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**Bill Mellett Design**  
L a n d s c a p e   A r c h i t e c t

September 30, 2016

Shirley Imsand  
Santa Monica Mountains Biological Assessment Review

Re: 33528 Mulholland Highway  
Malibu, CA 90265

Dear Ms. Imsand,

This letter is in regards to the plan check comments emailed to Everett Rollins 09/22/16.

Bill Mellett the project Arborist and Landscape Architect has prepared a comprehensive Tree Protection Plan, Native Tree Replacement Planting Program and Landscape Plan for the above referenced project. Below is a narrative of the ongoing tree protection, maintenance, monitoring, and reporting that will be part of this project.

All plants required to be protected and monitored have been evaluated and documented in the attached plans and documents. All trees retained and listed to have encroachment will be monitored for 10 years. All original trees will have a unique number in addition to the alphanumeric code on the Landscape Plan. Mitigation trees planted during the 10 year period will also be uniquely numbered, cared for, monitored, and mapped.

If any of the original protected trees, not already mitigated by 10 trees, deteriorates or dies, then 10 additional trees of that species from SMM stock, (1 gallon, 1-in. diameter) or seedling-sized (<1 yr. age) trees as specified in plan, shall be planted and included in the annual tree report and map. Oaks are required to be mitigated by 1-gallon container trees from acorns of the vicinity 1-in. diameter at 1-ft. from ground. Oak mitigation trees need an acorn planted in the irrigation zone of the same species from SMM stock. Offsite areas protected from development may be used, if the project space is not sufficient to accommodate all mitigation trees. Any offsite area shall be described for location and added to the annual reports; offsite mitigation trees shall be uniquely enumerated, tagged, monitored for the remainder of the 10-year term, and mapped.

Any trees that could be impacted by the proposed construction will be monitored by the project arborist (or designated alternative acceptable to DRP) for a period of 10-years. During that 10-year period trees will be evaluated for pests, diseases, vigor and structural integrity on a yearly basis. These findings will be reported and recorded. Any trees not meeting the minimum criteria set forth in this document for health and vigor will be mitigated for.

Bill Mellett Design PO Box 74 Carpinteria, CA 93014  
Landscape Architect Lic. #4464 Certified Arborist #WE-7619A  
Phone (805) 640-0168

Health describes the general condition of a tree in terms of its vitality and functioning. It is usually assessed in terms of the presence or absence of injury caused by biotic agents (insects, pathogens, viruses, etc.) or abiotic factors (water, sunlight, mechanical injury, salts, minerals, etc.). Poor health is generally based on a number of visual indicators with an understanding of the species in question. Collectively, these indicators can be used to provide an assessment of a tree's health. A tree in decline may exhibit the following symptoms; progressive loss of vitality and function in buds, shoots, branches, and roots that may result in tree death. Leaves of severely declining trees are often small, sparse, and off color, and may abscise prematurely. Epicormic shoots often develop on the trunk and larger branches, usually following defoliation or branch dieback. Decline may result from a succession of stressful conditions or events, such as acute drought, compaction of soils from construction activity, pest infestation, severe mineral deficiency, or disease. The aging process can also contribute to decline. All of these conditions will be monitored and recorded.

All trees which were impacted by construction or associated activities that are determined to be in decline and lacking the vigor to recover and be viable specimens will be mitigated for. During the 10-year period, mitigation trees that deteriorate or die shall be replaced by 1-gallon trees of at least 1-in diameter or seedlings (<1yr. age), as specified in the plan, and these shall also receive unique numbers, be planted, monitored, and mapped. Oaks are required to be acorns of the same species from the area, planted out from 1-gallon containers and of 1-in diameter at 1-ft from ground. Planting shall be done in the fall within the year of death. All mitigation trees shall be of SMM stock. An acorn of SMM stock of the same species shall be planted with each mitigation oak tree and flagged for future monitoring. Success of acorns planted shall be in annual record for mitigation oaks.

Care of protected trees and mitigation trees shall be the responsibility of the owner or their agent. This shall include the following:

**1) Irrigation**

- a) Although native Oaks are well adapted to seasonal rains and extended periods with no water a number of situations can exist where water deficits occur and supplemental water can be beneficial. During periods of extended drought supplemental watering during late spring and early summer may be of benefit. This watering should target the top 1 to 2 feet of soil and be applied slowly with a drip or soaker hose. Only one to two irrigation cycles per season should be applied and allow soil moisture levels to decline substantially between irrigations. Apply water to as much of the root zone as possible avoiding the area adjacent to the root collar.
- b) No irrigation should occur in the TPZ of existing trees in a normal rain year.
- c) Mitigation trees should be irrigated for the first 2-3 years and then irrigation is to be removed.

**2) Mulching**

- a) Mulching should consist of allowing the normal leaf drop to remain undisturbed and allowed to accumulate.
- b) Four to six inches of oak leaf mulch collected from the area should be applied around new mitigation trees.

**3) Weeding**

- a) All weeding within the TPZ should be done by hand.
- b) No herbicides should be used for weed control.

#### 4) Pruning

- a) Only dead wood and structural pruning should be allowed on protected Oaks.

Annual tree report is to be prepared by Project Arborist (or designated alternative acceptable to DRP) Monitoring will encompass original protected trees remaining and mitigation trees in both the project site and any offsite areas. Contents:

1. Summary of previous reports. This can be a table listing protected trees and mitigation trees by number, showing results of tree DBH and health in columns for each year of monitoring. "DBH" for mitigation trees will be measured at 1-ft. from the ground.
2. For years of construction disturbance, Project arborist will describe instituted tree protective measures for all original protected trees, results in terms of tree condition. Deterioration or death of any original protected tree will need to be mitigated by planting 10 additional mitigation trees of that species within the year following assessment of the deterioration.
3. Table of all enumerated trees listing unique number, tree species, original trunk or two-trunks' DBH, original canopy diameters in N-S and E-W dimensions, health and DBH of tree at monitoring for year in columns by year. For mitigation trees, measurement of "DBH" is done 1-ft. from ground, measured along the trunk. For original protected trees, DBH is measured at 4.5-ft. from ground along the trunk(s).
4. Entry in yearly columns for DBHs and tree condition. Trees that decline beyond the performance limit need to be indicated for mitigation planting. Table should indicate protected tree being mitigated and new unique identification numbers of mitigation trees. Mitigation trees need to be planted within a year of the assessment of deterioration.
5. Each tree will have a unique identification number. (Alphabetic characters may identify tree species, but number needs to be unique.) Trees in field should have aluminum tags that can endure 10 years with embossed numbers that match identification number on the map.
6. Mitigation trees should be planted late September-early December (fall), tagged with identification numbers, and mapped.
7. Map of all protected and mitigation trees on project site, [additional map(s) for each offsite mitigation area] with tree position shown by number keyed to table. Different tree species should have different symbols, and legend as a key to symbol.
8. Summary by species of trees retained in good condition, trees retained in condition worse than performance level specification (includes deaths), and new mitigation trees planted. Overall totals for the three categories.

Copies of annual report are to be submitted to DRP and at request to owner of project.

If you have any questions, please contact me at your convenience.

Sincerely,  
*Bill Mellett*

Bill Mellett, ASLA

Bill Mellett Design PO Box 74 Carpinteria, CA 93014  
Landscape Architect Lic. #4464 Certified Arborist #WE-7619A  
Phone (805) 640-0168

**NOTES:**

- NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSIST ON USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION.
- ALL TREE PROTECTION INFORMATION PROVIDED BY BILL MELLETT, CERTIFIED ARBORIST #W-7619A.
- 75 TOTAL TREES/SHRUBS TO BE ADDED TO THE SITE DUE TO MITIGATION. (20 - 3 GAL.) NEW QUERCUS AGRIFOLIA IDENTIFIED ON PLAN. (1 GAL. GERMINATED FROM SEEDS ON-SITE) HETEROMELES ARBUTIFOLIA (25 EACH), QUERCUS DUMOSA (10 EACH) AND CEROCARPUS BETULOIDES (10 EACH). FINAL SHRUB LOCATIONS TO BE DETERMINED IN FIELD BY LANDSCAPE ARCHITECT TO REDUCE FURTHER IMPACT TO NATIVE PLANT MATERIAL.
- MITIGATION TREES AND SHRUBS TO BE MONITORED AND REPLACED IN THE EVENT THE PLANT MATERIAL DECLINES.
- ALL INVASIVE PLANT MATERIAL REMOVED IS TO BE TAKEN TO A LANDFILL IN CLOSED CONTAINERS. ALL NON-NATIVE AND INVASIVE PLANT MATERIAL TO BE REMOVED AND DISPOSED OF TO A LANDFILL INCLUDING (E) EUCALYPTUS TREE. NATIVE MATERIAL MAY BE MULCHED AND USED ON-SITE. INVASIVE MATERIAL, ALL PARTS, INCLUDING EUCALYPTUS SPP., NEEDS TO GO TO A LANDFILL IN CLOSED CONTAINERS (NOT ANYWHERE ELSE OFF-SITE).
- MITIGATION FOR MARIPOSA LILIES SHALL INCLUDE THE FOLLOWING: IDENTIFY RELOCATION AREA ON-SITE, MONITOR TRANSPLANT SITE FOR TWO (2) YEARS TO THREE (3) YEARS PRIOR TO REPLANTING, MONITORING TO BEGIN THIS SPRING (2017), DETERMINE MEAN NUMBER OF LILIES PRIOR TO REPLANTING, TRANSPLANT LILIES; MOVE LARGE SOIL BLOCK WITH LILY BULBS AND EXISTING SOIL CONSTITUENTS (MYCORRHIZAE) TO NEW LOCATION.

**Legend**

- Proposed Structure Outline
- Proposed Paving Outline
- Existing Structure Outline
- (N) 3" High Split Rail Fence Detail D/I-4.1
- (N) Electrical Lines per E. Rollins
- (N) Sewer Lines per Friday Group
- (N) Trenching
- (N) Water Lines per Friday Group
- Rock with Lichen (H1-category)
- Catalina Mariposa-lilies (to be transplanted from bulb)
- \*H1, H2, H3 locations reference Biological Assessment, dated 4/26/16, prepared by Carl Wheeler
- NOTE: ALL UTILITY LINES ARE DIAGRAMATIC. ALL TRENCHING LAYOUT TO BE APPROVED BY PROJECT ARBORIST PRIOR TO ANY TRENCHING. ANY TRENCHING WITHIN THE TREE PROTECTION ZONE (TPZ) OF A PROTECTED TREE SHALL BE DONE UNDER THE SUPERVISION OF THE PROJECT ARBORIST.

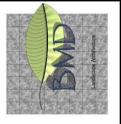
**LEGEND:**

- ET - EXISTING TREE
- NS - NATIVE SHRUB
- TREES TO BE REMOVED X
- (T.P.Z.) TREE PROTECTION ZONE
- TREE PROTECTION FENCING

ID	Botanical Name	Common Name	Canopy (Diameter)	Height	DBH	Condition	Action	Mitigation Ratio (# of replacement trees required for every 1 tree impacted/removed)	Notes
ET01	Quercus agrifolia	Coast Live Oak	30'0"	25'0"	18"	Rating - 80	Retain	None	co-dominant/double/beetle infestation
ET02	Quercus agrifolia	Coast Live Oak	15'0"	16'0"	10"	Rating - 90	Retain	> 30% Encroachment - 10:1	reduction pruning needed to improve form
ET03	Quercus agrifolia	Coast Live Oak	45'0"	55'0"	33"	Rating - 85	Retain	None	Located on steep slope
ET04	Quercus agrifolia	Coast Live Oak	24'0"	25'0"	16"	Rating - 60	Retain	10-30% Encroachment - 5:1	co-dominant/poor structural form
ET05	Quercus agrifolia	Coast Live Oak	22'0"	15'0"	12"	Rating - 60	Retain	None	double/co-dominant
ET06	Quercus agrifolia	Coast Live Oak	16'0"	28'0"	11"	Rating - 80	Retain	None	double
ET07	Quercus agrifolia	Coast Live Oak	16'0"	25'0"	15"	Rating - 75	Retain	None	triple
ET08	Quercus agrifolia	Coast Live Oak	25'0"	25'0"	14"	Rating - 75	Retain	10-30% Encroachment - 5:1	Located 1000' E of NE corner of property
ET09	Pinus spp.	Pine Tree	30'0"	15'0"	18"	Average	Retain	None	
ET10	Pinus spp.	Pine Tree	20'0"	15'0"	18"	Average	Retain	None	
NS09	Heteromeles arbutifolia	Toyon	14'0"	15'0"	10"	Good	Retain	> 30% Encroachment - 10:1	6 central stems
NS10	Heteromeles arbutifolia	Toyon	15'0"	15'0"	12"	Good	Remove	Removal - 10:1	
NS11	Heteromeles arbutifolia	Toyon	15'0"	15'0"	10"	Good	Retain	10-30% Encroachment - 5:1	9 central stems
NS12	Heteromeles arbutifolia	Toyon	15'0"	15'0"	8"	Good	Retain	None	10 central stems
NS13	Quercus dumosa	Nuttall's Scrub Oak	18'0"	16'0"	8"	Good	Retain	None	5 central stems
NS14	Heteromeles arbutifolia	Toyon	16'0"	15'0"	4"	Good	Retain	Mitigation not required due to DBH	11 central stems
NS15	Heteromeles arbutifolia	Toyon	15'0"	15'0"	6"	Good	Remove - Within building footprint	Mitigation not required due to DBH	triple
NS16	Heteromeles arbutifolia	Toyon	10'0"	15'0"	6"	Average	Retain	None	7 central stems
NS17	Heteromeles arbutifolia	Toyon	15'0"	15'0"	6"	Average	Retain	None	12 central stems
NS18	Quercus dumosa	Nuttall's Scrub Oak	18'0"	15'0"	9"	Average	Retain	None	triple
NS19	Quercus dumosa	Nuttall's Scrub Oak	15'0"	15'0"	5"	Fair	Retain	Mitigation not required due to DBH	Adjust path location to preserve tree, thicket, 20 central stems
NS20	Quercus dumosa	Nuttall's Scrub Oak	12'0"	15'0"	12"	Average	Remove - Within building footprint	Removal - 10:1	
NS21	Cercocarpus betuloides	Western Mountain Mahogany	10'0"	15'0"	6"	Good	Retain	None	6 central stems
NS22	Cercocarpus betuloides	Western Mountain Mahogany	9'0"	15'0"	6"	Good	Retain	None	
NS23	Cercocarpus betuloides	Western Mountain Mahogany	10'0"	15'0"	6"	Good	Retain	None	
NS24	Cercocarpus betuloides	Western Mountain Mahogany	9'0"	15'0"	12"	Average	Remove - Within building footprint	Removal - 10:1	
NS25	Malosma laurina	Laurel Sumac	15'0"	15'0"	15"	Average	Retain	None	4 central stems
NS26	Ceanothus megacarpus	Bigpod Ceanothus	15'0"	15'0"	7"	Average	Retain	None	5 central stems
NS27	Heteromeles arbutifolia	Toyon	15'0"	14'0"	6"	Good	Retain	Mitigation not required due to DBH	Adjust path location to preserve tree - 6 central stems
NS28	Heteromeles arbutifolia	Toyon	12'0"	12'0"	6"	Good	Retain	> 30% Encroachment - 10:1	

