

LA MESA ART ACADEMY
4200 PARKS AVENUE
LA MESA, CA 91941

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

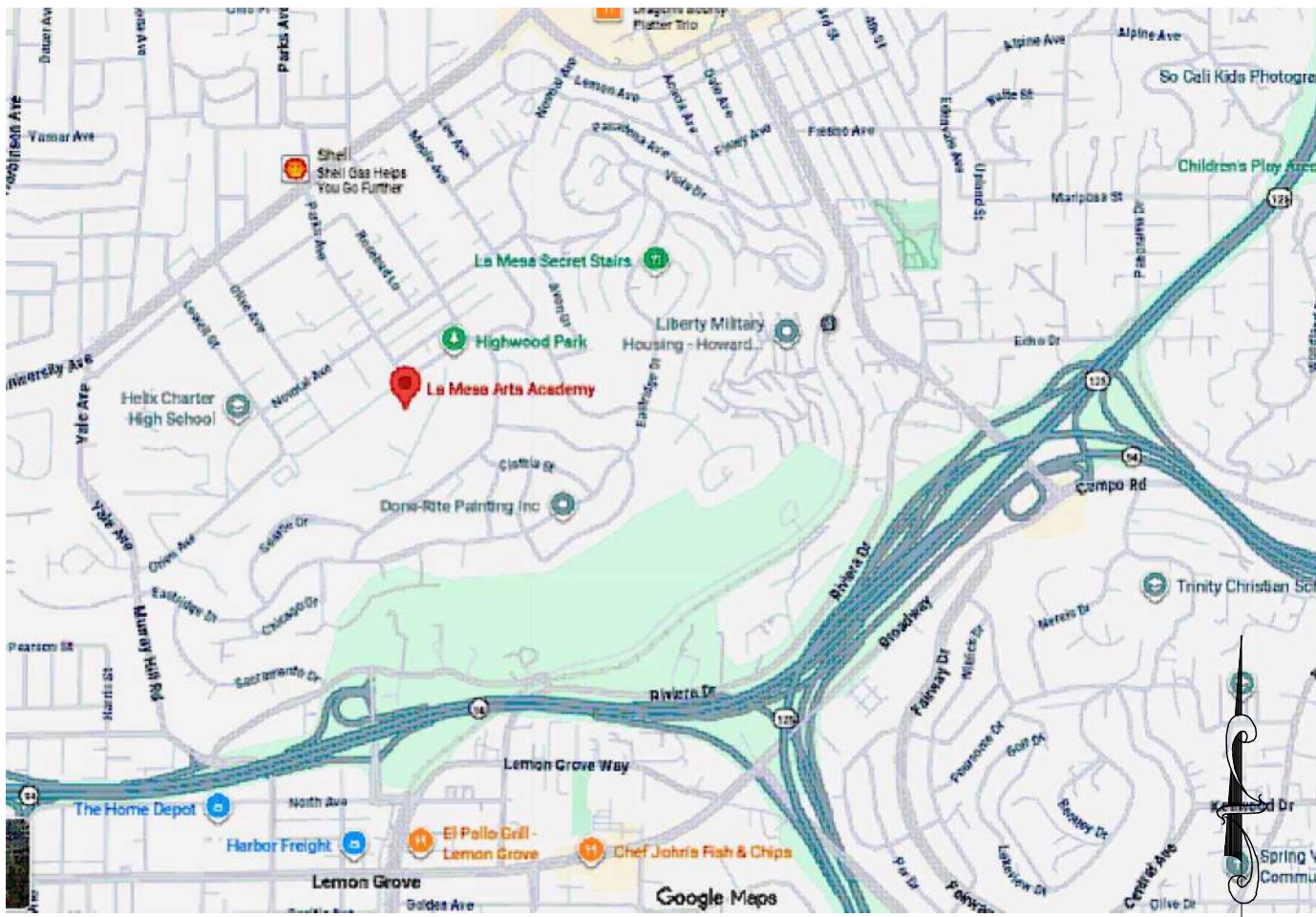
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

REVISIONS

NO.	REVISION	FOR	BY	DATE	APPROVED BY
△					

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L1.0	TITLE SHEET
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L2.3	PLANTING NOTES



Know what's below.
Call before you dig.

