COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

GAIL FARBER, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

June 30, 2009

IN REPLY PLEASE
REFER TO FILE: PD-3

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

HABITAT RESTORATION AGREEMENT BETWEEN THE MOUNTAINS RESTORATION TRUST AND THE COUNTY OF LOS ANGELES TO FUND 2.2 ACRES OF OFF-SITE ENVIRONMENTAL MITIGATION AND PLANT 60 OAK TREES FOR ROAD REPAIR PROJECTS IN THE SANTA MONICA MOUNTAINS (SUPERVISORIAL DISTRICT 3) (3 VOTES)

SUBJECT

This action is to authorize the Director of Public Works or her designee to sign the habitat restoration agreement between the Mountains Restoration Trust and the County of Los Angeles and delegate authority to the Director Public Works or her designee to execute future amendments to the agreement to provide, restore, maintain, monitor, and report on 2.2 acres of Mountains Restoration Trust–owned property, and to plant and monitor 60 oak trees, as mitigation for twenty-six existing road repair projects and other future projects in the Santa Monica Mountains.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Find that this habitat restoration agreement is exempt from the provisions of the California Environmental Quality Act.

2. Approve and authorize the Director of Public Works or her designee to sign the habitat restoration agreement between the Mountains Restoration Trust and the County of Los Angeles Department of Public Works and delegate authority to the or her designee to execute future amendments to the habitat

restoration agreement. The habitat restoration agreement provides for the Mountains Restoration Trust to provide, restore, maintain, and monitor 2.2 acres of mitigation and to plant and monitor 60 oak trees for existing and future projects in the Santa Monica Mountains. The Department of Public Works will finance the contract cost in the amount of $284,400.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The purpose of the recommended action is to fulfill the conditions of the permits issued by the California Coastal Commission for twenty-six 2004-05 Winter Rainstorm projects and to provide for mitigation for other future projects by restoring and revegetating 2.2 acres with specified plant species and to plant and monitor 60 oak trees for a five year period to mitigate the construction impacts at the project sites. The contract amount is based on a negotiated price of $102,000 per acre to perform the revegetation work plus an additional $60,000 for the oak tree planting and monitoring.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provision of Operational Effectiveness (Goal 1) by contracting for specialized services not currently provided by the Department of Public Works (Public Works).

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

The total cost to implement the habitat restoration agreement (Agreement) is $284,400. We are seeking reimbursement for a portion of the project cost under Federal and State disaster assistance programs. Funding for this project is included in the Third Supervisorial District's Proposed Road Construction Program in the Fiscal Year 2009-10 Proposed Road Fund Budget.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The Mountains Restoration Trust (MRT) is a California Public Benefit Nonprofit Organization recognized as a 501 (c) (3) organization by the Internal Revenue Service. This contract is a standard agreement used by MRT for off-site mitigation services and will be approved as to form by County Counsel prior to execution by the Director of Public Works or her designee.

Public Works has contracted or will soon contract for the following construction projects:

No.	Project Name	Mitigation Area (acres)	Oak Tree Planting (No.)
1	Corral Canyon @ MM 0.02	0.003	
2	Fairside Drive @ MM 0.29	0.003	
3	Fernwood Pacific Drive @ MM 0.90	0.010	
4	Grandview Drive 60' N/O Falls Drive	0.000	30
5	Greenleaf Canyon Road @ MM 0.25	0.069	
6	Hillside Drive @ MM 1.09	0.017	
7	Hillside Drive 170-277' S/O MM 1.09	0.034	
8	Hillside Drive 30' - 65' S/O MM 1.09	0.024	
9	Hillside Drive 90'-130' S/O MM 1.09	0.028	
10	Hume Road @ MM 0.94	0.003	
11	Hume Road Landslide: Briarbluff-Castlewood	0.689	
12	Las Flores Canyon Road 130' S/o MM 0.30	0.017	
13	Latigo Canyon Road @ MM 1.05	0.007	
14	Latigo Canyon Road @ MM 2.08	0.028	
15	Latigo Canyon Road @ MM 6.41	0.010	
16	Latigo Canyon Road @ 125' to 175' S/O MM 1.14	0.036	
17	Malibu Canyon Road @ MM 3.17	0.131	
18	Newton Canyon Road Et Al	0.096	30
19	Piuma Road @ MM 2.81	0.015	
20	Saddle Peak @ MM 0.88	0.024	
21	Schueren Road @ MM 1.27	0.258	
22	Seabreeze Drive @ 130' N/O MM 0.20	0.031	
23	Tuna Canyon Road MM 4.97/4.98/5.04	0.207	
24	Valley Drive @ House Number 1534	0.007	
25	Vera Canyon Road @ Lofty Hill	0.006	
26	Vera Canyon Road -150' North of cul de sac	0.023	
	Subtotal	1.776	60
	Mitigation for future projects	0.424	0
	Total mitigation	**2.20**	**60**

In order to carry out these projects, Public Works requested and obtained permits from the California Coastal Commission. As a condition of these permits, Public Works is required to mitigate construction impacts to the environment by restoring and

revegetating a combined total area of approximately 1.776 acres, including the planting of 60 oak trees. The 2.2 acres of total mitigation area covered in the agreement includes 0.424 acres of that will be banked for future projects.

MRT owns properties in the vicinity of our project sites that would meet the restoration and revegetation and oak tree planting mitigation requirements. MRT is willing to set aside, restore, maintain, monitor, and report to the permit agencies to meet the mitigation requirements for the fee of $102,000 per acre and $60,000 for oak trees for a total of $284,400 for 2.2 acres.

ENVIRONMENTAL DOCUMENTATION

This Agreement is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15333 of the CEQA guidelines for small habitat restoration.

The twenty-six named projects are exempt from CEQA per Section 15269 (a) of the CEQA guidelines for emergency projects in a disaster stricken area in which a state of emergency has been proclaimed by the Governor of California. Appropriate environmental documentation will be prepared and brought to the Board of Supervisors for any future projects, which will utilize this agreement for mitigation.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Restoration and revegetation of the mitigation site will enhance the environment and provide habitat to compensate for areas impacted by the construction projects.

CONCLUSION

Please return one adopted copy of this letter to Public Works, Programs Development Division.

Respectfully submitted,

GAIL FARBER
Director of Public Works

GF:SA:re

Attachment

c: Chief Executive Office (Lari Sheehan)
County Counsel
Department of Public Works (Public Relations)
Executive Office

HABITAT RESTORATION AGREEMENT

This Agreement is made and entered into on this ___ day of _____, 2009, by and between the County of Los Angeles, collectively referred to herein as "PUBLIC WORKS" and the Mountains Restoration Trust, is a California Public Benefit Nonprofit Organization and recognized as a 501 (c) (3) organization by the IRS., referred to herein as "MRT."

RECITALS

WHEREAS

A. PUBLIC WORKS is responsible for the operation and maintenance of the public roads in the unincorporated areas of the County of Los Angeles on the seaward side of Santa Monica Mountains and lying between Kanan Dume Road and Topanga Canyon Boulevard.

B. During the storms of January and February 2005, Public Works roads in the County of Los Angeles incurred over $100 million of damage, and over 40 road sites in the Malibu area, hereinafter referred to as “Projects” in a 50 square mile area of the Santa Monica Mountains region were damaged.

C. The California Coastal Commission (referred to herein as "CCC") has jurisdiction in the repair of these Project sites and requires habitat restoration work to be performed on the vegetated areas outside of the road right-of-way impacted by the construction work. The CCC requires that the impacted areas are fully revegetated to pre-project conditions 5 years after completion of construction. This includes revegetation of areas on a 3 to 1 ratio where there is a permanent vegetation loss (.i.e. structural repair areas covered by concrete or rip rap). The CCC also requires Oak Tree planting work and 10 years of monitoring to mitigate for adverse construction impacts to existing Oak Trees.

D. Public Works desires to satisfy all of the CCC’s permanent vegetation losses habitat restoration requirements for the 1.776 acres of revegetation work associated with the 26 Projects shown in Exhibit A, and also an additional 0.424 acres of re-vegetation work for future projects, for a total of 2.2 acres of mitigation to be performed in MRT’s Cold Creek Preserve property.

E. MRT has its Cold Creek Preserve property that is in the Coastal Zone in the vicinity of the Projects sites’ that needs habitat restoration work. MRT also has identified areas within the Topanga State Park that are suitable for the Oak Tree planting work. MRT does not have available funds to perform this work. MRT and Public Works have received the concurrence of the CCC to have Public Works fund habitat restoration work on MRT properties to serve as offsite mitigation for the Projects.

F. MRT is willing to set aside, restore, maintain, and report on a total of 2.2 acres of the Cold Creek Preserve Property as shown in the Re-vegetation Plan on Exhibit B, and to perform the required Oak Tree Planting for 60 trees, including maintenance and the initial 5 years of monitoring as described in Exhibit C, both of these sites hereto are

referred to as the Mitigation Areas, so as to enable PUBLIC WORKS's to comply with the previously mentioned CCC habitat restoration and Oak Tree planting requirements. MRT will not engage in nor permit any other entity to engage in activities that would negatively impact water quality, stream integrity, wildlife habitat, species diversity, and would preclude the introduction of non-native species for both of these projects. MRT agrees to record a conservation easement over the Cold Creek Property to the satisfaction of the CCC.

G. Public Works and MRT understand that additional offsite mitigation work may be required to satisfy CCC permit requirements for upcoming projects that will occur prior to 2014. If such additional re-vegetation work is necessary MRT is willing to amend this agreement to perform additional revegetation work for areas up to 1.49 acres at a cost of $102,000 per acre. If additional Oak Tree Planting work with 5 years of monitoring is required, MRT is willing to perform this work at a cost of $1,000 per oak tree.

NOW, THEREFORE it is agreed as follows:

A. **Payment.** PUBLIC WORKS will pay to MRT the amount of $102,000 per acre, for 2.3 acres of offsite restoration work for work done at the Cold Creek Preserve Property and $60,000 for the Oak Tree Planting Work for a total of $284,400. The payment schedule for this amount shall be: $142,200 within 30 days after the execution of this agreement, $71,100 after 1 year of the execution of this agreement, and $71,100 after 2 years of the execution of this agreement. MRT shall accordingly commence the Revegetation Plan and Oak Tree Planting work at the Cold Creek Preserve Property and at Topanga State Park in full consideration for all of the obligations undertaken by MRT in this agreement.

B. **Re-vegetation and planting work for the Mitigation Area(s).** Upon approval of the Re-vegetation Plan and/or Oak Tree Planting Plans by the CCC, as set forth in the previous paragraph, MRT shall begin the re-vegetation and Oak Tree Planting work in the Mitigation Area(s) as provided in Exhibits B and C hereof shall be completed within a period of 12 months. MRT shall subsequently implement the required monitoring for the Mitigation areas for a period of at least five years thereafter,

C. **Covenant for Preservation**. MRT hereby agrees and covenants that it will not engage in nor permit any other entity to engage in activities that would negatively impact the Mitigation area, including without limitation the water quality, stream integrity, wildlife habitat, and species diversity thereof, and that it will preclude the planting of non-native species therein. MRT shall record a conservation easement over the Mitigation Area(s) to the satisfaction of the CCC.

D. **Exclusive Allocation to PUBLIC WORKS**. The Mitigation Areal(s) shall be allocated and designated exclusively as mitigation measures by and for PUBLIC WORKS. MRT warrants and represents that the Mitigation Area(s) has/have not been claimed or used in whole or in part by any other entity for the purposes of mitigation of any environmental impact under any federal, state or local law or ordinance. MRT shall not permit the Mitigation Area to be claimed or used in whole or in part at any time hereafter by any other entity for the purposes of mitigation of any environmental

impact under any federal, state or local law or ordinance. However, MRT may conduct similar mitigations for other entities immediately adjacent to the Mitigation Area(s). MRT agrees to assume all of PUBLIC WORKS's obligations to the CCC as required by the CCC Coastal Development permits. If as a result of a material breach of this paragraph by MRT, PUBLIC WORKS is required by the CCC, MRT will indemnify and hold PUBLIC WORKS harmless for any and all costs, expenses, claims and liabilities resulting there from.

E. **Reporting.** MRT shall submit all required reports for the Re-vegetation Plan and the Oak Tree Planting Plan to the CCC in accordance with their required time schedule on PUBLIC WORKS' behalf. This includes:

1. Revegetation Plan

    a. The Completion Report documenting the completion of the initial planting for the Revegetation Plan, including exotics removal work. The report shall include photographs and be prepared by a qualified biologist or Resource Specialist.
    b. The Revegetation Monitoring Report to be submitted 5 years after the planting completion date. This report will certify whether the off-site habitat restoration is in conformance with the goals of the Plan. If the Revegetation Monitoring Report indicates the vegetation and restoration is not in conformance with or has failed to meet the performance standards specified in the Plan, MRT shall submit a revised or supplemental restoration plan for approval by the CCC.

2. Oak Tree Planting Plan – Annual monitoring reports are to be submitted for each year of the 5 year monitoring period.

F. **Release of PUBLIC WORKS.** Payment by PUBLIC WORKS to MRT relieves PUBLIC WORKS of any further obligation whatsoever to support, pay for, monitor, report on, sustain, continue in perpetuity, or otherwise be obligated or liable for the success or continued expense or maintenance in perpetuity of the Property or any part thereof.

G. **Monitoring.** MRT agrees to monitor, over a 5-year period, the status of the Revegetation Plan site and the Oak Tree Planting Plan site and conduct any restoration activities that may be necessary thereon to maintain theses sites in compliance with the terms of this Agreement. MRT shall provide PUBLIC WORKS with access to, and permit copying of, any and all documents in its possession or control related to the restoration of the Mitigation Area(s) and its ongoing maintenance.

H. **Notices.** Notices shall be in writing and delivered personally by facsimile (with original forwarded by U.S. Mail), by U.S. Mail first class, postage pre-paid; or by guaranteed overnight delivery service, addressed as follows:

If to PUBLIC WORKS	If to MRT
John Burton County of Los Angeles Department of Public Works, Programs Development Division P.O. Box 1460 Alhambra, CA 91803-1460 jburton@dpw.lacounty.gov phone: 626-458-5957 fax: 626-458-3192	Jo Kitz Mountains Restoration Trust 3815 Old Topanga Canyon Road Calabasas, CA 91302 jkitz@mountainstrust.org phone: 818-591-1701 fax: 818-591-1709

Notice shall be deemed given on the date personal delivery is made or, if sent by U.S. Mail, three days following deposit in the mail, as provided above.

I. **Default and Enforcement**. In the event of any breach of this agreement by either party, the other party may enforce this agreement by any means available at law or in equity. In the event of litigation, mediation or arbitration to resolve any breach of, or dispute related to, this agreement, the prevailing party shall be entitled to receive from the other party its reasonable legal costs and expenses, including reasonable legal fees and the reasonable cost of in-house counsel related to the breach or dispute.

