CITY of CALABASAS

Las Virgenes Creek Restoration Project – Phase II

Application to the Santa Monica Mountains Conservancy
Proposition 1 Grant Program

City of Calabasas
Public Works Department
100 Civic Center Way
Calabasas, CA 91302

Telephone: (818) 224-1600
Facsimile: (818) 225-7338

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SANTA MONICA MOUNTAINS CONSERVANCY
GRANT APPLICATION

Project Name: Las Virgenes Creek Restoration Project - Phase II

Applicant Name: City of Calabasas

Applicant Address:
100 Civic Center Way
Calabasas, CA 91302

Phone: (818) 224-1600
Email: afarassati@cityofcalabasas.com

Amount of Request: $980,500
Total Project Cost: $2,977,235
Matching Funds: $1,996,735
Lat/Long: 34.143789, -118.700549

Project Address: 26400 Agoura Rd, Calabasas, CA

County	Senate District	Assembly District
Los Angeles	27	45

Tax ID: 95-4315963

Grantee's Authorized Representative:

Robert Yalda, P.E., T.E., Public Works Director/City Engineer — (818) 224-1600

Name and Title — *Phone*

Overhead Allocation Notice:

- ☑ Any overhead costs will be identified as a separate line item in the budget and invoices.
- ☑ The Conservancy encourages grantees to reduce overhead costs including vehicle and phone expenses.
- ☑ The overhead allocation policy has been submitted prior to or with the grant application.

All check boxes must be checked

Project Description:

Funds from SMMC's Proposition 1 Grant Program will be used to fund the rehabilitation of Las Virgenes Creek, including the removal of exotic and invasive plant species, and the restoration of fish passage into Las Virgenes Creek. Additionally, restoration of Las Virgenes Creek to its natural conditions will greatly improve flood management, adding to the safety and security of the surrounding community. *attach additional pages as necessary

Tasks / Milestones: **Budget:** **Completion Date**

(Please see attached Project Timeline and Cost Estimate)

For Acquisition Projects: **APN(s):** N/A
Acreage: N/A

I certify that the information contained in this Grant Application form, including required attachments, is accurate.

_____ _____

Signature of Authorized Representative *Date*

STATE OF CALIFORNIA ◆ THE NATURAL RESOURCES AGENCY

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Scope of Work

The proposed project involves two primary components: creek restoration and development of public access facilities. Creek and riparian corridor restoration includes activities such as: debris removal, erosion and sediment control and biotechnical slope and bank stabilization, fish habitat enhancement, fish passage barrier removal, and improving flood carrying capacity through selective willow thinning and removal of aggressive exotic trees and shrubs.

Public access facilities that would be developed as part of the proposed project include public trails and environmental education areas. More detailed information regarding these components is provided below and described in Appendix A (Project Plans).

Creek Restoration

Creek restoration and enhancement would include habitat enhancement, fish passage improvements, stabilization of creek slopes and gullies for erosion control, and revegetation with native riparian species. These activities are described further below. See Figures 4a and 4b for activities involved with creek restoration.

a. Habitat Enhancement and Fish Passage Improvements. Habitat and fisheries enhancement would include removal of broken concrete pieces present on the bottom of the channel immediately downstream of Meadow Creek Lane, biotechnical bank and slope stabilization and riparian restoration in this area, and reduction of fish passage barriers or impediments that occur in this same area by making improvements to the Meadow Creek Lane culvert, including the downstream approach to the culvert. The work would also include thinning and pruning of invasive vegetation and removal of non-native invasive species that obstruct flood flows and have deterred the establishment of a multi-layered understory.

An approximately 400 foot long by 4 foot high concrete wall on the west side of the creek associated with the construction of the Meadow Creek Lane concrete culvert in the early 1960's has been undermined by ongoing creek down-cutting in this area. The concrete wall has now completely failed and fallen into the creek bed. The pieces of broken wall have diverted flow against the opposite bank, resulting in bank erosion, especially on the east side of the channel.

The concrete pieces also create barriers to upstream fish movement. The down-cutting of the stream bed in this area also has created a jump barrier and combined with the high stream velocities through the concrete culvert preclude upstream fish movement during nearly all flow events.

Stream restoration and fish habitat enhancement and barrier removal in the Meadow Creek Lane area would include the following elements:

- Removal of pieces of broken concrete from the channel bottom and grade stabilization using large rock;
- Channel bank slope restoration and stabilization using planted rock rip rap on the lower slopes and earthen fill stabilized with coir end-wrapped geogrids (planted coconut fiber encased earthen fill structures which are stacked on top of each other) and coir blankets on the upper slopes;
- Willow and cottonwood pole planting on the upper slopes;
- Construction of a series of rock step pools to gradually raise the channel bed to the invert elevation of the culvert over a distance of 400 linear feet; and,
- Addition of baffles (structure sills) in the culvert barrel to reduce stream velocities.

Habitat restoration efforts would focus on enhancing and restoring degraded wetland/riparian habitat to facilitate future use by wildlife species (such as the California red-legged frog). Enhanced habitat would support a diversity of native wetland species as well as provide for improved water quality (by reducing erosion and sedimentation along the creek).

Creek rehabilitation also includes general cleanup for habitat improvement as well as management of fire fuel loads, including removal of downed wood, debris and other materials in the creek. Fish passage improvements may involve dewatering of surface waters temporarily during construction.

b. Erosion Control. Project activities which would reduce erosion in the channel, and watershed as a whole, would include:

- Removal of exotic vegetation;
- Removal of obstructions to flood flows that are causing local slope erosion and siltation problems;
- Construction of a stable channel bed and banks;
- Utilization of bioengineering techniques for bank stabilization;
- Enhancement of bed morphologic diversity; and
- Replanting of riparian revegetation.

Bank and slope stabilization would be completed in areas where there is erosion and/or concentration of drainage from upland areas that may increase siltation or sedimentation in the creek. Channel banks on areas with active gully erosion from upstream drainage and over slope flow would be repaired using soil bioengineering. The main focus area for bank stabilization is downstream of Meadow Creek Lane, where there is approximately 400 feet of unstable bank.

For the three months following planting, watering would occur weekly to help with plant establishment. During winter months, assuming there is adequate rainfall, no watering would

occur. For the spring and summer following planting, watering would occur twice a month to continue plant establishment. Watering would occur for up to a year after construction or until plants are well established.

Public Access Facilities

The proposed project would involve multiple public access amenities including a public trail network, an outdoor environmental education area, and learning stations at three locations along the creek.

a. Public Trails. The proposed project would involve completion of a trail network within the creek corridor to provide opportunities for visitors to travel along the creek, facilitate future connections to the north and south to Juan Bautista de Anza Park and the Santa Monica Mountains National Recreation Area, and to enhance environmental education about the creek ecosystem. Appendix A illustrates the conceptual alignment of the proposed public access facilities. The proposed project includes two trail types including:

1. Improved Trail. Where topography is suitable for an accessible trail (grades of generally less than 5%), a shared use path will be implemented. This pathway would be sufficient width to accommodate pedestrians, mobility-impaired and cyclists on a firm and stable surface. This trail type will include ramps and landings if needed to accommodate universal access. This trail would be approximately 8-feet to 10-feet wide.
2. Natural Open Space Trail. A soft surface narrow trail with vertical clearance for trail users will be located in steeper areas where Americans with Disabilities Act (ADA) accessibility is not feasible, as well as where proximity to channel banks or existing tree canopy necessitates a seasonal, unpaved path. This trail would be approximately two-feet to three-feet wide.

Other elements of the public access system include:

- Boardwalk/Bridge. In two locations, the trail would cross an upland gully or swale, where a bridge structure would be constructed to maintain consistent grade. These structures would be clearspan prefabricated units that can be assembled in place or installed by crane, with minimal surface disruption.
- Causeway. Where the natural open space trail crosses areas of rip rap, the rocks would be re-distributed to create a suitable walking surface.
- Retaining walls. In some areas, short (less than 4 foot high) retaining walls would be constructed to enable a relatively flat cross section for the trail alignment. Walls could utilize segmental construction ("Keystone") or Sutter Walls (soldier–pile walls) to minimize construction footprint within the project area.