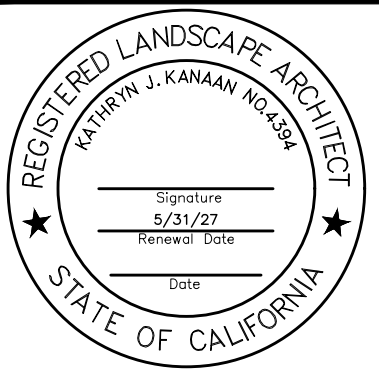
CONSULTANTS



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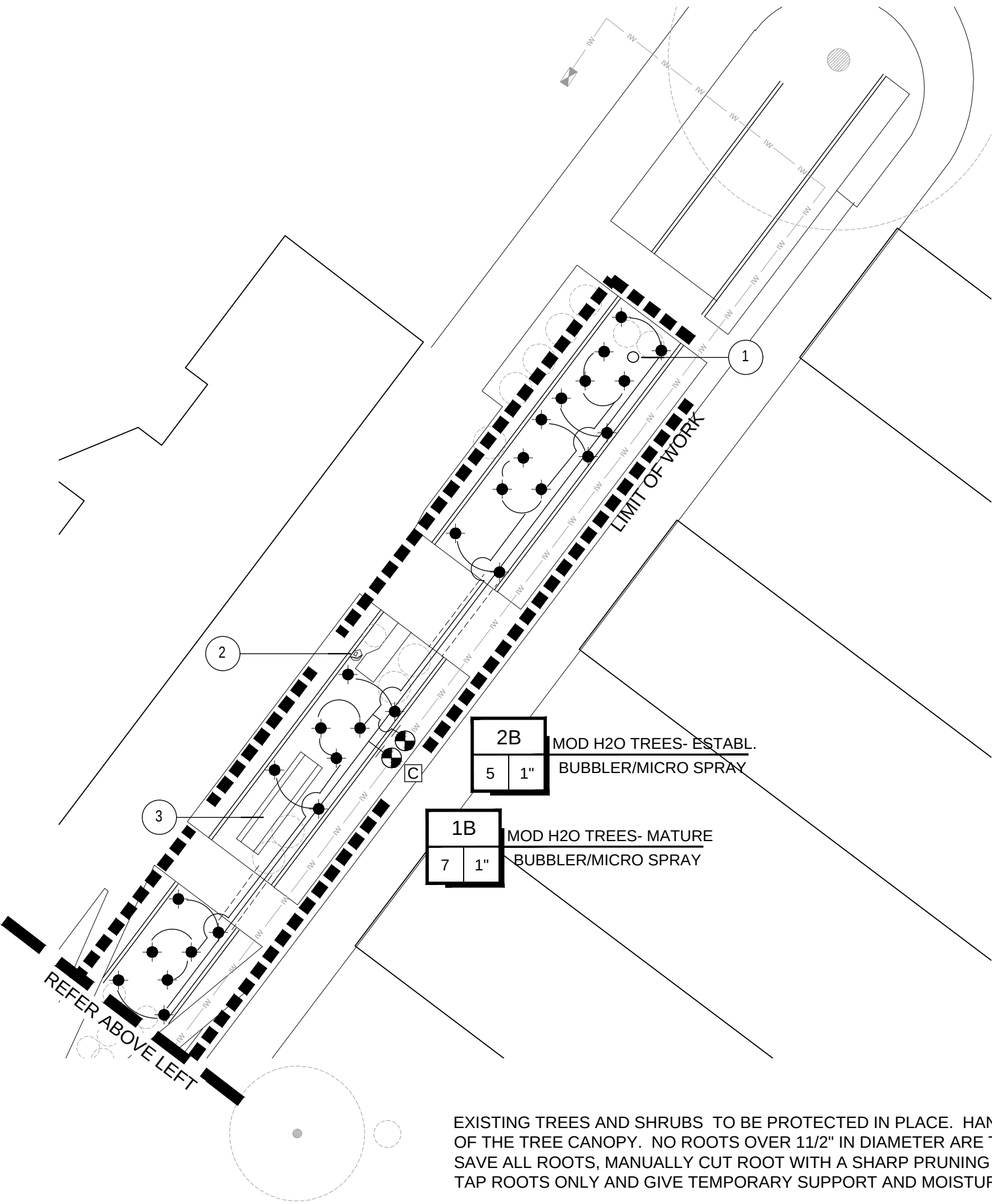
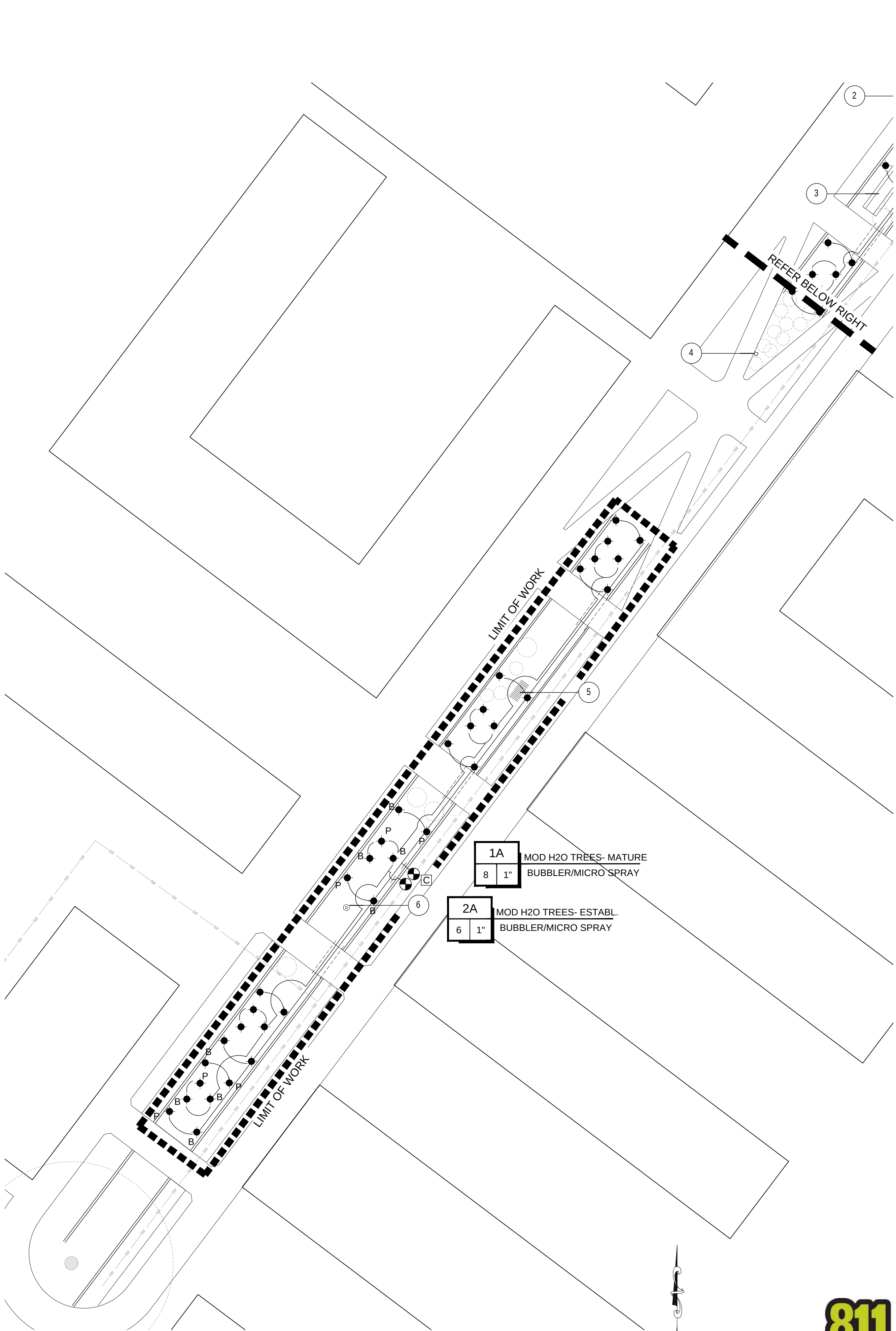


SHEET TITLE
TITLE SHEET

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L1.0
OF 09 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\SD CAL FIRE GRANT LANDSCAPE\AUTOCAD\CD\SILA MESA ARTS ACADEMY\26004 LMAA IP.DWG



EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

IRRIGATION NOTES:

1. REFER TO IRRIGATION DETAILS AND SPECIFICATIONS SHEETS L1.1.
2. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
3. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
4. LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
5. MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
6. MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
7. ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUNDCOVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
8. ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
9. LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
10. ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
11. THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
12. INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
13. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE, EXTEND EXISTING MAINLINE, SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	'C/L1.2	(2, 3)
	RAINBIRD TBO5-BT2LT BATTERY OPERATED CONTROLLER	2 ST.	'C/L1.2	
	EXISTING BACKFLOW PREVENTER TO BE PROTECTED IN PLACE	-		
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	-		
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER. WATER BORE WHENEVER POSSIBLE WITHOUT DAMAGING EXISTING PLANT MATERIAL.	3"	'A, B'/ L1.2	(1, 2)
NOT SHOWN	UF RATED CONTROL WIRE, 12 GA COMMON, 14 GA PILOT - 18" MIN. COVER	12/14 GA	'A, B'/ L1.2	
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS				
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P', RAINBIRD 1806-SAM W/ R-VAN14 NOZZLES FOR MATURE 'P' TREES IN PLANTERS. RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+ .5 .28 +.5	ESTABLISH MATURITY 'D-F'/ L1.2
MISCELLANEOUS				
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART		
1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART	
	3/4" PIPE
	1" PIPE

STATION NUMBER	
FLOW (GPM)	VALVE SIZE



LANDSCAPE ARCHITECTS

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PROJECT:

LA MESA ARTS ACADEMY

4200 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



REGISTERED LANDSCAPE ARCHITECT
MATTHEW J. KANAAN NO. 14044
Signature
5/31/27
Reviewed Date
Date