J. **Modifications.** This agreement may be amended only by a written document signed by both parties.

K. **Assignment.** This agreement shall not be assigned by either party without the prior written consent of the other party that shall not be unreasonably withheld. Failure to respond to a written request for such consent within 90 days shall be deemed implied consent.

L. **Integration and Construction of Agreement**. This agreement sets forth the complete and final understanding of the parties with regard to the subject matter hereof (with the exception of the preparation of the Plan which shall become Exhibit D hereto, as provided for herein) and supersedes any and all prior communications, representations, negotiations, understandings and agreements, whether written or oral, concerning such subject matter.

M. **Non-waiver**. A failure by either party to enforce any provision of this agreement shall not be construed as a continuing waiver, or as a waiver of the right to compel enforcement of that provision.

N. **Successors and Assigns**. This agreement shall inure to the benefit of each party's successors and assigns.

O. **Governing Law.** This agreement" shall be governed by the laws of the State of California without regard to choice of law principles.

P. **Authority and Counterparts.** The persons signing this agreement represent and warrant that they are authorized to do so by the party for whom they are signing. This

agreement may be executed in counterparts, each of which shall be deemed an original and all of which taken together shall constitute one and the same agreement.

Q **Indemnification.** MRT shall fully indemnify, defend and hold PUBLIC WORKS and its officers, agents and employees harmless from and against any claim, liability, demand, damage, cost or expense, including, without limitation, defense costs, arising from (i) a breach of MRT's obligations under this Agreement, or (ii) any act or omission of MRT or its officers, agents, employees, contractors or subcontractors in the performance of the MRT's obligations described in this Agreement.

R **Cold Creek Preserve-Access**. MRT, hereby grants permission to Public works, its agents, and invitees to enter upon and perform re-vegetation work at their Cold Creek Preserve Site in Assessor Parcel Number 4455-022-027, for a period of 5 years after the execution of this agreement, should this become necessary.

IN WITNESS WHEREOF, PUBLIC WORKS and MRT have caused this agreement to be executed by their duly authorized officers as of the date first written above.

COUNTY OF LOS ANGELES	**MOUNTAINS RESTORATION TRUST (MRT)**
By_____ Deputy APPROVED AS TO FORM: ROBERT E. KALUNIAN Acting County Counsel By_____ Deputy	By:_____ Jo Kitz Mountains Restoration Trust

EXHIBIT A

Re-vegetation mitigation areas for County of Los Angeles Department of Public Works Road repairs sites that were damaged during the 2004-05 Winter Storm Events to compensate for permanent habitat losses

#	Project Name	Mitigation Area (acres)	Oak Tree Planting (No.)	Permit no
1	Corral Canyon @ MM 0.02	0.003		4-06-009
2	Fairside Drive @ MM 0.29	0.003		4-06-065
3	Fernwood Pacific Drive @ MM 0.90	0.010		
4	Grandview Drive 60' N/O Falls Drive	0.000	30	4-06-153
5	Greenleaf Canyon Road @ MM 0.25	0.069		4-06-025-G
6	Hillside Drive @ MM 1.09	0.017		4-05-181-G
7	Hillside Drive 170-277' S/O MM 1.09	0.034		4-05-180-G
8	Hillside Drive 30' - 65' S/O MM 1.09	0.024		4-05-182-G
9	Hillside Drive 90'-130' S/O MM 1.09	0.028		4-05-183-G
10	Hume Road @ MM 0.94	0.003		4-06-002-G
11	Hume Road Landslide: Briarbluff-Castlewood	0.689		4-08-026
12	Las Flores Cyn Road 130' S/o MM 0.30	0.017		4-06-137
13	Latigo Canyon Road @ MM 1.05	0.007		4-06-019-G
14	Latigo Canyon Road @ MM 2.08	0.028		4-06-114
15	Latigo Canyon Road @ MM 6.41	0.010		4-06-142
16	Latigo Canyon Road @ 125' to 175' S/O MM 1.14	0.036		4-06-019-G
17	Malibu Canyon Road @ MM 3.17	0.131		4-05-172-G
18	Newton Canyon Road Et Al	0.096	30	4-07-121
19	Piuma Road @ MM 2.81	0.015		4-05-190-G
20	Saddle Peak @ MM 0.88	0.024		4-05-061-G
21	Schueren Road @ MM 1.27	0.258		4-05-174-G
22	Seabreeze Drive @ 130' N/O MM 0.20	0.031		4-07-094
23	Tuna Cyn Road MM 4.97/4.98/5.04	0.207		4-06-118
24	Valley Dr @ House Number 1534	0.007		
25	Vera Canyon Road @ Lofty Hill	0.006		
26	Vera Canyon Road -150' no cul de sac	0.023		
	Subtotal	1.776	60	
	Mitigation for future projects	0.424	0	
	Total mitigation	**2.20**	**60**	

P:\pdpub\EP&A\EU\Mitigation\CCC Mitigation for Jan 2005 storm\BL & AGR\Exhibit A .doc

EXHIBIT B

MIXED CHAPARRAL HABITAT MITIGATION AND RESTORATION PLAN

Mountains Restoration Trust Site

Los Angeles County, CA

Prepared for:

Los Angeles County Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803
John Burton
(626) 458-5957

Prepared by:

UltraSystems Environmental, Inc.
100 Pacifica, Suite 250
Irvine, California 92618
Katie Kurtz, Biologist
Teresa Salvato, Botanist
(949) 788-4900

June 2008

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INTRODUCTION

Purpose of Plan

This Habitat Mitigation and Restoration Plan (HMRP) has been prepared to address the criteria for restoration of three acres of land in connection with road repairs to be conducted by the Los Angeles County Department of Public Works (LACDPW). Much of the required construction work for repairing the road sites that were damaged in the January/February 2005 storm events causes permanent habitat losses at the sites. To mitigate for these permanent habitat losses this offsite habitat restoration work is being done at the MRT's project site. The project site is located along Stunt Road, east of Mulholland Highway in an unincorporated area of Los Angeles County, CA. This HMRP has been prepared in compliance with the Special Conditions as outlined by the California Coastal Commission (CCC) and outlines the mitigation, restoration, and monitoring criteria required for the project site. It has also been prepared in compliance with the recommendations of the Mountains Restoration Trust (MRT).

Proposed Project

The project site is located along Stunt Road, east of Mulholland Highway, and west of Sylvan Glen Road (*Figure 1. Project Area Map*). It is located within the U.S. Geological Survey (USGS) Malibu, CA, 7.5-minute series topographic quadrangle (Township 1S, Range 17W, Section 28). The proposed project includes the preparation and implementation of an HMRP for degraded areas located within the Cold Creek Valley Preserve (CCVP), owned by the MRT. There are eight specific locations within the CCVP characterized by disturbed areas dominated by non-native invasive species that are preventing the recurrence of native plant species, the basis of sustainable ecosystems. Of these eight, three areas have been identified for this HMRP. This HMRP will be used to conduct off-site mitigation work in order to satisfy the habitat restoration requirements of the CCC associated with conditions set forth in a permit for the repair of forty (40) LACDPW road sites that were damaged during the January/February 2005 storm events.

The six areas designated for restoration under this HMRP are outlined in *Figure 1*. *Table 1. MRT Site Acreages* displays the acreage to be restored for each Area as laid out in the Planting Plan. Restoration plans will be developed accordingly and include removal of non-native invasive species and installing native plants appropriate to the location, adjacent vegetation, soil type, water requirement, and number and type of native plants present. There is a total of approximately nineteen (19) acres available for restoration projects in the CCVP, of which three acres are planned for restoration under this HMRP.

Table 1. MRT Site Acreages

Site #	Site Acreage	Restoration Acreage
Area 1A & 1B	3.63	1.26
Area 2	1.23	0.58
Area 3A & 3B	1.88	1.03
Area 4	4.32	0.82
Total	**11.06**	**3.69**

UltraSystems

Source: Google Earth, 2007

Figure 1. Project Area Map.

EXISTING CONDITIONS

The project site includes an open wilderness area that is dominated by Mulefat Scrub, Southern Mixed Chaparral and Venturan Coastal Sage Scrub with some non-native ruderal plant species present in existing disturbed areas. There is a riparian corridor which runs from the northeastern section to the southwestern section of the project area. The flora observed during the field survey is listed in *Appendix A. List of Species Observed*. The nearest residences are located on the northern side of Stunt Road and adjacent to the project site on the western boundary.

Native Plant Communities

Sensitive plant communities found on-site include: Southern Mixed Chaparral and Venturan Coastal Sage Scrub. Vegetation descriptions and corresponding element codes used in this report are from Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986).

Mulefat Scrub (63310)

STRUCTURE: A depauperate, tall, herbaceous riparian scrub strongly dominated by *Baccharis salicifolia*. This early seral community is maintained by frequent flooding. Absent this, most stands would succeed to cottonwood or sycamore dominated riparian forests or woodlands.

COMPOSITION: Intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland (62100), especially under heavy grazing.

DISTRIBUTION: Widely scattered along intermittent streams and near larger rivers from about Tehama County south through the Coast Ranges and Sierra Nevada to San Diego and northwestern Baja California Norte, usually below about 2,000 feet.

Southern Mixed Chaparral (37120)

STRUCTURE: Southern Mixed Chaparral was found throughout the project site and frequently integrades with Venturan Coastal Sage Scrub. This community is similar to Northern Mixed Chaparral (37110) but typically not quite as tall (5-16 feet) or dense.

COMPOSITION: Occasionally, Southern Mixed Chaparral contains patches of bare soil and forms a mosaic with Venturan Coastal Sage Scrub (32300) or Riversidean Sage Scrub (32700). Divisible into Granitic (37121) and Mafic (37122) subtypes based on substrate, but floristic distinctions between these two subtypes remain unknown. Similar to Northern Mixed Chaparral (37110) but with a somewhat lower precipitation level and more moderate temperatures. This community is often adjacent to and on moister sites than Chamise Chaparral (37200).

DISTRIBUTION: Southern Mixed Chaparral is transitional from the chaparral habitats of California to the coastal semi-desert of Baja California Norte. Southern Mixed Chaparral is distributed among the coastal foothills of San Diego County and northern Baja California, usually below 3,000 feet.

Venturan Coastal Sage Scrub (32300)

STRUCTURE: Venturan Coastal sage scrub was found throughout the project site and frequently integrades with Southern Mixed Chaparral. This community contains mostly low, mostly soft-woody shrubs, 1.6-6.5 feet in height, with crowns usually touching, but less dense than Central (Lucian) Coastal

Scrub (32200) or Chaparral (37000), and typically with bare ground underneath and between shrubs. Growth occurs in late winter and spring, following the onset of winter rains. Most flowering occurs in spring, but some species continue into summer. Species are dormant and more or less deciduous in summer and fall and are adapted to fire by crown-sprouting.

COMPOSITION: Venturan Coastal Sage Scrub occurs on dry, more or less rocky slopes, often at lower elevations and on drier but less rocky sites than associated Upper Sonoran (37100) and Chamise chaparrals (37200). This community can be found from the South Coast Ranges to Cismontane, southern California and northern Baja California, usually below 3,000 feet.

DISTRIBUTION: It is most abundant in the coastal region south of Point Conception, but extends inland to the vicinity of Cajon and San Gorgonio passes in San Bernardino and Riverside Counties.

RESPONSIBLE PARTIES

Los Angeles County Department of Public Works

The entity undertaking the restoration work, LACDPW, must make a good faith effort to meet the success criteria outlined in this plan. These responsibilities include:

- Provide funding to the Mountains Restoration Trust for the plants, seeds, materials, planting work, maintenance and monitoring of the progress of the habitat restoration on the property as outlined in this plan, through an interagency agreement,

- Decide to stop work, suspend payment, or terminate contracts for inadequate performance. This includes all phases of project installation, long-term maintenance, and biological monitoring. The restoration entity may replace any of these providers if necessary, and

Mountains Restoration Trust

Mountain Restorations Trust shall:

- Utilize a qualified biologist (or Resource Specialist) for the tasks described in this HMRP, and

- Pay for plants, seeds, and other materials needed for restoring the areas described herein, perform the required planting work and exotics removal, and perform the required maintenance as specified and as recommended by the qualified biologist.

Qualified Biologist **(***or Resource Specialist***)**

A qualified biologist will be retained by MRT during the restoration work to oversee and perform the required monitoring and reporting in accordance with the procedures established in this HMRP. The qualified biologist will be responsible for the following tasks:

- Prior to restoration implementation, attend a meeting with the Contractor to discuss the construction plan, maintenance specifications, and monitoring schedule in relation to the project site, and

- Oversee and perform the required monitoring and reporting in accordance with the procedures established in this HMRP.

California Coastal Commission

The California Coastal Commission shall:

- ❖ Review the As-Built Assessment and a Final Report at the end of the five-year monitoring period as outlined in this HMRP, and

- ❖ Approve the completion of the restoration work, when the permit conditions have been fully satisfied.

RESTORATION

This HMRP is designed to reestablish coastal sage scrub, chaparral and riparian habitat within the degraded portions of the project site. Within sixty (60) days of the issuance of the CCC Coastal Development permit, the MRT and LACDPW shall commence implementation of this HMRP. After site preparations are completed, the site will be restored using various techniques including: application of a seed mix and one-gallon plantings. The plants recommended for restoration for sites in the general project area can be found in Appendix B: Recommended List of Native Plants for Landscaping in the Santa Monica Mountains, updated August 2007 (CNPS 2007). The species list recommended for restoration of this specific project site is included in *Appendix C. Recommended Species for Restoration* and were determined using the CNPS Native Plant List and data collected during site surveys. Specific information regarding weed removal and location of plantings, etc. included in this HMRP has been referenced from the project's Planting Plan (Cornerstone Studios 2007).

Weed Removal

Appropriate weed control measures shall be implemented under the direction of the qualified biologist. Removal of weeds found on the project site will reduce competition, helping desired native plants establish and thrive (Clewell 2005). Non-native invasive species found on the project site are listed in *Table 2. Non-Native Species That Need To Be Controlled*. Non-native species shall be removed upon completion of all fine grading work and prior to soil preparation. Herbicide application (Rodeo and RoundUp or CCC approved equivalents) shall be applied by workers familiar with and trained to distinguish weeds from native species. A tree removal specialist shall remove the non-native trees found on site. In the event that additional invasive plant species are encountered, the qualified biologist will refine measures to control them.