**REVISIONS**

NO.	DATE	DESCRIPTION
1	09/28/2016	ISSUE FOR PERMITS
2	10/15/2016	REVISED PER SANITA MONICA MOUNTAIN LANDSCAPE REVIEW



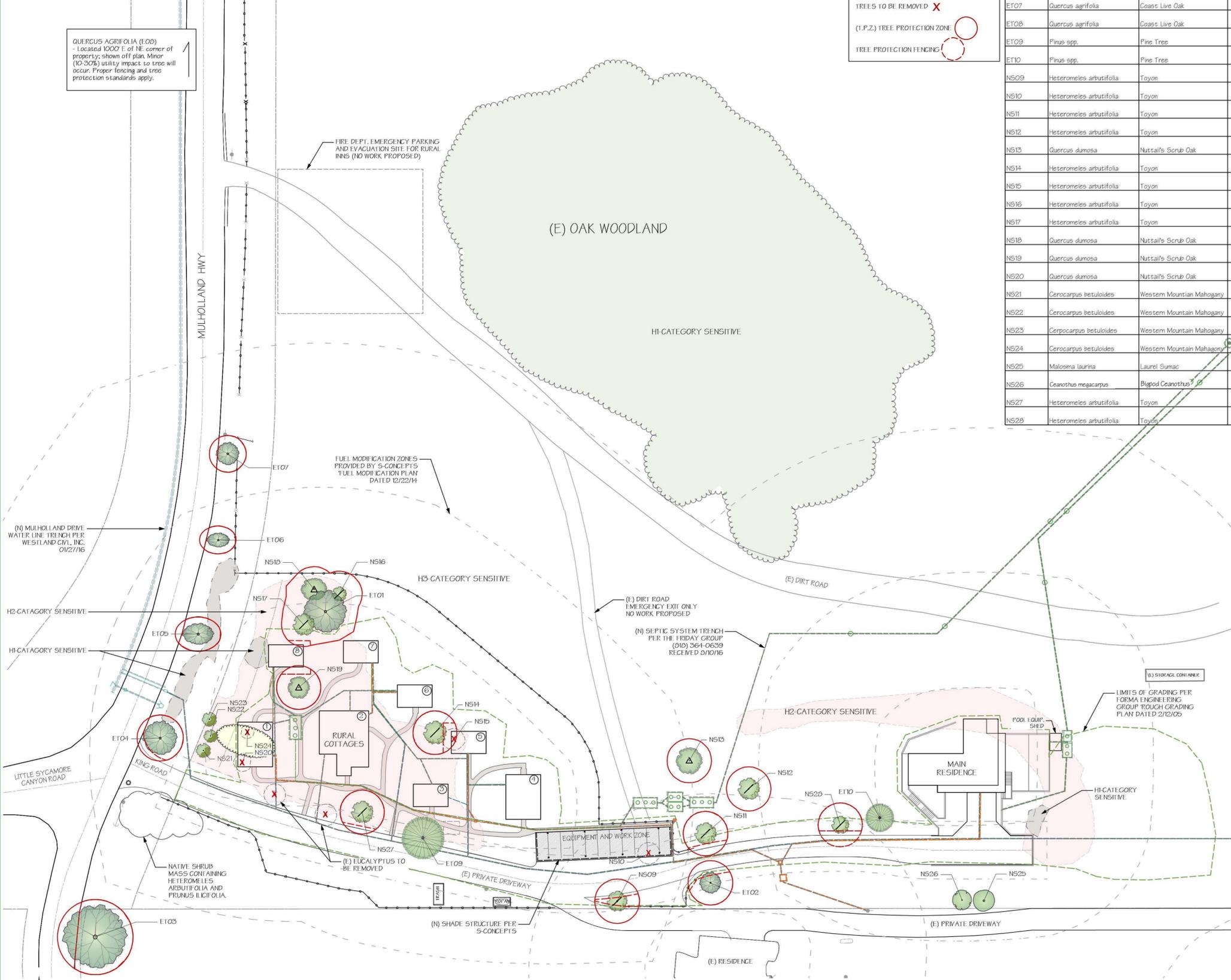
**TREE PROTECTION PLAN**

SHEET TITLE

**ROLLINS RESIDENCE / RURAL INN**  
 95528 MULHOLLAND HWY  
 MALIBU, CA 90265

**BILL MELLETT DESIGN LANDSCAPE ARCHITECTURE**  
 CARPENTERS, CA 95014  
 P.O. BOX 74  
 BILL MELLETT DESIGN IS A DIVISION OF ENCIROTELL, INC.  
 (925) 470-0148

DATE: 07/28/2016  
 SCALE: 1"=30'  
 DRAWN: WLM  
 JOB: 1547  
 SHEET: **L2.0**  
 02 of 11 Sheets



**SANTA MONICA MOUNTAINS LOCAL IMPLEMENTATION PLAN (LIP)-TREE PROTECTION NOTES:**

**GENERAL REQUIREMENTS**

- No equipment is to be operated or parked under a tree, nor is any material to be stored within the dripline of a tree or leaned against a tree trunk. Do not pile or compact soil within a dripline.
- In areas of construction, protect soil surface from traffic compaction with 3" of mulch or overlapping 3/4" plywood sheets.
- No surface irrigation shall be installed within the dripline of a tree.
- All work shall be in accordance with the Santa Monica Mountains Local Implementation Plan (LIP). All invasive plant material removed is to be taken to a landfill in closed containers. Native material may be mulched and used on-site. Invasive material needs to go to a landfill, not anywhere else off-site. Invasives would include Eucalyptus spp. Native plant trimmings and removals should be chopped up and used as mulch on-site.
- LIP Section 3.5.3. "The use of insecticides, herbicides, anti-coagulant rodenticides, and any other toxic chemical substance which has the potential to significantly degrade biological resources in the Coastal Zone, shall be prohibited on existing and new development, except where necessary to protect or enhance the habitat itself, such as for eradication of invasive plant species or habitat restoration, and where there are no feasible alternatives that would result in fewer adverse effects to the habitat value of the site. Application of such chemical substances shall not take place during the winter season or when rain is predicted within a week of application." Instead use native plant mulch from fuel modification zone C as amendment.
- Do not nail grade stakes or anything else to trees.
- Encroachment from paving or structures within the dripline of a tree shall be permitted only with written authorization from the Department's Arborist. No encroachment within 10' of a tree trunk will be permitted under any circumstances.
- Do not strip topsoil around trees. Any vegetation to be removed should be removed by cutting at ground level rather than pulling out by equipment.
- Use a pneumatic drill to excavate in tree protection zones (TPZs) leaving woody roots 1-in. and larger. Do not cut any root 1-in. or larger that can remain. If roots must be severed, cuts are to be made by an arborist and soil backfilled immediately.

**TYPICAL WORK PROCEDURES**

All work around any existing oak trees and all trees designated to remain and to be protected shall follow this work procedures program. This program has been developed to minimize the impacts to each tree and protect them from unscheduled damage.

- All work within a tree's root zone shall follow the DRP Tree Care Manual.
- The extent of all work affecting any protected tree shall be staked by field survey and reviewed with the Project Arborist prior to construction.
- A Project Arborist shall approve any pruning of protected trees prior to the start of construction.

**Appendix G TREE CARE MANUAL/Model Tree Preservation Specifications**

- Hand dig the vertical trench at the final cut line and to the final grade; cleanly cut roots behind torn ends. There is no need to apply any kind of pruning seal, since roots will form their own internal barriers to decay.
- Type I, II, or III tree protection fencing shall be constructed at the limit of approved work to protect the trees from unauthorized damage. It shall remain in place until landscape work commences.
- No further work within the root zone shall be done beyond that which was approved without obtaining written approval from the Project Arborist, prior to proceeding.
- Chain link fence should be "temporary chain link fence" (without foundation). Chain link fence is not considered wildlife permeable, but may be used in Zone A and where needed for safety as around a pool, but should not be elsewhere.
- During construction, the impacted trees should be closely monitored for symptoms of shock. The contractor should be prepared to provide temporary water to irrigate and if needed, wash dust from foliage. Irrigation should wet the top 2-3 feet of soil to replicate similar volumes and normal seasonal distribution. Contact the Project Arborist if a decline in tree condition is noted.
- Project Arborists are available to answer any general questions regarding trees in parks.
- For excavation in Tree Protection Zones (TPZs) see 12.2 General Notes, BMPs for Trench Work.

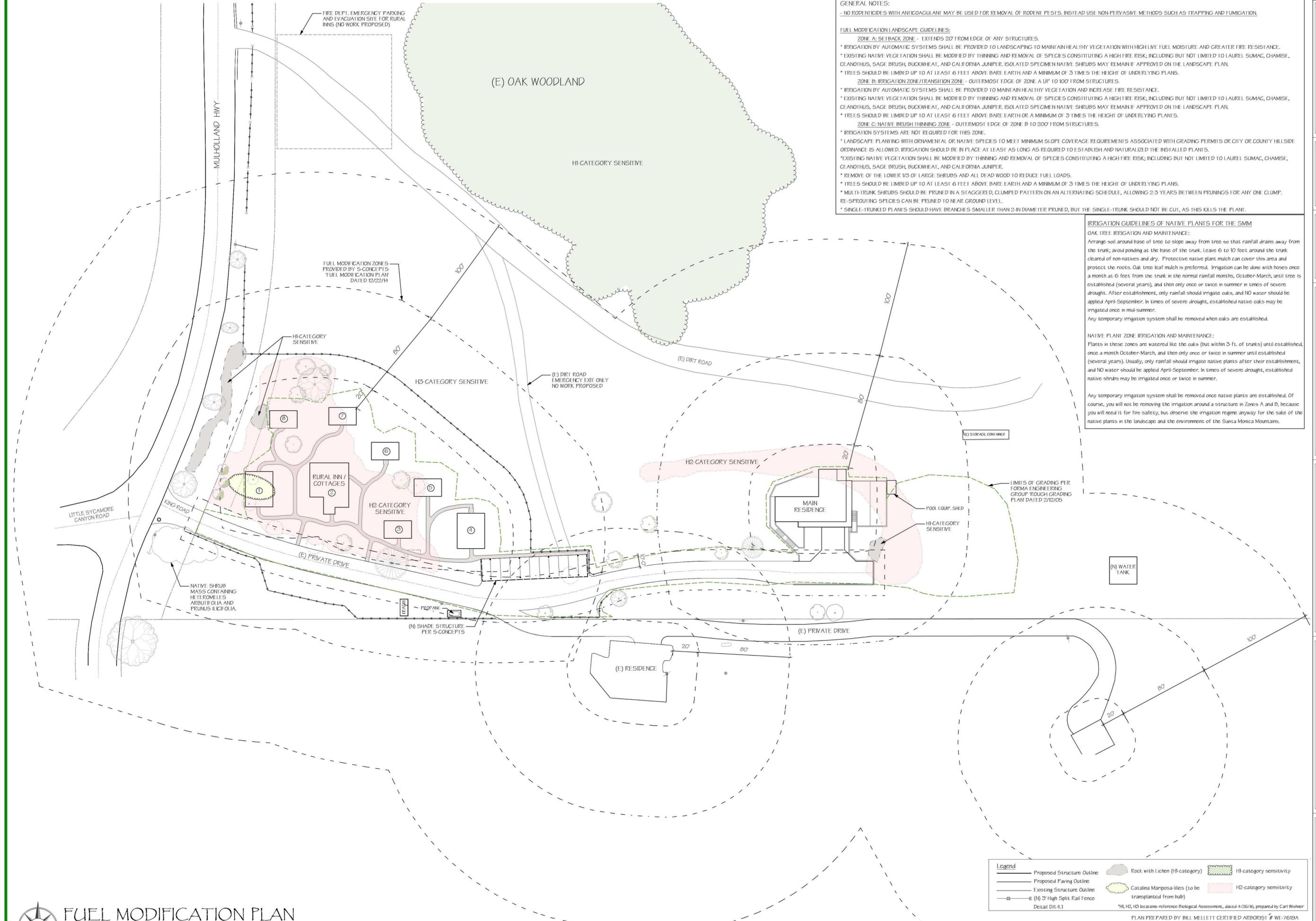
**DAMAGES**

If a tree designated to remain is removed or irreversibly damaged as determined by the Project Arborist, 10 mitigation trees must be added to the same species per requirements of the Native Tree Replacement Program.

**IMPLEMENTATION**

Please direct questions about construction adjacent to oak trees to LA County Department of Regional Planning Local Coastal Program (215) 974-6465. The qualifications of Oak tree consultants shall also be reviewed prior to report preparation. If tree removals are requested, the Special Compliance Program (215) 974-6411 reviews applications and passes their recommendations for action.

PLAN PREPARED BY BILL MELLETT CERTIFIED ARBORIST # W-7619A



**GENERAL NOTES:**  
 - NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION.

**FUEL MODIFICATION LANDSCAPE GUIDELINES:**

**ZONE A: SETBACK ZONE -** EXTENDS 20' FROM EDGE OF ANY STRUCTURES.  
 \* IRRIGATION BY AUTOMATIC SYSTEMS SHALL BE PROVIDED TO LANDSCAPING TO MAINTAIN HEALTHY VEGETATION WITH HIGH LIVE FUEL MOISTURE AND GREATER FIRE RESISTANCE.  
 \* EXISTING NATIVE VEGETATION SHALL BE MODIFIED BY THINNING AND REMOVAL OF SPECIES CONSTITUTING A HIGH FIRE RISK, INCLUDING BUT NOT LIMITED TO LAUREL SUMAC, CHAMISE, CEANOTHUS, SAGE BRUSH, BUCKWHEAT, AND CALIFORNIA JUNIPER. ISOLATED SPECIMEN NATIVE SHRUBS MAY REMAIN IF APPROVED ON THE LANDSCAPE PLAN.  
 \* TREES SHOULD BE LIMBED UP TO AT LEAST 6 FEET ABOVE BARE EARTH AND A MINIMUM OF 3 TIMES THE HEIGHT OF UNDERLYING PLANTS.

**ZONE B: IRRIGATION ZONE/TRANSITION ZONE -** OUTERMOST EDGE OF ZONE A UP TO 100' FROM STRUCTURES.  
 \* IRRIGATION BY AUTOMATIC SYSTEMS SHALL BE PROVIDED TO MAINTAIN HEALTHY VEGETATION AND INCREASE FIRE RESISTANCE.  
 \* EXISTING NATIVE VEGETATION SHALL BE MODIFIED BY THINNING AND REMOVAL OF SPECIES CONSTITUTING A HIGH FIRE RISK, INCLUDING BUT NOT LIMITED TO LAUREL SUMAC, CHAMISE, CEANOTHUS, SAGE BRUSH, BUCKWHEAT, AND CALIFORNIA JUNIPER. ISOLATED SPECIMEN NATIVE SHRUBS MAY REMAIN IF APPROVED ON THE LANDSCAPE PLAN.  
 \* TREES SHOULD BE LIMBED UP TO AT LEAST 6 FEET ABOVE BARE EARTH OR A MINIMUM OF 3 TIMES THE HEIGHT OF UNDERLYING PLANTS.