- Stairs and ramps. Stairs and ramps are indicated at the two trail entry sites to facilitate access to the path. Portions of the trail that are accessible would be designed with ramp components that meet grade requirements, with resting areas. Stairs would be provided at trailheads to supplement access options. Trail ramp requirements are listed below.

b. Educational Amenities. Efforts to improve public access would also include installation of an outdoor environmental education area across from De Anza Park that would provide opportunities for environmental education and interpretation. The environmental education area would be located at El Encanto Drive and would include an overlook of the fish passage enhancement and repair area, interpretive exhibits, and a demonstration restoration garden with native riparian plants. The area would include benches, interpretive signs and native plantings to provide information about the Las Virgenes Creek ecosystem, urban interface, water quality, wildlife corridors and restoration activities to improve habitat conditions. A universally-accessible path will be provided to provide ADA access from the street to the overlook area.

Along the entire improved trail, learning stations to explain the ecosystem and enhancement along the creek would be installed. These would include benches, interpretive signs, and areas for native riparian plantings. Trailhead improvements at the A.E. Wright School bridge and at Agoura Road would also include environmental interpretation and access improvements.

Las Virgenes Creek Restoration Project - Phase II Cost Estimate

Project Elements		Total Project Costs	SMMC Prop 1	Urban Streams	Prop 84, Round 3	General Fund
PRE-CONSTRUCTION						
	Project Design Consultant	$ 210,000.00				$ 210,000.00
	Project Administration	$ 200,000.00				$ 200,000.00
	Permitting	$ 30,000.00				$ 30,000.00
	CEQA Preparation	$ 45,000.00				$ 45,000.00
Subtotal of Pre-Construction Costs		$ 485,000.00				$ 485,000.00
CONSTRUCTION						
Mobilization and Staging						
	Mobilization and Move-in	$ 45,000.00		$ 20,000.00	$ 25,000.00	
	Staging Areas and Site Protection	$ 55,000.00		$ 25,000.00	$ 30,000.00	
Trailhead, Overlook and Education Areas*						
	North Trailhead	$ 140,000.00		$ 63,000.00	$ 77,000.00	
	Overlook/Education Area	$ 85,000.00		$ 38,000.00	$ 47,000.00	
	Southern Overlook Area	$ 107,000.00		$ 48,000.00	$ 59,000.00	
Trail Construction*						
	Improved Trail Construction	$ 220,000.00		$ 99,000.00	$ 121,000.00	
	Natural Trail Construction	$ 140,000.00		$ 63,000.00	$ 77,000.00	
Debris Removal, Clearing and Vegetation Management						
	General Debris Removal	$ 75,000.00	$ 62,000.00	$ 8,300.00	$ 4,700.00	
	Invasive and Exotic Species Removal	$ 123,000.00	$ 81,300.00	$ 21,300.00	$ 20,400.00	
	Improved Trail and Observation/Education Area Clearing	$ 100,000.00	$ 72,000.00	$ 15,100.00	$ 12,900.00	
Fish Passage Work						
	Demolition	$ 176,000.00	$ 103,000.00	$ 35,200.00	$ 37,800.00	
	Step Pool Construction	$ 213,000.00	$ 117,300.00	$ 45,700.00	$ 50,000.00	
	Baffle Construction	$ 126,000.00	$ 82,500.00	$ 22,100.00	$ 21,400.00	
Erosion Control						
	Recontour/Regrade Erosion	$ 86,000.00	$ 56,400.00	$ 19,300.00	$ 10,300.00	
	Break Up and Restack Existing Rock Apron	$ 78,000.00	$ 53,200.00	$ 19,100.00	$ 5,700.00	
	Existing Drain Pipe Repair and Stabilization	$ 72,000.00	$ 60,800.00	$ 7,500.00	$ 3,700.00	
	Erosion Control Fabric and Coir Log Installation	$ 83,000.00	$ 65,200.00	$ 10,500.00	$ 7,300.00	
Revegetation						
	Planting	$ 168,000.00	$ 78,300.00	$ 33,500.00	$ 56,200.00	
	Seeding	$ 142,000.00	$ 88,500.00	$ 26,500.00	$ 27,000.00	
Demobilization and Move-out						
	Demobilization and Move-out	$ 94,000.00	$ 15,000.00	$ 14,000.00	$ 65,000.00	
	Subtotal of Construction Costs	$ 2,328,000.00	$ 935,500.00	$ 634,100.00	$ 758,400.00	
	Subtotal All Project Costs	$ 2,813,000.00	$ 935,500.00	$ 634,100.00	$ 758,400.00	$ 485,000.00
	Contingency	$ 164,235.00	$ 45,000.00	$ 42,635.00	$ 61,600.00	$ 15,000.00
	GRAND TOTAL	$ 2,977,235.00	$ 980,500.00	$ 676,735.00	$ 820,000.00	$ 500,000.00

*Funds from SMMC Prop 1 Grant will be used strictly for creek rehabilitation. No funds from Prop 1 grant will be used toward trail construction.

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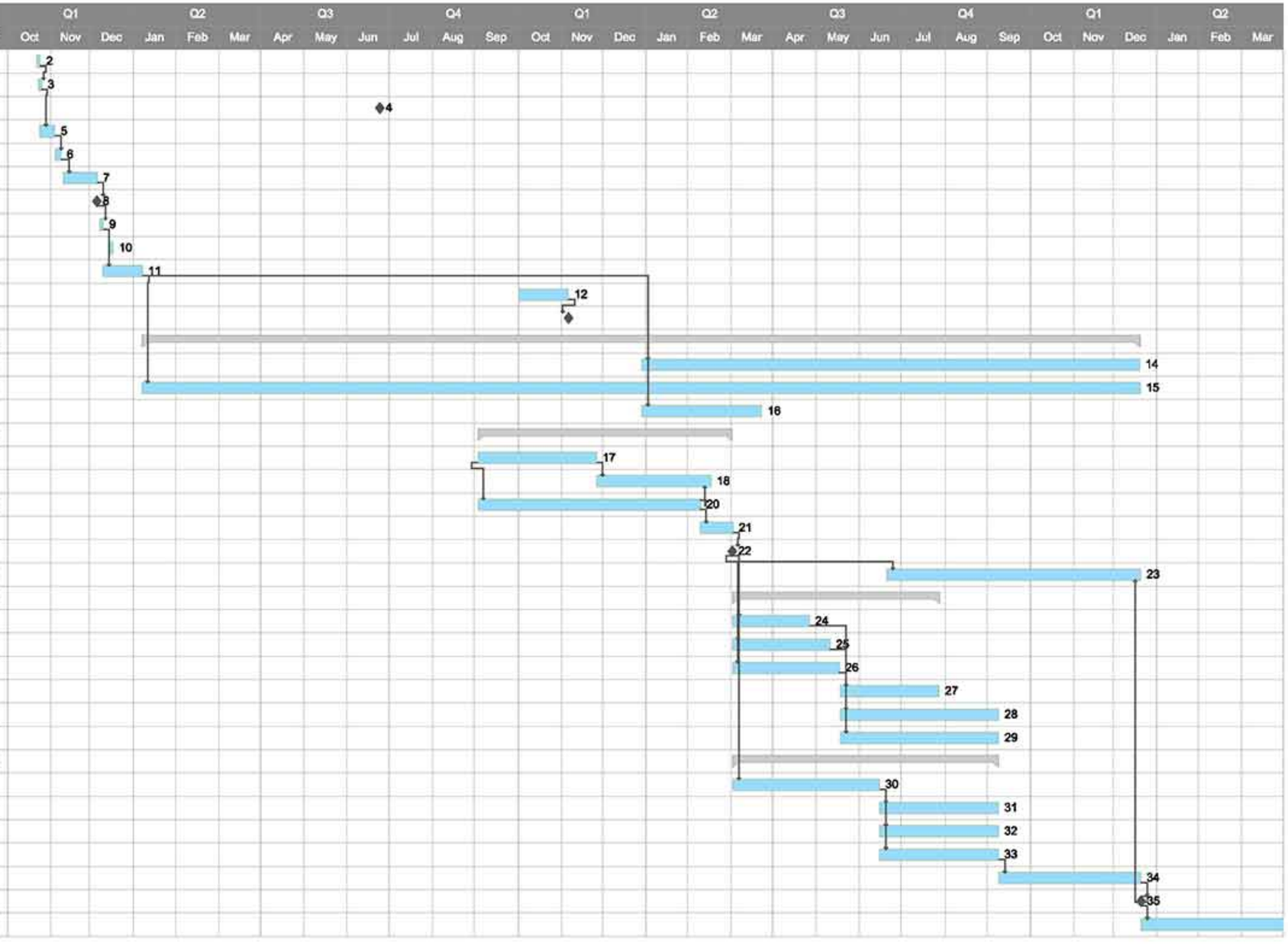
Las Virgenes Creek Restoration Project - Phase II