Table 2. Non-Native Species That Need To Be Controlled	
Scientific Name	**Common Name**
Ailanthus altissima	tree of heaven
Anagallis arvensis	scarlet pimpernel
Arundo donax	giant reed
Avena barbata	slender wild oats
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Bromus madritensis ssp. rubens	red brome
Carduus pycnocephalus	Italian thistle
Centaurea melitensis	tocolate
Cirsium vulgare	bull thistle
Eucalyptus polyanthemos	silver dollar gum
Hirschfeldia incana	wild mustard
Galium aparine	common bedstraw
Lactuca serriola	prickly wild lettuce
Marrubium vulgare	horehound
Melilotus indicus	yellow sweetclover
Piptatherum miliaceum	smilo grass
Polygonum argyrocoleon	silversheath knotweed
Rumex crispus	curly dock
Silybum marianum	milk thistle
Vinca major	periwinkle

Site and Soil Preparation

Use of soil currently on the project site will improve the chances for restoration success. Improving the quality of the soil by adding from an outside source would favor the growth of non-native species and is not recommended. The covering of bare ground with native species is a necessary part of weed control and will help hold the available moisture in place; this will also help to stabilize the soils to prevent erosion and runoff. See below under *Planting Plan* for further details regarding ground cover planting.

Irrigation

Prior to planting, a series of temporary irrigation lines will be installed as laid out in the Planting Plan. Immediately after planting, water will be applied to each shrub. Water should be applied in a moderate stream into the planting hole until the material around the roots is completely saturated from the bottom of the hole to the top of the ground. Water should be applied in sufficient quantities and as often as seasonal conditions require to keep planted areas moist, well below the root system of the plants.

Five-gallon buckets or closed water containers shall be placed adjacent to each newly planted tree or shrub. This should be fitted with ¼ inch tubing or a small hole in the bottom to allow slow seepage onto the new plantings. In this way, water use can be monitored and adjusted for each type of plant. This type of irrigation plan is non-invasive (no digging and placing of extensive water lines), and these buckets can be refilled as needed and removed once the plant has shown that it can survive independently of extra irrigation. Sprinklers shall be placed in appropriate locations along Stunt Road. Placement of these sprinklers will help reduce the amount of hand watering needed by volunteers.

It will be the responsibility of MRT to maintain a balanced watering program to ensure proper growth until the CCC's final acceptance of the restoration work.

Planting Plan

The schedule for the implementation of this HMRP is subject to change. Site conditions and construction related activities can change due to several factors, some of which include weather conditions and changes in project plans due to unforeseen circumstances. The habitat quality of the restoration site is expected to improve each year during a minimum five-year maintenance and monitoring period. Volunteers will be utilized under the direction of MRT's biologist (resource specialist) for the initial plantings and the yearly maintenance of the restoration activities.

The MRT will provide and install the seedlings, shrubs and trees as laid out in the Planting Plan. All plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided by the wholesale supplier at no additional cost to the project applicant. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples shall be replaced. Plants requiring cold winter weather before they can germinate, such as *Ceanothus* ssp., should be planted in the fall. Planting in the fall also allows for establishing with the natural winter rainfall. This will allow ample time for plants to establish before the following winter season begins (Jeanette Dorner 2002). Seedlings will require moisture to germinate, which generally occurs in the fall or spring. Replanting immediately following weed removal practices can help ensure establishment of native plants.

Appendix C. Recommended Species for Restoration lays out a more thorough list of species which can be used for restoration activities on the project site. This list is not recommended within this HMRP as it is quite extensive. However, the qualified biologist may find it useful as a reference guide and to substitute species which may not be readily available from local wholesalers.

Seed Mix

The MRT will seed all bare areas with a mixture of the species listed in *Table 3. Recommended Species for Seed Mix*. All of these species should be available from local wholesalers. These perennial species are common and readily available and have a distinctive appearance which would make them easily distinguishable from non-native grasses.

Table 3. Recommended Species for Seed Mix

Scientific Name	Common Name
Asclepias fascicularis	narrowleaf milkweed
Eriogonum elongatum	long stemmed buckwheat
Eriogonum fasciculatum var. *foliolosum*	California buckwheat
Eschsholzia californica	California poppy
Gnaphalium californicum	California cudweed
Hazardia squarrosa	sawtooth goldenbush
Helianthus gracilentus	slender sunflower
Juncus patens	common rush
Lotus scoparius var. *scoparius*	common deerweed
Penstemon heterophyllus	foothill penstemon
Trichostema lanatum	woolly bluecurls

Seedlings

All of the shrubs and trees should be grown in one-gallon pots, either by cutting or by seed. When they are securely rooted, (i.e. when new roots have formed a 'root ball') they should be planted in the proper location as described in the Planting Plan. Seedlings should be planted in plastic tubing or chicken wire to ensure growth is not inhibited by wildlife grazing. In areas where deer and rodents are a problem the cage should be extended well above ground level until the plant is established. At that point they can be cut off at ground level. Adding weed-free mulch surrounding the seedlings is recommended as it can help ensure successful seed germination. Mulch also provides protection from extreme weather conditions and aids in moisture retention (Dorner 2002).

Plants shall be true to name and one of each bundle or lot shall be tagged with the name and size of plants in accordance with the standard of practice recommended by the American Association of Nurserymen. The location, quantity and spacing of plants shall be as specified herein and as shown on the Planting Plan or adjusted as necessary by the qualified biologist to meet unexpected field conditions (California Conservation 2003).

Since the climate has been irregular lately, an irregular approach to planting time might be best. Ordinarily, one would let the young cuttings over-winter in pots and plant them in early fall. Some chaparral species don't like summer water, so they need to be planted in the fall. If temperature and humidity are both favorable, it may be best to let them 'over-winter' in the ground and thereby get a head start in getting established before the summer heat blast arrives.

Appendix C. lists the species which are preferable for restoration activities. The shortened list in *Table 4. Recommended Species for Plantings* is for inclusion in the Planting Plan, however if the qualified biologist prefers planting more species than are listed above, *Appendix C* shall be used for reference.

Table 4. Recommended Species for Plantings

Scientific Name	Common Name	% Cover	Quantity
Adenostoma fasciculatum	chamise	10%	
Trichostema lanatum	wooly blue curls	10%	
Ceanothus megacarpus	big-pod ceanothus	10%	
Heteromeles arbutifolia	toyon	10%	
Juglans californica var. *californica*	California walnut	5%	
Platanus racemosa	western sycamore	5%	
Quercus agrifolia var. *agrifolia*	coast live oak	5%	
Quercus berberidifolia	scrub oak	5%	
Rhamnus ilicifolia	hollyleaf redberry	10%	
Salvia apiana	white sage	10%	
Salvia mellifera	black sage	10%	
Eriophyllum confertiflorum	golden yarrow	10%	

MAINTENANCE PLAN

During the five-year maintenance period the MRT will provide all watering, weeding, fertilizing, cultivation, and spraying necessary to keep the plants in a healthy growing condition. Maintenance and

monitoring of the replanted areas shall continue for at least five years after the replanting efforts are completed.

Irrigation

Maintenance of irrigation lines will be performed periodically by a subcontractor hired by MRT and the system will be repaired as needed for proper function. If it is determined that adjustment in the irrigation equipment will provide proper and more adequate coverage, the subcontractor shall make such adjustments prior to planting.

Irrigation will be phased out during the fifth season after planting, unless an evaluation by the qualified biologist (with approval from the LACDPW and the CCC) indicates that additional irrigation is needed to meet the performance criteria.

Weed Control

During the first year, weed removal will be performed as needed up to four times annually to keep weeds from producing seeds and to control competition during the establishment period of the native plants. Weeding will continue at least two times per year thereafter. Weeds will be eradicated or removed before they set seed. Application of herbicides should coincide with the time of year most appropriate to control non-native species found in this area. MRT's biologist (or resource specialist), will be responsible for weed control activities.

Maintenance Inspection Schedule

The maintenance period will follow replanting and last for at least five years. The maintenance program will include: weed control, debris removal, replanting, and reseeding, as well as other tasks as required for the site to grow and achieve the success criteria established in this HMRP.

Maintenance measures will be monitored by the qualified biologist on a bi-annual basis. Site visits will generally occur in the fall and spring, beginning in the spring following implementation. The qualified biologist will be responsible for submitting an annual report describing maintenance activities to the LACDPW for at least five years after replanting has occurred.

MONITORING PLAN

Initial Assessment Report

The MRT shall submit, upon completion of the initial planting, an Initial Assessment Report prepared by their qualified biologist (or resource specialist). The report will be submitted for the review and approval of the Executive Director of the CCC. The Initial Assessment Report shall document actions completed to prepare the site for restoration, including planting and seeding. Throughout implementation of restoration activities, the qualified biologist shall keep records including dates of site preparation, container plantings, and hydro-seeding. These, along with any significant problems encountered, or necessary changes made in the field, will be recorded and included in the Initial Assessment Report.

This report shall include photographs taken from pre-designated photo stations prior to construction related activities (attached to a copy of the site plans) documenting the completion of the initial planting/restoration work.

Recommendations for corrective measures, if any, shall be made by the qualified biologist immediately upon conclusion of the initial assessment. These recommendations shall be conveyed to the LACDPW and to the CCC, 30 days after completion of planting.

Annual Performance Monitoring

A monitoring program shall be implemented to monitor the project for compliance with the specified guidelines and performance standards. The monitoring period shall begin with implementation of the restoration work and shall last for at least five years. At a minimum, the monitoring program shall be conducted by the qualified biologist as outlined herein.

Performance and maintenance monitoring will occur during the same five-year time period. Maintenance and monitoring of the restoration efforts shall continue for at least five years after the initial restoration efforts are completed. The purpose of the monitoring will be to gather data on the percent cover, survival, and height of shrubs in the restoration areas. The results of this quantitative sampling will be used to determine if the success criteria have been met. During the maintenance and monitoring period, the LACDPW shall review the annual monitoring reports which will address the status of restoration efforts. The initial assessment report shall be the first of such reports due prior to issuance of a CCC Special Condition Permit for the proposed project.

The qualified biologist shall be responsible for inspecting the restoration site and documenting each site visit, including changes in the maintenance program. Site visit records shall be included in site maintenance yearly reports as an appendix. At a minimum, the qualified biologist shall conduct bi-yearly inspections to document plant survival and to assess the need for maintenance for all plantings. The first visit will be conducted during the spring following implementation. Afterward, site visits shall generally occur in the fall and spring.

Five years from the date of issuance of the CCC permit, the MRT shall submit for the review and approval of the Executive Director of the CCC, a Habitat Restoration Monitoring Report, prepared by their biologist (or resource specialist) that certifies whether the on-site restoration is in conformance with the restoration plan approved pursuant to the CCC. The monitoring report shall include photographic documentation of plant species and plant coverage.

SUCCESS CRITERIA

On-site restoration of disturbed land will be considered successful when the success criteria have been met. The site restoration shall be deemed successful if the restoration of native plant species on site is adequate to provide 90% coverage by the end of the five year monitoring period and is able to survive without additional outside inputs, such as supplemental irrigation (*Table 4. Five-Year Performance Standards*).

The restored habitat must sustain itself for a minimum of five years in the absence of significant maintenance measures from the completion of the HMRP. Significant maintenance measures include replanting, eradication of major weed infestations, erosion repairs, and additional outside inputs.

Table 5. Five-Year Performance Standards		
Year	**Coverage of Shrubs & Herbs**	**Coverage of Weeds**
1	50%	25%
2	60%	20%
3	70%	15%
4	80%	10%
5	90%	5%

CONTINGENCY MEASURES

If the monitoring reports indicate the restoration work is not in conformance with or has failed to meet the performance standards specified in this HMRP, the MRT shall submit a revised or supplemental HMRP for the review and approval of the CCC and shall implement the approved version of the HMRP. The revised HMRP must be prepared by a qualified biologist/resource specialist and shall specify measures to remediate those portions of the original HMRP that have failed or are not in conformance with the original approved HMRP.

REFERENCES

California Conservation (2003). Rehabilitation of Disturbed Lands in California: A Manual for Decision Making. Gail A. Newton and V.P. Claasen. CA.

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CNPS (2007). Recommended List of Native Plants for Landscaping in the Santa Monica Mountains. CNPS.

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Holland, R. F. (1986). Preliminary Descriptions of the Terrestrial Natural Communities of California. Sacramento, CA, California Department of Fish and Game.

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Appendix A. List of Plant Species Observed.

Appendix A. List of Plant Species Observed	
Scientific Name	**Common Name**
ANACARDIACEAE	
Rhus laurina	laurel sumac
Rhus ovata	sugar sumac
Toxicodendron diversilobum	poison oak
APOCYNACEAE	
*Vinca major**	periwinkle
ASCLEPIADACEAE	
Asclepias fascicularis	narrow leaf milkweed
ASTERACEAE	
Artemisia californica	California sagebrush
Artemisia douglasiana	California mugwort
Baccharis pilularis	coyote brush
Baccharis salicifolia	mulefat
*Centaurea melitensis**	tocalote
Eriophyllum confertiflorum	golden yarrow
Gnaphalium californicum	California cudweed
Haplopappus squarrosus	sawtooth goldenbush
Helianthus gracilentus	slender sunflower
Heterotheca grandiflora	telegraph weed
*Lactuca serriola**	prickly wild lettuce
Lessingia filaginifolia	common California aster
Malacothrix saxatilis	cliff aster
Stephanomeria virgata	twiggy wreath plant
BRASSICACEAE	
*Brassica nigra**	black mustard
CAPRIFOLIACEAE	
Lonicera subspicata	southern honeysuckle
Sambucus mexicana	blue elderberry
CUSCUTACEAE	
Cuscuta spp.	dodder
CYPERACEAE	
Cyperus spp.	flatsedge
FABACEAE	
Lotus scoparius var. *scoparius*	deerweed
*Melilotus indicus**	yellow sweetclover
FAGACEAE	
Quercus agrifolia var. *agrifolia*	coast live oak
Quercus berberidifolia	scrub oak

Appendix A. List of Plant Species Observed	
Scientific Name	**Common Name**
LAMIACEAE	
*Marrubium vulgare**	horehound
Salvia apiana	white sage
Salvia mellifera	black sage
LILIACEAE	
Yucca whipplei	chaparral yucca
MALVACEAE	
Malacothamnus fasciculatus	chaparral mallow
MYRTACEAE	
*Eucalyptus polyanthemos**	silver dollar gum
ONAGRACEAE	
Epilobium canum	California fuchsia
PLATANACEAE	
Platanus racemosa	western sycamore
POLYGONACEAE	
Eriogonum fasciculatum var. *foliolosum*	California buckwheat
*Polygonum argyrocoleon**	silversheath knotweed
*Rumex crispus**	curly dock
RANUNCULACEAE	
Delphinium spp.	larkspur
RHAMNACEAE	
Ceanothus cuneatus	buck brush
Ceanothus spinosus	greenbark ceanothus
Rhamnus ilicifolia	hollyleaf redberry
ROSACEAE	
Adenostoma fasciculatum	chamise
Adenostoma sparsifolium	red shank
Heteromeles arbutifolia	toyon
Rosa californica	California wildrose
Rubus ursinus	California blackberry
RUBIACEAE	
*Galium aparine**	common bedstraw
SALICACEAE	
Salix exigua	sanbar willow
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
SIMAROUBACEAE	
*Ailanthus altissima**	tree of heaven
SOLANACEAE	