**ZONE C: NATIVE BRUSH THINNING ZONE -** OUTERMOST EDGE OF ZONE B TO 200' FROM STRUCTURES.  
 \* IRRIGATION SYSTEMS ARE NOT REQUIRED FOR THIS ZONE.  
 \* LANDSCAPE PLANTING WITH ORNAMENTAL OR NATIVE SPECIES TO MEET MINIMUM SLOPE COVERAGE REQUIREMENTS ASSOCIATED WITH GRADING PERMITS OR CITY OR COUNTY HILLSIDE ORDINANCE IS ALLOWED. IRRIGATION SHOULD BE IN PLACE AT LEAST AS LONG AS REQUIRED TO ESTABLISH AND NATURALIZED THE INSTALLED PLANTS.  
 \* EXISTING NATIVE VEGETATION SHALL BE MODIFIED BY THINNING AND REMOVAL OF SPECIES CONSTITUTING A HIGH FIRE RISK, INCLUDING BUT NOT LIMITED TO LAUREL SUMAC, CHAMISE, CEANOTHUS, SAGE BRUSH, BUCKWHEAT, AND CALIFORNIA JUNIPER.  
 \* REMOVE THE LOWER 1/3 OF LARGE SHRUBS AND ALL DEAD WOOD TO REDUCE FUEL LOADS.  
 \* TREES SHOULD BE LIMBED UP TO AT LEAST 6 FEET ABOVE BARE EARTH AND A MINIMUM OF 3 TIMES THE HEIGHT OF UNDERLYING PLANTS.  
 \* MULTI-TRUNK SHRUBS SHOULD BE PRUNED IN A STAGGERED, CLUMPED PATTERN ON AN ALTERNATING SCHEDULE, ALLOWING 2-3 YEARS BETWEEN PRUNINGS FOR ANY ONE CLUMP. RE-SPROUTING SPECIES CAN BE PRUNED TO NEAR GROUND LEVEL.  
 \* SINGLE-TRUNKED PLANTS SHOULD HAVE BRANCHES SMALLER THAN 2-IN DIAMETER PRUNED, BUT THE SINGLE-TRUNK SHOULD NOT BE CUT, AS THIS KILLS THE PLANT.

**IRRIGATION GUIDELINES OF NATIVE PLANTS FOR THE SMM**

**OAK TREE IRRIGATION AND MAINTENANCE:**  
 Arrange soil around base of tree to slope away from tree so that rainfall drains away from the trunk; avoid ponding at the base of the trunk. Leave 6 to 10 feet around the trunk cleared of non-natives and dry. Protective native plant mulch can cover this area and protect the roots. Oak tree leaf mulch is preferred. Irrigation can be done with hoses once a month at 6 feet from the trunk in the normal rainfall months, October-March, until tree is established (several years), and then only once or twice in summer in times of severe drought. After establishment, only rainfall should irrigate oaks, and NO water should be applied April-September. In times of severe drought, established native oaks may be irrigated once in mid-summer.  
 Any temporary irrigation system shall be removed when oaks are established.

**NATIVE PLANT ZONE IRRIGATION AND MAINTENANCE:**  
 Plants in these zones are watered like the oaks (but within 3-ft. of trunks) until established, once a month October-March, and then only once or twice in summer until established (several years). Usually, only rainfall should irrigate native plants after their establishment, and NO water should be applied April-September. In times of severe drought, established native shrubs may be irrigated once or twice in summer.  
 Any temporary irrigation system shall be removed once native plants are established. Of course, you will not be removing the irrigation around a structure in Zones A and B, because you will need it for fire safety, but observe the irrigation regime anyway for the sake of the native plants in the landscape and the environment of the Santa Monica Mountains.

**REVISIONS**

NO. 01	DATE	DESCRIPTION

**BMD**  
 BIODIVERSITY MONITORING DESIGN

**LANDSCAPE ARCHITECT**  
 #4485  
 03/01/2019  
 CALIFORNIA STATE OF CA

**FUEL MODIFICATION PLAN**

**PROJECT:** ROLLINS RESIDENCE / RURAL INN  
 95528 MULHOLLAND HWY  
 MALIBU, CA 90265

**BILL MELLETT DESIGN**  
 LANDSCAPE ARCHITECTURE  
 101 BOX 74  
 CARPINTERIA, CA 93014  
 CARPINTERIA, CA 93014  
 (805) 440-0148  
 BMDIA.COM

**DATE:** 07/28/2016  
**SCALE:** 1"=30'  
**DRAWN:** WLM  
**JOB:** 1547  
**SHEET:** L2.1  
 03 of 11 Sheets

**FUEL MODIFICATION PLAN**

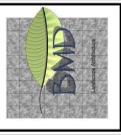
**NOT FOR CONSTRUCTION**

**SCALE:** 1" = 30' - 0"

All design ideas, arrangements, and plans indicated by these drawings and specifications are the property and copyright of Bill Mellett Design and shall neither be used on any other work, nor be disclosed to any other person for any use whatsoever without written permission.

REVISIONS

002416	REVISIONS PER SAN JUAN MONICA WITH LANDSCAPE REVIEW



UTILITY SUPPLY  
IMPACT PLAN

PROJECT: ROLLINS RESIDENCE / RURAL INN  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

BILL MELLETT DESIGN  
LANDSCAPE ARCHITECTURE  
10 BOX 74  
CARPENTERS, CA 95014  
BILL MELLETT DESIGN IS A DIVISION OF TENCROTELL INC.  
(408) 440-0148  
BMD@G.COM

DATE: 07/28/2016  
SCALE: A5 SHOWN  
DRAWN: WLM  
JOB: 1547  
SHEET:

L2.2  
04 of 11 Sheets

GENERAL NOTES:  
- NO RODENTICIDES WITH ANTI-COAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION. USE BEST MANAGEMENT PRACTICES FOR TRENCH WORK:  
1) ANY EXCAVATIONS IN THE TPZs SHOULD BE DONE WITH HAND TOOLS OR AIR SPADE TO SPARE ANY ROOTS OF 1-IN. AND LARGER DIAMETERS.  
2) PIPES SHOULD BE THREADED THROUGH THE ROOTS.  
3) EXPOSED ROOTS SHOULD BE COVERED WITH WET CLOTH OR WET BURLAP DURING EXPOSURE TO AIR.  
4) TRENCHES SHOULD BE CLEARED OF SMALL ANIMALS THAT FALL IN AND ARE TRAPPED AT THE BEGINNING AND END OF EACH WORKING DAY AND BEFORE COVERING.  
5) PLYWOOD BRIDGES AT INTERVALS OF 20-FT. SHOULD COVER AN OPEN TRENCH TO PROVIDE PASSAGE FOR SMALL ANIMALS OVER THE TRENCH BETWEEN THE END OF THE WORKING DAY AND THE START OF THE NEXT WORKING DAY. AFTER REMOVAL OF THE PLYWOOD FOR WORK IS THE BEST TIME TO CHECK FOR TRAPPED SMALL ANIMALS AT THE START OF THE DAY AND BEFORE PLACEMENT OF THE PLYWOOD AT THE END OF THE WORKING DAY IS ALSO A GOOD TIME. THERE NEEDS TO BE A CHECK AND RELEASE OF TRAPPED SMALL ANIMALS BEFORE COVERING ANY TRENCH.  
- REFER TO TREE PROTECTION PLAN, SHEET L2.0, FOR TREE MITIGATION IMPACT REPORT

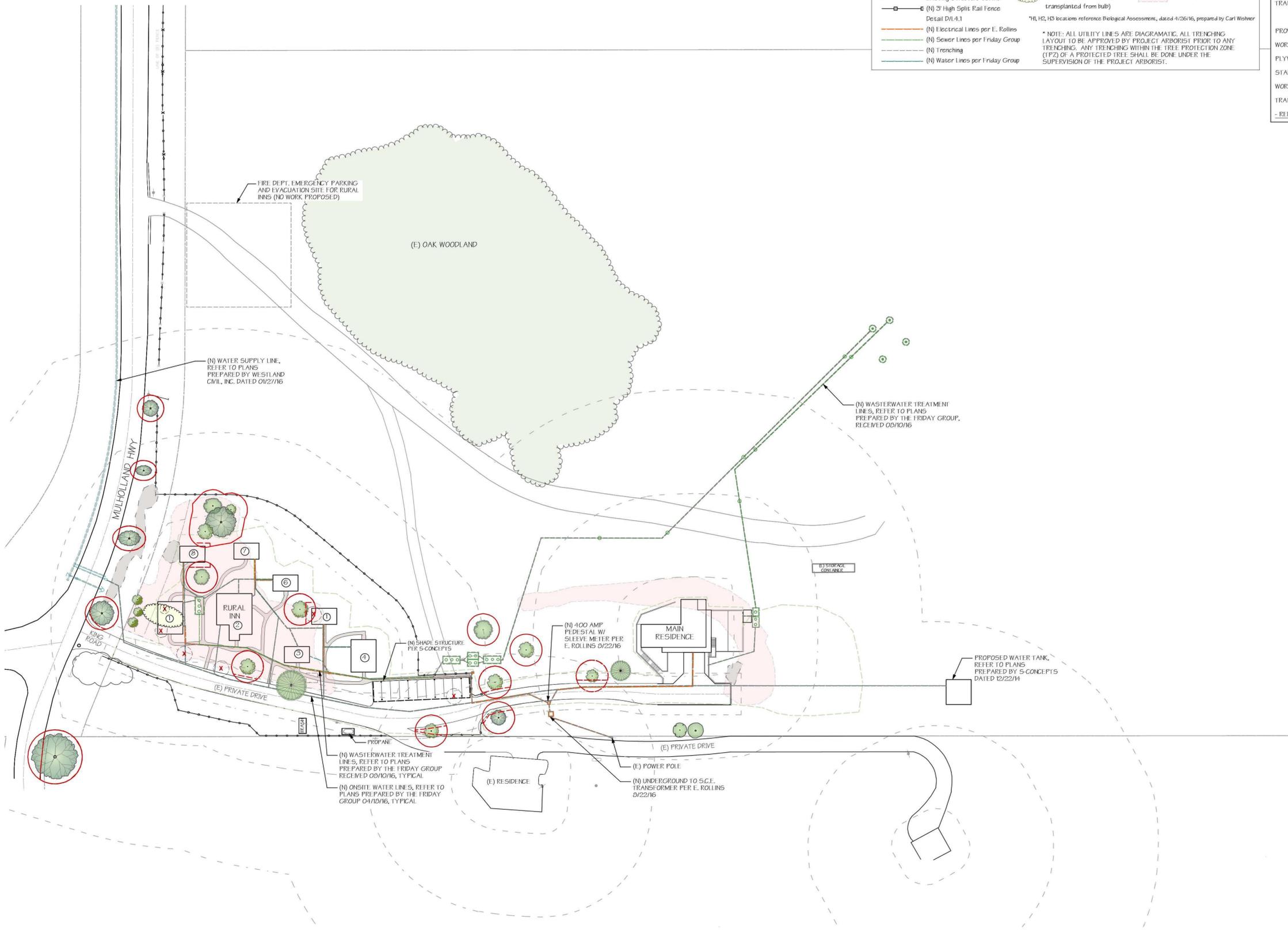
LEGEND:  
ET - EXISTING TREE  
NS - NATIVE SHRUB  
TREES TO BE REMOVED X  
(T.P.Z.) TREE PROTECTION ZONE  
TREE PROTECTION FENCING

Legend

- Proposed Structure Outline
- Proposed Paving Outline
- Existing Structure Outline
- (N) 3' High Split Rail Fence
- Detail D/L4.1
- (N) Electrical Lines per E. Rollins
- (N) Sewer Lines per Friday Group
- (N) Trenching
- (N) Water Lines per Friday Group
- Rock with Lichen (H1-category)
- Catalina Maniposa-lilies (to be transplanted from bulb)
- H1-category sensitivity
- H2-category sensitivity

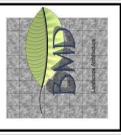
\*H1, H2, H3 locations reference Biological Assessment, dated 4/26/16, prepared by Carl Wheeler

\* NOTE: ALL UTILITY LINES ARE DIAGRAMATIC. ALL TRENCHING LAYOUT TO BE APPROVED BY PROJECT ARBORIST PRIOR TO ANY TRENCHING. ANY TRENCHING WITHIN THE TREE PROTECTION ZONE (TPZ) OF A PROTECTED TREE SHALL BE DONE UNDER THE SUPERVISION OF THE PROJECT ARBORIST.



REVISIONS

000416 - REVISIONS PER SANITA MONICA MIN LANDSCAPE REVIEW

OVERALL IRRIGATION PLAN

PROJECT: ROLLINS RESIDENCE / RURAL INN  
 95528 MULHOLLAND HWY  
 MALIBU, CA 90265

BILL MELLETT DESIGN  
 LANDSCAPE ARCHITECTURE  
 10 BOX 74  
 CARPENTERSIA, CA 93014  
 BILL MELLETT DESIGN IS A DIVISION OF TENCROTT, INC.  
 (909) 440-0168  
 BMDIA.COM

DATE: 07/28/2016  
 SCALE: AS SHOWN  
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 JOB: 1547  
 SHEET: L3.0  
 05 of 11 Sheets

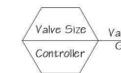
GENERAL NOTES:  
 - NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION.  
 - FOR EXCAVATION IN TREE PROTECTION ZONES (TPZs) SEE 1.2.2 GENERAL NOTES, BMPs FOR TRENCH WORK.

IRRIGATION SYMBOL REPORT

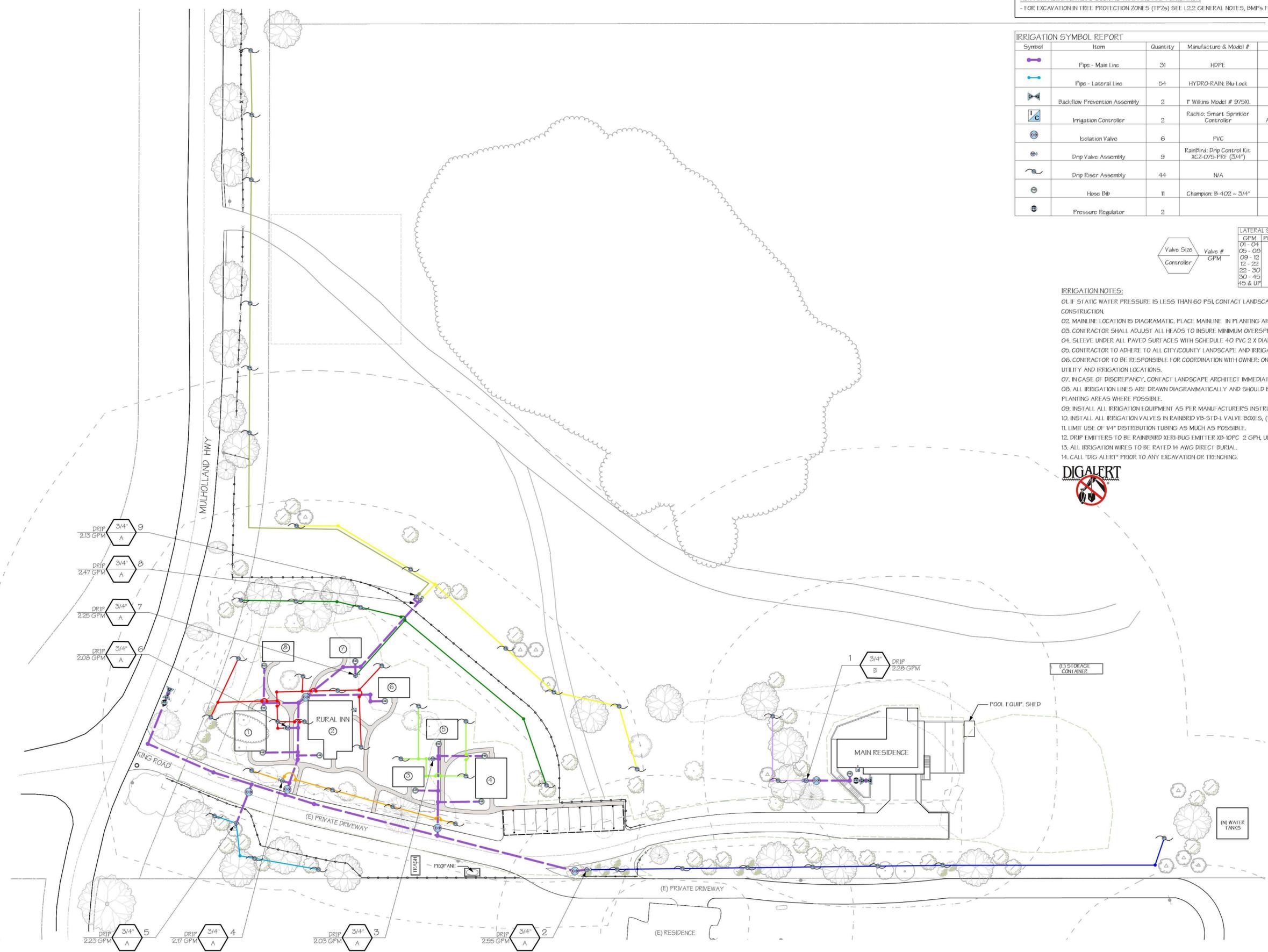
Symbol	Item	Quantity	Manufacture & Model #	Notes
	Pipe - Main Line	31	HDPE	Size Per Plan
	Pipe - Lateral Line	54	HYDRO-RAIN: Blu-Lock	Size Per Plan
	Backflow Prevention Assembly	2	1" Wilkins Model # 975XL	
	Irrigation Controller	2	Rachio: Smart Sprinkler Controller	A) 16 Station B) 8 Station
	Isolation Valve	6	PVC	
	Drip Valve Assembly	9	RainBird: Drip Control Kit XC2-07B-FRT (3/4")	
	Drip Eiser Assembly	44	N/A	
	Hose Bib	11	Champion: B-402 - 3/4"	Install Per Detail
	Pressure Regulator	2		