	Start	Finish	Task	Duration
1	10/22/14	10/22/14	Reviewed exisitng Project description for Phase II	1d
2	10/23/14	10/23/14	Commissioned Questa Engineering	1d
3	06/24/15	06/24/15	City Council Resolution	0
4	10/24/14	11/03/14	Land Surveying Company Search	7d
5	11/04/14	11/07/14	Land Survey Bidding and Selection	4d
6	11/10/14	12/05/14	Survey and Basemap Work	20d
7	12/05/14	12/05/14	Site Survey Basemap Complete	0
8	12/08/14	12/08/14	Basemap sent to Questa	1d
9	12/15/14	12/16/14	Site Walk Through	2d
10	12/10/14	01/06/15	Concept and Engineering Design Work	20d
11	10/01/15	11/05/15	SMMC Prop 1 Grant Preparation	26d
12	11/05/15	11/05/15	SMMC Prop 1 Grant Submission	0
13	01/07/15	12/19/16	**Project Administration**	509d
14	12/29/15	12/19/16	Quarterly and Final Report Preperation	255d
15	01/07/15	12/19/16	Public Meetings and Notices	509d
16	12/29/15	03/22/16	Labor Compliance Program	61d
17	09/03/15	03/01/16	**Pre-Implementation**	129d
18	09/03/15	11/25/15	Finish Final Designs	60d
19	11/26/15	02/17/16	CEQA, Regulatory Compliance, Permitting	60d
20	09/03/15	02/09/16	Contractor Bidding and Selection	114d
21	02/10/16	03/01/16	Site Preperations	15d
22	03/01/16	03/01/16	Ground Breaking: Start of Construction / Implementation	0
23	06/20/16	12/20/16	Monitoring: Biological, Environmental, Construction	132d
24	03/01/16	07/27/16	**Creek Restoration**	106d
25	03/02/16	04/26/16	Tree Thinning/Limbing - Flood Passage	40d
26	03/01/16	05/10/16	Exotic Species Removal	50d
27	03/01/16	05/17/16	Debris Removal - Creek Cleanup	55d
28	05/17/16	07/27/16	Restoration Planting	51d
29	05/17/16	09/08/16	Biotechnical Stream Bank Stabilization	82d
30	05/17/16	09/08/16	Bioengineered Gully Erosion Control	82d
31	03/02/16	09/08/16	**Fish Passage**	137d
32	03/02/16	06/14/16	Concrete/Debris/Demolition	75d
33	06/15/16	09/08/16	Grade Control - Step Pools	62d
34	06/15/16	09/08/16	Structure Sills in Culvert	62d
35	06/15/16	09/08/16	Floodplain Restoration - New Terrace/Grading	62d
36	09/09/16	12/20/16	Education and Community Outreach Area Construction	73d
37	12/20/16	12/20/16	Project Completion	0
38	12/21/16	12/26/17	Post Construction Monitoring	265d



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LAS VIRGENES CREEK RESTORATION PROJECT - PHASE II

CITY OF CALABASAS, CA

AREA MAP
NOT TO SCALE

VICINITY MAP
NOT TO SCALE

DRAWING INDEX

DETAIL DRAWING DESIGNATION

XX — DETAIL NO.
XX — SHEET NO.