SHEET TITLE

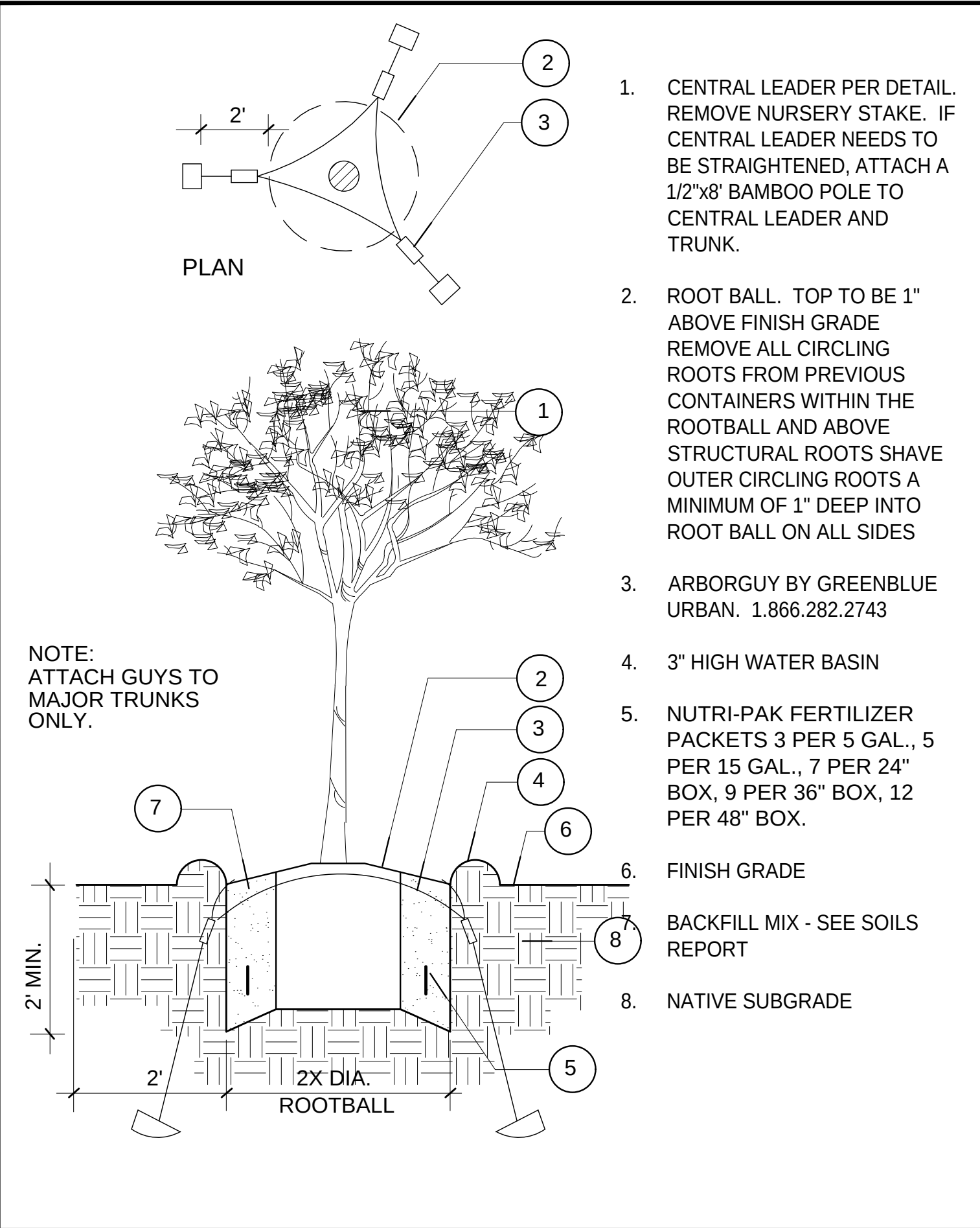
IRRIGATION PLAN

DESIGNED	KJK
DRAWN	KJK
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SCALE	1"=20'-0"
JOB NO.	26004