LATERAL SCHEDULE (SIZE CHART)

GPM	PVC CLASS 40 PIPE SIZE
01 - 04	1/2"
05 - 08	3/4"
09 - 12	1"
12 - 22	1 - 1/4"
22 - 30	1 - 1/2"
30 - 45	2"
45 & UP	2 - 1/2"



IRRIGATION NOTES:  
 01. IF STATIC WATER PRESSURE IS LESS THAN 60 PSI, CONTACT LANDSCAPE ARCHITECT AT 009.640.0168 PRIOR TO CONSTRUCTION.  
 02. MAINLINE LOCATION IS DIAGRAMATIC. PLACE MAINLINE IN PLANTING AREAS WHEREVER POSSIBLE.  
 03. CONTRACTOR SHALL ADJUST ALL HEADS TO INSURE MINIMUM OVERSPRAY ONTO PAVED SURFACES.  
 04. SLEEVE UNDER ALL PAVED SURFACES WITH SCHEDULE 40 PVC 2 X DIAMETER OF INSIDE PIPE.  
 05. CONTRACTOR TO ADHERE TO ALL CITY/COUNTY LANDSCAPE AND IRRIGATION GUIDELINES.  
 06. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION WITH OWNER: ON LOCATION OF EXISTING UNDERGROUND UTILITY AND IRRIGATION LOCATIONS.  
 07. IN CASE OF DISCREPANCY, CONTACT LANDSCAPE ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH WORK.  
 08. ALL IRRIGATION LINES ARE DRAWN DIAGRAMMATICALLY AND SHOULD BE LOCATED IN COMMON TRENCHES AND PLANTING AREAS WHERE POSSIBLE.  
 09. INSTALL ALL IRRIGATION EQUIPMENT AS PER MANUFACTURER'S INSTRUCTIONS.  
 10. INSTALL ALL IRRIGATION VALVES IN RAINBIRD VB-STD-L VALVE BOXES, (1) PER BOX, UNLESS NOTED.  
 11. LIMIT USE OF 1/4" DISTRIBUTION TUBING AS MUCH AS POSSIBLE.  
 12. DRIP EMITTERS TO BE RAINBIRD XE-R-BUG EMITTER XB-10PC 2 GPH UNLESS NOTED.  
 13. ALL IRRIGATION WIRES TO BE RATED IN AWG DIRECT BURIAL.  
 14. CALL "DIG ALERT" PRIOR TO ANY EXCAVATION OR TRENCHING.



OVERALL IRRIGATION PLAN



SCALE: 1" = 30' - 0"

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Water Efficient Landscape Worksheet

Project: Rollins Residence/Rural Inn  
 Malibu, Ca.

MANWA- Maximum applied water allowance per year (gallons)  
 Eto - Reference evapotranspiration (44.2" for Malibu)      ETAF = 55 for residential and 45 for non-residential  
 MAWA = (Eto) (0.62) [(ETAF x LA) + (0.3 x SLA)]  
 MAWA = (44.2) (0.62) [(0.55 x 77,860) + (0.3 x 0)] = 1,098,160 gal./yr.

Site Information  
 Site Name → Rollins Residence/ Rural Inn  
 Site Type → Residential  
 Annual Eto (inches/yr) → 41.2

Hydrozone or Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Hydrozone Area (sq-ft.)	ETAF x Area	Estimated Total Water Use (gal./yr.)
<b>Regular Landscape Areas</b>							
Valve 1	0.1	Low	Drip	0.81	0.1	5,399	667
Valve 2	0.1	Low	Drip	0.81	0.1	13,371	1,075
Valve 3	0.1	Low	Drip	0.81	0.1	5,817	718
Valve 4	0.1	Low	Drip	0.81	0.1	4,111	508
Valve 5	0.1	Low	Drip	0.81	0.1	5,317	656
Valve 6	0.1	Low	Drip	0.81	0.1	9,528	1,176
Valve 7	0.1	Low	Drip	0.81	0.1	12,387	1,529
Valve 8	0.1	Low	Drip	0.81	0.1	14,240	1,758
Valve 9	0.1	Low	Drip	0.81	0.1	8,943	1,092
<b>SUBTOTAL →</b>							<b>267,994</b>
<b>Special Landscape Areas</b>							
9					1	0	0
10					1	0	0
11					1	0	0
12					1	0	0
<b>SUBTOTAL →</b>							<b>0</b>
<b>Estimated Total Water Use (ETWU) →</b>							<b>267,994</b>
<b>Maximum Allowed Water Allowance (MAWA) →</b>							<b>1,098,160</b>

ETAF Calculations  
 Regular Landscape Areas  
 Total ETAF x Area      9,779  
 Total Area              79,213  
 Average ETAF            0.12

All Landscape Areas  
 Total ETAF x Area      9,779  
 Total Area              79,213  
 Sitewide ETAF            0.12

Notes:  
 ETWU meets MAWA requirement.  
 Average ETAF meets requirement for this site type.  
 Calculator developed July 27, 2015.  
 This calculator is for estimating purposes only.  
 Designer assumes no liability for use of this calculator.

**Planting Notes:**

- NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION.

**Criteria for Planting:**

- Hydrozones have plant material with similar water use requirements
- No turf in parkways, medians, or other areas within the landscape with any dimension of less than eight feet. No turf on slopes exceeding 25%
- Project is located in a high fire hazard area
- 79,213 SF overall landscape area is water-wise. 0 SF of overall landscape area is turf or non water-wise plant material = 0% of overall landscape area includes turf or non water-wise (Med. or High) plant material

**Mulch & Amendments:**

- A minimum of 3" layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting ground cover, succulents of the immediate vicinity of wood trunks. Mulch to be organic mulch made from recycled materials or approved equal, contractor to submit sample to Landscape Architect.
- Soil amendments shall be incorporated according to recommendations of the soil report.
- Native plant trimmings and removals should be chopped up and used as mulch onsite. Mulch from diseased coast live oak grove not to be used on-site. Native mulch needs to come from offsite or from removed and chopped native plants in the northwest area of the project where cabins are planned and oaks are not diseased.

**Abbreviations:**

- High - High Water Use
- Med. - Medium Water Use
- Low - Low Water Use

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

BILL MELLETT #4464

**REVISIONS**


**BMD**

**LANDSCAPE ARCHITECT**

**PROFESSIONAL SEAL**

**STATE OF CALIFORNIA**

**LANDSCAPE ARCHITECT**

**#4464**

**03/01/2019**

**EXPIRES 03/01/2024**

**HYDROZONE PLAN**

SHEET TITLE

**ROLLINS RESIDENCE / RURAL INN**

35528 MULHOLLAND HWY

MALIBU, CA 90265

PROJECT

**BILL MELLETT DESIGN**

**LANDSCAPE ARCHITECTURE**

10 BOX 74

CARPINTERIA, CA 93904

BILL MELLETT DESIGN IS A DIVISION OF TENCOR TELL, INC.

INDIA, CA

(805) 440-0148

DATE: 07/28/2016

SCALE: AS SHOWN

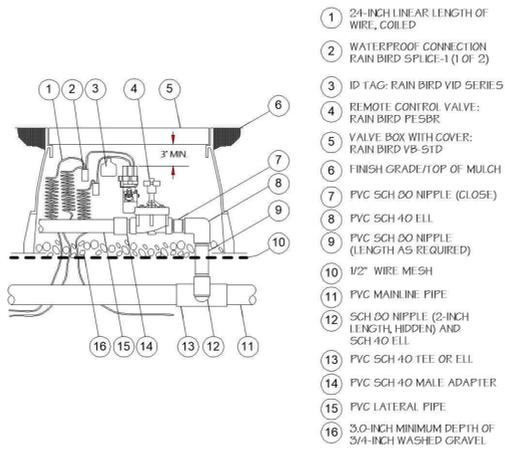
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JOB: 1547

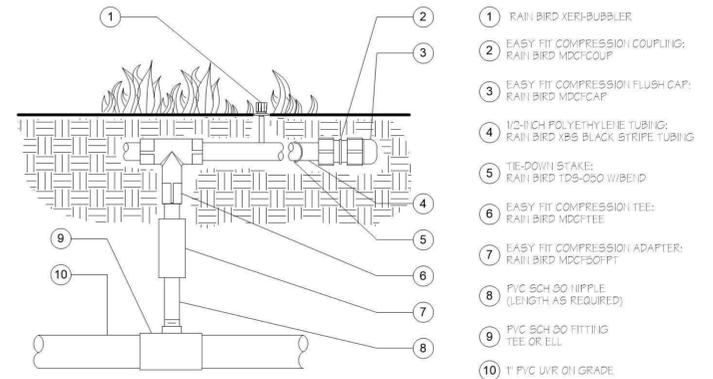
SHEET: **L3.1**

06 of 11 Sheets

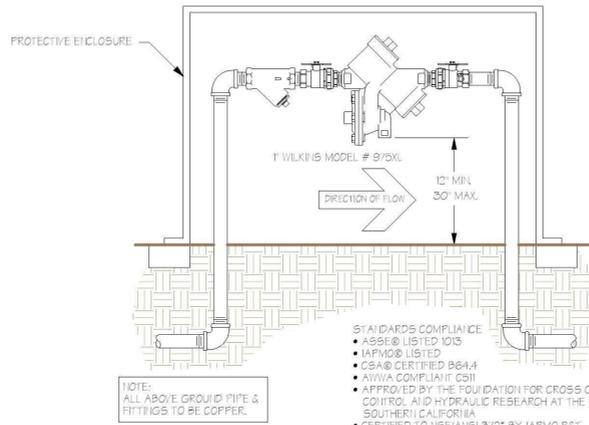
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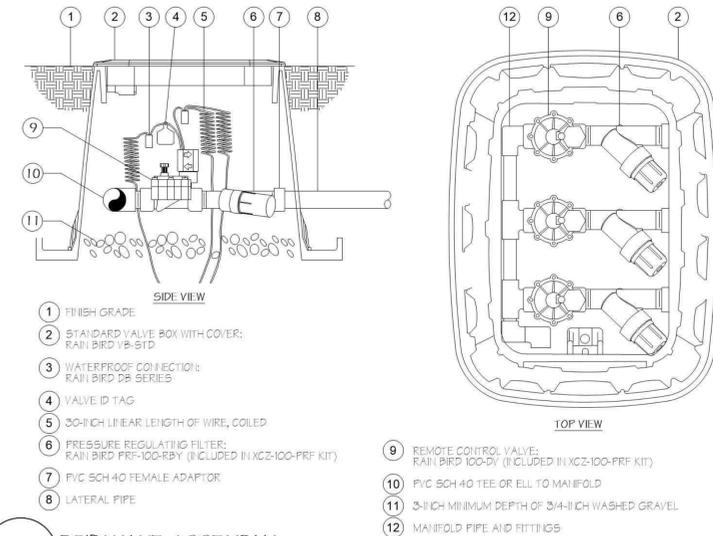
**PE-5B-R REMOTE CONTROL VALVE**  
SCALE: 1/16" = 1"



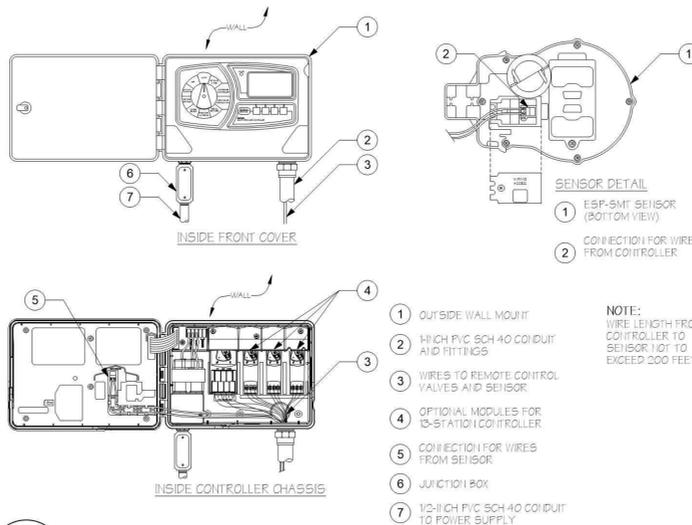
**DRIP RISER ASSEMBLY**  
SCALE: 1/16" = 1"



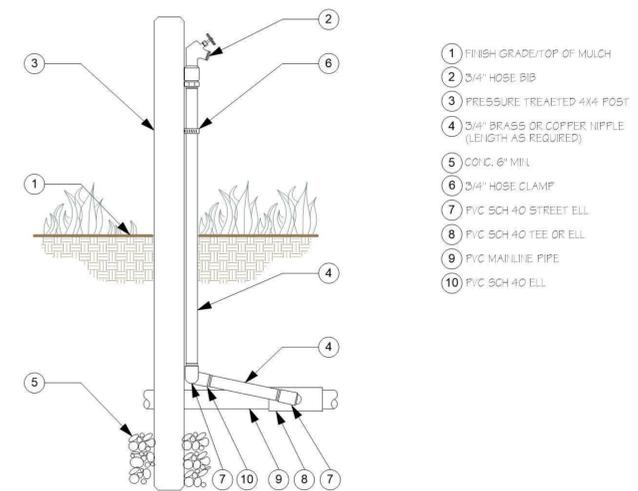
**BACKFLOW PREVENTER**  
SCALE: 1/16" = 1"



**DRIFT VALVE ASSEMBLY**  
SCALE: 1/16" = 1"



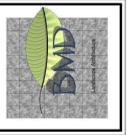
**RACHIO SMART SPRINKLER CONTROLLER**  
SCALE: 1/16" = 1"



**HOSE BIB**  
SCALE: 1/16" = 1"

**REVISIONS**

002416	REVISIONS PER SAN ANTONIO MIN. LANDSCAPE REVIEW




PROJECT: ROLLINS RESIDENCE / RURAL INN  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

SHEET TITLE: IRRIGATION DETAILS

PROJECT: ROLLINS RESIDENCE / RURAL INN  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

**BILL MELLETT DESIGN**  
LANDSCAPE ARCHITECTURE  
BILL MELLETT DESIGN IS A DIVISION OF TENCOR TELL, INC.  
CARPINTERIA, CA 93014  
P.O. BOX 74  
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SHEET:

**L3.2**  
07 of 11 Sheets

**Plant Legend - Mitigation Trees**

Size	Quantity	ID	Botanical Name	Common Name	WUCOLS
3 Gal.	23	QUE AGR	<i>Quercus agrifolia</i>	Coast Live Oak (Existing Mitigation - planted 2016)	Low

**Plant Legend - Mitigation Shrubs**

Size	Quantity	ID	Botanical Name	Common Name	WUCOLS
1 Gal.	10	CER BET	<i>Cercocarpus betuloides</i>	Western Mountain Mahogany	Low
1 Gal.	35	HET ARB	<i>Heteromeles arbutifolia</i>	Tayon	Low
1 Gal.	10	QUE DUM	<i>Quercus dumosa</i>	Nuttall's Scrub Oak	Low

**ADDITIONAL PLANT PALETTE**

<p><b>Shrubs:</b></p> <ul style="list-style-type: none"> <li>Adenostoma sparsifolium - Red Shanks</li> <li>Arctostaphylos glauca - Big Berry Manzanita</li> <li>Artemisia californica - California Sagebrush</li> <li>Baccharis pilularis consanguinea 'Pozo Sur' - Lowly Coyote Bush</li> <li>Ceanothus cuneatus - Wedgeleaf Ceanothus</li> <li>Ceanothus megacarpus x Tranquil Marganita - Big Pod California Lilac</li> <li>Denarionem rigidula - Bush Poppy</li> <li>Eriogonum fasciculatum var. foliolosum - California buckwheat</li> <li>Eriophyllum confertiflorum - Golden Yarrow</li> <li>Malacothamnus fasciculatus - Bush Mallow</li> <li>Rhus integrifolia - Lemonade Berry</li> <li>Rhus ovata - Sugar Bush</li> <li>Salvia leucophylla - Purple Sage</li> <li>Salvia mellifera - Black Sage</li> <li>Sambucus mexicana - Mexican Elderberry</li> <li>Sambucus nigra ssp. caerulea - Blue Elderberry</li> <li>Trichostema lanatum - Woolly Blue Curly</li> </ul> <p><b>Succulents:</b></p> <ul style="list-style-type: none"> <li>Dudleya lanceolata - Lance-leaf Dudleya</li> <li>Dudleya pulverulenta - Chalk Liveforever</li> <li>Hesperoyucca whipplei - Our Lord's Candle</li> </ul> <p><b>Grasses:</b></p> <ul style="list-style-type: none"> <li>Elymus triticoides - Creeping Wild Rye</li> <li>Melica imperfecta - California Melica</li> <li>Muhlenbergia rigens - Deer Grass</li> </ul>	<p><b>Perennials/Annuals:</b></p> <ul style="list-style-type: none"> <li>Asclepias fascicularis - Narrow-leaf Milkweed</li> <li>Castilleja foliolosa - Woolly Indian Paintbrush</li> <li>Delphinium patens ssp. hepaticoides - Blue Larkspur</li> <li>Dichelostemma capitatum ssp. capitatum - Blue Dicks</li> <li>Dodecatheon clevelandii - Shooting Star</li> <li>Eriogonum foliosum - Fleabane Aster</li> <li>Eschscholzia californica - California Poppy</li> <li>Helianthus gracilentus - Slender Sunflower</li> <li>Keckelia cordifolia - Heart Leaf Penstemon</li> <li>Lupinus longifolius - Bush Lupine</li> <li>Mimulus aurantiacus - Bush Monkey Flower</li> <li>Penstemon heterophyllus - Foothill Penstemon</li> <li>Salvia columbiana - Chia</li> <li>Scutellaria tuberosa - Skull Cap</li> <li>Sisyrinchium bellum - Blue-eyed Grass</li> <li>Toxicoscordion fremontii - Star Lily</li> </ul> <p><b>Groundcovers:</b></p> <ul style="list-style-type: none"> <li>Encelia californica - Coast Sunflower</li> <li>Salvia spathacea - Hummingbird Sage</li> </ul> <p>*Plants found on-site by B. Mellett and/or shown in C. Wehner Biology Report, dated April 26, 2016</p>
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**PALETTE NOTES:**

- Additional plant material only to be selected from list above. Landscape Architect to spot plants in field as necessary. Quantities and plant material sizes to be determined.
- Goal of project is to maintain and encourage existing native plant ecosystems.

**SANTA MONICA MOUNTAINS LOCAL IMPLEMENTATION PLAN (LIP)-TREE PROTECTION NOTES:**

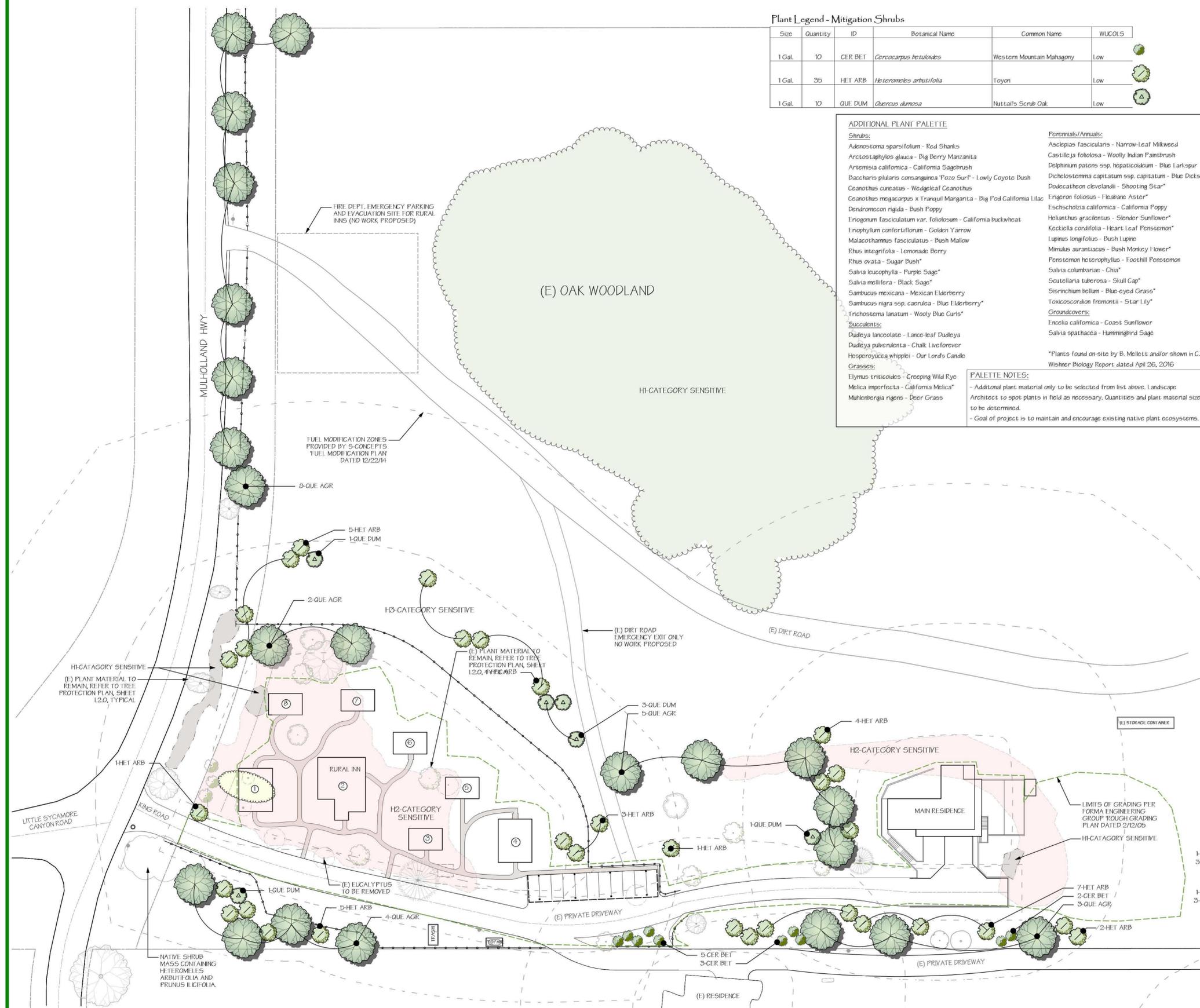
- GENERAL REQUIREMENTS**
1. No equipment is to be operated or parked under a tree, nor is any material to be stored within the dripline of a tree or leaned against a tree trunk. Do not pile or compact soil within a dripline.
  2. In areas of construction, protect soil surface from traffic compaction with 3" of mulch or overlapping 3/4" plywood sheets.
  3. No surface irrigation shall be installed within the dripline of a tree.
  4. All work shall be in accordance with the Santa Monica Mountains Local Implementation Plan (LIP). All invasive plant material removed is to be taken to a landfill in closed containers. Native material may be mulched and used on-site. Invasive material needs to go to a landfill, not anywhere else offsite. Invasives would include Eucalyptus spp. Native plant trimmings and removals should be chipped up and used as mulch onsite.
  5. LIP Section 5.5.3. "The use of insecticides, herbicides, anti-coagulant rodenticides, and any other toxic chemical substance which has the potential to significantly degrade biological resources in the Coastal Zone, shall be prohibited on existing and new development, except where necessary to protect or enhance the habitat itself, such as for eradication of invasive plant species or habitat restoration, and where there are no feasible alternatives that would result in fewer adverse effects to the habitat value of the site. Application of such chemical substances shall not take place during the winter season or when rain is predicted within a week of application." Instead use native plant mulch from fuel modification zone 'C' as amendment.
  6. Do not nail grade stakes or anything else to trees.
  7. Encroachment from paving or structures within the dripline of a tree shall be permitted only with written authorization from the Department's Arborist. No encroachment within 10' of a tree trunk will be permitted under any circumstances.
  8. Do not strip topsoil around trees. Any vegetation to be removed should be removed by cutting at ground level rather than pulling out by equipment.
  9. Use a pneumatic drill to excavate in tree protection zones (TPZs) leaving woody roots larger 1-in or larger. Do not cut any root 1-in or larger that can remain. If roots must be severed, cuts are to be made by an arborist and soil backfilled immediately.
- TYPICAL WORK PROCEDURES**
- All work around any existing oak trees and all trees designated to remain and to be protected shall follow this work procedures program. This program has been developed to minimize the impacts to each tree and protect them from unscheduled damage.
1. All work within a tree's root zone shall follow the DRP Tree Care Manual.
  2. The extent of all work affecting any protected tree shall be staked by field survey and reviewed with the Project Arborist prior to construction.
  3. Project Arborist shall approve any pruning of protected trees prior to the start of construction.
- Appendix C  
TREE CARE MANUAL/Model Tree Preservation Specifications
4. Hand dig the vertical trench at the final cut line and to the final grade; cleanly cut roots behind tom ends. There is no need to apply any kind of pruning seal, since roots will form their own internal barriers to decay.
  5. Type I, II, or III tree protection fencing shall be constructed at the limit of approved work to protect the trees from unauthorized damage. It shall remain in place until landscape work commences.
  6. No further work within the root zone shall be done beyond that which was approved without obtaining written approval from the Project Arborist, prior to proceeding.
  7. The area within the chain link fence shall not be used for material or equipment storage, or parking during construction.
  8. During construction, the impacted trees should be closely monitored for symptoms of shock. The contractor should be prepared to provide temporary water to irrigate and if needed, wash dust from foliage. Irrigation should wet the top 2-3 feet of soil to replicate similar volumes and normal seasonal distribution. Contact the Project Arborist if a decline in tree condition is noted.
  9. The Project Arborists are available to answer any general questions regarding trees in parks.
- DAMAGES**
- If a tree designated to remain is removed or irreversibly damaged as determined by the Project Arborist, a contractor may be required to install a replacement tree matching in size, quality and variety, using a contractor designated by the Project Arborist. If an acceptable replacement tree is not available, the contractor may be required to pay damages to the City for the value of the damaged tree in accordance with the guidelines set forth in the Guide for Plant Appraisal, 9th Edition, using the Trunk Formula Method.
- IMPLEMENTATION**
- Please direct questions about construction adjacent to oak trees to LA County Department of Regional Planning Local Coastal Program (213) 9/4-6460. The qualifications of Oak tree consultants shall also be reviewed prior to preparation. If tree removals are requested, the Special Compliance Program (213) 9/4-6411 reviews applications and passes their recommendations for action.

**Legend**

- Proposed Structure Outline
- Proposed Paving Outline
- Existing Structure Outline
- (N) High Split Rail Fence
- Rock with Lichen (H1-category)
- Catalina Mariposa-lilies (to be transplanted from bulb)
- H1-category sensitivity
- H2-category sensitivity

Detail D1/A.1  
\*H1, H2, H3 locations reference Biological Assessment, dated 4/26/16, prepared by Carl Wehner

- NOTES:**
- NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVAZIVE METHODS SUCH AS TRAPPING AND FUMIGATION
  - ALL TREE PROTECTION INFORMATION PROVIDED BY BILL MELLETT, CERTIFIED ARBORIST #WE-7619A.
  - 75 TOTAL TREES/SHRUBS TO BE ADDED TO THE SITE DUE TO MITIGATION. (20 - 3 GAL.) NEW QUERCUS AGRIFOLIA IDENTIFIED ON PLAN (1 GAL. GERMINATED FROM SEEDS ON-SITE) HETEROMELES ARBUTIFOLIA (35 EACH), QUERCUS DUMOSA (10 EACH) AND CEROCARPUS BETULOIDES (10 EACH). FINAL SHRUB LOCATIONS TO BE DETERMINED IN FIELD BY LANDSCAPE ARCHITECT TO REDUCE FURTHER IMPACT TO NATIVE PLANT MATERIAL.
  - MITIGATION TREES AND SHRUBS TO BE MONITORED AND REPLACED IN THE EVENT THE PLANT MATERIAL DECLINES.
  - ALL NON-NATIVE AND INVASIVE PLANT MATERIAL TO BE REMOVED AND DISPOSED OF OFF-SITE INCLUDING (E) EUCALYPTUS TREE.
  - MITIGATION FOR MARIPOSA LILIES SHALL INCLUDE THE FOLLOWING: IDENTIFY RELOCATION AREA ON-SITE, MONITOR TRANSPLANT SITE FOR TWO (2) YEARS PRIOR TO REPLANTING, DETERMINE MEAN NUMBER OF LILIES PRIOR TO REPLANTING, TRANSPLANT LILIES: MOVE LARGE SOIL BLOCK WITH LILY BULBS AND EXISTING SOIL CONSTITUENTS (MYCORRHIZAE) TO NEW LOCATION.
  - NATIVE PLANTS RECEIVE NATIVE PLANT MULCH IN PLACE OF FERTILIZER AND OTHER AMENDMENTS. NATIVE OAKS RECEIVE PREFERENTIALLY OAK LEAF MULCH (BUT DO NOT FROM THE DISEASED OAK GROVE OF THE PARCEL) AND NATIVE PLANT MULCH FROM THE SMM MAY BE SUBSTITUTED. (DO NOT APPLY FERTILIZER, HERBICIDES, OR OTHER CHEMICAL AMENDMENTS TO NATIVE PLANT AREAS.)