GENERAL NOTES

1. **DESIGN INTENT:** THESE PLANS AND SPECIFICATIONS REPRESENT THE DESIGN INTENT OF QUESTA ENGINEERING CORPORATION (THE ENGINEER), AS APPROVED BY THE OWNER, CITY OF CALABASAS. THE CONTRACTOR IS RESPONSIBLE FOR ALL ITEMS SHOWN ON THESE PLANS AND SPECIFICATIONS AND SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS AND ASSOCIATED RISK AND EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COPY OF THE APPROVED PLANS AND SPECIFICATIONS AND ANY ADDENDA AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CITY OF PASADENA OF ANY UNFORESEEN CIRCUMSTANCES OR CONDITIONS THAT WOULD ALTER THESE PLANS AND SPECIFICATIONS FOR APPROVAL OF MODIFICATIONS TO THE INTENDED DESIGN.
2. **BASE MAP:** THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE MAP. THIS BASE MAP IS COMPILED FROM AERIAL AND GROUND SURVEYS, AND OTHER DATA AS MADE AVAILABLE TO THE ENGINEER, WHO SHALL NOT BE HELD LIABLE FOR CHANGES, INACCURACIES, OMISSIONS OR OTHER ERRORS ON THESE DOCUMENTS. THE COMPOSITE BASE MAP IS PROVIDED AS AN AID ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THESE DOCUMENTS AND INCORPORATING/INTEGRATING ALL CONSTRUCTION AS REQUIRED TO ACCOMMODATE THE SAME. NONE OF THE INCLUDED DRAWINGS DEPICT A BOUNDARY SURVEY ALTHOUGH A PARTIAL ALTA SURVEY WAS PERFORMED ALONG A PORTION OF THE UP ROW. BOUNDARY LINES SHOWN ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY.
3. **DISCREPANCIES:** IN THE EVENT THAT SUBGRADE OBSTRUCTIONS ARE ENCOUNTERED OR DISCREPANCIES ARE FOUND BETWEEN THE DRAWINGS AND FIELD CONDITIONS, NOTIFY ENGINEER OR CITY OF CALABASAS FOR DIRECTIONS. DO NOT PROCEED WITH THE WORK WITHOUT DIRECTION FROM THE ENGINEER.
4. **PRECONSTRUCTION MEETING:** A PRECONSTRUCTION MEETING ATTENDED BY THE CONTRACTOR, CITY OF CALABASAS REPRESENTATIVE, AND OTHERS AS APPROPRIATE, WILL BE HELD WITHIN FIFTEEN (15) DAYS OF AWARD OF CONTRACT TO DISCUSS THE WORK. SUBMIT ALL REQUIRED DOCUMENTS, REQUESTS, AND PROPOSALS AT THIS MEETING FOR DISCUSSION.
5. **UTILITIES:** CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES IN THE PROJECT AREA A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR MUST INVESTIGATE AND VERIFY THE LOCATION OF ANY EXISTING UTILITIES WITHIN THE PROJECT AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, LOCATE, AND PROTECT ALL UNDERGROUND UTILITIES. ANY UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE CONSIDERED TENTATIVE AND APPROXIMATIONS AND THEREFORE, NO WARRANTY EXPRESSED OR IMPLIED IS MADE AS TO THE COMPLETENESS OR CORRECTNESS OF THEIR LOCATION. THE UTILITY COMPANIES ARE THOUGHT TO BE MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) ON-CALL PROGRAM. THE CONTRACTOR SHALL NOTIFY U.S.A. 72-HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK AT 811 FROM 7:00 AM TO 6:00 PM, MONDAY THROUGH FRIDAY. EXISTING PUBLIC UTILITIES SHALL BE KEPT IN SERVICE AT ALL TIMES. UTILITIES THAT INTERFERE WITH THE WORK TO BE PERFORMED SHALL BE PROTECTED AS REQUIRED BY CITY OF CALABASAS AND ALL OTHER AFFECTED ENTITIES. DAMAGE TO UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE CITY OF CALABASAS AND TO THE SATISFACTION OF THE ENGINEER AND OWNER. POTHOLING IS REQUIRED. ANY EXCAVATION WITHIN FIVE (5) FEET OF THE EXISTING GAS TRANSMISSION PIPE SHALL BE DUG BY HAND IN THE PRESENCE OF UTILITY INSPECTOR.
6. **RESOURCE PROTECTION:** THE CONTRACTOR IS ADVISED OF THE PRESENCE OF SENSITIVE RESOURCES LOCATED NEAR PROJECT WORK AREAS. THE TRAIL ALIGNMENT, FENCING, STAGING AREAS AND ALL OTHER PROJECT FACILITIES HAVE BEEN CAREFULLY LOCATED TO MINIMIZE DISTURBANCE OF SENSITIVE RESOURCES. THE LIMITS OF WORK ARE SHOWN ON THE DRAWINGS. ALL CONTRACTOR ACTIVITIES, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION ACTIVITIES, VEHICLE MAINTENANCE, AND MATERIALS AND EQUIPMENT STORAGE AND STAGING, MUST BE STRICTLY CONFINED TO THE WORK AREAS SHOWN ON THE DRAWINGS. THE LIMITS OF WORK WILL BE CAREFULLY LOCATED IN THE FIELD BY THE CONTRACTOR AND ENGINEER OF RECORD, AND ALL WORK LIMIT AREAS WILL BE PROTECTED BY STRAW WATTLES, CONSTRUCTION BARRIER FENCING, OR SILT FENCING AS SHOWN ON THE DRAWINGS.
7. **BIOLOGICAL AND CULTURAL RESOURCE MONITOR:** CITY OF CALABASAS WILL PROVIDE A QUALIFIED BIOLOGICAL/ARCHEOLOGICAL MONITOR THAT WILL INITIALLY REVIEW SITE CONSTRUCTION PROTOCOLS WITH ALL CONSTRUCTION CONTRACTOR EMPLOYEES AT A PRE-CONSTRUCTION MEETING THAT WILL BE SPECIFICALLY HELD ON RESOURCE PROTECTION. EACH EMPLOYEE ASSIGNED TO THIS PROJECT MUST PARTICIPATE IN THIS PRE-CONSTRUCTION MEETING AND DISCUSSION OF ADJACENT SENSITIVE RESOURCES, AND SIGN A STATEMENT INDICATING THAT THEY HAVE READ AND UNDERSTOOD THE PROTOCOLS AND AGREE TO ADHERE TO THEM. SIGNIFICANT BREACHES OF PROTOCOL AND FAILURE TO ADEQUATELY PROVIDE THE DEGREE OF RESOURCE PROTECTION REQUIRED BY THIS PROJECT WILL RESULT IN THE ISSUANCE OF A STOP WORK ORDER BY THE ENGINEER OR BY THE MONITOR. CITY OF CALABASAS PROVIDED MONITOR WILL CAREFULLY INSPECT ALL WORK AREAS FOR THE PRESENCE OF WILDLIFE OR CULTURAL RESOURCES PRIOR TO INSTALLATION OF PROTECTIVE BARRIER FENCING AND FIELD FENCING, AND PRIOR TO INITIATION OF CONSTRUCTION EACH DAY. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PENALTIES AND ALL REPAIRS AND MITIGATIONS IMPOSED DUE TO BREACH OF PROTOCOL AND UNAUTHORIZED INTRUSION INTO SENSITIVE RESOURCE AREAS.
8. **CONTRACTOR RESPONSIBILITY:** BY ENTERING INTO THIS CONTRACT WITH CITY OF AGOURA HILLS, THE CONTRACTOR AGREES TO HAVING EXAMINED THE SITE, COMPARING THE SITE CONDITIONS WITH THE DRAWINGS AND SPECIFICATIONS AND HAS CAREFULLY EXAMINED ALL OF THE CONTRACT DOCUMENTS AND IS SATISFIED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. NO ALLOWANCE SHALL BE MADE SUBSEQUENTLY ON BEHALF OF THE CONTRACTOR DUE TO FAILURE TO BE ACQUAINTED WITH THE CONDITIONS OF THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH ALL CONSTRUCTION OPERATIONS. CONTRACTOR SHALL PROTECT ALL EXISTING ON-SITE AND OFF-SITE IMPROVEMENTS AGAINST DAMAGE RESULTING FROM OPERATIONS. RESPONSIBILITY EXTENDS TO THE CONTRACTOR'S WORKERS, SUBCONTRACTORS AND OTHERS PROVIDING SERVICES. CONTRACTOR SHALL REPAIR AND/OR REPLACE DAMAGE AT THEIR OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER AND CITY OF CALABASAS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD CITY OF CALABASAS AND THE ENGINEER (QUESTA ENGINEERING CORPORATION) HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FROM LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CITY OF AGOURA HILLS OR THE ENGINEER. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
9. **JOB SITE CONDITIONS:** CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, TRAFFIC CONTROL, ACCESS TO AND FROM ADJOINING DRIVEWAYS AND STREETS, AND ANY LANE CLOSURES. TRASH GENERATED BY THIS WORK (CONSTRUCTION DEBRIS, PAPER, BOTTLES, CIGARETTES, ETC) SHALL BE REMOVED ON A DAILY BASIS. CONTRACTOR SHALL CONTROL DUST AT ALL TIMES WITH WATER.
10. **SAFETY AND TRAFFIC CONTROL:** ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR AND/OR THE STATE OF CALIFORNIA AND CITY OF RICHMOND. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALTRANS MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OF WORK ZONES. ALL SIGNS SHALL BE APPROPRIATELY CONSTRUCTED WITH REFLECTIVE MATERIAL ON A BACKING OF METAL OR FABRIC (NO WOOD OR PLASTIC ALLOWED) AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION TO PROVIDE PROPER VISIBILITY, PER SECTION 12 OF THE CALTRANS SPECIAL PROVISIONS. THE CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS TO ALL ROADWAYS DURING CONSTRUCTION.
11. **SPECIFICATIONS:** REFER TO THE SPECIFICATIONS THAT ARE A PART OF THESE CONTRACT DOCUMENTS. COMPLY WITH ALL REGULATIONS AND CODES GOVERNING WORK PERFORMED UNDER THIS CONTRACT. REFER TO CALTRANS STANDARD PLANS AND SPECIFICATIONS AS REQUIRED.
12. **MISCELLANEOUS:** WRITTEN DIMENSIONS ALWAYS TAKE PRECEDENCE OVER SCALED DIMENSIONS IF THERE IS A CONFLICT. THE CONTRACTOR SHALL CONTACT CITY OF CALABASAS TO OBTAIN ADDITIONAL CLARIFICATION. NO DEVIATION OR SUBSTITUTION SHALL BE ALLOWED WITHOUT OBTAINING PRIOR WRITTEN APPROVAL FROM CITY OF AGOURA HILLS AND THE ENGINEER.
13. **GEOTECHNICAL REPORT:** QUESTA ENGINEERING CORPORATION, 1220 BRICKYARD COVE ROAD, POINT RICHMOND, CA 94807, (510) 236 - 6114

REVISIONS	DATE

APPROVED
design:
operations:

QUESTA ENGINEERING CORP.

scale: 1" = 250'
drawn: MM
checked: ---
date: 9-24-2015

TITLE SHHET AND SHEET INDEX
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 1
OF : TBD