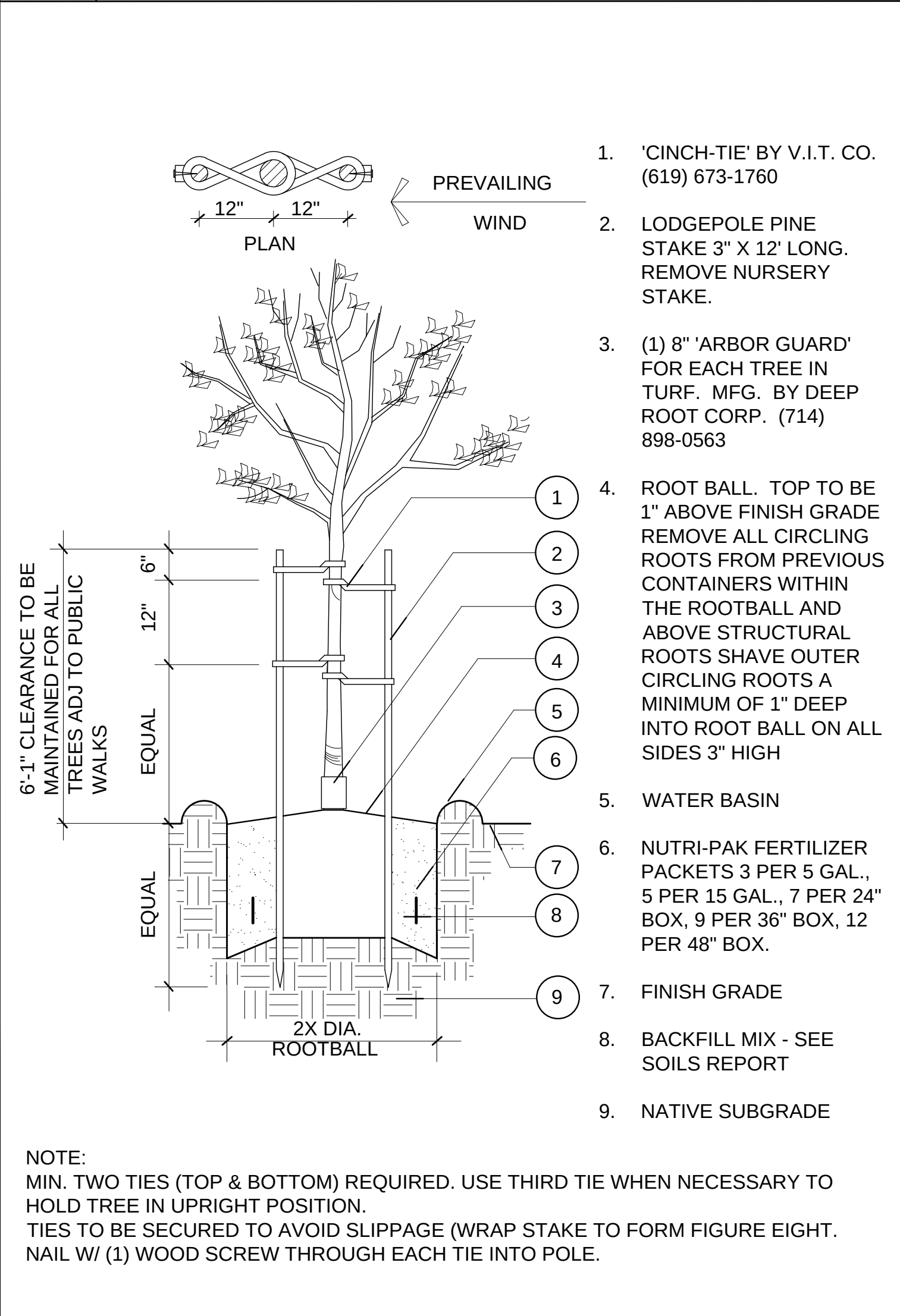
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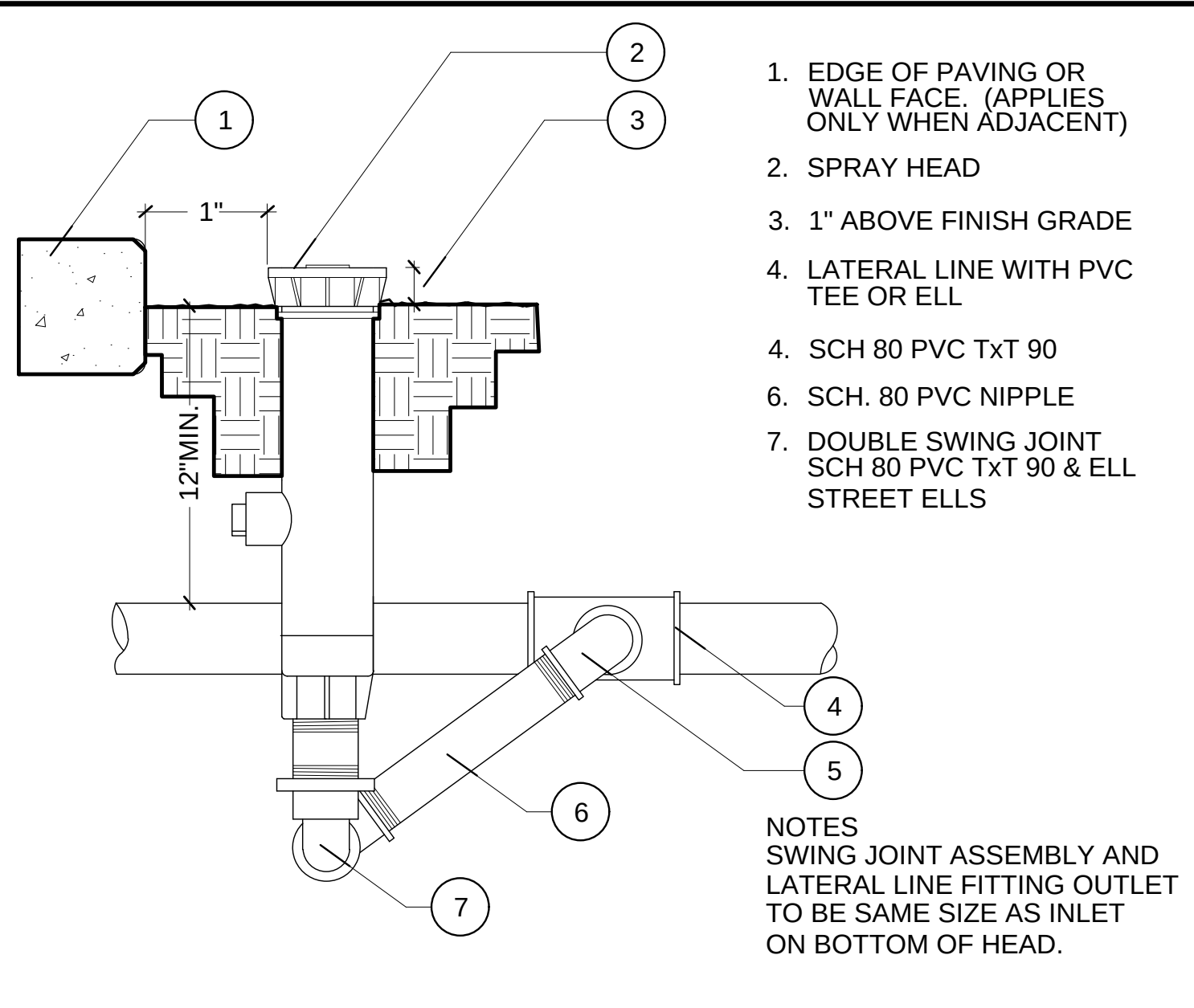
OF 09 SHEETS