**REVISIONS**

NO.	DATE	DESCRIPTION
001	07/28/2016	ISSUE FOR REVIEW
002	07/28/2016	ISSUE FOR REVIEW
003	07/28/2016	ISSUE FOR REVIEW
004	07/28/2016	ISSUE FOR REVIEW
005	07/28/2016	ISSUE FOR REVIEW
006	07/28/2016	ISSUE FOR REVIEW
007	07/28/2016	ISSUE FOR REVIEW
008	07/28/2016	ISSUE FOR REVIEW
009	07/28/2016	ISSUE FOR REVIEW
010	07/28/2016	ISSUE FOR REVIEW

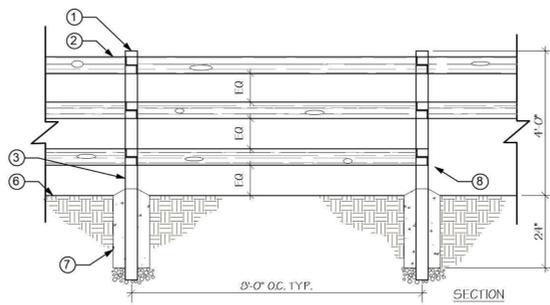


OVERALL PLANTING AND MITIGATION PLAN

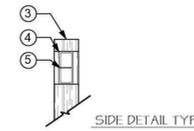
PROJECT: ROLLINS RESIDENCE / RURAL INN  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

DESIGNER: BILL MELLETT DESIGN LANDSCAPE ARCHITECTURE  
BILL MELLETT DESIGN IS A DIVISION OF ENCIENO TILLING INC.  
(805) 470-0148

DATE: 07/28/2016  
SCALE: A5 SHOWN  
DRAWN: WLM-CAZ  
JOB: 1547  
SHEET: L4.0  
08 of 11 Sheets

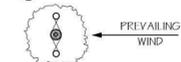


- 1 MORTIS & TENDON JOINTS OF RAILS INSIDE POST TOE NAIL AS NECESSARY
- 2 2x6 RAILS PRESSURE TREATED CEDAR BROWN
- 3 6x6 POST PRESSURE TREATED CEDAR BROWN
- 4 HOLE FOR RAILS
- 5 RAIL TOENAIL MORTIS AND TENDON PIECES AS NECESSARY
- 6 FINISH GRADE
- 7 12"X24" DOMED CONCRETE FOOTING
- 8 REMOVE BOTTOM RAIL FROM EVERY THIRD PANEL

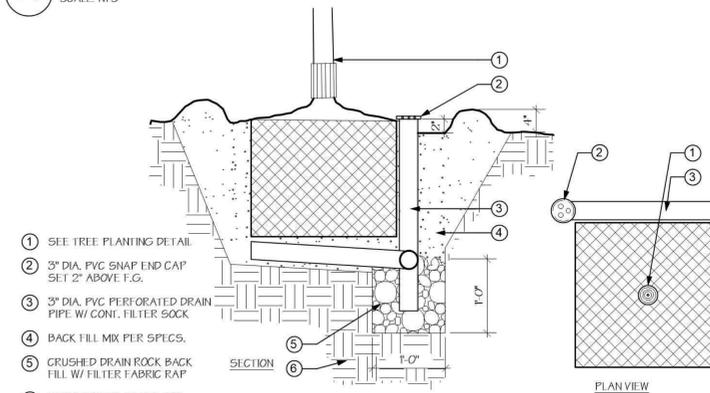
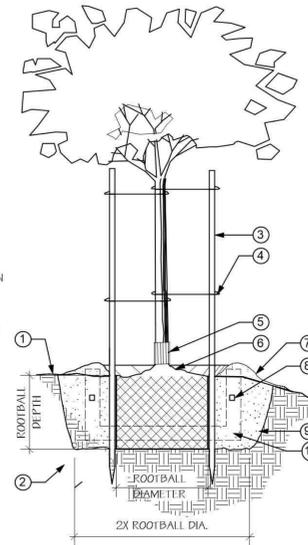


**D** SPLIT RAIL FENCE  
SCALE: 1/2" = 1'-0"

- 1 FINISH GRADE
- 2 UNDISTURBED NATIVE SOIL
- 3 2" DIA. LODGE POLE STAKES (2) EACH FOR 15g AND LARGER TREES
- 4 RUBBER GINCH TIES-MIN (2) PER TREE. PROVIDE TREE TRUNK GUARDS FOR ALL TREES IN TURF AREAS
- 5 ROOTBALL - 5g & 15g SET 1 1/2" ABOVE FINISH GRADE, 24" BOX & LARGER SET 3" ABOVE FINISH GRADE. SLOPE ROOTBALL TO GRADE
- 6 6" WATERING BASIN
- 7 PLANT TABLETS PER SPECS.
- 8 BACK FILL MIX PER SPECS.
- 9 SEE DETAIL "B" FOR ROOTBALL
- 10 DRAINAGE & AERATION (24" BOX & LARGER)

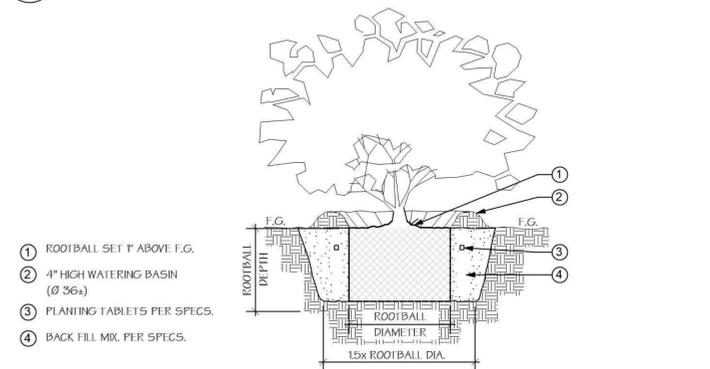


**A** TREE PLANTING  
SCALE: NTS



- 1 SEE TREE PLANTING DETAIL
- 2 3" DIA. PVC SNAP END CAP SET 2" ABOVE F.G.
- 3 3" DIA. PVC PERFORATED DRAIN PIPE W/ CONT. FILTER SOCK
- 4 BACK FILL MIX PER SPECS.
- 5 CRUSHED DRAIN ROCK BACK FILL W/ FILTER FABRIC RAP
- 6 UNDISTURBED NATIVE SOIL

**B** TREE ROOTBALL DRAINAGE  
SCALE: NTS



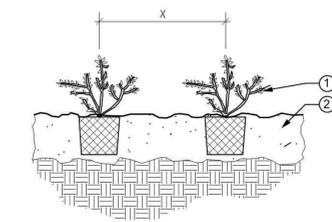
- 1 ROOTBALL SET 1" ABOVE F.G.
- 2 4" HIGH WATERING BASIN (Ø 36")
- 3 PLANTING TABLETS PER SPECS.
- 4 BACK FILL MIX PER SPECS.

**C** SHRUB PLANTING  
SCALE: NTS

NOTE:  
REFER TO PLANTING NOTES FOR ADDITIONAL SPECIFICATIONS

- 1 GROUND COVER TO BE PLANTED IN FLATS, CUTTINGS, LINERS OR 1 GAL. CONTAINERS PER PLANS.
- 2 SOIL PREPARATION - REFER TO PLANTING NOTES

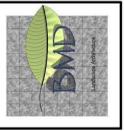
x	SQ. FT. PLANTS WILL COVER	
	64 PLANTS	100 PLANTS
4"	7.50 FT.	11.50 FT.
6"	16.50 FT.	25.50 FT.
8"	28.50 FT.	44.50 FT.
10"	45.50 FT.	70.50 FT.
12"	64.50 FT.	100.50 FT.
15"	100.50 FT.	156.50 FT.
18"	144.50 FT.	225.50 FT.
24"	256.50 FT.	400.50 FT.



**D** GROUND COVER PLANTING  
SCALE: NTS

REVISIONS

NO.	DATE	DESCRIPTION



PLANTING DETAILS

SHEET TITLE

PROJECT: ROLLINS RESIDENCE / RURAL INN  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

BILL MELLETT DESIGN  
LANDSCAPE ARCHITECTURE  
101 BOX 74  
CARPINTERIA, CA 95014  
BILL MELLETT DESIGN IS A DIVISION OF TENCOR TELL, INC.  
(805) 440-0168  
BMDIA.COM

DATE: 07/28/2016  
SCALE: A5 SHOWN  
DRAWN: WLM/CAZ  
CON: 1547  
SHEET:

L4.1

09 of 11 Sheets

PLANTING DETAILS

**IRRIGATION SPECIFICATIONS**

**PART 1.0 - GENERAL**

- 1.1 DESCRIPTION
  - A. Includes furnishing all labor, materials, and equipment required to provide and install the irrigation system specified herein and required to complete the work.
- 1.2 REQUIREMENTS OF REGULATORY AGENCIES
  - A. Comply with all local and state codes, ordinances, safety orders, and regulations of all legally constituted authorities having jurisdiction over this work.
  - B. Obtain and pay for all plumbing permits and inspections required by authorities stated above.
- 1.3 SUBMITTALS
  - A. Submit materials list to Landscape Architect prior to installation.
- 1.4 MATERIALS TO BE FURNISHED
  - A. Prior to final inspection, the Contractor shall furnish the following materials to the Owner: two keys for each automatic controller.
- 1.5 INSPECTIONS
  - A. In order for the system to be certified, the following inspections and/or tests must be made under the direction of and approved by the Landscape Architect.
    - 1. Proper coverage of heads.
    - 2. Pressure test all mains for 24 hours.
  - B. The irrigation contractor shall not allow, nor cause any of his work to be covered or enclosed prior to inspection, testing, and approval.

**PART 2.0 - PRODUCTS**

- 2.1 MATERIALS AND EQUIPMENT
  - A. All irrigation equipment shall be new and unused prior to installation and shall conform to the following Irrigation Specifications:
    - 1. An automatically irrigated system shall be installed.
    - 2. All areas adjacent to curbs, driveways, walks, and other pedestrian access shall have pop-up heads. Turf pop-ups shall be 4" or more, and shrubs shall be 12" high-pops. All other heads shall be on risers per the details, unless noted.
    - 3. Turf heads shall not be mixed with shrub/groundcover heads.
    - 4. Sprinkler coverage shall be head to head.
    - 5. Use a reduced pressure or pressure vacuum breaker as dictated by local code and level changes within each lot. Place in shrub area for screening.
- 2.2 PLASTIC PIPE AND FITTINGS
  - A. All pipe and fittings shall be as manufactured by Lasco Co., Western or S.M. or an approved equal.
  - B. All pipe must bear the following markings: Manufacturer's name, nominal pipe size, schedule or class, pressure rating in p.s.i. and NSF (National Sanitation Foundation). The manufacturer shall also mark the date of extrusion of the pipe.
  - C. All fittings shall be schedule 40 P.V.C. all threaded fittings shall be injection molded. All tees and elbows shall be side graded.
  - D. All threaded nipples shall be standard weight schedule 40 with molded threads. All threaded nipples shall be gray in color.
  - F. All lateral lines to be Hydro-Rain, Blu-Lock pipe and fittings. (See Spec Sheet)

**PART 3.0 - EXECUTION**

- 3.1 SITE CONDITIONS
  - A. Water Supply
    - 1. Make connection to existing water system.
  - B. Pipe Fittings
    - 1. All threaded pipe and fittings shall be assembled using Teflon tape or equivalent, applied to the male threads only.
    - 2. All plastic slip fittings shall be solvent welded as per pipe manufacturer's recommendations.
  - C. Line Clearance
    - 1. All lines shall have a minimum clearance of 4 inches from each other, and 6 inches from lines of other trades. Parallel lines shall be installed directly over one another.
  - D. Trenching
    - 1. Dig trench and support pipe continuously on bottom of ditch. Snake pipe in trench to an even grade.
    - 2. Provide minimum cover of 18 inches for pressure supply lines.
    - 3. Provide minimum cover of 16 inches for all control wires.
    - 4. Provide minimum cover of 12 inches for all other non-pressure.
  - E. Backfilling
    - 1. Backfilling for trenching shall be compacted to a dry density equal to the adjacent undisturbed soil, and shall conform to the adjacent grades without dips, sunken areas, humps or other irregularities. Initial backfill on all lines shall be of a fine granular material with no foreign matter larger than 1/2 size.
    - 2. Trenches shall be backfilled promptly after the open trench inspection.
  - F. Control Wires
    - 1. Unless otherwise specified connections between controller and remote control valves shall be made with direct burial wire AWG-UF type, installed in accordance with valve manufacturers wire chart and specifications.
    - 2. Between controller and remote control valves, use a continuous wire. Under no circumstances shall splices exist.
    - 3. Where more than one wire is placed in a trench, the wiring shall be taped together and to mainline at intervals of 10 feet.
    - 4. Wiring shall occupy the same trench and shall be installed along the same route as the pressure supply line whenever possible.
    - 5. An expansion loop of 12 inches shall be provided at each wire connection and/or directional turn.
    - 6. Sizing of wire shall be according to manufacturer's recommendations, in no case less than #14 in size.
  - G. Flushing the System
    - 1. After all new sprinkler pipe lines and risers are in place and connected, all necessary diversion work has been completed, and prior to installation of sprinkler heads, the control valves shall be opened and a full head of water used to flush out the system.

- 3.2 ADJUSTING OF SYSTEM
  - A. Adjust valves, alignment, and coverage of all sprinkler heads.
  - B. If it is determined that adjustments in the irrigation equipment or nozzle changes will provide proper and more adequate coverage, make all necessary changes, without additional cost, to the Owner, prior to any planting.
  - C. The entire system shall be operating properly before any planting operations commence.
  - D. Lower raised sprinkler heads in lawn areas within 10 days after notification by Landscape Architect.

- 3.3 CLEAN UP AND REPAIR
  - A. Upon completion of the work, make the ground surface level, remove excess materials, rubbish, debris, etc., and remove construction and installation equipment from the premises.
  - B. Replace and/or repair to the satisfaction of the Landscape Architect all existing paving disturbed during the course of this work. New paving shall be the same type, strength, texture, finish, and be equal in every way to the material removed.

- 3.4 GUARANTEE
  - A. The entire sprinkler system shall be guaranteed by the Contractor as to material and workmanship, including settling of backfilled areas for a period of one (1) year following the date of final acceptance of the work.

**PLANTING SPECIFICATIONS**

**PART 1.0 - GENERAL**

- 1.1 DESCRIPTION
  - A. Includes furnishing all labor, materials, and equipment required to provide and install the planting indicated on the plans and specification.
- 1.2 SUBMITTALS
  - A. Furnish material invoices indicating the quantities of fertilizer and soil amendments delivered to the job site. Material invoices must be approved by the Landscape Architect prior to incorporating soil amendments.
- 1.3 PROTECTION
  - A. Contractor shall check or locate existing structures, electric cables or conduits, utility lines and other existing features or conditions above or below ground that might be damaged as a result of his operation. Questions or conflicts arising out of such examination prior to or during operation shall be immediately directed to the attention of the Landscape Architect for necessary action or decisions before resuming operation. Contractor shall be responsible for repair or replacement at no cost to the Owner, for features or conditions damaged through failure to comply with above procedures.

- 1.4 ALTERNATES
  - A. Alternates will be permitted only upon written approval by the Landscape Architect.

**PART 2.0 - PRODUCTS**

- 2.1 MATERIALS
  - A. Nitrogen stabilized organic amendments as derived from wood residual.
  - B. Fertilizer shall be first grade commercial quality as specified.
  - C. Plant material
    - 1. Plant Quality
      - a. Plants shall be fresh, well established, vigorous, of normal habit of growth, free of diseases, insects, insect eggs, and larvae. Plants shall have healthy, normal root systems well filling their containers, but not to the point of being root bound.
    - 2. Tagged Plant Material
      - a. All plant material indicated as "tagged" shall be installed by the Contractor.
      - b. The Contractor shall be responsible for ordering, unloading, and purchasing of all "tagged" material from the specified source.
      - c. All "tagged" material shall have the same requirements as the non-tagged material of the contract.
    - 3. Plant Sizes
      - a. The height and spread of plant material shall be measured with branches in their normal position when plant is installed.
    - 4. Plant Quantities
      - a. Plant materials shall be furnished in size, quantities, species, and in the spacing as indicated on the plans.
      - b. Groundcover material shall be provided in quantity adequate to fill the entire groundcover areas at the spacing shown.