Appendix A. List of Plant Species Observed	
Scientific Name	**Common Name**
Datura wrightii	jimsonweed
Solanum umbelliferum	bluewitch nightshade
POACEAE	
*Arundo donax**	giant reed
*Avena barbata**	slender wild oats
*Bromus diandrus**	ripgut brome
*Bromus hordeaceus**	soft brome
*Bromus madritensis ssp. rubens**	red brome
Elymus condensatus	giant wildrye
PRIMULACEAE	
*Anagallis arvensis**	scarlet pimpernel
PTERIDACEAE	
Pityrogramma triangularis	goldenback fern
** denotes non-native species*	

Appendix B. CNPS Recommended List of Species for Restoration in the Santa Monica Mountains

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Trees						
Acer macrophyllum	bigleaf maple				X	
Alnus rhombifolia	California alder				X	
Fraxinus dipetala	flowering ash				X	
Fraxinus velutina	Arizona ash				X	
Heteromeles arbutifolia	toyon	X	X	X	X	X
Juglans californica var. californica	California walnut	X			X	X
Juniperus californica	California juniper			X	X	
Platanus racemosa	California sycamore	X			X	
Populus fremontii ssp. *fremontii*	Fremont cottonwood				X	
Populus balsamifera ssp. *trichocarpa*	black cottonwood				X	
Quercus agrifolia	coast live oak	X	X	X	X	X
Quercus lobata	valley oak	X				X
Salix laevigata	red willow				X	
Sambucus mexicana	Mexican elderberry		X	X	X	X
Umbellularia californica	California bay	X			X	
Shrubs						
Adenostoma fasciculatum	chamise		X	X		X
Amorpha californica	false indigo			X		X
Andenostoma sparsifolium	red shanks			X		
Arctostaphylos glandulosa	eastwood manzanita			X		
Arctostaphylos glauca	big berry manzanita			X		
Artemisia californica	California sagebrush		X	X		X
Atriplex lentiformis ssp. *lentiformes*	quail bush		X			
Baccharis pilularis	coyote brush		X			X
Baccharis salicifolia	mulefat		X	X	X	X
Berberis pinnata	barberry				X	
Brickellia californica	brickel bush		X	X		
Ceanothus crassifolius	hoary-leaf ceanothus	X		X		

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Shrubs						
Ceanothus cuneatus	buck brush	X		X		
Ceanothus leucodermis	whitebark ceanothus	X		X		
Ceanothus megacarpus	bigpod ceanothus	X		X		
Ceanothus oliganthus	hairy-leaf ceanothus	X			X	
Ceanothus spinosus	greenbark ceanothus	X		X	X	
Cercocarpus betuloides	mountain mahogany			X	X	
Comarostaphylis diversifolia ssp. *planifolia*	summer holly			X		X
Comus glabrata	smooth dogwood				X	
Dendromecon rigida	bush poppy			X		
Eriodictyon crassifolium	yerba santa		X	X		
Eriogonum cinereum	ashyleaf buckwheat		X			
Eriogonum fasciculatum	California buckwheat		X	X		X
Eriogonum parvifolium	seacliff buckwheat		X			
Garrya veatchii	silktassel bush			X	X	
Hazardia squarrosa	common hazardia, goldenbush		X	X		
Heteromeles arbutifolia	toyon	X	X	X	X	X
Holodiscus discolor	cream bush				X	
Isomeris arborea	bladderpod		X			X
Lonicera hispidula var. *vacillans*	California honeysuckle			X	X	
Lonicera subspicata var. denudata	wild huneysuckle			X		
Malacothamnus fasciculatus	bush mallow		X	X		
Malosma laurina	laural sumac		X	X	X	X
Mimulus aurantiacus longiflorus	bush monkeyflower		X	X	X	X
Myrica californica	wax myrtle		X		X	
Opuntia littoralis	coastal prickly pear		X			
Pickeringia montana	chaparral pea			X		
Prunus ilicifolia ssp. *ilicifolia*	holly leaf cherry			X	X	X
Quercus berberidifolia	scrub oak	X		X		X
Quercus wislizenii	interior live oak	X				X
Rhamnus californica	California coffeeberry			X	X	X

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Shrubs						
Rhamnus crocea	redberry		X	X		X
Rhamnus ilicifolia	hollyleaf redberry			X	X	
Rhus integrifolia	lemonade berry		X	X		
Rhus ovata	sugarbush	X		X		X
Rhus trilobata	squaw bush			X	X	X
Ribes aureum	golden currant				X	X
Ribes californicum	hillside currant			X	X	X
Ribes malvaceum	chaparral currant			X		X
Ribes speciosum	fuchsia-flowering gooseberry			X	X	X
Rosa californica	wild rose		X		X	
Salix lasiolepis	arroyo willow				X	
Salvia apiana	white sage		X	X		X
Salvia leucophylla	purple sage		X			
Salvia mellifera	black sage		X	X		X
Symphoricarpos mollis	snowberry			X	X	X
Perennials						
Abronia umbellata	sand verbena		X			
Achillea millefolium	yarrow	X	X	X		X
Anemopsis californica	yerba mansa	X			X	
Antirrhinum multiflorum	many-flowered snapdragon	X	X	X		
Asclepias eriocarpa	Indian milkweed		X			X
Asclepias fascicularis	narrow leaf milkweed	X	X			X
Astragalus trichopodus	locoweed		X	X		
Camissonia cheiranthifolia	dune primrose	X	X			
Castilleja affinis	Indian paintbrush		X	X		
Coreopsis gigantea	tree coreopsis	X	X			
Croton californicus	California croton		X			
Delphinium cardinale	scarlet larkspur	X	X	X		
Delphinium parryi	blue larkspur	X	X	X		X
Delphinium patens	blue larkspur			X		X

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Perennials						
Dicentra ochroleuca	silver ear drops		X	X		
Dodecatheon clevelandii	shooting star		X			X
Dudleya pulverulenta	chalk live forever	X	X	X	X	X
Encelia californica	California bush sunflower	X	X	X	X	X
Epilobium spp. (see Zauschneria)	California fuchsia		X			
Eriogonum crocatum	Conejo buckwheat	X	X	X		
Eriogonum elongatum	wand buckwheat	X	X			
Eriogonum wrightii var. *membranaceum*	spreading buckwheat	X	X	X		X
Eriophyllum confertifolium	golden yarrow	X		X		
Eschscholzia californica	California poppy	X	X	X		
Gnaphalium bicolor	two-tone everlasting		X			X
Gnaphalium californicum	California everlasting		X	X		
Grindelia camporum var. *bracteosum*	gum plant		X	X		X
Helianthus gracilentus	dwarf sunflower		X	X		X
Isocoma arguta	coastal isocoma			X		
Keckiella cordifolia	heart-leaved keckiella		X	X		
Lepechinia fragrans	white pitcher sage	X	X	X		X
Leptodactylon californicum	prickly phlox				X	
Lithophragma affine	woodland star	X		X		
Lotus scoparius	deer weed				X	
Lupinus longifolius	bush lupine		X	X		
Mimulus cardinalis	scarlet monkeyflower	X	X	X		X
Mimulus guttatus	yellow monkeyflower	X			X	
Mirabilis californica	wishbone bush, wild four o'clock	X			X	
Oenothera elata ssp. *hookeri*	evening primrose		X	X		
Paeonia californica	California peony		X	X	X	
Penstemon centranthifolius	scarlet bugler			X		
Penstemon heterophyllus	foothill penstemon	X		X		X
Penstemon spectabilis	royal penstemon	X	X	X		
Potentilla glandulosa	sticky cinquefoil		X	X	X	X

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Perennials						
Salvia spathacea	hummingbird sage	X		X	X	X
Satureja douglasii	yerba buena	X	X	X	X	X
Saxifraga californica	California saxifrage				X	
Scrophularia californica	California figwort		X	X	X	X
Scuttellaria tuberosa	skull cap			X		X
Sidalcea malviflora	common checkerbloom					X
Silene laciniata ssp. *major*	Indian pink	X	X	X		
Sisyrinchium bellum	blue-eyed grass	X	X			X
Solanum xanti	purple nightshade	X	X	X	X	X
Stachys bullata	hedge nettle		X		X	
Stanleya pinnata	Prince's plume	X	X	X		
Thalictrum fondleri var. *polycarpum*	meadow rue	X		X	X	X
Trichostema lanatum	woolly blue curls		X	X		
Venegasia carpesioides	canyon sunflower			X	X	
Viola pedunculata	Johnny jump up				X	X
Yucca (=Hesperoyucca) whipplei	our lord's candle	X	X	X		
Zauschneria (=Epilobium) californica	California fuchsia	X	X	X		X
Zauschneria (=Epilobium) cana	narrow leaf California fuchsia	X	X	X		
Annuals						
Calandrinia cilliata	red maids		X	X		X
Castilleja densiflora	owl's clover			X		X
Castilleja exserta	purple owl's clover		X	X		X
Clarkia bottae	farewell to spring		X	X		X
Clarkia unguiculata	elegant clarkia			X		X
Collinsia heterophylla	Chinese houses				X	X
Erysimum capitatum	Douglas wallflower	X		X	X	
Eschscholzia caespitosa	collarless poppy		X	X		X
Eschscholzia californica	California poppy		X	X		X
Gilia capitata	globe gilia		X	X		
Lasthenia californica	gold fields		X	X		X

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Annuals						
Layia platyglossa	tidy tips		X	X		X
Lupinus succulentus	succulent lupine	X	X	X		X
Nemophila menziesii	baby blue eyes		X	X		X
Nicotiana quadrivalvis	Indian tobacco		X	X		
Phacelia minor	wild canterbury bells		X	X		
Phacelia parryi	Parry's phacelia		X	X		
Platystemon californicus	cream cups			X		X
Salvia columbariae	chia		X	X		X
Bulbs						
Bloomeria crocea	golden stars		X	X		X
Calochortus albus	white globe lily				X	X
Calochortus catalinae	Catalina mariposa		X	X		X
Calochortus clavatus	yellow mariposa		X	X		X
Dichelostemma capitatum	blue dicks		X	X		X
Lilium humboldtii	Humboldt lily				X	
Zigadenus fremontii	star lily		X	X		X
Perennial grasses						
Achnatherum coronatum	porcupine grass		X	X		
Agrostis pallens	San Diego bent grass		X	X		X
Agrostis exarata	bent grass				X	
Andropogon glomeratus var. scabriglumis	southwestern bushy bluestem				X	
Bothriochloa barbinodis	cane bluestem		X			
Bromus carinatus	California brome		X	X		X
Bromus laevipes	woodland brome					X
Distichlis spicata	salt grass		X			
Elymus glaucus	western rye grass		X	X		X
Elymus multisetus	squirreltail		X	X		
Elymus stebbinsii	wheat grass			X		
Festuca elmeri	Elmer's fescue				X	
Hordeum brachyantherum ssp. *californicum*	meadow barley				X	

Appendix B. CNPS Recommended List of Native Plants for Landscaping in the Santa Monica Mountains						
Scientific Name	**Common Name**	**fire resist**	**coast**	**chaparral**	**riparian north slope**	**oak woodland**
Perennial grasses						
Juncus patens	rush				X	
Koelaria macrantha	June grass					
Leymus condensatus	giant wild rye		X	X		X
Leymus triticoides	creeping wild rye					X
Melica imperfecta	chaparral melic		X	X		X
Muhlenbergia asperifolia	scratch grass					
Muhlenbergia rigens	showy deer grass					X
Nassella cemua	nodding needlegrass		X	X		X
Nassella lepida	foothill needlegrass		X	X		X
Nassella pulchra	purple needlegrass		X	X		X
Poa secunda ssp. *secunda*	Malpais bluegrass			X		
Vines						
Calystegia macrostegia	morning glory		X	X		
Clematis lasiantha	virgin's bower			X		
Clematis ligusticifolia	western virgin's bower			X	X	
Lathyrus vestitus var. *vestitus*	wild sweet pea		X	X		X
Lonicera hispidula	California honeysuckle	X		X	X	
Vitis girdiana	wild grape				X	

Appendix C. Recommended Species for Restoration

Appendix C. Recommended Species for Restoration			
Scientific Name	**Common Name**	**Type**	**Percentage/Amount**
Area 1			
Adenostoma fasciculatum	chamise	shrub	30%
Artemisia californica	California sagebrush	shrub	30%
Quercus berberidifolia	scrub oak	shrub	10%
Rhamnus ilicifolia	hollyleaf redberry	shrub	10%
Rhus ovata	sugar sumac	shrub	10%
Salvia apiana	white sage	shrub	5%
Salvia mellifera	black sage	shrub	5%
Area 2			
Adenostoma fasciculatum	chamise	shrub	20%
Artemisia californica	California sagebrush	shrub	20%
Quercus agrifolia var. *agrifolia*	coast live oak	tree	10%
Salvia apiana	white sage	shrub	20%
Salvia mellifera	black sage	shrub	20%
Sambucus mexicana	blue elderberry	shrub/tree	10%
Area 3			
Adenostoma fasciculatum	chamise	shrub	10%
Adenostoma sparsifolium	red shank	shrub	10%
Artemisia californica	California sagebrush	shrub	10%
Ceanothus cuneatus	buck brush	shrub	10%
Ceanothus spinosus	greenbark ceanothus	shrub	10%
Heteromeles arbutifolia	toyon	shrub	10%
Quercus agrifolia var. *agrifolia*	coast live oak	tree	10%
Rhamnus ilicifolia	hollyleaf redberry	shrub	10%
Salvia apiana	white sage	shrub	10%
Salvia mellifera	black sage	shrub	10%

Appendix D. Planting and Irrigation Plan

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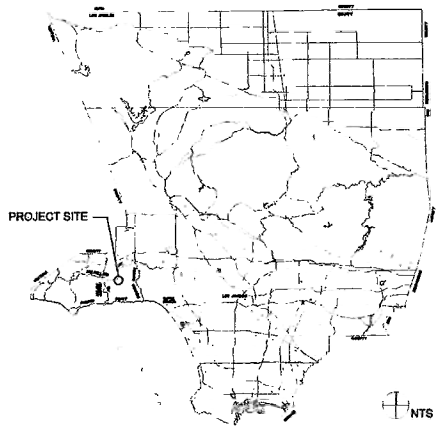
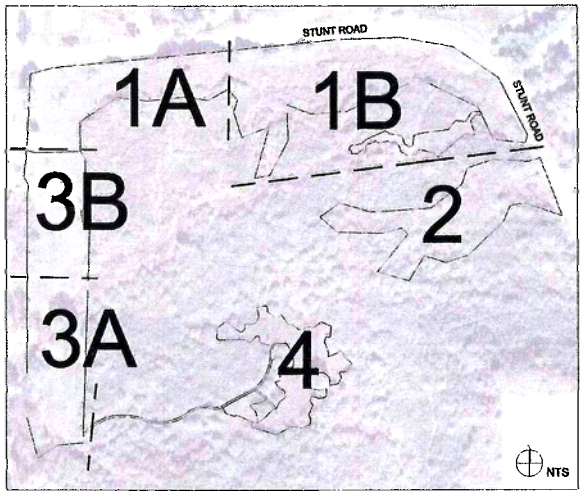
MRT HABITAT RESTORATION