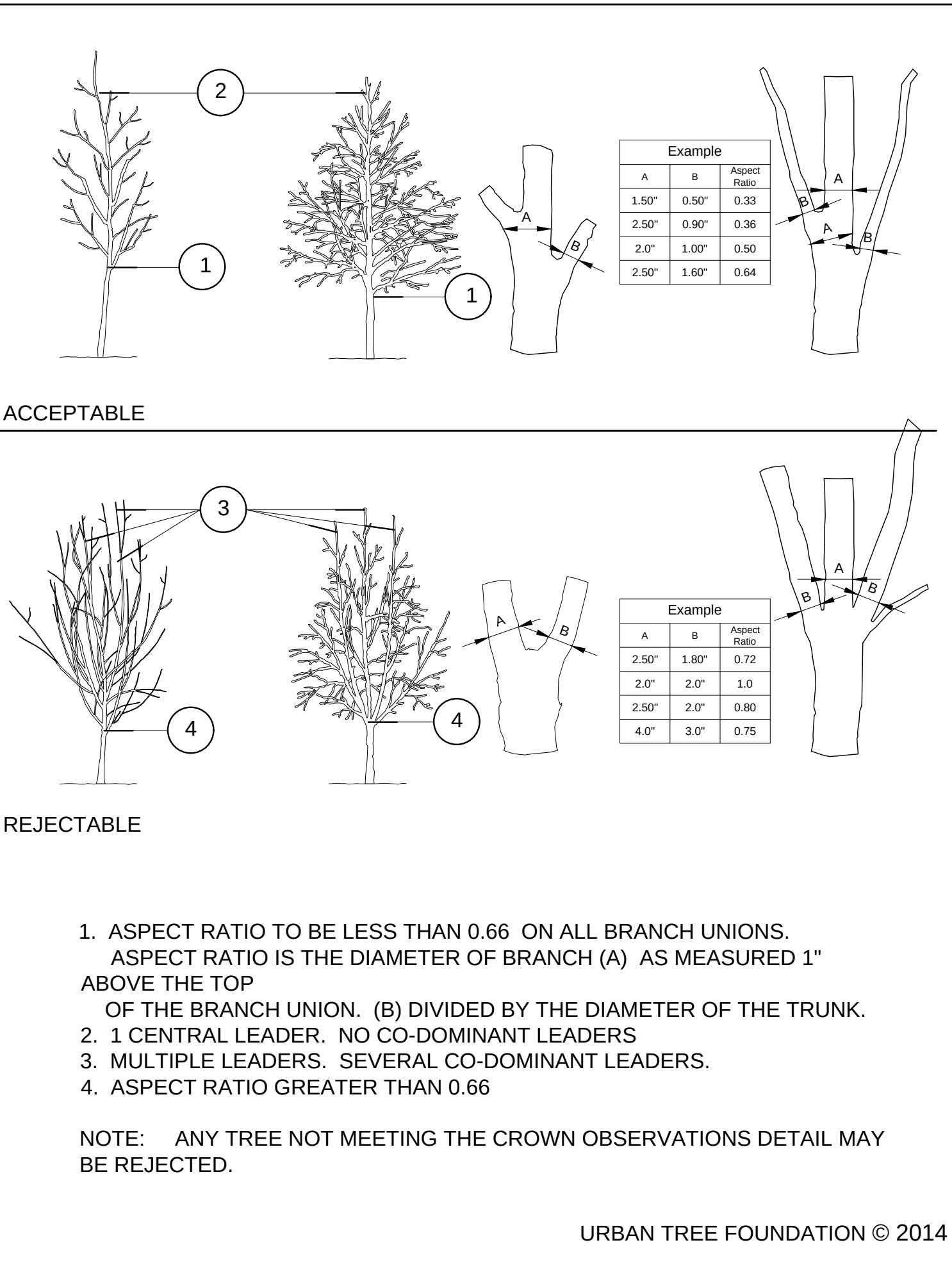
H TREE DUCKBILL GUY



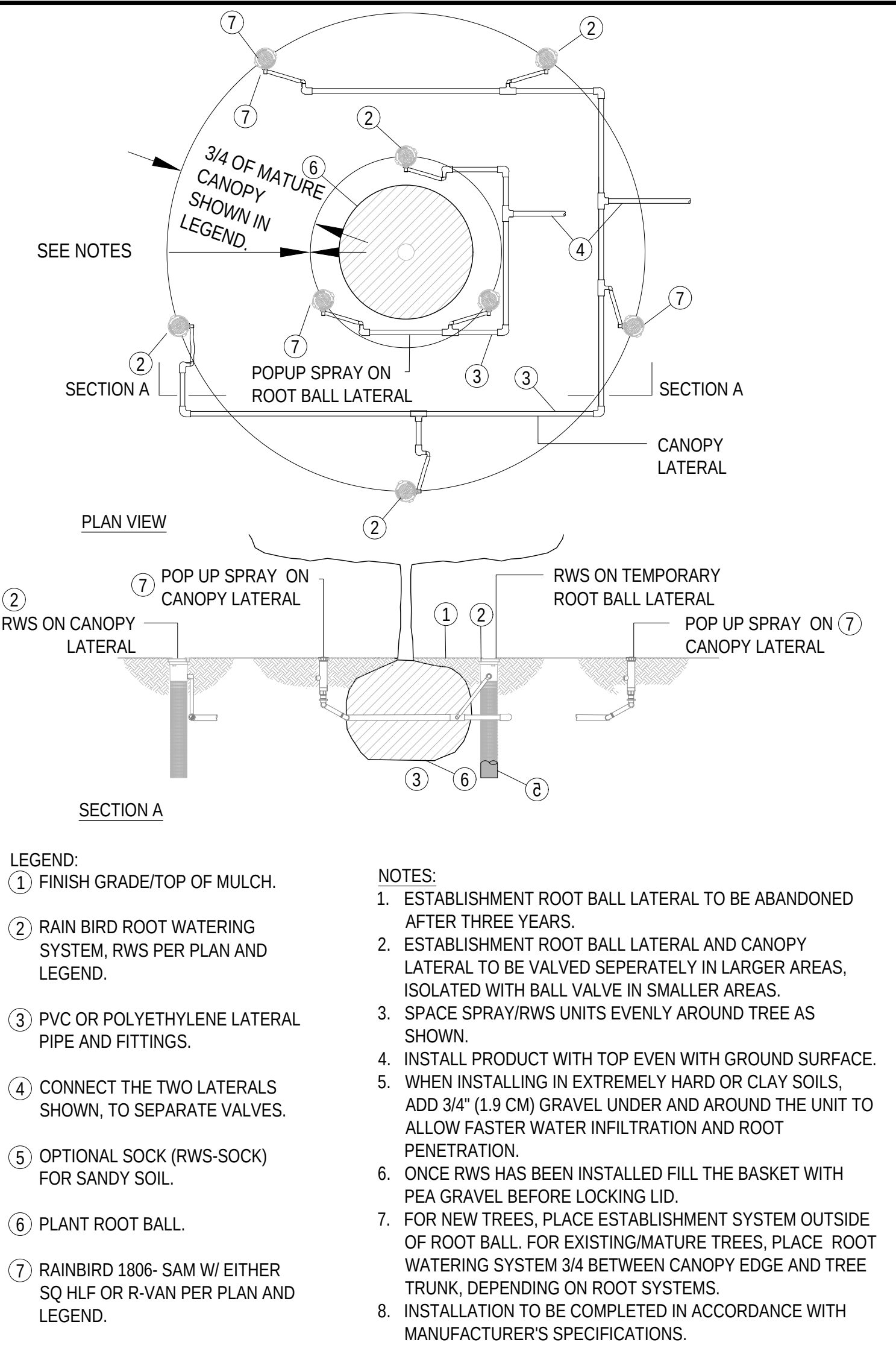
I DOUBLE STAKED TREE