**PART 3.0 - EXECUTION**

- 3.1 SITE CONDITION
  - A. No plant materials shall be planted until all operations in conjunction with the installation of the sprinkler system have been completed, final grades established, and the planting areas have been properly graded and prepared.
- 3.2 GROUND PREPARATION
  - A. Remove from site dead or dying shrubs, trees, or weeds within proposed planting areas. When Bermuda Grass, Nut Grass or St. Augustine grass is present (2) grow kill cycles shall be performed prior to grading and soil preparation.
  - B. All planted areas, except slopes, shall be thoroughly ripped to a depth of 8", using ripper with teeth no wider than 12" o.c. Where possible, the ripping should be done in two directions to reduce the compaction which occurs as a result of construction.
  - C. Stones or rocks over 1" in size, construction refuse, and other deleterious material shall be removed from the site.
  - D. Wet soil thoroughly and allow to settle. Repeat this compaction procedure until soil is stable enough to permit aeration and drainage for plant material.
- 3.3 FINISHED GRADING
  - A. Finish grade all planting areas to a smooth, uniform surface ready for planting. Planting area finish grade shall be 1" below finish grade of adjacent paved surfaces unless otherwise noted on drawings.
- 3.4 PLANTING - TREES AND SHRUBS
  - A. Trees and shrub planting shall comply with details on plan.
  - B. Make necessary adjustments and excavate pits of circular outline with sloping sides for all plants. Scarify sides and bottoms of all plant pits.
  - C. Protect root ball of plants at all times from sun and drying winds.
  - D. If directed by the Landscape Architect, the Contractor shall prune plants in accordance with standard horticultural practice.
- 3.5 PLANTING - GROUNDCOVER
  - A. All groundcover shall be well rooted and shall be evenly spaced at distances indicated on the drawings, and shall be staggered in rows.
  - B. Dig good sized pockets for planting so that the root system lies free without doubling and so roots are planted vertically, not horizontally.
- 3.6 GUARANTEE
  - A. All specimen trees 24" box and larger shall be guaranteed for one full year, all 1/2 gal. plants for 6 months, all 1 gal. and 5 gal. plants for 3 months, lawns for 3 months, and flatbed groundcover for 30 days, from date of final acceptance.

**ADDITIONAL NOTES**

- 1.1 LAWN
  - A. All lawn/meadow areas to be sown shall be amended as follows: incorporate 1 yard of Harvest Blend compost from Agri Chip per 100 sq.ft. of planted area. Amendments shall be roto-tilled into top 8" of soil.
- 1.2 PLANTS
  - A. All 1 - 1/2 gal. plants shall be installed with gopher baskets.
- 1.3 D.G. PATHWAYS
  - A. All D.G. pathways shall be installed with D.G. stabilizer per manufacturers specifications.
- 1.4 DIMENSIONS
  - A. Written dimensions shall take precedence over scaled dimensions and shall be verified at the job site. Any dimensional discrepancy shall be brought to the attention of the Landscape Architect prior to the commencement of work.

**MAINTENANCE SPECIFICATIONS**

**PART 1.0 - GENERAL**

- 1.1 DESCRIPTION
  - A. Includes furnishing all labor, materials, and equipment required to continuously maintain all areas included in the contract during the progress of the work, the maintenance period and until final acceptance of the work.
- 1.2 MAINTENANCE PERIOD
  - A. After all work indicated on the drawings or herein specified, including all planting and sowing, has been completed, inspected and approved by the Landscape Architect, the Contractor shall maintain all planted areas by means of continuous watering, weeding, mowing, re-seeding, cultivating, spraying, mulching, trimming, edging, and/or any other operation necessary for their care and upkeep for the period of thirty (30) calendar days after aforementioned approvals, except that the maintenance period shall be extended to include the time necessary to:
    - 1. Meet the requirements and approval by the municipal or county agency having jurisdiction.
    - 2. Establish hydroseeded lawn areas.

- 1.3 REQUIREMENTS OF REGULATORY AGENCIES
  - A. Any required spraying work shall be done in accordance with governing agencies.

**PART 2.0 - PRODUCTS**

- 2.1 MATERIALS
  - A. All materials used in conjunction with the maintenance work shall conform to the material requirements originally specified for the work.

**PART 3.0 - EXECUTION**

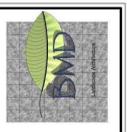
- 3.1 REPLACEMENTS
  - A. Contractor shall immediately replace any and all plant materials which, for any reason, dies or are damaged while under his care. Replacement plants shall be of the same quality as the original specified plants.
- 3.2 REPAIR
  - A. Damage to planting areas shall be repaired immediately.
  - B. Depressions caused by vehicles, equipment, and foot traffic shall be filled with soil, leveled, and replanted.
  - C. Exterminate gophers and moles, repair damage as above.
- 3.3 CLEAN-UP
  - A. All planted areas shall be kept free of debris, and shall be cultivated and weeded at not more than ten (10) day intervals.
  - B. At completion of the maintenance period, all areas included in the contract shall be clean and free of debris and weeds; all plant materials shall be live, healthy, and free of infestation.
- 3.4 FERTILIZING
  - A. Bandini "Gro-Pellets" (11-0-1) shall be applied at the rate of 20 pounds per 1,000 Sq. Ft., to all planting areas 25 and 55 days after the maintenance period is initiated.
  - B. Native plants receive native plant mulch in place of fertilizer and other amendments. Native oaks receive preferentially oak leaf mulch (but not from the diseased oak grove of the parcel) and native plant mulch from the SNM may be substituted. (Do not apply fertilizer, herbicides, or other chemical amendments to native plant areas.)

**GENERAL NOTES**

NO RODENTICIDES WITH ANTICOAGULANT MAY BE USED FOR REMOVAL OF RODENT PESTS. INSTEAD USE NON-PERVASIVE METHODS SUCH AS TRAPPING AND FUMIGATION.

**REVISIONS**

000016 - REVISIONS (PLS. SANI A MENEA MTR. LANDSCAPE, REVIEW)



**SPECIFICATIONS**

PROJECT: ROLLINS RESIDENCE / RURAL INN  
 95528 MULHOLLAND HWY  
 MALIBU, CA 90265

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 110 BOX 74  
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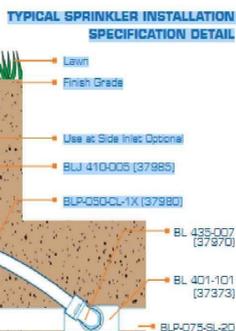
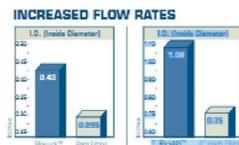
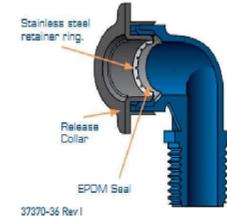


**SPECIFICATIONS**

- Blu-Lock® 1/2" (1.3 cm) Fittings:
  - Max working pressure: 80 PSI (5.5 BAR) at 72°F (23°C)
  - Burst Pressure: Exceeds 220 PSI (15.2 BAR)
  - Working Pressure: 10-80 PSI (0.69-5.5 BAR)
  - Body Material: ABS
  - Retaining Ring Material: Stainless Steel
  - Seal Material: EPDM
- Blu-Lock® 3/4" (1.9 cm) Fittings:
  - Max working pressure: 125 PSI (8.5 BAR) at 72°F (23°C)
  - Burst Pressure: Exceeds 250 PSI (17.2 BAR)
  - Working Pressure: 10-125 PSI (0.69-8.6 BAR)
  - Body Material: ABS
  - Retaining Ring Material: Stainless Steel
  - Seal Material: EPDM
- Blu-Lock® 1" (2.5 cm) Fittings:
  - Max Working Pressure: 150 PSI (10.3 BAR) at 72°F (23°C)
  - Burst Pressure: Exceeds 350 PSI (24.1 BAR)
  - Working Pressure: 10-150 PSI (0.69-10.3 BAR)
  - Body Material: ABS
  - Retaining Ring Material: Stainless Steel
  - Seal Material: EPDM
- Blu-Lock® 1/2" (1.3 cm) Lateral and Swing Pipe (LLD):
  - Operating Pressure: 80 PSI (5.5 BAR)
  - Pressure loss at 6 GPM: 5 PSI (0.3 BAR)
  - Outer Dimensions: .59" (1.5 cm)
  - Inner Dimensions: .43" (1.1 cm)
  - Wall Thickness: .08" (0.2 cm)
- Blu-Lock® 1" (2.54 cm) & 3/4" (1.90 cm) Lateral Pipe (HDPE):
  - Burst Pressure Rating: 320 PSI (22.06 BAR) at 72°F (23°C)
  - Working Pressure: 100 PSI (6.89 BAR)
  - Outer Dimensions: 3/4" - 9/4" (2.4 cm), 1.21" (3.1 cm)
  - Inner Dimensions: 3/4" - 8/4" (2.1 cm), 1.07" (2.1 cm)
  - Wall Thickness: .060" (0.2 cm)
  - Wt. Foot: .074 lbs. (0.03 Kg)

\* For non-constant pressure valve-out outdoor irrigation connections only.

**BLU-LOCK CUTAWAY**



1" (2.54 CM) PIPE PRESSURE LOSS				3/4" (1.9 CM) PIPE PRESSURE LOSS			
Flow (GPM)	Velocity (FPS)	Pressure Loss (PSI)		Flow (GPM)	Velocity (FPS)	Pressure Loss (PSI)	
1	0.80	0.15		1	0.80	0.15	
2	1.20	0.48		2	1.20	0.48	
3	1.60	1.00		3	1.60	1.00	
4	1.98	1.84		4	2.41	3.14	
5	2.36	2.98		5	2.81	4.48	
6	2.72	4.48		6	3.21	6.02	
7	3.07	6.32		7	3.61	7.78	
8	3.42	8.50		8	4.01	9.78	
9	3.76	11.02		9	4.41	12.02	
10	4.09	13.88		10	4.81	14.98	
11	4.42	17.08		11	5.21	18.58	
12	4.75	20.62		12	5.61	22.58	
13	5.07	24.50		13	6.01	27.02	
14	5.39	28.72		14	6.41	31.98	
15	5.71	33.28		15	6.81	37.48	

PSI VS. FLOW RATE			
PSI	1" GPM	3/4" GPM	
40	11	8	
50	12	9	
60	14	10	
70	16	11	

\* Measured in 100' lengths  
 Build It Green MEMBER

Working in a sprinkler trench is tough enough—don't make it harder by using traditional pipe fitting methods that require hot, toxic glue, clamps or frustrating barbed fittings. Hydro-Rain offers a better way: Blu-Lock.

Everything you do from the valve out, you can now do faster and easier with Blu-Lock. Primer? Glue? Clamps? Tools? With the Blu-Lock system, you don't need them!

Simply stated, Blu-Lock by Hydro-Rain is the fastest, greenest, irrigation installation method in the world.

**BUILT FOR SPEED ADVANTAGES**

- **Patented "Push-and-Go" Design**—100% tool and chemical free approach cut installation time in half.
- **True System Integration**—Total compatibility of fittings, pipe, manifolds, valves, saddles, and heads.
- **Exclusive Trench and Trenchless Technology**—Coil and straight length pipe options provide unrivaled flexibility.

**BUILT FOR GREEN ADVANTAGES**

- **Blu-Lock Pipe is Green**—Environmentally-friendly, recyclable HDPE pipe provides a superior alternative to PVC.
- **Blu-Lock Fittings are Green**—Outside diameter (OD) technology ensure lower friction loss for better efficiency.
- **And Both are Chemical Free**—Glueless, tool-free installation protects the environment and the long-term health of your crew.

**FEATURES AND BENEFITS**

- **Heavy-Duty Construction**—Built tough fittings made from UV-resistant ABS, stainless steel and EPDM seals are designed and tested to ensure toughness.
- **Patented Retaining System**—Stainless steel teeth grip pipe tight for a strong, leak-proof connection.
- **Outside Diameter (OD) Technology**—Flow is unimpeded for 25 percent increase in flow versus traditional insert fittings.
- **High Quality and "Easy-Flex"**—Blu-Lock lateral and swing pipe are made from virgin resins and meet ASTM standards.
- **Patented Quick-Release Collar**—1/2" swing fittings feature quick-release mechanism that allows tool-free removal.
- **Hydro-Rain Warranty**—3-year limited warranty on fittings, 30-year limited warranty on pipe. Some restrictions apply.

\* Minimum burst pressure varies according to pipe and fitting size. See specifications for details.



**SPECIFICATIONS**

**GENERAL NOTES:**

- ALL TREES RETAINED AND LISTED HAVE ENCROACHMENT AND WILL BE MONITORED FOR 10 YEARS.
- ALL ORIGINAL TREES WILL HAVE A UNIQUE NUMBER IN ADDITION TO THE ALPHANUMERIC CODE ON THE LANDSCAPE PLAN. THE ALPHANUMERIC CODE SHALL ALSO BE LISTED IN THE MONITORING REPORT TABLES FOR THE ORIGINAL PROTECTED TREES.
- ALL MITIGATED TREES SHALL BE OF SMM STOCK.
- MITIGATION TREES PLANTED WITHIN THE 10 YEAR PERIOD WILL ALSO BE UNIQUELY NUMBERED, CARED FOR, MONITORED, AND MAPPED.
- IF ANY OF THE ORIGINAL PROTECTED TREES, NOT ALREADY MITIGATED BY 10 TREES, DETERIORATE OR DIE, THEN 10 ADDITIONAL TREE OF THAT SPECIES FROM SMM STOCK, (1 GALLON 1-IN DIAMETER) OR SEEDLING-SIZED (<1 YR. AGE) TREES AS SPECIFIED IN PLAN, SHALL BE PLANTED AND INCLUDED IN THE ANNUAL TREE REPORT AND MAP. OAKS ARE REQUIRED TO BE MITIGATED BY 1-GALLON CONTAINER TREES FROM ACORNS OF THE VICINITY 1-IN DIAMETER AT 1-FT. FROM GROUND. OAK MITIGATION TREES NEED AN ACORN PLANTED IN THE IRRIGATION ZONE OF THE SAME SPECIES FROM SMM STOCK. OFF-SITE AREAS PROTECTED FROM DEVELOPMENT MAY BE USED, IF THE PROJECT SPACE IS NOT SUFFICIENT TO ACCOMMODATE ALL MITIGATION TREES. ANY OFF-SITE AREA SHALL BE DESCRIBED FOR LOCATION AND ADDED TO THE ANNUAL REPORTS; OFF-SITE MITIGATION TREES SHALL BE UNIQUELY ENUMERATED, TAGGED, MONITORED FOR THE REMAINDER OF THE 10-YEAR TERM, AND MAPPED.
- DURING THE 10-YEAR PERIOD, MITIGATION TREES THAT DETERIORATE OR DIE SHALL BE REPLACED BY 1 GALLON TREES OF AT LEAST 1-IN DIAMETER OR SEEDLINGS (< 1 YR. AGE), AS SPECIFIED IN THE PLAN, AND THESE SHALL ALSO RECEIVE UNIQUE NUMBERS, BE PLANTED, MONITORED, AND MAPPED. OAKS ARE REQUIRED TO BE OF ACORNS OF THE SAME SPECIES FROM THE AREA, PLANTED OUT FROM 1-GALLON CONTAINERS AND OF 1-IN DIAMETER AT 1-FT. FROM GROUND. PLANTING SHOULD BE DONE IN THE FALL WITHIN THE YEAR OF THE DEATH.
- AN ACORN OF SMM STOCK OF THE SAME SPECIES SHALL BE PLANTED WITH EACH MITIGATED OAK TREE AND FLAGGED FOR FUTURE MONITORING.
- SUCCESS OF ACORNS PLANTED SHALL BE IN ANNUAL RECORD FOR MITIGATION OAKS
- PERFORMANCE DESCRIBING WHAT CONSTITUTES MINIMUM DETERIORATION THAT REQUIRES MITIGATION PLANTING SHALL BE DESCRIBED FOR BOTH ORIGINAL TREES AND MITIGATION TREES. (See attached Narrative)
- CARE OF THE ORIGINAL TREES SHALL BE DESCRIBED FOR OAKS AND OTHER SPECIES INCLUDING NO IRRIGATION IN TREE PROTECTION ZONE (1FZ), SCHEDULE FOR IRRIGATION IN TIMES OF DROUGHT, WEEDING BY HAND TOOLS, BUILDUP OF OAK TREE LEAVES IN PROTECTED ZONE TO A DEPTH OF 6-IN. (See attached Narrative)
- CARE OF MITIGATION TREES SHALL BE DESCRIBED FOR METHODS, IRRIGATION SCHEDULE, GENERALLY WITH IRRIGATION REMOVAL AFTER TREE ESTABLISHED IN 2-3 YEARS. (See attached Narrative)

QUERCUS AGRIFOLIA (E00)  
- Located 1000' E of NE corner of property; shown off plan. Minor (10-30%) utility impact to trees will occur. Proper fencing and tree protection standards apply.