LOCATION MAP
TG 589-D-5



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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

MRT HABITAT RESTORATION
IRRIGATION AND PLANTING PLANS

T-101 | JOB — | DWG | SHEET 1 OF 11

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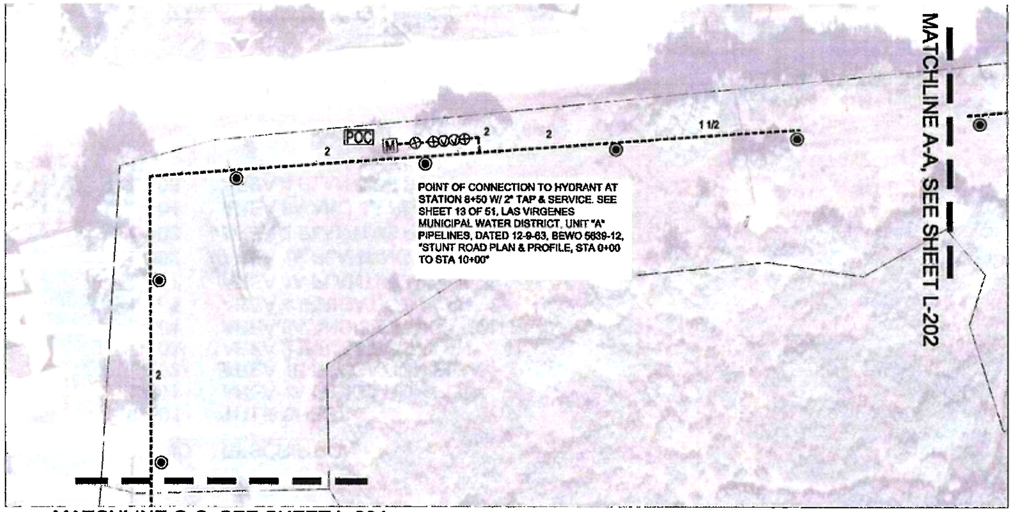


IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MODEL & MANUFACTURER
◉	QUICK COUPLER VALVE	RAIN BIRD 44 LVC
⊗	BALL VALVE, LINE SIZE	KING BROS. TUBV SERIES
⊕Ⓥ Ⓥ⊕	REDUCED PRESSURE BACKFLOW PREVENTER, WITH REGULATOR SET TO 50 PSI	FEBCO 825 W/ WILKINS 500 YS STRAINER & REGULATOR
— — —	MAIN LINE (PRESSURE) PIPING, CL 315, SIZE AS SHOWN	JM OR EQUAL
[M]	MAIN LINE (PRESSURE) PIPING, CL 315, SIZE AS SHOWN	PER COUNTY & WATER DIST. STANDARDS

IRRIGATION NOTES

1 EXISTING UTILITIES AND CONDITIONS: PRIOR TO CUTTING INTO THE SOIL OR PAVING, LOCATE ALL CABLES, CONDUITS, AND OTHER UTILITIES COMMONLY FOUND UNDERGROUND, AND TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH IMPROVEMENTS. IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK, PROMPTLY NOTIFY OWNER WHO WILL ARRANGE FOR RELOCATIONS IF REQUIRED. PROCEED IN THE SAME MANNER IF ROCK LAYERS OR ANY OTHER CONDITIONS ENCOUNTERED UNDERGROUND MAKE CHANGES ADVISABLE.

2 THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL CONFORM TO ALL APPLICABLE REGULATIONS AND CODES.

3 THE IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY FOR CLARITY. LOCATE ALL PIPING, EQUIPMENT AND APPURTENANCES WITHIN THE PLANTING AREAS SHOWN UNLESS NOTED OR DIRECTED OTHERWISE. LOCATE ALL VALVES AND VALVE BOXES 6" MIN., 12" MAX FROM PAVING. LOCATE QUICK COUPLER VALVES AT THE EDGE OF PLANTING AREAS. LOCATE PRESSURE MAIN LINES WITHIN 12" OF EDGE OF PLANTING AREAS.

4 ALL BRASS PIPE AND FITTINGS TO BE IPS RED BRASS, STANDARD PIPE SIZE, SCHEDULE 40. ALL COPPER PIPE TO BE TYPE "K" COPPER.

5 USE TWO WRAPS OF 3/4" TEFLON TAPE FOR ALL THREADED CONNECTIONS.

6 DURING INSTALLATION ALL EXPOSED PIPE AND JOINTS SHALL BE SHADED WHENEVER TEMPERATURES EXCEED 100 DEGREES FAHRENHEIT.

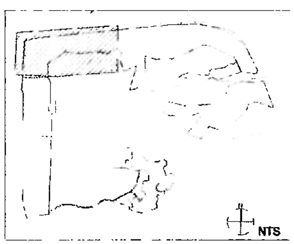
7 SYSTEM DESIGN IS BASED ON STATIC PRESSURE OF 65 PSI REGULATED TO 50 PSI.

8 THE USE OF A MANUFACTURER'S NAME AND MODEL OR CATALOG NUMBER IS FOR THE PURPOSE OF ESTABLISHING THE STANDARD OF QUALITY AND CONFIGURATION DESIRED ONLY. DESIGN OF IRRIGATION SYSTEM IS BASED ON THESE MATERIALS. IF OTHER EQUIPMENT IS SUBSTITUTED, WITH APPROVAL, DESIGN REQUIREMENTS ARE TO BE ADJUSTED ACCORDINGLY.

9 ALL EQUIPMENT IS TO BE INSTALLED PER THE CURRENT COUNTY OF LOS ANGELES DETAILS AND REQUIREMENTS.

10. THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FOR THE CONNECTION TO THE FIRE HYDRANT FROM THE CONSTRUCTION DIVISION PERMIT SECTION OF THE LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS, 900 SOUTH FREMONT, 8TH FLOOR, ALHAMBRA, CA 91803. THE PHONE NUMBER FOR THE PUBLIC COUNTER IS 626-458-3129.

11. THE CONTRACTOR SHALL OBTAIN A CONNECTION PERMIT FORM THE LAS VIRGENES MUNICIPAL WATER DISTRICT FOR THE IRRIGATION LINE CONNECTION TO THE FIRE HYDRANTS ON SHEETS 2 AND 3 OF THESE PLANS. PLEASE CONTACT MR. MIKE BROWN, C.E. ASSOCIATE, LAS VIRGENES MUNICIPAL WATER DISTRICT, 4232 LAS VIRGENES ROAD, CALABASAS, CA 91302. THE PHONE NUMBER FOR THE PUBLIC COUNTER IS 818 251-2200.



KEY MAP

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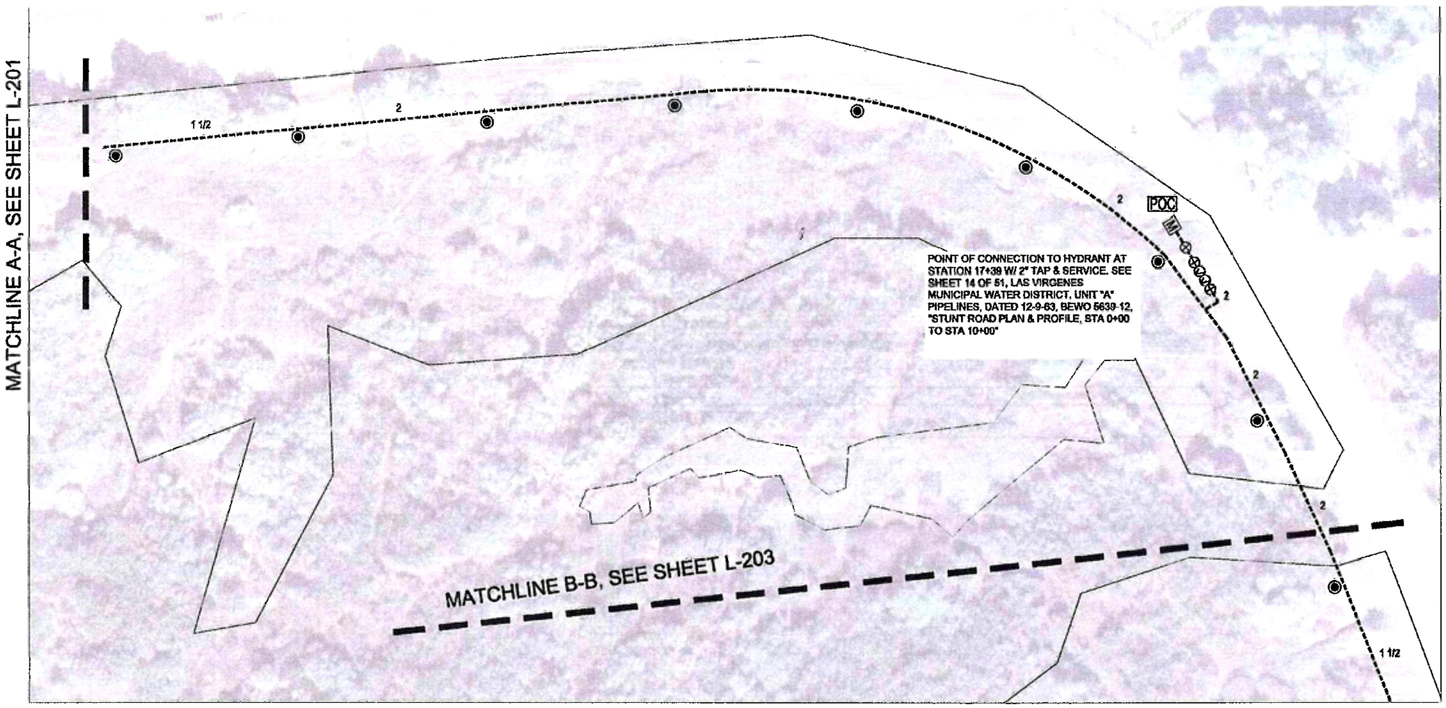
MRT HABITAT RESTORATION
AREA 1A IRRIGATION PLAN

L-201 | JOB — | DWG | SHEET 2 OF 11



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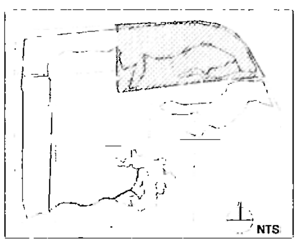

KEY MAP

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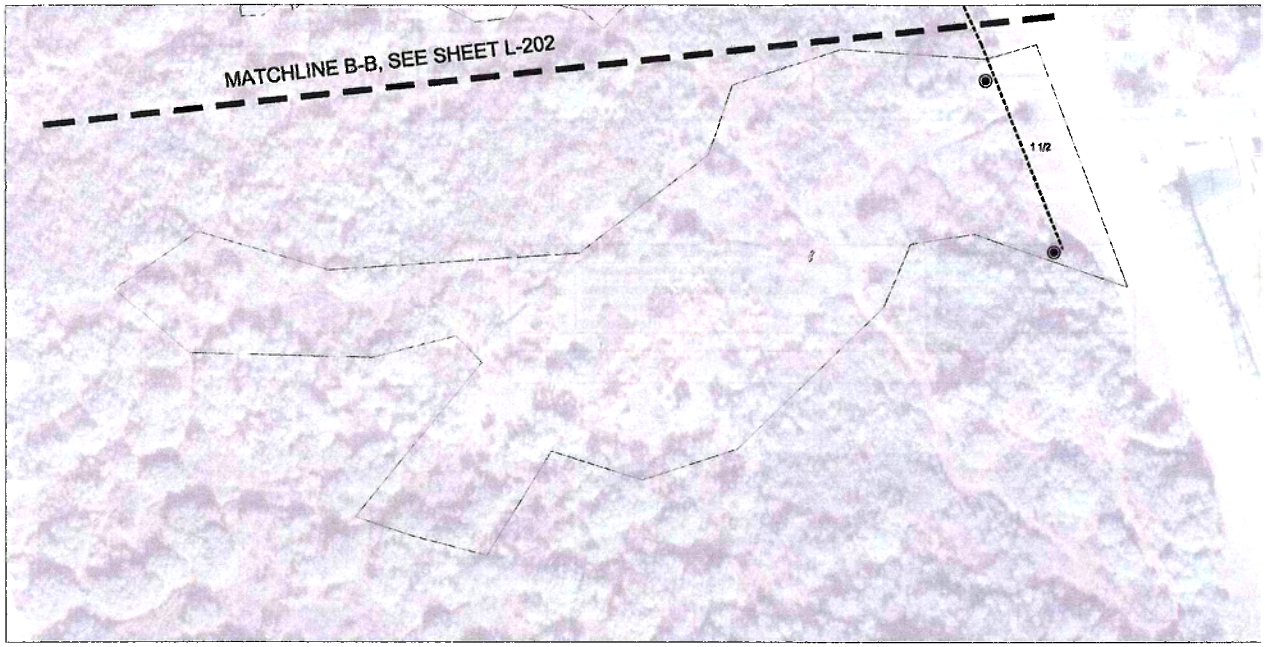
AREA 1B IRRIGATION PLAN

L-202 | JOB — | DWG | SHEET 3 OF 11



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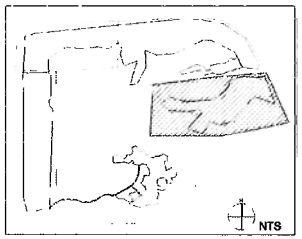

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AREA 2 IRRIGATION PLAN

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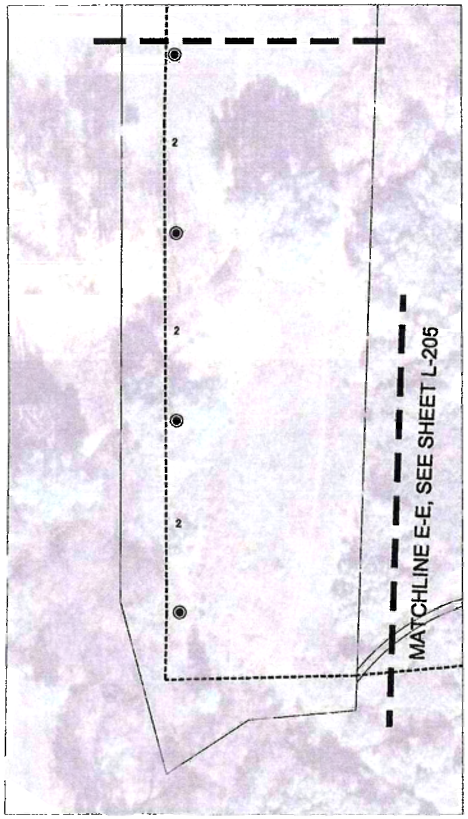