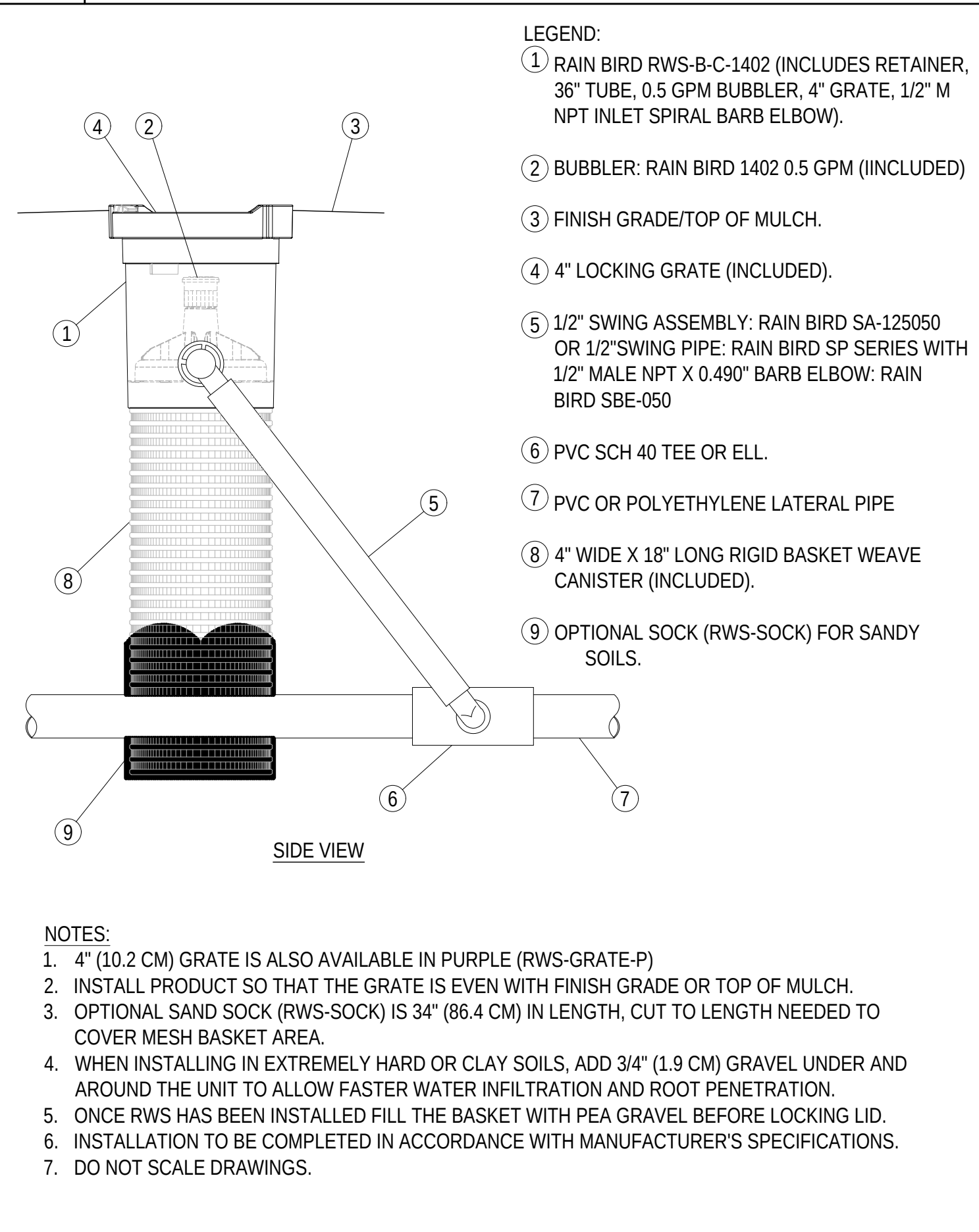
F SHRUB SPRAY HEAD



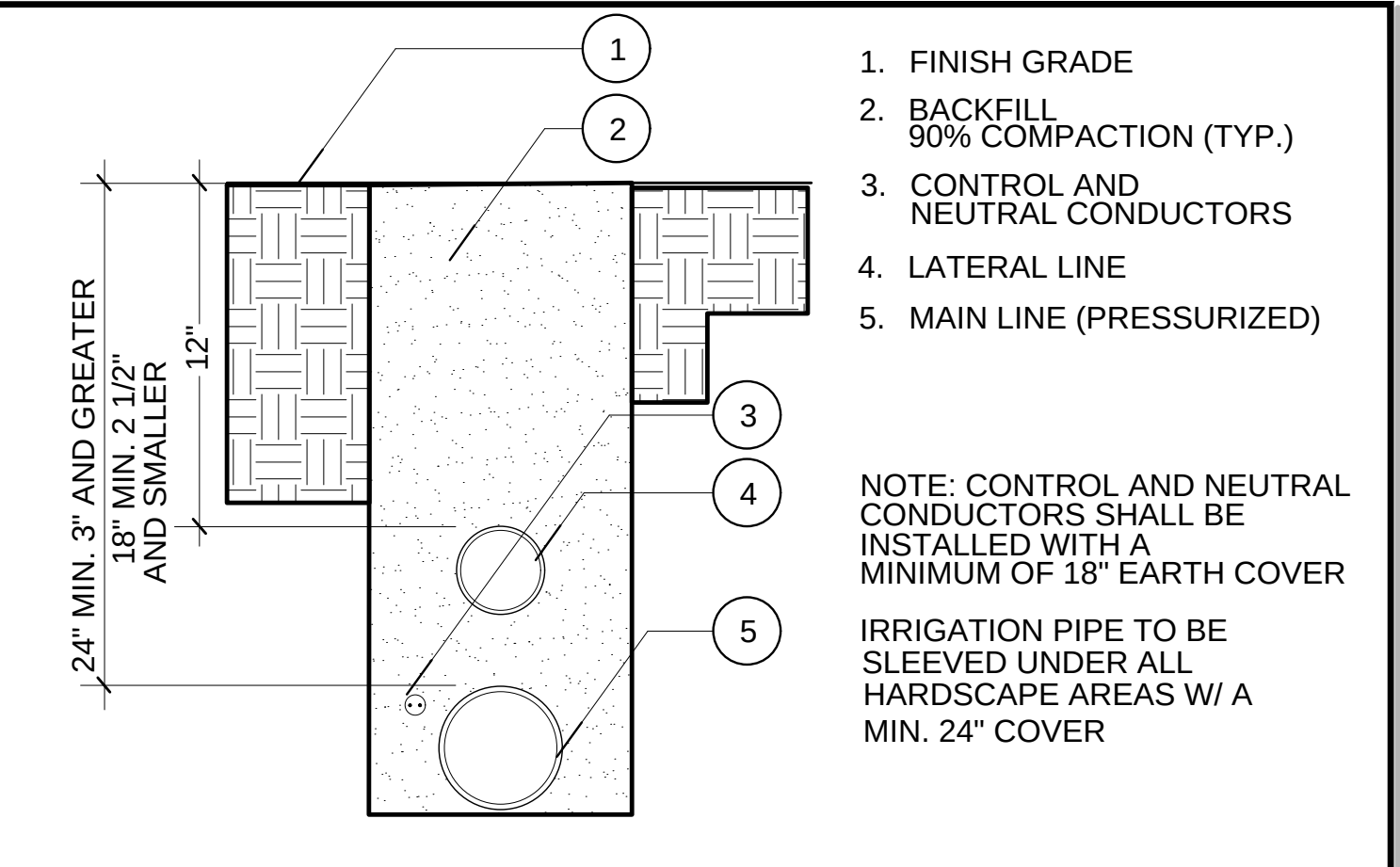
G HIGH BRANCHED CROWN OBSERV.