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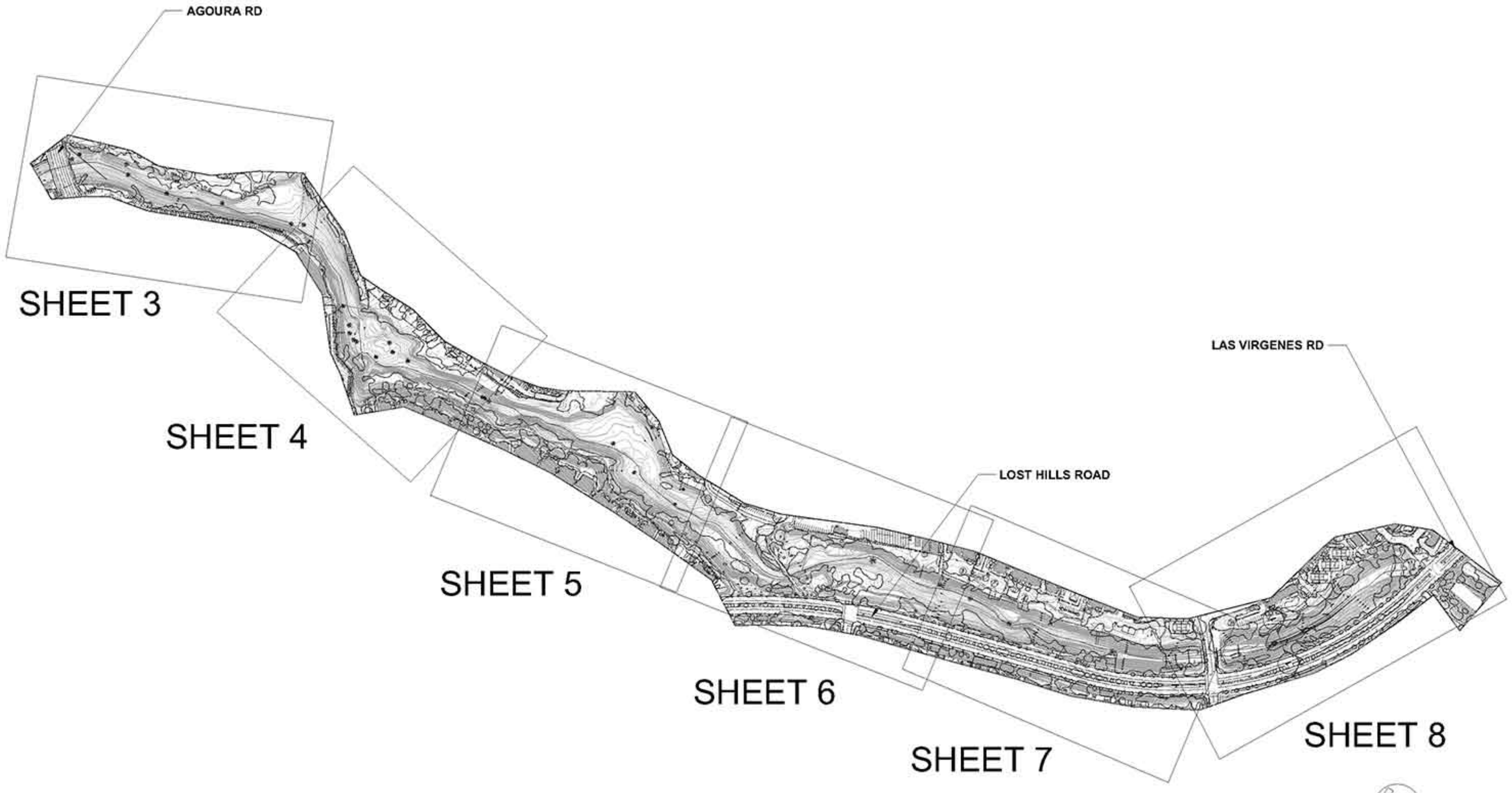

REVISIONS | DATE

APPROVED
design:
operations:

QUESTA ENGINEERING CORP.

scale: 1" = 250'
drawn: MM
checked: ___
date: 9-23-2015

VEGETATION MANAGEMENT & DEMO OVERVIEW
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 | CONTRACT NO.

SHEET NO. 2
OF : TBD

P:\2015\1500058_Las_Virgenes_Trail_Design\CAD\1500058_SITE PLAN.dwg 9-28-15 02:45:49 PM Mundo

LEGEND

TREE PROTECT IN PLACE

TREE REMOVE

PALM TREE REMOVE

SCHINUS MOLLE (REMOVE)

EXISTING STANDS OF SCHINUS MOLLES 12 TREES +/- WITH DBH RANGE OF 6-28" (REMOVE)

DENSE UNDER BRUSH (15,000 SQFT.) THIN AND LIMB UP WILLOWS PER TRI-COUNTY F.I.S.H. TEAM GUIDELINES

EXISTING RESIDENCES

LIMB UP EXISTING SALIX SPECIES PER ARBORIST RECOMMENDATIONS

DEAD 18" DBH TREE (REMOVE)

ORDINARY HIGH WATER

DENSE BRUSH AND POORLY DEFINED DRAINAGE PATH (2,600 SF) THIN UNDER STORY VEGETATION AND LIMB UP WILLOWS PER TRI-COUNTY F.I.S.H. TEAM GUIDELINES

MATCHLINE SEE NEXT PAGE

Agoura Rd

82+00

80+00

78+00

76+00

74+00

72+00

70+00

EXISTING PARKING LOT

EXISTING RIP RAP (PROTECT IN PLACE)

EXISTING STAND OF SCHINUS MOLLE 35 TREES +/- WITH DBH RANGE OF 6-28" (REMOVE)

MATURE SYCAMORES (PROTECT IN PLACE)

SLASH AND DEBRIS PILES (10 CY REMOVE)

EXISTING STAND OF SCHINUS MOLLE 15 TREES +/- WITH DBH RANGE OF 6-28" (REMOVE) LIMB UP EXISTING SALIX SPECIES AND JUGLANS CALIFORNICA TREES PER ARBORIST RECOMMENDATIONS

STAGNANT WATER POOLS W/ BOUNDING DRY SEGMENTS (1,500 SF)

MATURE SYCAMORES (PROTECT IN PLACE)

EXISTING STAND OF SCHINUS MOLLE 160 TREES +/- WITH DBH RANGE OF 6-50" (REMOVE)

0 80 160 Feet

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checked: ___
date: 9-24-2015

VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 3
OF : TBD

LEGEND

TREE PROTECT IN PLACE

TREE REMOVE

PALM TREE REMOVE

MATCHLINE SEE PREVIOUS PAGE

MATCHLINE SEE NEXT PAGE

EMERGING TREE OF HEAVEN STAND. 10 TREES +/- WITH DBH RANGE OF 3-8". (REMOVE)

EXISTING PARKING LOT

SCHINUS MOLLE (REMOVE)

ORDINARY HIGH WATER

EXISTING EUCAPLYPTUS GLOBULUS GROVE. 50 TREES +/- WITH DBH RANGE OF 8-50". (REMOVE)

FALLEN 18" DIAMETER TREE THROTTLING FLOW DOWN STREAM (REMOVE)

CATTAILS OBSTRUCTING FLOW REMOVE PER TRI-COUNTY F.I.S.H. TEAM GUIDELINES

SCHINUS MOLLE (REMOVE)

70+00

68+00

66+00

64+00

62+00

60+00

58+00

MATURE SYCAMORES (PROTECT IN PLACE)

EXISTING SCHINUS MOLLE STAND.160 TREES +/- WITH DBH RANGE OF 6-50" (REMOVE)

PINUS CANARIENSIS (REMOVE)

EXISTING PARTKING LOT

SCHINUS MOLLE (REMOVE)

EUCALYPTUS GLOBULUS (REMOVE)

EXISTING RESIDENCES

SCHINUS MOLLE STAND 6 TREES +/- WITH DBH RANGING FROM 6-30" (REMOVE)