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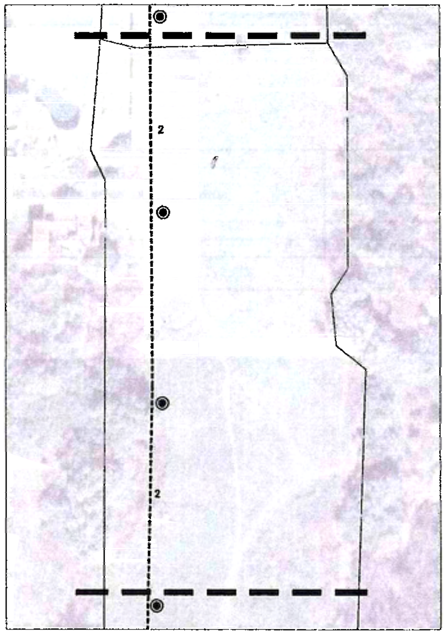

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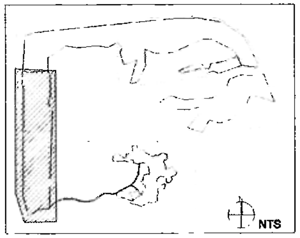

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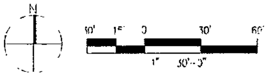

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MRT HABITAT RESTORATION

AREA 3A AND 3B IRRIGATION PLAN

L-204 | JOB — | DWG | SHEET 5 OF 11

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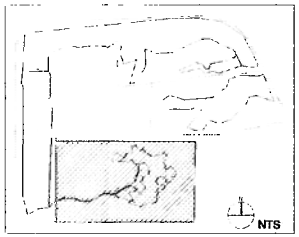

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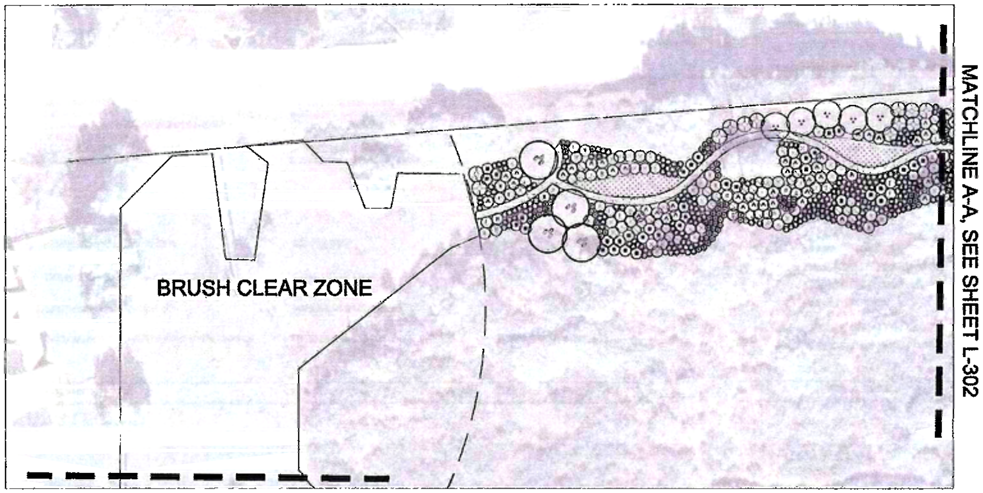
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

MRT HABITAT RESTORATION

AREA 4 IRRIGATION PLAN

L-205 | JOB — | DWG | SHEET 8 OF 11



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PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
STREET TREES					
	JUGLANS CALIFORNICA VAR. CALIFORNICA	CALIFORNIA WALNUT	4	1 GAL.	20' WIDTH
	PLATANUS RACEMOSA	WESTERN SYCAMORE	-	1 GAL.	30' WIDTH
	QUERCUS AGRIFOLIA VAR. AGRIFOLIA	COAST LIVE OAK	-	1 GAL.	35' WIDTH
	QUERCUS BERBERIDIFOLIA	SCRUB OAK	12	1 GAL.	8' WIDTH
SHRUBS					
	ADENOSTOMA FASCICULATUM	CHAMISE	37	1 GAL.	6' WIDTH
	TRICHOSTEMA LANATUM OR	WOOLY BLUE CURLS	126	1 GAL.	3' WIDTH
	RHUS TRILOBATA	BASKET BUSH	126	1 GAL.	3' WIDTH
	CEANOTHUS MEGACARPUS	BIGPOD CEANOTHUS	36	1 GAL.	8' WIDTH
	HETEROMELES ARBUTIFOLIA	TOYON	5	1 GAL.	15' WIDTH
	RHAMNUS ILICIFOLIA	HOLLYLEAF REDBERRY	44	1 GAL.	6' WIDTH
	SALVIA APIANA	WHITE SAGE	31	1 GAL.	5' WIDTH
	SALVIA MELLIFERA	BLACK SAGE	43	1 GAL.	6' WIDTH
	ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	86	1 GAL.	3' WIDTH
SEED MIX					
	ASCLEPIAS FASCICULARIS	NARROWLEAF MILKWEED			
	ERIOGONUM ELONGATUM	LONG STEMMED BUCKWHEAT			
	ERIOGONUM FACSICULATUM VAR. FOLIOLOSUM	CALIFORNIA BUCKWHEAT			
	ESCHSHOLZIA CALIFORNICA	CALIFORNIA POPPY			
	GNAPHALIUM CALIFORNICUM	CALIFORNIA CUDWEED			
	HAZARDIA SQUARROSA	SAWTOOTH GOLDENBUSH			
	HELIANTHUS GRACILENTUS	SLENDER SUNFLOWER			
	JUNCUS PATENS	COMMON RUSH			
	LOTUS SCOPARIUS VAR. SCOPARIUS	COMMON DEERWEED			
	PENSTEMON HETEROPHYLLUS	FOOTHILL PENSTEMON			
	TRICHOSTEMA LANATUM	WOOLLY BLUECURLS			
BARE GROUND					
	PATHWAYS DRAINAGE				

1" = 30'-0"

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MRT HABITAT RESTORATION

AREA 1A PLANTING PLAN

L-301 JOB ---- DWG SHEET 7 OF 11

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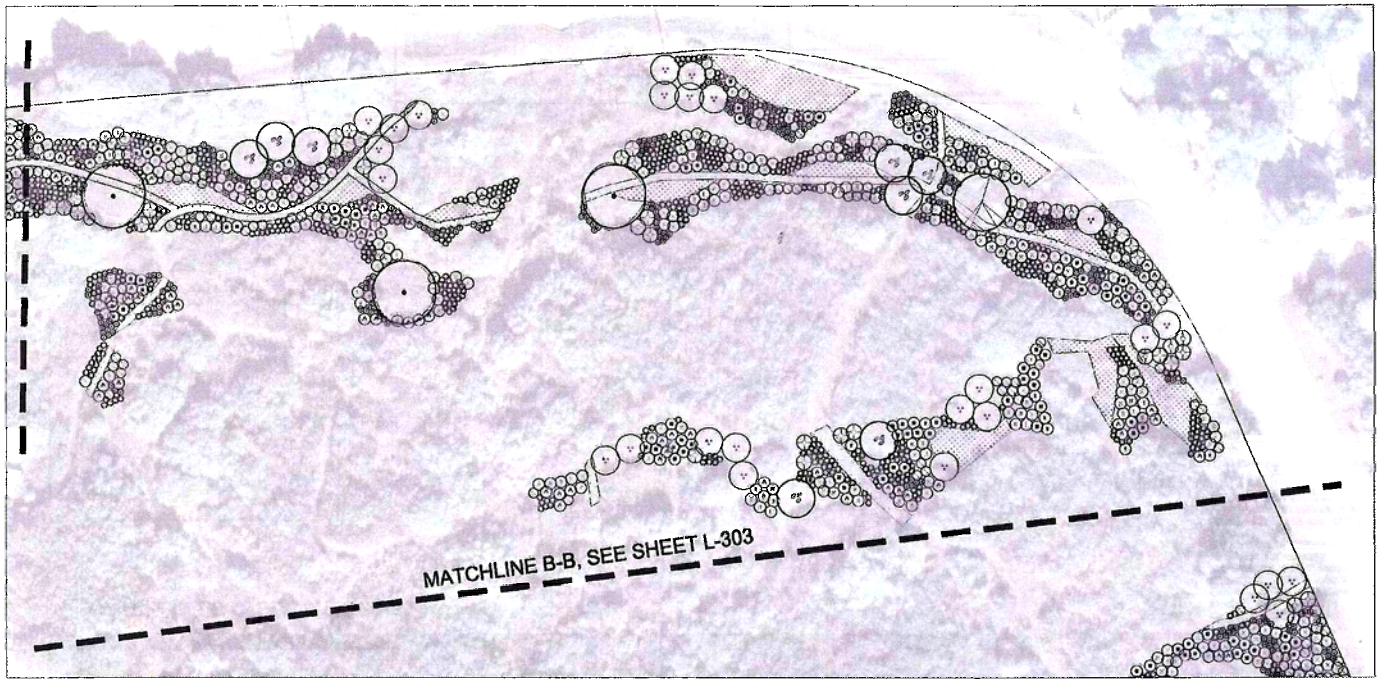


PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
STREET TREES					
	JUGLANS CALIFORNICA VAR. CALIFORNICA	CALIFORNIA WALNUT	8	1 GAL.	20' WIDTH
	PLATANUS RACEMOSA	WESTERN SYCAMORE	1	1 GAL.	30' WIDTH
	QUERCUS AGRIFOLIA VAR. AGRIFOLIA	COAST LIVE OAK	3	1 GAL.	35' WIDTH
	QUERCUS BERBERIDIFOLIA	SCRUB OAK	40	1 GAL.	6' WIDTH

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
SHRUBS					
	ADENOSTOMA FASCICULATUM	CHAMISE	90	1 GAL.	6' WIDTH
	TRICHOSTEMA LANATUM OR RHUS TRILOBATA	WOOLY BLUE CURLS / BASKET BUSH	348	1 GAL.	3' WIDTH
	CEANOTHUS MEGACARPUS	BIGPOD CEANOTHUS	73	1 GAL.	6' WIDTH
	HETEROMELES ARBUTIFOLIA	TOYON	21	1 GAL.	15' WIDTH
	RHAMNUS ILICIFOLIA	HOLLYLEAF REDBERRY	135	1 GAL.	6' WIDTH
	SALVIA APIANA	WHITE SAGE	76	1 GAL.	5' WIDTH
	SALVIA MELLIFERA	BLACK SAGE	84	1 GAL.	6' WIDTH
	ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	300	1 GAL.	3' WIDTH

SEED MIX

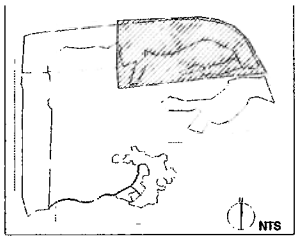
HAZARDIA SQUARROSA — SAWTOOTH GOLDENBUSH
HELIANTHUS GRACILENTUS — SLENDER SUNFLOWER
JUNCUS PATENS — COMMON RUSH
LOTUS SCOPARIUS VAR. SCOPARIUS — COMMON DEERWEED
PENSTEMON HETEROPHYLLUS — FOOTHILL PENSTEMON
TRICHOSTEMA LANATUM — WOOLLY BLUECURLS

SEED MIX CONT'D

ASCLEPIAS FASCICULARIS — NARROWLEAF MILKWEED
ERIOGONUM ELONGATUM — LONG STEMMED BUCKWHEAT
ERIOGONUM FACSICULATUM VAR. FOLIOLOSUM — CALIFORNIA BUCKWHEAT
ESCHSHOLZIA CALIFORNICA — CALIFORNIA POPPY
GNAPHALIUM CALIFORNICUM — CALIFORNIA CUDWEED

BARE GROUND

PATHWAYS
DRAINAGE



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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

MRT HABITAT RESTORATION

AREA 1B PLANTING PLAN

L-302 | JOB — | DWG | SHEET 8 OF 11

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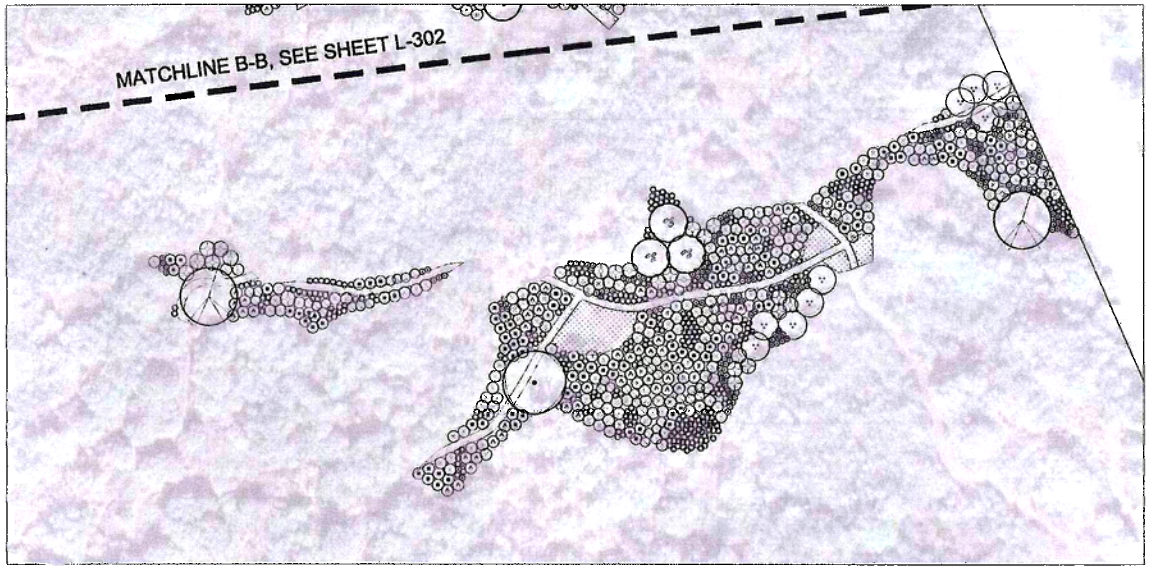