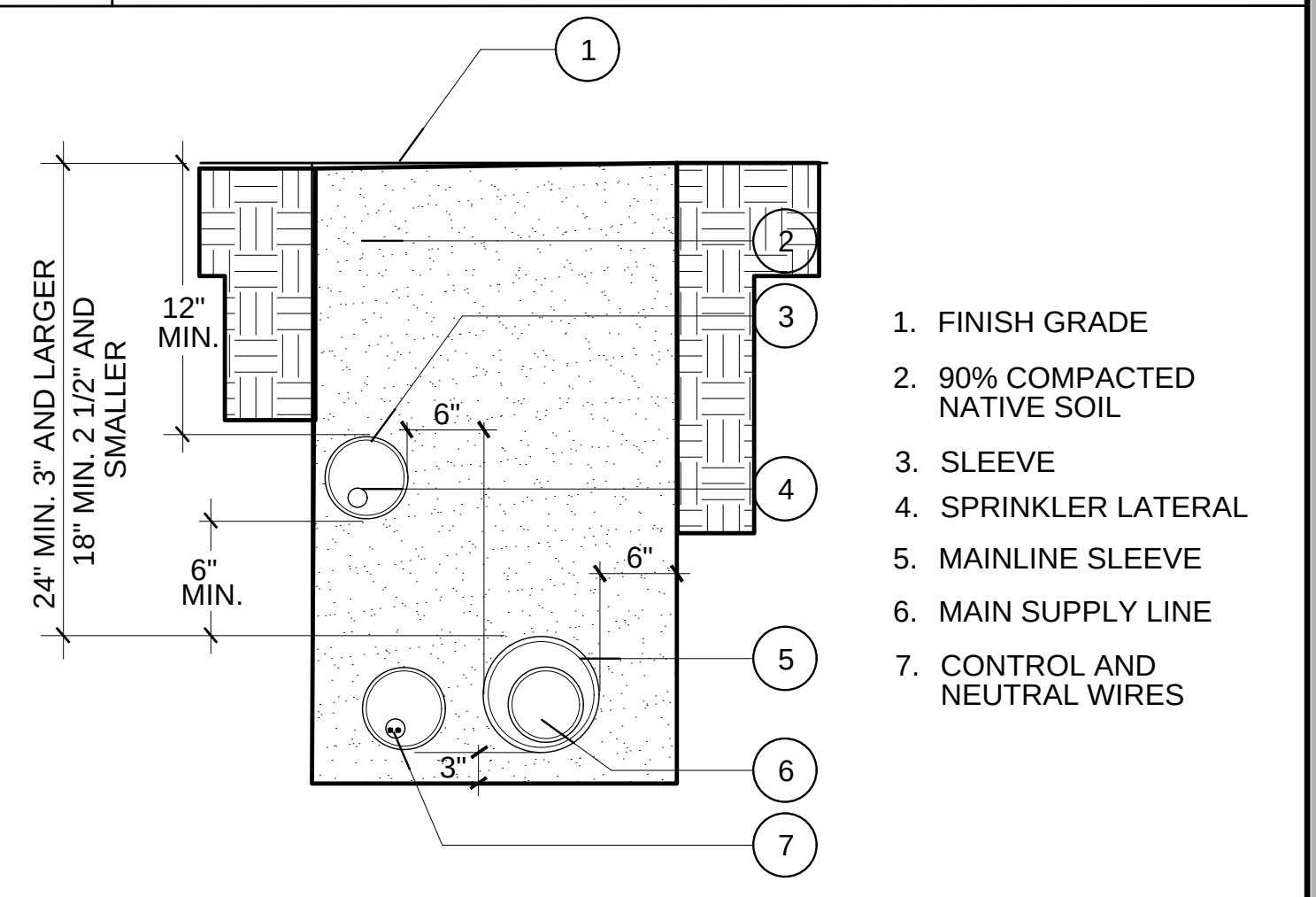
D TREE WATERING LAYOUT



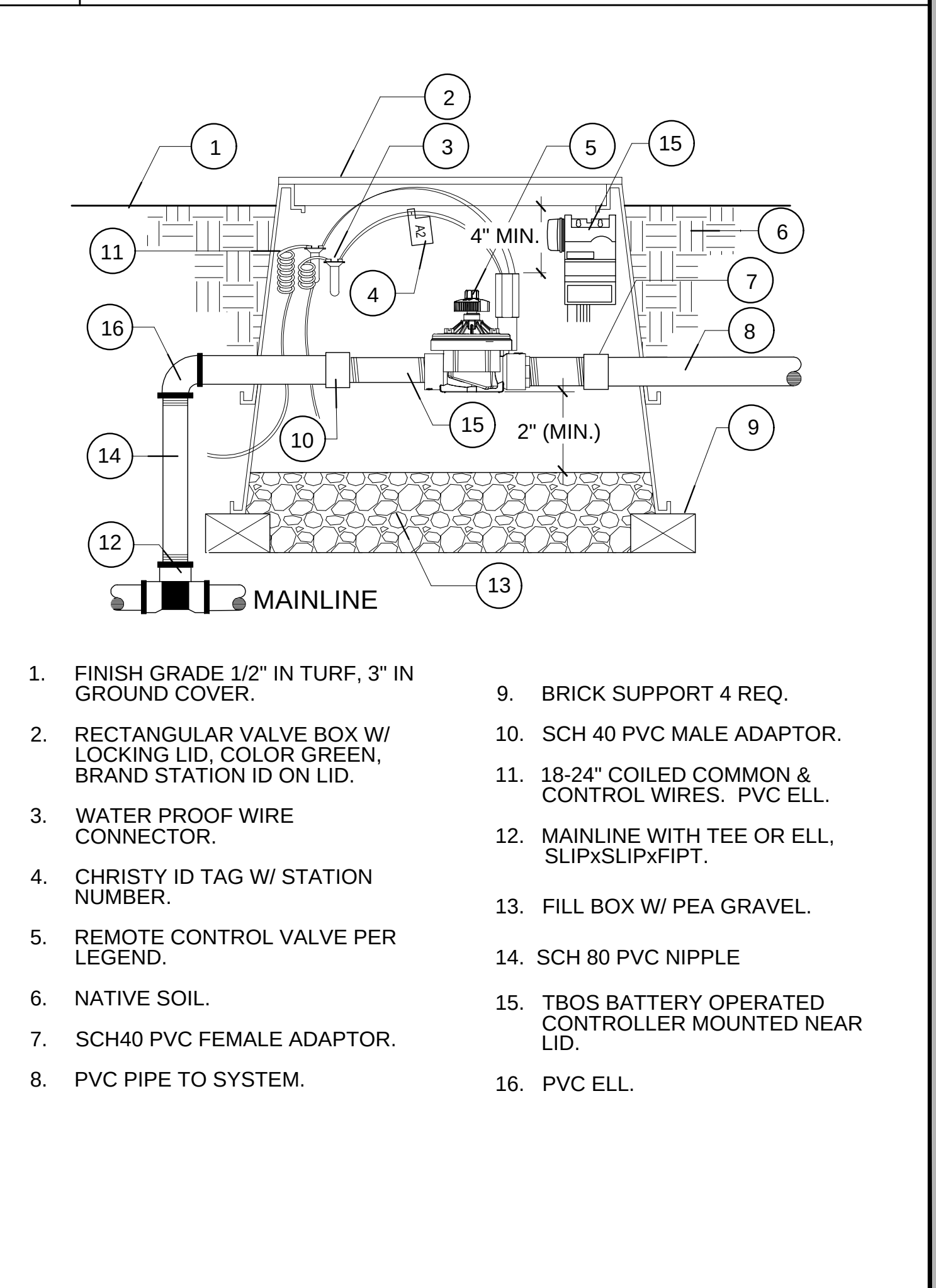
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER

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SHEET TITLE
**IRRIGATION/
PLANTING
DETAILS**

DESIGNED	KJK
DRAWN	KJK
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SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L1.2
OF 09 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE KEPT TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.
- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT A LIST OF THE MATERIALS AND PROPOSALS TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
- § CONNECTIONS TO THE EXISTING WATER LINES
- § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
- § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
- § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
- § CONTROLLER LOCATIONS WITH GROUNDING RODS
- § WIRE RUNS, SPLICE LOCATIONS
- § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.

- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).

5. TESTING DATA FROM REQUIRED PRESSURE TESTING.

G. PRODUCT HANDLING

1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

J. TEMPORARY UTILITIES

1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.

K. CUTTING, PATCHING, TRENCHING AND DIGGING

1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.

C. SOLVENT CEMENTS AND THREAD LUBRICANT

6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.

D. VALVES

1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.

E. AUTOMATIC CONTROLLERS (ELECTRIC)

5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPARATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPARATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.

F. CONTROL WIRE:

1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE ULV (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT I RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B_3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEER'S ASSOCIATION) PLB. NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.

2. DISCREPANCIES:

- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.

c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.

- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.

- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.

- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.

3. BACKFILL MATERIAL:

- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|---|--|--|
|---|--|--|
- b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER.
- c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS.
- d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS.
- e. BACKFILL SHALL BE TAMPED OR Puddled TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING.

4. LOCATION WIRE:

- a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN.

C. PIPE INSTALLATION

1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.

D. FLUSHING

6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.

E. HYDROSTATIC PRESSURE TESTING

1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.

- THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.