0 80 160 Feet

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VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 4
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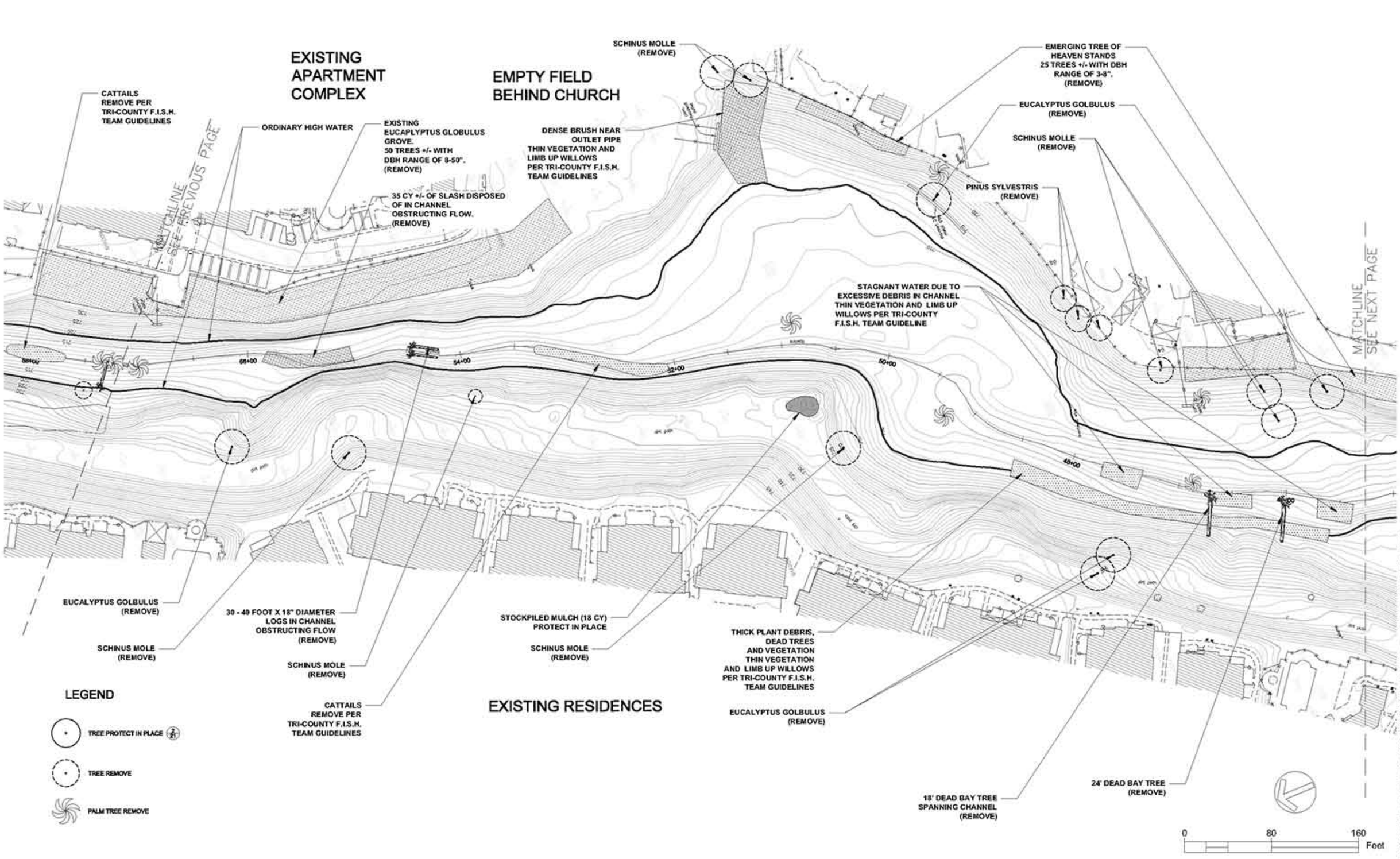

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VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

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SHEET NO. 5
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LEGEND

TREE PROTECT IN PLACE

TREE REMOVE

PALM TREE REMOVE

SCHOOL PLAY FIELDS

SCHOOL DISTRICT MAINTENANCE YARD

ORDINARY HIGH WATER

SCHINUS TEREBINTHIFOLIUS (REMOVE)

KOELREUTRIA BIPINNATA (REMOVE)

EMERGING TREE OF HEAVEN STAND. 13 TREES +/- W/ DBH RANGE OF 3 - 8" (REMOVE)

SALIX SPECIES (PROTECT IN PLACE)

QUERCUS AGRIFOLIA (PROTECT IN PLACE)

EXISTING PLANTINGS (PROTECT IN PLACE)

MATCHLINE SEE PREVIOUS PAGE

SCHINUS MOLLE (REMOVE)

1 TON CONCRETE CHUNKS (5 CY REMOVE)

EMERGING TREE OF HEAVEN STAND. 15 TREES +/- W/ DBH RANGE OF 3 - 8"

CONCRETE & ASPHALT CHUNKS DUMPED IN GULLY (20 CY REMOVE)

MATCHLINE SEE NEXT PAGE

36+00

34+00

32+00

38+00

44+00

42+00

40+00

Lost Hills

Cold Springs St.

QUERCUS AGRIFOLIA (PROTECT IN PLACE)

EXISTING OAK GROVE PLANTING (PROTECT IN PLACE)

SCHINUS MOLLE (REMOVE)

QUERCUS AGRIFOLIA (PROTECT IN PLACE)

EXISTING PLANTINGS (PROTECT IN PLACE)

QUERCUS AGRIFOLIA (PROTECT IN PLACE)

BRANCHES AND SLASH PILES (REMOVE)

MOW AND CLEAR EXISTING BRUSH

EXISTING SLASH ND VEGETATION DEBRIS (30 CY REMOVE)

MOW AND CLEAR EXISTING BRUSH

0 80 160 Feet

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VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058

CONTRACT NO.

SHEET NO. 6

OF : TBD

LEGEND

- TREE PROTECT IN PLACE
- TREE REMOVE
- PALM TREE REMOVE

ORDINARY HIGH WATER

DENSE VEGETATION OBSTRUCTING OUTLET FLOW
THIN VEGETATION AND LIMB UP WILLOWS PER TRI-COUNTY F.I.S.H. TEAM GUIDELINE

DUMPED LANDSCAPE DEBRIS (10 CY REMOVE)

POPULUS NIIGRA (REMOVE)

MATCHLINE SEE NEXT PAGE

MATCHLINE SEE PREVIOUS PAGE

Meadow Creek Ln

Calabasas Hills

Lost

QUERCUS AGRIFOLIA (PROTECT IN PLACE) 2/21

DEAD 18" DIA BAY TREE (REMOVE)

PLATANUS RACEMOSA (PROTECT IN PLACE) 2/21

POPULUS NIIGRA (REMOVE)

QUERCUS AGRIFOLIA (PROTECT IN PLACE) 2/21

PLATANUS RACEMOSA (PROTECT IN PLACE) 2/21

MOW AND CLEAR EXISTING BRUSH

0 80 160 Feet

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VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 7
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LEGEND

- TREE PROTECT IN PLACE (2/21)
- TREE REMOVE
- PALM TREE REMOVE

MATCHLINE — SEE PREVIOUS PAGE —

Meadow Creek Ln

Ca

Lost Hills

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

SCHINUS MOLLE (REMOVE)

DECLINING POPULUS FREMONTII (REMOVE)

SCHINUS MOLLE (REMOVE)

MISCELANEOUS DEBRIS (7 CY REMOVE)

QUERCUS AGRIFOLIA (PROTECT IN PLACE) (2/21)

JUGLANS CALIFORNICA (PROTECT IN PLACE) (2/21)

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

CATTAILS OBSTRUCTING FLOW REMOVE PER TRI-COUNTY F.I.S.H. TEAM GUIDELINE

ORDINARY HIGH WATER

FAILING RETAINING WALL AT TOE OF EACH SLOPE (30 CY)