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PLANTING LEGEND

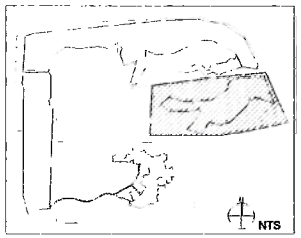
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
STREET TREES					
	JUGLANS CALIFORNICA VAR. CALIFORNICA	CALIFORNIA WALNUT	3	1 GAL.	20' WIDTH
	PLATANUS RACEMOSA	WESTERN SYCAMORE	2	1 GAL.	30' WIDTH
	QUERCUS AGRIFOLIA VAR. AGRIFOLIA	COAST LIVE OAK	1	1 GAL.	35' WIDTH
	QUERCUS BERBERIDIFOLIA	SCRUB OAK	26	1 GAL.	6' WIDTH
SHRUBS					
	ADENOSTOMA FASCICULATUM	CHAMISE	16	1 GAL.	8' WIDTH
	TRICHOSTEMA LANATUM OR RHUS TRILOBATA	WOOLY BLUE CURLS / BASKET BUSH	182	1 GAL.	3' WIDTH
	CEANOTHUS MEGACARPUS	BIGPOD CEANOTHUS	105	1 GAL.	6' WIDTH
	HETEROMELES ARBUTIFOLIA	TOYON	9	1 GAL.	15' WIDTH
	RHAMNUS ILICIFOLIA	HOLLYLEAF REDBERRY	163	1 GAL.	6' WIDTH
	SALVIA APIANA	WHITE SAGE	71	1 GAL.	8' WIDTH
	SALVIA MELLIFERA	BLACK SAGE	60	1 GAL.	6' WIDTH
	ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	168	1 GAL.	3' WIDTH

SEED MIX

ASCLEPIAS FASCICULARIS	NARROWLEAF MILKWEED
ERIOGONUM ELONGATUM	LONG STEMMED BUCKWHEAT
ERIOGONUM FACSICULATUM VAR. FOLIOLOSUM	CALIFORNIA BUCKWHEAT
ESCHSHOLZIA CALIFORNICA	CALIFORNIA POPPY
GNAPHALIUM CALIFORNICUM	CALIFORNIA CUDWEED
HAZARDIA SQUARROSA	SAWTOOTH GOLDENBUSH
HELIANTHUS GRACILENTUS	SLENDER SUNFLOWER
JUNCUS PATENS	COMMON RUSH
LOTUS SCOPARIUS VAR. SCOPARIUS	COMMON DEERWEED
PENSTEMON HETEROPHYLLUS	FOOTHILL PENSTEMON
TRICHOSTEMA LANATUM	WOOLLY BLUECURLS

BARE GROUND

PATHWAYS
DRAINAGE



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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

MRT HABITAT RESTORATION

AREA 2 PLANTING PLAN

L-303 | JOB — | DWG | SHEET 9 OF 11

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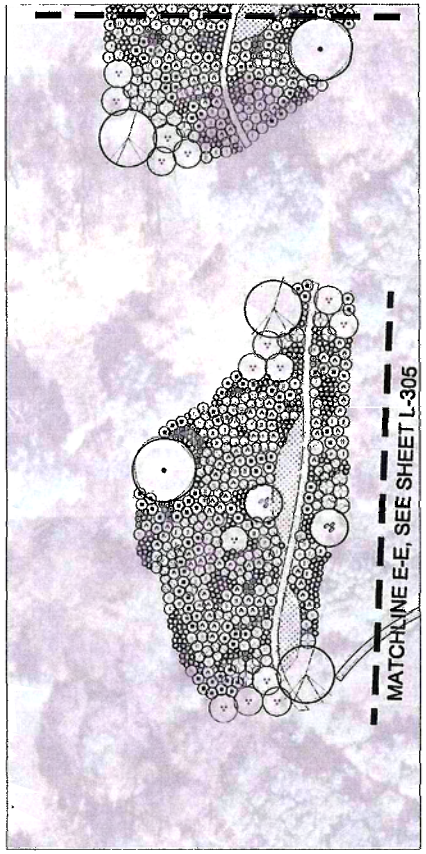

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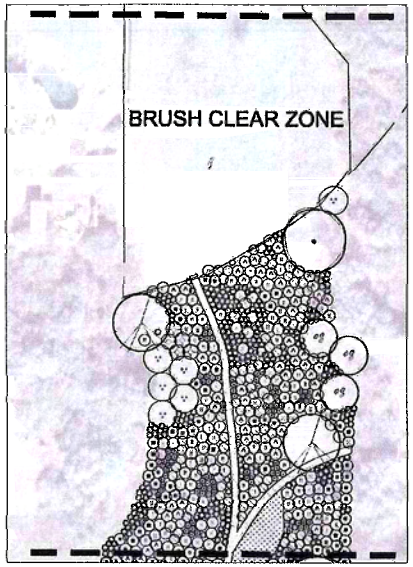

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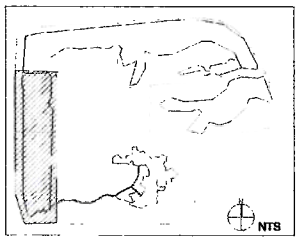

KEY MAP

PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
STREET TREES					
	JUGLANS CALIFORNICA VAR. CALIFORNICA	CALIFORNIA WALNUT	5	1 GAL.	20' WIDTH
	PLATANUS RACEMOSA	WESTERN SYCAMORE	5	1 GAL.	30' WIDTH
	QUERCUS AGRIFOLIA VAR. AGRIFOLIA	COAST LIVE OAK	3	1 GAL.	35' WIDTH
	QUERCUS BERBERIDIFOLIA	SCRUB OAK	28	1 GAL.	6' WIDTH
SHRUBS					
	ADENOSTOMA FASCICULATUM	CHAMISE	213	1 GAL.	6' WIDTH
	TRICHOSTEMA LANATUM OR RHUS TRILOBATA	WOOLY BLUE CURLS OR BASKET BUSH	334 / 333	1 GAL.	3' WIDTH
	CEANOTHUS MEGACARPUS	BIGPOD CEANOTHUS	163	1 GAL.	6' WIDTH
	HETEROMELES ARBUTIFOLIA	TOYON	21	1 GAL.	15' WIDTH
	RHAMNUS ILICIFOLIA	HOLLYLEAF REDBERRY	59	1 GAL.	6' WIDTH
	SALVIA APIANA	WHITE SAGE	187	1 GAL.	5' WIDTH
	SALVIA MELLIFERA	BLACK SAGE	155	1 GAL.	6' WIDTH
	ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	175	1 GAL.	3' WIDTH

SEED MIX

ASCLEPIAS FASCICULARIS	NARROWLEAF MILKWEED
ERIOGONUM ELONGATUM	LONG STEMMED BUCKWHEAT
ERIOGONUM FACSICULATUM VAR. FOLIOLOSUM	CALIFORNIA BUCKWHEAT
ESCHSHOLZIA CALIFORNICA	CALIFORNIA POPPY
GNAPHALIUM CALIFORNICUM	CALIFORNIA CUDWEED
HAZARDIA SQUARROSA	SAWTOOTH GOLDENBUSH
HELIANTHUS GRACILENTUS	SLENDER SUNFLOWER
JUNCUS PATENS	COMMON RUSH
LOTUS SCOPARIUS VAR. SCOPARIUS	COMMON DEERWEED
PENSTEMON HETEROPHYLLUS	FOOTHILL PENSTEMON
TRICHOSTEMA LANATUM	WOOLLY BLUECURLS

BARE GROUND

PATHWAYS
DRAINAGE

N

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

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MRT HABITAT RESTORATION

AREA 3A AND 3B PLANTING PLAN

L-304 | JOB — | DWG | SHEET 10 OF 11

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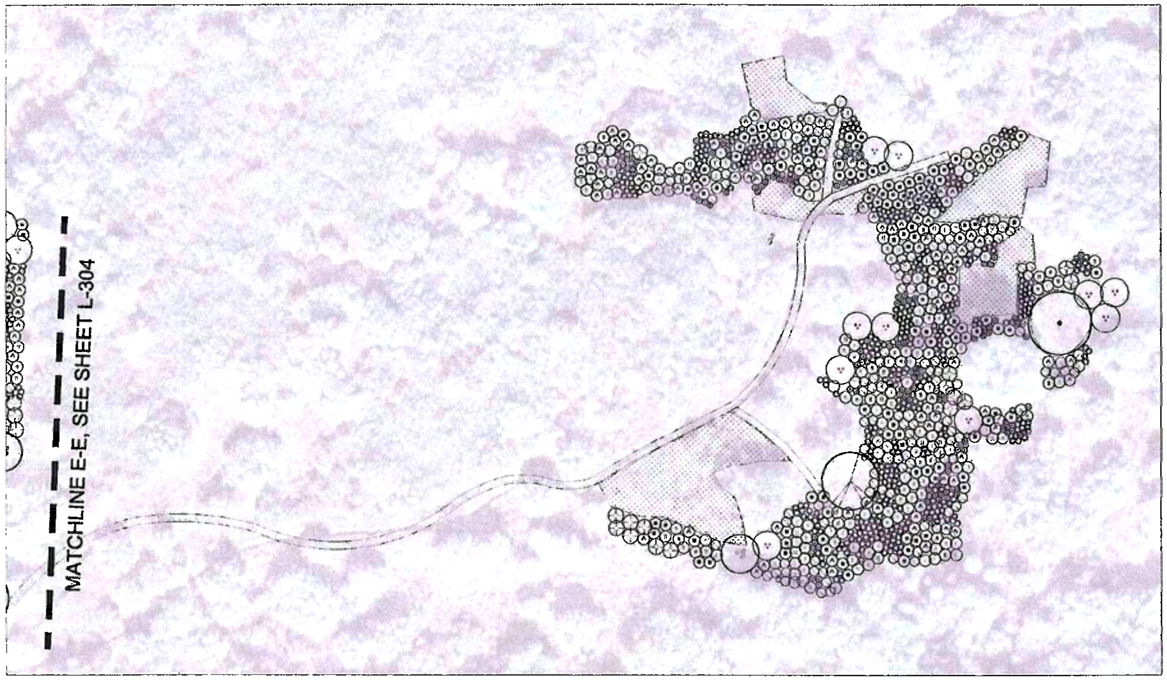


PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
STREET TREES					
	JUGLANS CALIFORNICA VAR. CALIFORNICA	CALIFORNIA WALNUT	1	1 GAL.	20' WIDTH
	PLATANUS RACEMOSA	WESTERN SYCAMORE	1	1 GAL.	30' WIDTH
	QUERCUS AGRIFOLIA VAR. AGRIFOLIA	COAST LIVE OAK	1	1 GAL.	35' WIDTH
	QUERCUS BERBERIDIFOLIA	SCRUB OAK	15	1 GAL.	6' WIDTH

SEED MIX

BOTANICAL NAME	COMMON NAME
HAZARDIA SQUARROSA	SAWTOOTH GOLDENBUSH
HELIANTHUS GRACILENTUS	SLENDER SUNFLOWER
JUNCUS PATENS	COMMON RUSH
LOTUS SCOPARIUS VAR. SCOPARIUS	COMMON DEERWEED
PENSTEMON HETEROPHYLLUS	FOOTHILL PENSTEMON
TRICHOSTEMA LANATUM	WOOLLY BLUECURLS

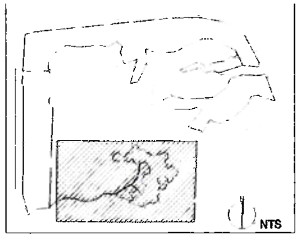
BARE GROUND

PATHWAYS
DRAINAGE

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
SHRUBS					
	ADENOSTOMA FASCICULATUM	CHAMISE	132	1 GAL.	6' WIDTH
	TRICHOSTEMA LANATUM	WOOLY BLUE CURLS	230	1 GAL.	3' WIDTH
	OR				
	RHUS TRILOBATA	BASKET BUSH	229	1 GAL.	3' WIDTH
	CEANOTHUS MEGACARPUS	BIGPOD CEANOTHUS	117	1 GAL.	6' WIDTH
	HETEROMELES ARBUTIFOLIA	TOYON	10	1 GAL.	15' WIDTH
	RHAMNUS ILICIFOLIA	HOLLYLEAF REDBERRY	51	1 GAL.	6' WIDTH
	SALVIA APIANA	WHITE SAGE	101	1 GAL.	5' WIDTH
	SALVIA MELLIFERA	BLACK SAGE	101	1 GAL.	6' WIDTH
	ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	138	1 GAL.	3' WIDTH

SEED MIX CONT'D

BOTANICAL NAME	COMMON NAME
ASCLEPIAS FASCICULARIS	NARROWLEAF MILKWEED
ERIOGONUM ELONGATUM	LONG STEMMED BUCKWHEAT
ERIOGONUM FACSICULATUM VAR. FOLIOLOSUM	CALIFORNIA BUCKWHEAT
ESCHSHOLZIA CALIFORNICA	CALIFORNIA POPPY
GNAPHALIUM CALIFORNICUM	CALIFORNIA CUDWEED



KEY MAP

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30' 15' 0 30' 60'
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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

MRT HABITAT RESTORATION

AREA 4 PLANTING PLAN

L-305 JOB — DWG SHEET 11 OF 11

EXHIBIT C

Grandview Drive 60 Feet North of Falls Drive Oak Tree Planting Project Proposal in Topanga State Park

Mountains Restoration Trust

County of Los Angeles Department of Public Works

December 3, 2008

Table of Contents

1.0 Oak Tree Planting for Offsite Mitigation

This Oak Tree Planting, Maintenance and Monitoring Plan was prepared to satisfy the California Coastal Commission mitigation requirements for the Coastal Development Permit No 4-06-153 for the Grandview Drive 60 – North of Falls Drive road repair project. The permit authorizes Public Works to install a soldier pile retaining wall on the failed and damaged outboard slope of the road that was damaged during the 2005 Winter Storm event. This Oak Tree Mitigation, Planting, and Monitoring Plan includes the planting of 30 oak trees in an off site location to mitigate for the adverse impacts on 3 oak trees associated with the construction of the soldier pile retaining wall to stabilize the road for public safety purposes.

The planting plan covers the planting area description, site preparation and oak tree planting procedures, irrigation systems installation, monitoring plan and reports, and restoration criteria.

The work will be implemented by the Mountains Restoration Trust and funded by Public Works in the offsite mitigation agreement to be executed by both agencies.