**Legend**

- Proposed Structure Outline
- Proposed Paving Outline
- Existing Structure Outline
- (N) 3' High Split Rail Fence Detail D1.4.1
- Rock with Lichen (H1-category)
- Catalina Manrosera-lilies (to be transplanted from hub)
- H1-category sensitivity
- H2-category sensitivity

**New Tree Mitigation Legend**

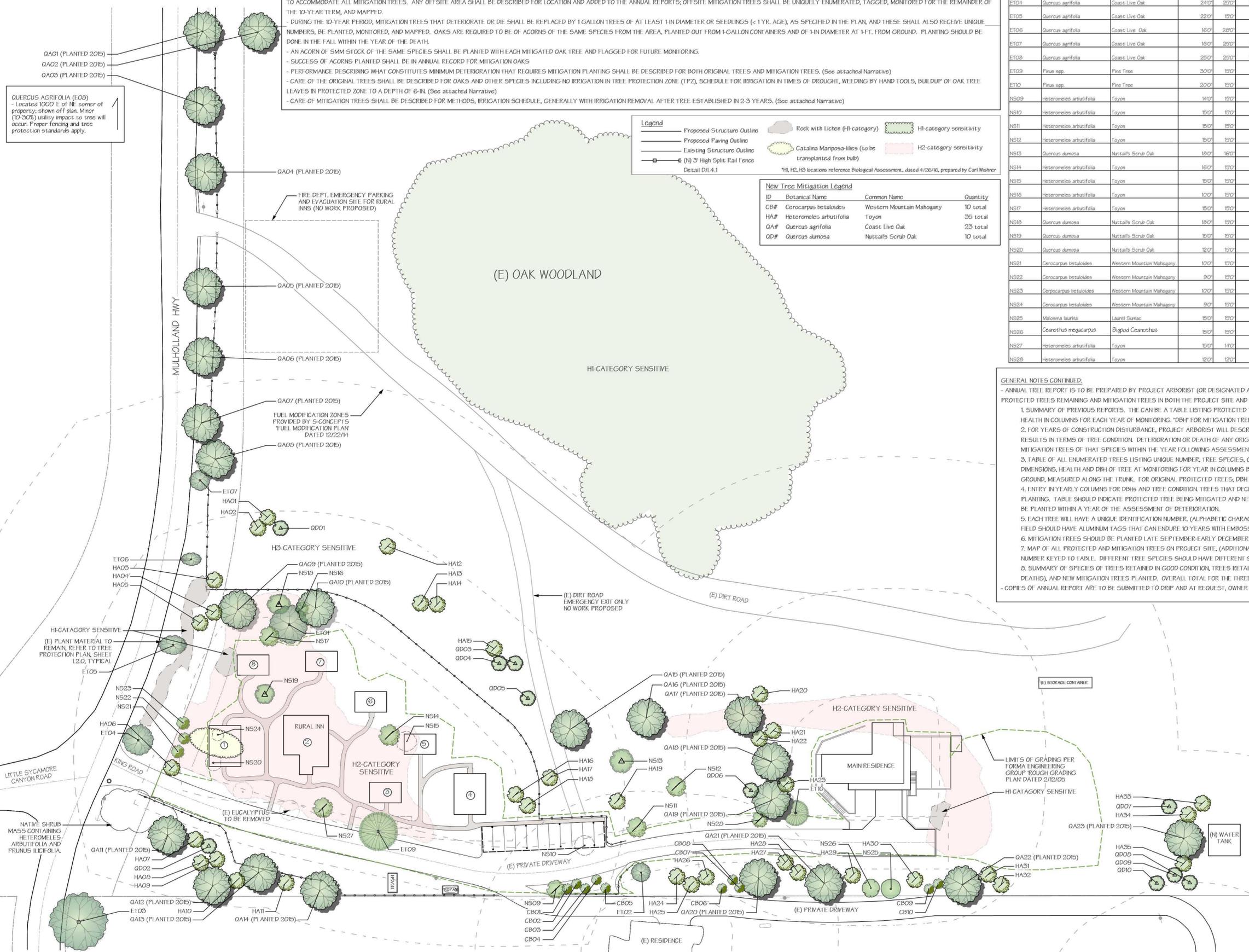
ID	Botanical Name	Common Name	Quantity
CB#	Cercocarpus betuloides	Western Mountain Mahogany	10 total
HA#	Heteromeles arbutifolia	Toyon	35 total
QA#	Quercus agrifolia	Coast Live Oak	23 total
QD#	Quercus dumosa	Nuttall's Scrub Oak	10 total

\*H1, H2, H3 locations reference Biological Assessment, dated 4/26/16, prepared by Carl Wisner

ID	Botanical Name	Common Name	Canopy (Diameter)	Height	DBH	Condition	Action	Mitigation Ratio (# of replacement trees required for every 1 tree impacted/removed)	Notes
E101	Quercus agrifolia	Coast Live Oak	30'0"	25'0"	15"	Rating - 80	Retain	None	co-dominant/double/triple infestation
E102	Quercus agrifolia	Coast Live Oak	15'0"	16'0"	10"	Rating - 90	Retain	> 30% Encroachment - 10:1	reduction pruning needed to improve form
E103	Quercus agrifolia	Coast Live Oak	45'0"	50'0"	23"	Rating - 85	Retain	None	Located on steep slope
E104	Quercus agrifolia	Coast Live Oak	24'0"	25'0"	16"	Rating - 60	Retain	10-30% Encroachment - 5:1	co-dominant/poor structural form
E105	Quercus agrifolia	Coast Live Oak	22'0"	19'0"	18"	Rating - 60	Retain	None	double/co-dominant
E106	Quercus agrifolia	Coast Live Oak	16'0"	28'0"	11"	Rating - 80	Retain	None	triple
E107	Quercus agrifolia	Coast Live Oak	16'0"	25'0"	15"	Rating - 75	Retain	None	Located 1000' E of NE corner of property
E108	Quercus agrifolia	Coast Live Oak	25'0"	25'0"	14"	Rating-75	Retain	10-30% Encroachment - 5:1	
E109	Pinus spp.	Pine Tree	30'0"	19'0"	18"	Average	Retain	None	
E110	Pinus spp.	Pine Tree	20'0"	19'0"	18"	Average	Retain	None	
N509	Heteromeles arbutifolia	Toyon	14'0"	19'0"	10"	Good	Retain	> 30% Encroachment - 10:1	6 central stems
N510	Heteromeles arbutifolia	Toyon	15'0"	19'0"	12"	Good	Remove	Removal - 10:1	
N511	Heteromeles arbutifolia	Toyon	15'0"	19'0"	10"	Good	Retain	10-30% Encroachment - 5:1	3 central stems
N512	Heteromeles arbutifolia	Toyon	15'0"	19'0"	8"	Good	Retain	None	10 central stems
N513	Quercus dumosa	Nuttall's Scrub Oak	18'0"	16'0"	8"	Good	Retain	None	5 central stems
N514	Heteromeles arbutifolia	Toyon	16'0"	19'0"	4"	Good	Retain	Mitigation not required due to DBH	
N515	Heteromeles arbutifolia	Toyon	15'0"	19'0"	6"	Good	Remove - Within building footprint	Mitigation not required due to DBH	triple
N516	Heteromeles arbutifolia	Toyon	10'0"	19'0"	6"	Average	Retain	None	7 central stems
N517	Heteromeles arbutifolia	Toyon	15'0"	19'0"	6"	Average	Retain	None	12 central stems
N518	Quercus dumosa	Nuttall's Scrub Oak	18'0"	19'0"	9"	Average	Retain	None	triple
N519	Quercus dumosa	Nuttall's Scrub Oak	15'0"	19'0"	5"	Poor	Retain	Mitigation not required due to DBH	Adjust path location to preserve tree; thicket, 20 central stems
N520	Quercus dumosa	Nuttall's Scrub Oak	12'0"	19'0"	12"	Average	Remove - Within building footprint	Removal - 10:1	
N521	Cercocarpus betuloides	Western Mountain Mahogany	10'0"	19'0"	6"	Good	Retain	None	6 central stems
N522	Cercocarpus betuloides	Western Mountain Mahogany	9'0"	19'0"	6"	Good	Retain	None	
N523	Cercocarpus betuloides	Western Mountain Mahogany	10'0"	19'0"	6"	Good	Retain	None	
N524	Cercocarpus betuloides	Western Mountain Mahogany	9'0"	19'0"	12"	Average	Remove - Within building footprint	Removal - 10:1	
N525	Malosma laurina	Laurel Sumac	15'0"	19'0"	15"	Average	Retain	None	4 central stems
N526	Ceanothus megacarpus	Bigpod Ceanothus	15'0"	19'0"	7"	Average	Retain	None	5 central stems
N527	Heteromeles arbutifolia	Toyon	15'0"	14'0"	6"	Good	Retain	Mitigation not required due to DBH	Adjust path location to preserve tree - 6 central stems
N528	Heteromeles arbutifolia	Toyon	12'0"	12'0"	6"	Good	Retain	> 30% Encroachment - 10:1	

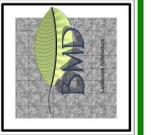
**GENERAL NOTES CONTINUED:**

- ANNUAL TREE REPORT IS TO BE PREPARED BY PROJECT ARBORIST (OR DESIGNATED ALTERNATIVE ACCEPTABLE TO DRIP). MONITORING WILL ENCOMPASS ORIGINAL PROTECTED TREES REMAINING AND MITIGATION TREES IN BOTH THE PROJECT SITE AND ANY OFF-SITE AREAS. CONTENTS:
  - SUMMARY OF PREVIOUS REPORTS. THIS CAN BE A TABLE LISTING PROTECTED TREES AND MITIGATION TREES BY NUMBER, SHOWING RESULTS OF TREE DBH AND HEALTH IN COLUMNS FOR EACH YEAR OF MONITORING. "DBH" FOR MITIGATION TREES WILL BE MEASURED AT 1-FT. FROM THE GROUND.
  - FOR YEARS OF CONSTRUCTION DISTURBANCE, PROJECT ARBORIST WILL DESCRIBE INSTITUTED TREE PROTECTIVE MEASURES FOR ALL ORIGINAL PROTECTED TREES. RESULTS IN TERMS OF TREE CONDITION, DETERIORATION OR DEATH OF ANY ORIGINAL PROTECTED TREE WILL NEED TO BE MITIGATED BY PLANTING 10 ADDITIONAL MITIGATION TREES OF THAT SPECIES WITHIN THE YEAR FOLLOWING ASSESSMENT OF THE DETERIORATION. (See attached Narrative)
  - TABLE OF ALL ENUMERATED TREES LISTING UNIQUE NUMBER, TREE SPECIES, ORIGINAL TRUNK OR TWO-TRUNKS' DBH, ORIGINAL CANOPY DIAMETERS IN N-S AND E-W DIMENSIONS, HEALTH AND DBH OF TREE AT MONITORING FOR YEAR IN COLUMNS BY YEAR. FOR MITIGATION TREES, MEASUREMENT OF "DBH" IS DONE 1-FT. FROM GROUND, MEASURED ALONG THE TRUNK. FOR ORIGINAL PROTECTED TREES, DBH IS MEASURED AT 4.5-FT. FROM GROUND ALONG THE TRUNK(S). (See attached Matrix)
  - ENTRY IN YEARLY COLUMNS FOR DBHs AND TREE CONDITION. TREES THAT DECLINE BEYOND THE PERFORMANCE LIMIT NEED TO BE INDICATED FOR MITIGATION PLANTING. TABLE SHOULD INDICATE PROTECTED TREE BEING MITIGATED AND NEW UNIQUE IDENTIFICATION NUMBERS OF MITIGATION TREES. MITIGATION TREES NEED TO BE PLANTED WITHIN A YEAR OF THE ASSESSMENT OF DETERIORATION.
  - EACH TREE WILL HAVE A UNIQUE IDENTIFICATION NUMBER. (ALPHABETIC CHARACTERS MAY IDENTIFY TREE SPECIES, BUT NUMBER NEEDS TO BE UNIQUE.) TREES IN FIELD SHOULD HAVE ALUMINUM TAGS THAT CAN ENDURE 10 YEARS WITH EMBOSSED NUMBERS THAT MATCH IDENTIFICATION NUMBERS ON THE MAP.
  - MITIGATION TREES SHOULD BE PLANTED LATE SEPTEMBER-EARLY DECEMBER (FALL), TAGGED WITH IDENTIFICATION NUMBERS, AND MAPPED.
  - MAP OF ALL PROTECTED AND MITIGATION TREES ON PROJECT SITE. (ADDITIONAL MAP(S) FOR EACH OFF-SITE MITIGATION AREA) WITH TREE POSITION SHOWN BY NUMBER KEYED TO TABLE. DIFFERENT TREE SPECIES SHOULD HAVE DIFFERENT SYMBOLS, AND LEGEND AS A KEY TO SYMBOL.
  - SUMMARY OF SPECIES OF TREES RETAINED IN GOOD CONDITION, TREES RETAINED IN CONDITION WORSE THAN PERFORMANCE LEVEL SPECIFICATION (INCLUDES DEATHS), AND NEW MITIGATION TREES PLANTED. OVERALL TOTAL FOR THE THREE CATEGORIES. (See attached Narrative)
- COPIES OF ANNUAL REPORT ARE TO BE SUBMITTED TO DRIP AND AT REQUEST, OWNER OF PROJECT.



**REVISIONS**

NO.	DATE	DESCRIPTION
001	07/28/2016	ISSUE FOR PERMIT REVIEW



**NATIVE TREE REPLACEMENT PLANTING PROGRAM**

**ROLLINS RESIDENCE / RURAL INN**  
35528 MULHOLLAND HWY  
MALIBU, CA 90265

**BILL MELLETT DESIGN LANDSCAPE ARCHITECTURE**  
BILL MELLETT DESIGN LANDSCAPE ARCHITECTURE  
CANTONIA, CA 95014  
BILL.MELLETT@GMAIL.COM (408) 440-0148

DATE: 07/28/2016  
SCALE: AS SHOWN  
DRAWN: WLM-CAZ  
JOB: 1547  
SHEET: L6.0  
11 of 11 Sheets