REMOVE VEGETATION FOR FISH PASSAGE CONSTRUCTION (25,000 SF)

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

10+00 12+00 14+00 16+00 18+00 20+00 22+00

0 80 160 Feet

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VEG MANAGEMENT, DEBRIS REMOVAL AND DEMO
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058

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SHEET NO. 8

OF : TBD

Las Virgines Invasive and Non Native Tree Removal						
East Bank						
Common Name	**Scientific Name**	**Total in 2 Year Flood Plain**	**Total in 10 Year Flood Plain**	**Total in Upland Area**	**DBH Range**	**Removal Priority**
Pepper Tree	Schinus molle			15		
Brazilian Pepper Tree	Schinus terebinthifolious			40	1 - 6"	High
Blue Gum	Eucalyptus globulus		3	47		High
Lombadry Poplar	Populus nigra			4	18-20"	Medium
Chinese Flame Tree	Koelreutria bipinnata			1	12"	Medium
Canary Island Palm	Phoenix canariensis	1			26"	High
Cordyline	Cordyline australis		4		2"	Medium
Scots Pine	Pinus sylvestris			3		Low
Mexican Fan Palm	Washingtonia fimbriata	15	2	3	3" - 36"	High
Sub-Totals		16	9	113		
West Bank						
Common Name	**Scientific Name**	**Total in 2 Year Flood Plain**	**Total in 10 Year Flood Plain**	**Total in Upland Area**	**DBH Range**	**Removal Priority**
Canary Island Pine	Pinus canariensis			1	24"	Medium
Pepper Tree	Schinus molle		2	210		High
Brazilian Pepper Tree	Schinus terebinthifolious	1			26"	High
Blue Gum	Eucalyptus globulus			4	12-36"	High
Common Fig	Ficus carica		3		8-15"	High
Lombadry Poplar	Populus nigra			4	10-14"	Medium
Canary Island Palm	Phoenix canariensis	1				High
Cordyline	Cordyline australis		1		4"	Medium
Mexican Fan Palm	Washingtonia fimbriata	15	2	1	3" - 36"	High
Sub-Totals		17	8	220		
Total Trees Removed				**333**		
*** Diamater at Breast Height (DBH)**						

Trees to be Planted					
Common Name	**Scientific Name**	**Size**			
		24" Box	15 gal	Deepot	Live Stakes
Sycamore	Plantanus racemosa	150	100		
Cottonwood	Populus fremontii			50	
Live Oak	Quercus agrifolia	50	75	50	
Box Elder	Acer negundo			50	
Red Willow	Salix laevigata				400
California Walnut	Juglans Californica			50	
Sub-Totals		200	175	200	400
Total Trees To Be Planted					**975**

DISTRUBED AREA HYDROSEEDING			
COMMON NAME	**SCIENTIFIC NAME**	**FUNCTION**	**LBS/ACRE**
Yarrow	Achillea millenfolium	PERENNIAL	5
Creeping Wild Rye	Elymus triticoides	PERENNIAL	15
California Brome	Bromus carinatus	COVER/PERENNIAL	15
Narrow Leaf Milkweed	Asclepias fascicularis	COVER/PERENNIAL	10
MULCH	N/A	EROSION CONTROLL	2000
FERTILIZER	N/A	PLANT ESTABLISHMENT	200
TACKIFIER3	N/A	EROSION CONTROLL	200

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VEGETATION MANAGEMENT TABLES
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO:1500058 CONTRACT NO.

SHEET NO. 9
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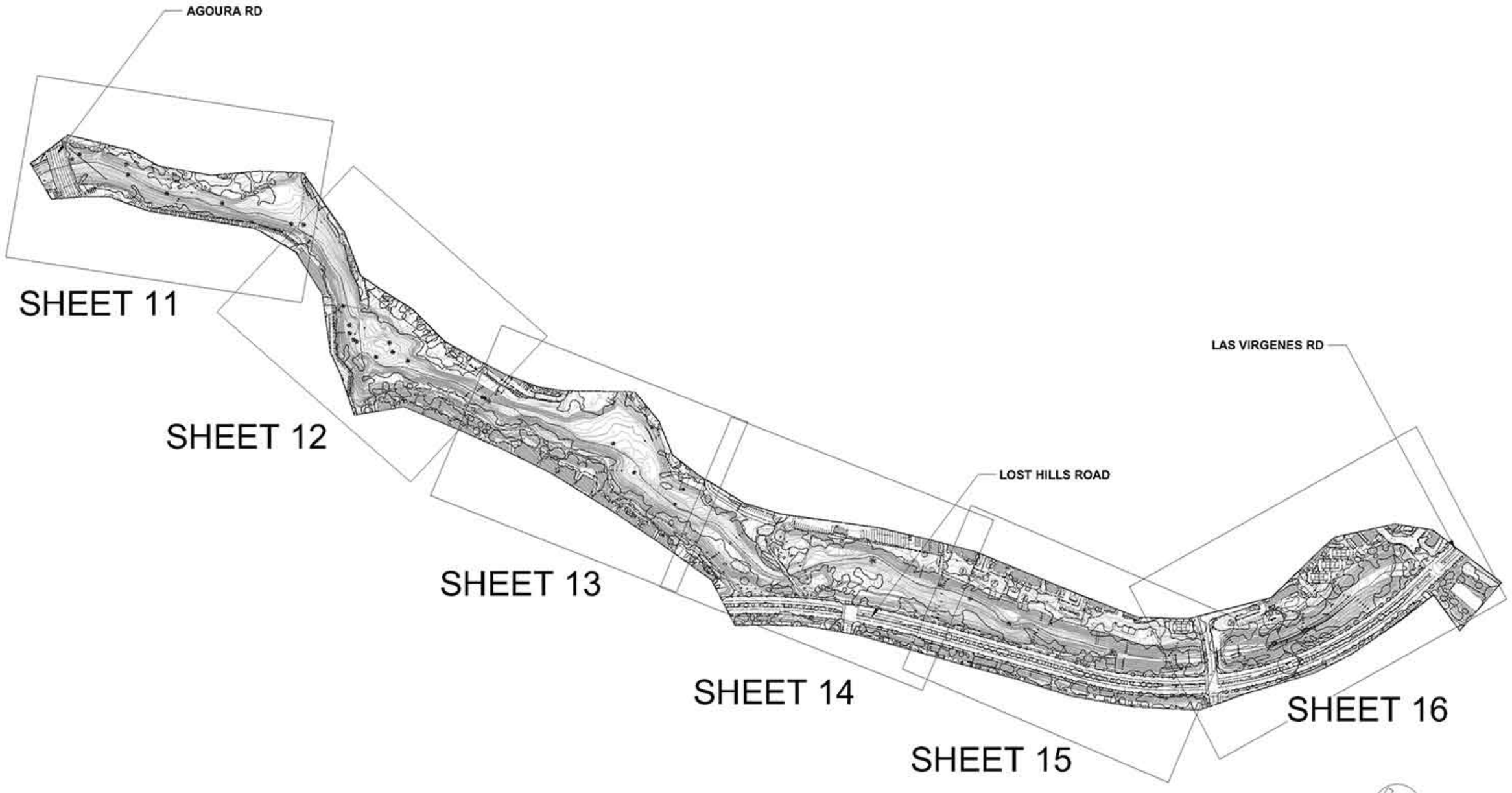

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TRAIL AND SITE IMPROVEMENTS OVERVIEW
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 | CONTRACT NO.

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MATURE SYCAMORES
(PROTECT IN PLACE)

EXISTING RESIDENCES

LIMB UP EXISTING SALIX
SPECIES PER ARBORIST
RECOMMENDATIONS

ORDINARY HIGH WATER

MATCHLINE
SEE NEXT PAGE

Agoura Rd

BEGIN NEW IMPROVED TRAIL (1/25)

NEW TRAIL HEAD AREA
SEE SHEET 17

EXISTING PARKING LOT

STEEP SLOPES AND
EROSION FEATURES
STABILIZE BANK
USING BIO-BLOCK (1/22)

(1/25) NEW IMPROVED TRAIL

MATURE SYCAMORES
(PROTECT IN PLACE) (2/21)

LEGEND

TREE PROTECT IN PLACE (2/21)

0 80 160 Feet

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058

CONTRACT NO.