2.0 Planting Area description

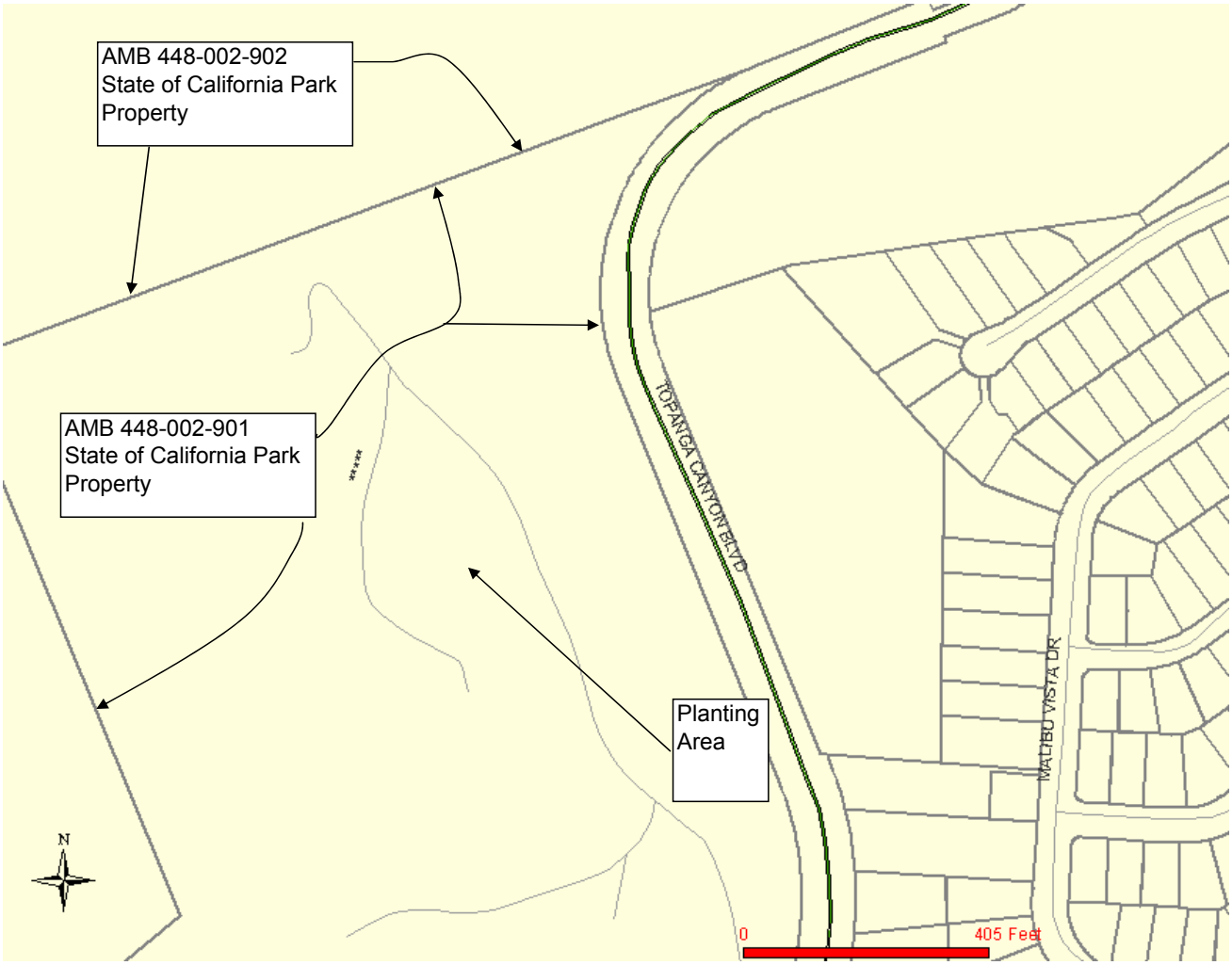
The 30 oak trees will be planted in the land owned by the State of California Department of Parks and Recreation property as shown on the Figure 1 aerial location map. Figure 2 presents the property boundaries and ownership information. Figure 3 presents the USGS topographic map of the site. Additional site photos are included at the end of this report as Figures 4 and 5.

As this is State Park land it is restricted in perpetuity from development. In fact, numerous residents that previously lived in near the project site have been vacated. The State Parks Department is subsequently in the process of removing the residential structures that are now within this State Park land that was part of a 1600 acre area acquired in 2001.

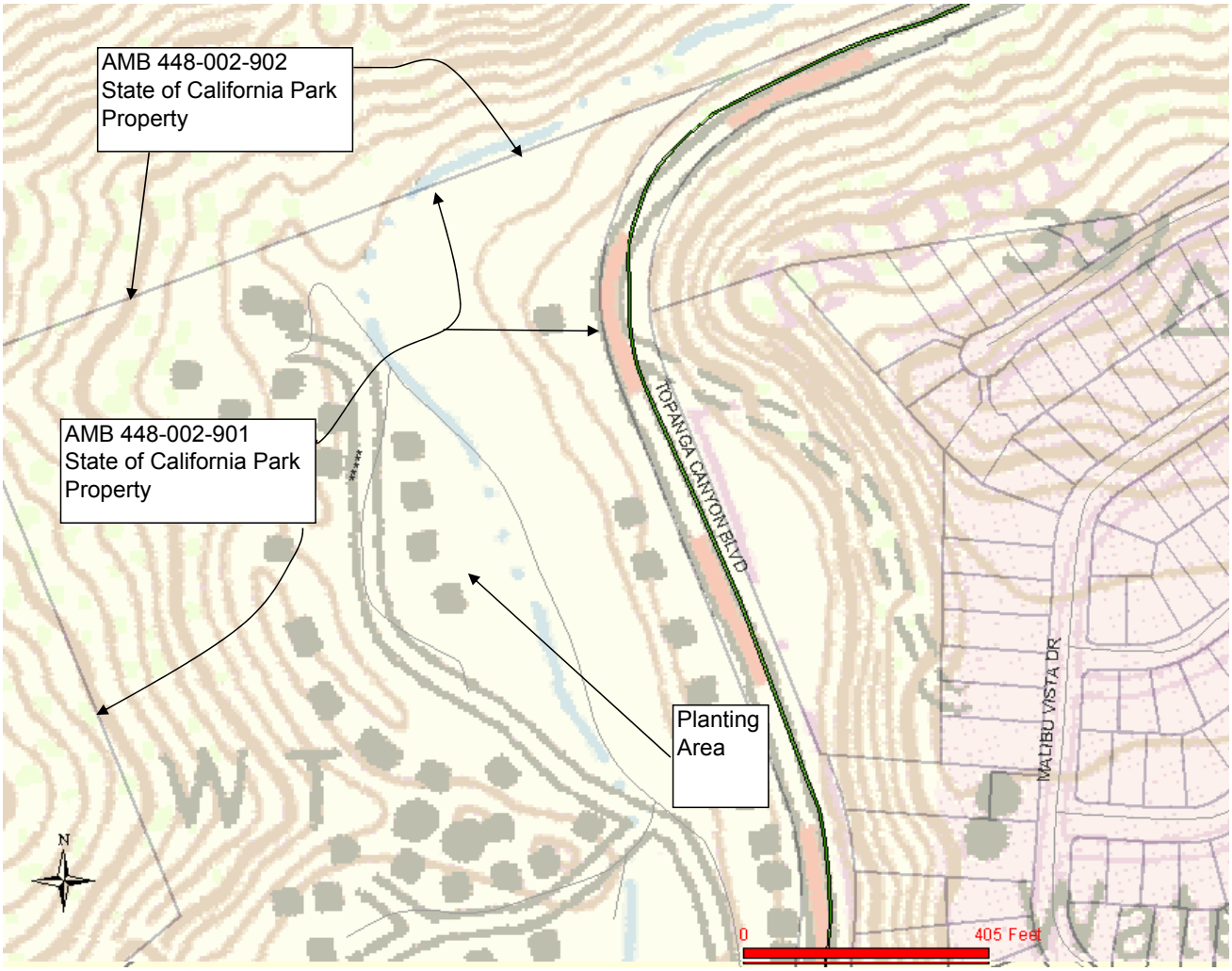
The parcel numbers for the oak tree planting area project sites in the Topanga State Park Property are, 448-002-900, 4448-002-901 and 4448-002-902.

Source: Resource Conservation District of the Santa Monica Mountains. Aerial Photograph, I.K. Curtis, 1997.

Figure 1 - Project Area Map



4.0 Figure 2 - Property Boundary Map



5.0 Figure 3 - USGS Topographic Map

Note: The structures depicted in this Topographic map in the vicinity of the planting area have been removed.

The 12 acre site is located within a graded area covered with hydro mulch adjacent to the riparian corridor of Topanga Creek. The graded and hydro mulched 12 acre site is surrounded by Willow, Sycamore, Poplar and Oak mixed riparian habitat

The site is within the Lower Topanga Creek Berm Removal Project area that is associated with Coastal Development Permit No 4-07-002 that was submitted by the State Department of Parks and Recreation (DPR) and the Resource Conservation District of the Santa Monica Mountains (RCDSMM).

Mountains Restoration Trust staff has been in contact with DPR and RCDSMM staff for this Oak Tree Planting Project and have received their concurrence. An approval letter from the DPR for the Oak Tree Planting Project is attached to this report.

6.0 Planting Procedures

30 Oak Trees are proposed to be planted at State Park property along Topanga Creek. The trees will be planted 10 feet apart along the southerly and easterly portion of the site. Acorns can be gathered from the endemic oak trees in the Santa Monica Mountains coastal zone for planting.

The acorns will be gathered from the ground or soon after they drop from local oak trees in the August to October period of the year. Typically, the acorns drop anywhere in this period depending on the hydrologic and weather trends for that year.

Trees will be protected with tree shelters to prevent browse damage from deer and root girdling by voles and gophers. The shelters wire cages will be installed a minimum of 6 inches (6") below the soil line to discourage voles and gophers from digging under the shelters wire cages and girdling the trees. Managing the vegetation immediately around the oak seedlings is proposed to limit tree mortality and damage from ground burrowing animals. The grass and ground cover surrounding the mitigation trees will be mowed close to a height of 4 inches from the ground annually to limit grass and weed growth. This will also reduce the fire damage potential and reduce the competition between the young trees and the grasses and weeds for valuable water and nutrients. Weed control mats measuring 3 feet by 3 feet may be placed around each tree to control weeds and conserve moisture.

Planting holes are to be backfilled with friable native soil. Rocks larger than 1" in diameter are to be removed from the backfill. The backfill should be tamped in place and then flooded to displace any air pockets in the rooting zone. After planting, flooding and backfilling the surrounding soil surface level should be approximately equal with the top of the root ball.

Prior to the planting, non native plants and weeds will be removed from the site. Wood chips or mulch may be placed around each tree to enable the watered areas to retain moisture and reduce propagation of weeds to the vicinity of the oak trees.

7.0 Weed Control

Weeds will be controlled in the restoration area prior to planting and through year five or until plantings are well established, to prevent detrimental competition between the non-native, invasive species and the native revegetation plantings. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government will be allowed to occur within the restoration area. Less troublesome weeds may be allowed to grow if they are known to be harmless to native species in the conditions of the restoration site. Such species are sometimes helpful in preventing the invasion of more harmful species, and in providing shade and other protection to native plant species. Weeds will not be allowed to reach 10 percent or greater cover.

8.0 Irrigation System

The mitigation trees (planted acorns or 1 year old saplings) will be irrigated manually to facilitate germination and plant establishment. A 1000 foot long fire hose will be used for the watering which will connect to a water meter and outlet tied to the Waterworks District 29 water line on Topanga Canyon Boulevard. The Mountains Restoration Trust staff has used this manual watering strategy for the Commemorative Oaks, an oak woodland restoration project in Malibu Creek State Park that involved the planting of more than 3,000 oak trees

If the manual watering strategy is problematic, then the oak trees will be irrigated by an above-ground, drip line irrigation system. The trees will receive irrigation twice weekly during the growing season for the first 2 seasons and then taper off in the 3rd and 4th seasons based on growth, survival and recommendations by the Mountains Restoration Trust staff. Each tree will have two 1-gallon per hour

drip emitters placed on the uphill side of the root ball and receive approximately 2 gallons of water or more per week for the first 2 years. Irrigation schedule will be adjusted to meet field conditions and plant growth. Drip feeder lines will be staked in place so the emitters are no further than 6" from the root ball.

The irrigation system will be inspected on a monthly basis to ensure the desired water regime (frequency and quantity) is followed. The irrigation system will be maintained and operated for a four year period, after which the trees should be able to survive with the local rainfall and groundwater.

9.0 Monitoring Plan and Reports

A monitoring program will be implemented to appraise the project for compliance with the guidelines and performance standards set forth in this oak tree planting plan. Yearly reports will be submitted to the CCC. The monitoring period will begin with implementation of the restoration work and will last for 10 years.

Annual reports will be prepared by the Mountains Restoration Trust to confirm and document that the mitigation planting is effective. The mitigation monitoring will be conducted for a period of ten years to satisfy the CCC□s requirements as specified in Coastal Development Permit No. 4-06-153.

Survival at the end of the year four of the ten year monitoring period must be at 80□. Should survival percentage drop below the 80□ additional planting, maintenance and monitoring will be completed to assure the requirements are met. Survival by year 6 shall be at least 70□ and at least 50□ at the end of the 10 year period.

Each mitigation tree will have a numbered aluminum tag attached to the support stake for ready field and data identification. The position of each tree will be located using GPS mapping equipment. Using the GPS data a mitigation planning area map will be prepared showing the locations and tag number of each tree. This information combined with the survival data plus other information will provide the CCC with a ready means of verifying the success of the mitigation program. Annual field monitoring will occur in the fall of each year until the ten-year monitoring period has been completed. The current status of each tree (i.e., dead or alive) will be recorded and cause or causes of mortality will be noted. If the survival rate falls below the prescribed percentage, added planting will occur. Recommendations will be provided for the correction of any

deficiencies observed in the mitigation area. The mitigation program includes annual field surveys and submittal of the annual reports to the City will be by December 31st of each monitoring year.

Monitoring reports will be sent to the CCC on an annual basis documenting the status of the planted oak trees.

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State of California • The Resources Agency
Arnold Schwarzenegger, *Governor*
DEPARTMENT OF PARKS AND RECREATION
Ruth Coleman, *Director*
Angeles District
1925 Las Virgenes Road
Calabasas, California, 91302

November 21, 2008

Ms. Jo Kitz
Mountains Restoration Trust
3815 Old Topanga Canyon Road
Calabasas, California, 91302

Re: Oak planting in Topanga State Park

Dear Ms. Kitz:

The California Department of Parks and Recreation, Angeles District, has reviewed and approved your proposal to plant 30 coast live oak trees or 30 coast live oak acorns in Topanga State Park. We understand the planting will meet the requirements of the Los Angeles County Department of Public Works as mitigation for disturbance of the understory of coast live oaks in the Topanga Creek watershed.

The oak planting will benefit Topanga State Park by helping to revegetate lower Topanga Canyon, an area added to the park in 2001. This area is heavily infested with numerous species of exotic ornamental plants. The addition of these oaks will help to restore the native ecosystem as we remove the exotic species.

We look forward to the addition of this project to the other successful projects that have been carried out by Mountains Restoration Trust in the state parks of the Santa Monica Mountains.

Sincerely,

Suzanne Goode

Suzanne Goode
Senior Environmental Scientist

Figure 4 - Panoramic view of proposed Oak Tree planting area looking north inside of Topanga Canyon State Park

Figure 5 - Panoramic view of proposed Oak Tree planting area looking south west inside of Topanga Canyon State Park

Figure 6 - Oblique aerial photo of Topanga State Park Oak Tree Planting Site