFIGURATION
NOT TO SCALE



KEY MAP
SCALE 1" = 700'

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET/NOTES/DETAIL
2	UNIT 1 - VESTING SITE PLAN
3	UNIT 2 - VESTING SITE PLAN



REVISIONS

NO.	DESCRIPTION

Figure 2 – Equestrian Park Concept Plan
No scale



COUNTY OF SAN DIEGO MAJOR USE PERMIT PLOT PLAN (P__-__) MONTECITO RANCH WASTEWATER RECLAMATION FACILITY

PLANT LEGEND

MONTECITO RANCH ROAD STREETSCAPE

STREET TREE			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX	PLANT 2'-6" FROM EDGE OF SIDE WALK AT 25' O.C.
 TRISTANIA CONFERTA	BRISBANE BOX	24" BOX	PLANT 2'-6" FROM EDGE OF SIDE WALK AT 25' O.C.
SHRUBS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 RHAPHIOLEPIS INDICA 'BALLERINA'	INDIAN HAWTHORN	5 GALLON	MAINTAIN AT 30" HIGH HEDGE PLANT 36" O.C.

TREES			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 KOELREUTERIA BIPINATA	CHINESE FLAME TREE	24" BOX	
 CUPANIOPSIS ANACARDIOIDES	CARROT WOOD TREE	24" BOX	
 LAGERSTROEMIA INDICA 'NATCHEZ'	CRAPE MYRTLE	24" BOX	
LARGE SHRUBS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 PITTOSPORUM TOBIRA 'VARIEGATA'	VARIEGATED PITTOSPORUM	5 GALLON	
 FEUJOA SELLOWANA	PINEAPPLE GUAVA	5 GALLON	
 ARBUTUS UNEDO 'COMPACTA'	DWARF STRAWBERRY TREE	5 GALLON	
 HETEROMELES ARBUTIFOLIA	TOYON	5 GALLON	
MEDIUM SHRUBS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 RHAPHIOLEPIS INDICA 'CLARA'	INDIAN HAWTHORN	5 GALLON	
 LIGUSTRUM JAPONICUM 'TEXANUM'	TEXAS PRIVET	5 GALLON	
SMALL SHRUBS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 RHAPHIOLEPIS INDICA 'BALLERINA'	INDIAN HAWTHORN	1 GALLON	
 NERIUM OLEANDER 'PETITE PINK'	DWARF OLEANDER	1 GALLON	

ACCENT SHRUB			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 PHORMIUM SPP.	NEW ZEALAND FLAX	5 GALLON	
PERENNIALS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 AGAPANTHUS 'QUEEN ANNE'	LILY-OF-THE-NILE	1 GALLON	
 HEMEROCALLIS HYBRIDS	DAY LILY	1 GALLON	
GROUNDCOVERS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 GAZANIA 'MITSUWA YELLOW'	GAZANIA	FLATS	PLANT AT 12" O.C.
 MYOPORUM PARVIFOLIUM 'PINK'	PINK MYOPORUM	FLATS	PLANT 12" O.C.
 LONICERA JAPONICA 'HALLIANA'	HONEYSUCKLE	1 GALLON	PLANT 24" O.C.

SLOPE PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 POPULUS FREMONTII	WESTERN COTTONWOOD	5 GALLON	PLANT AT RATE OF: 1 PER 200 SQ. FT.
 PLATANUS MEXICANA 'ALAMO'	MEXICAN SYCAMORE	5 GALLON	PLANT AT RATE OF: 1 PER 200 SQ. FT.
SHRUBS			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 CISTUS 'SUNSET'	ROCKROSE	5 GALLON	PLANT AT RATE OF: 1 PER 200 SQ. FT.
 CEANOTHUS HORIZONTALIS 'YANKEE POINT'	WILD LILAC	5 GALLON	PLANT AT RATE OF: 1 PER 200 SQ. FT.
SHRUBS AND IRRIGATED HYDROSEED MIX			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 BACCHARIS PILULARIS 'TWIN PEAKS'	DWARF COYOTE BUSH	1 GALLON	PLANT AT 10' O.C.
 ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	HYDROSEED	2 LBS. PER ACRE.
 PLANTAGO INSULARIS	INDIAN WHEAT GRASS	HYDROSEED	60 LBS. PER ACRE.
 VERBENA TENUISECTA	MOSS VERBENA	HYDROSEED	3 LBS. PER ACRE.
BOTTOM OF DETENTION BASIN PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	NOTES
 MUHLENBERGIA RUGENS	DEER GRASS	HYDROSEED	2 LBS. PER ACRE.
 LEYMUS TRITICOIDES	BEARDEE WILDGRASS	HYDROSEED	10 LBS. PER ACRE.
 FESTUCA RUBRA 'MOLATE'	RED FOUNTAIN GRASS	HYDROSEED	8 LBS. PER ACRE.
 DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	HYDROSEED	5 LBS. PER ACRE.
 VULPIA MICROSTACHYS	SMALL FESCUE	HYDROSEED	5 LBS. PER ACRE.

DESIGN STATEMENT / OBJECTIVES

- Planting will be designed to obscure undesirable views (automobile, storage, utility areas, etc.) and add character and interest to the site. Where planting area exceeds eight feet in width, mounding shall be used. Planting shall blend with designs proposed for adjacent property.
- Architectural elements of the site will be related and enhanced with plantings of similar design character.
- All plant material selected for use will be of a type known to be successful in the area or in similar climatic and soil conditions.
- Color from plant foliage, bark or flowers will be utilized to create a friendly, warm and visually exciting landscape environment. Thematic color schemes will be utilized in developing project identity. See final planting plans for installation layout, details and specifications.
- All outdoor storage, loading, refuse and utility areas will be visually screened on all sides (except at access points). Planting will be used to soften hard materials where such are used for screening.
- Vehicular entrances will be identified and accented with special groupings or trees, shrubs and/or ground covers, however, these areas shall not detract from the building as the focus of the site.
- Slope plantings are intended to take place during the appropriate seasons of late fall or winter (November through February) for optimum results.
- Landscape finish grading objectives will include positive surface drainage of planted areas throughout the site - a minimum of two percent (2%) away from building in planting areas. See civil engineering plans for final grading.
- Irrigation systems will be permanent below ground automated systems adequate for the establishment and maintenance of all plant material. These systems will be installed as soon as practical after grading and prior to plant material installation. Areas adjacent to structures, roadways, entries and activity areas will be irrigated with permanent below grade automated systems.
- Irrigation systems shall utilize low precipitation fixed and pop-up steam rotor, shrub spray and bubbler heads for transitional landscape areas, adjacent open space, parkways, parking area landscaping, building perimeter landscape planting and all lawn areas. Pop-up spray heads shall be used adjacent to walks, drives and activity areas.
- All soils will be fertilized, amended, and tilled to conform to recommendations made by a soil testing laboratory and/or landscape architect in order to promote healthy and vigorous plant growth.
- All planting areas will be privately maintained in a weed and debris free condition.

NOTE:
EROSION CONTROL PLANTING AND IRRIGATION SHALL COMPLY WITH THE COUNTY OF SAN DIEGO REQTS. FOR EROSION CONTROL.



NO.	REVISION	PREPARED BY	DATE

NO.	REVISION	PREPARED BY	DATE

MONTECITO RANCH WASTEWATER RECLAMATION FACILITY
SAN DIEGO COUNTY, CALIFORNIA
MONTECITO RANCH, LLC

**MAJOR USE PERMIT LANDSCAPE
CONCEPT PLAN LEGEND**
P__-__