SHEET NO. 11
OF : TBD

LEGEND

TREE PROTECT IN PLACE (3/21)

MINOR DRAINAGE EROSION
(150 SF)
SCARIFY, RECONTOUR, SEED
AND INSTALL EROSION
CONTROLL BLANKET (3/22)

EROSION
(2,500 SF)
SCARIFY, RECONTOUR, SEED
AND INSTALL EROSION
CONTROLL BLANKET (3/22)

ORDINARY HIGH WATER

EXISTING PARKING LOT

MATCHLINE
SEE NEXT PAGE

MATCHLINE
SEE PREVIOUS PAGE

MATURE SYCAMORES
(PROTECT IN PLACE) (2/21)

BEGIN NEW NATURAL TRAIL (2/25)

NEW IMPROVED TRAIL (1/25)

EROSION GULLIES
(1,200 SF)
SCARIFY, RECONTOUR, SEED
AND INSTALL EROSION
CONTROL BLANKET (3/22)

STEEP BANKS
STABILIZE BANK
USING BIO-BLOCK (1/22)

EXISTING RESIDENCES

NEW IMPROVED TRAIL (1/25)

NEW NATURAL TRAIL (2/25)

EXISTING PARTKING LOT

0 80 160 Feet

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 12
OF : TBD

EXISTING APARTMENT COMPLEX

EMPTY FIELD BEHIND CHURCH

GROUTED RIP RAP APRON SEPARATED FROM OUTLET BREAK UP AND RESET RIP-RAP (3/25)

EROSION SCARPS (600 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROLL BLANKET (3/25)

ORDINARY HIGH WATER

MINOR EROSION (175 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/25)

MATCHLINE SEE PREVIOUS PAGE

MATCHLINE SEE NEXT PAGE

EROSION GULLIES (600 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROLL BLANKET (3/25)

(1/25) NEW IMPROVED TRAIL

(2/25) NEW NATURAL TRAIL

STEEP DROP OFF STABILIZE BANK USING BIO-BLOCK (3/25)

EXISTING RESIDENCES

3/4 TO 1-TON ROCK STABILIZED DRAINAGE (PROTECT IN PLACE)

0 80 160 Feet

LEGEND

TREE PROTECT IN PLACE (3/25)

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

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SCHOOL PLAY FIELDS

LEGEND

TREE PROTECT IN PLACE (2/S1)

SCHOOL DISTRICT MAINTENANCE YARD

1-2 FOOT LAYER OF LOOSE SOIL ON SLOPE (4,800 SF) RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/S1)

MATCHLINE SEE PREVIOUS PAGE

EXPOSED SOIL ON TOP OF BANK W/ EROSION GULLIES AND SLOUGHING ALONG TOP. (6,375 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/S2)

ORDINARY HIGH WATER

MATCHLINE SEE NEXT PAGE

Lost Hills

Cold Springs St.

NEW NATURAL TRAIL (2/S5)

NEW IMPROVED TRAIL (1/S5)

NEW OVERLOOK AREA SEE SHEET 17

MINOR EROSION (2,220 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/S2)

1-2 FOOT LAYER OF LOOSE SOIL ON SLOPE (12,964 SF) RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/S2)

NEW NATURAL TRAIL (2/S5)

NEW IMPROVED TRAIL (1/S5)

0 80 160 Feet

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

SHEET NO. 14
OF : TBD

LEGEND

TREE PROTECT IN PLACE (2/21)

ORDINARY HIGH WATER

EROSION UNDERCUTTING SLOPE
INSTALL ROCK SLOPE PROTECTION (2/22)

5-6 EROSION GULLIES AND BARE SOIL ON SLOPE (12,964 SF) RECONTOUR, SEED AND INSTALL EROSION CONTROL BLANKET (3/22)

NEW NATURAL TRAIL (2/25)

NEW IMPROVED TRAIL (1/25)

MATCHLINE SEE PREVIOUS PAGE

MATCHLINE SEE NEXT PAGE

Meadow Creek Ln

Calabasas

Lost

0 80 160 Feet

REVISIONS	DATE

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design:
operations:

QUESTA ENGINEERING CORP.

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 CONTRACT NO.

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LEGEND

TREE PROTECT IN PLACE (2/21)

MATCHLINE
SEE PREVIOUS PAGE

NEW OVERLOOK AREA
SEE SHEET 19

EROSION GULLIES AND BARE SOIL SLOPES (5,800 SF) SCARIFY, RECONTOUR, SEED AND INSTALL EROSION CONTROLL BLANKET (1/21)

FISH PASSAGE
SEE SHEET 20

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

QUERCUS AGRIFOLIA (PROTECT IN PLACE) (2/21)

JUGLANS CALIFORNICA (PROTECT IN PLACE) (2/21)

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

SPRAY MULCH TO FILL VOIDS IN EXISTING RIP RAP (18,000 SF)

ORDINARY HIGH WATER

PLATANUS RACEMOSA (PROTECT IN PLACE) (2/21)

Meadow Creek Ln

Lost Hills

Ca

10+00
12+00
18+00
20+00
22+00

0 80 160 Feet

REVISIONS | DATE

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operations:

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SITE PLAN
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058 | CONTRACT NO.

SHEET NO. 16
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LEGEND

PLATANUS RACEMOSA

QUERCUS AGRIFOLIA

JUGLANS CALIFORNICA

AGOURA ROAD

EXISTING RIP-RAP
(PROTECT IN PLACE)

EXISTING TELEPHONE DUCT
(PROTECT IN PLACE)

NEW TRAIL HEAD AREA

BEGIN IMPROVED TRAIL 1/25

flowline

80+00

2' wide Suspended telephone duct

0+00

1+00

EXISTING PARKING LOT

0 20 40 Feet

REVISIONS

DATE

APPROVED

design:

operations:

QUESTA ENGINEERING CORP.

scale: 1" = 10'

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AGOURA RD. TRAILHEAD

LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT

CALABASAS, CA

PROJECT NO.1500058

CONTRACT NO.

SHEET NO. 17

OF : TBD

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LEGEND

PLATANUS RACEMOSA

QUERCUS AGRIFOLIA

JUGLANS CALIFORNICA

NEW NATURAL TRAIL (2/25)

NEW OVERLOOK AREA

NEW IMPROVED TRAIL (1/25)

695

700

705

710

715

flowline

40+00

conc. footing

27+00

27+38

0+00

1+00

smh

vent

trans-former

LOST HILLS ROAD

0 20 40 Feet

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INTERPRETIVE AREA/OVERLOOK
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058

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SHEET NO. 18

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NEW OVERLOOK AREA

NEW ACCESS RAMP

EL: 690.8

EL: 685.3

EL: 688.1

685

690

EL: 692.1

EL: 694.5

EL: 692

EL: 698

EL: 696.9

10+00

LOST HILLS RD.

LEGEND

PLATANUS RACEMOSA

QUERCUS AGRIFOLIA

JUGLANS CALIFORNICA

0 10 20 Feet

P:\2015\1500058_Las_Virgenes_Trail_Design\CAD\1500058_SITE PLAN.dwg 9-28-15 02:46:52 PM Mundo

REVISIONS	DATE

APPROVED

design:

operations:

QUESTA ENGINEERING CORP.

scale: 1" = 10'
drawn: MM
checked: ___
date: 9-25-2015

OVERLOOK AREA
LAS VIRGENES CREEK BANK STABILIZATION, STREAM RESTORATION AND FISH BARRIER ENHANCEMENT
CALABASAS, CA

PROJECT NO.1500058

CONTRACT NO.

SHEET NO. 19
OF : TBD