7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

F. BACKFILLING AND COMPACTING

1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.



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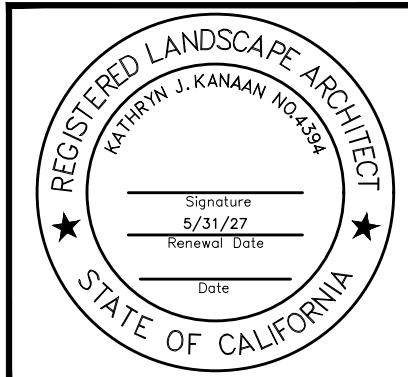
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|----|--|---|
| | <p>a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL, BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.</p> <p>b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION 'PLANTING SOIL'.</p> | <p>e. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.</p> <p>f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.</p> <p>g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.</p> |
| 1. | FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE. | 3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS: |
| 2. | ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE. | a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS. |
| I. | INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?) | b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS. |
| 1. | UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. | O. TESTS |
| 2. | UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14. | 1. PRESSURE TESTS: |
| 3. | SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED. | 2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER. |
| 4. | TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM, PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING. | 3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT. |
| 5. | ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION. | 4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL. |
| 6. | ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER CABLE LETTERS AS AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 20 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE. | Q. REVIEWS |
| 7. | THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS. | 1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR. |
| 8. | TESTING: | a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY L.A. |
| a. | ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER. | b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS |
| | -BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED. | c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS. |
| | -AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED. | d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY L.A. |
| 9. | PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED. | e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP. |
| J. | INSTALLATION OF VALVES | f. FINAL ACCEPTANCE OF PROJECT BY L.A. |
| 1. | GENERAL: | g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE. |
| a. | ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURER'S REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS. | 2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST. |
| b. | INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE. | 3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES. |
| c. | INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS. | a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS. |
| d. | ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT. | R. MAINTENANCE PERIOD |
| 2. | BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSONBROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX. | 1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: |
| 3. | AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX. | <ul style="list-style-type: none"> - CLEANING OF PLUGGED IRRIGATION HEADS. - IRRIGATION HEADS ADJUSTMENTS. - VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.) - PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.) - REPAIRING LEAKING VALVES, ETC. - ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM. - REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE. - LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER. |
| 4. | QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX. | S. LONG TERM MAINTENANCE |
| 5. | PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX. | 1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS. |
| K. | INSTALLATION OF AUTOMATIC CONTROLLERS NEW MV/F5? | 2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS. |
| 1. | UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS. | 3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER. |
| 2. | ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS. | END OF SECTION |
| 3. | INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER. | |
| 4. | UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN. | |
| 5. | CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN. | |
| L. | INSTALLATION OF SPRINKLER HEADS | |
| 1. | UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. | |
| 2. | FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED. | |
| 3. | LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS. | |
| 4. | ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS, SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE. | |
| 5. | ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY | |



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PROJECT: LA MESA ARTS ACADEMY
4200 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L1.4

OF 09 SHEETS

Linear Style Planting with DeepRoot Barriers

Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2 feet (61cm). This will be the number of feet necessary for a Linear style planting application. (See chart below.)

A. Choose the barrier that best suits the application.

B. Dig the trench to the depth based upon the particular barrier chosen.

C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the joiner at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.

D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow

over the top.

E. plant the tree(s), the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area. take steps to ensure healthy growth of the tree at planting, consult with a local arborist for planting tips and recommendations.

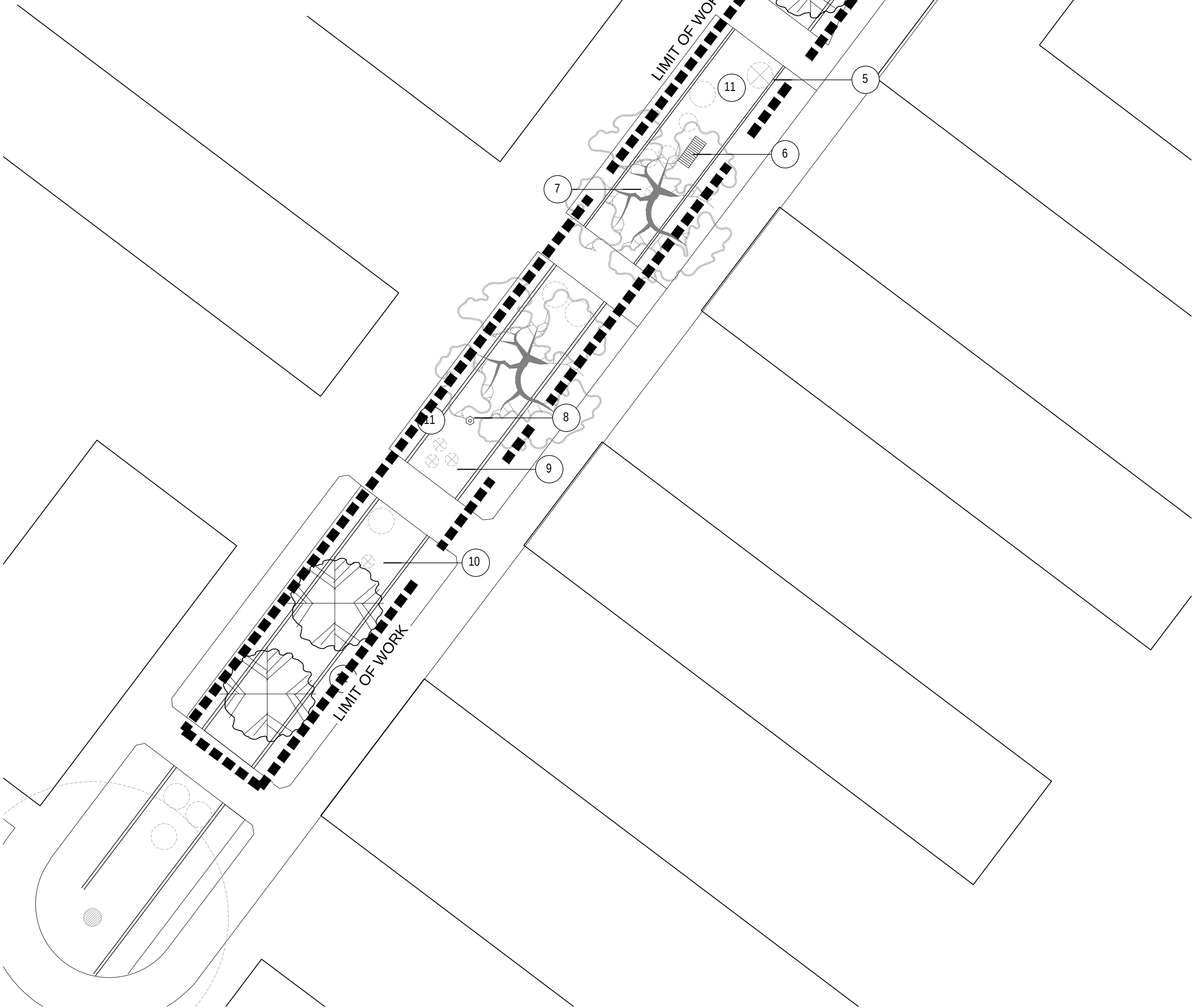
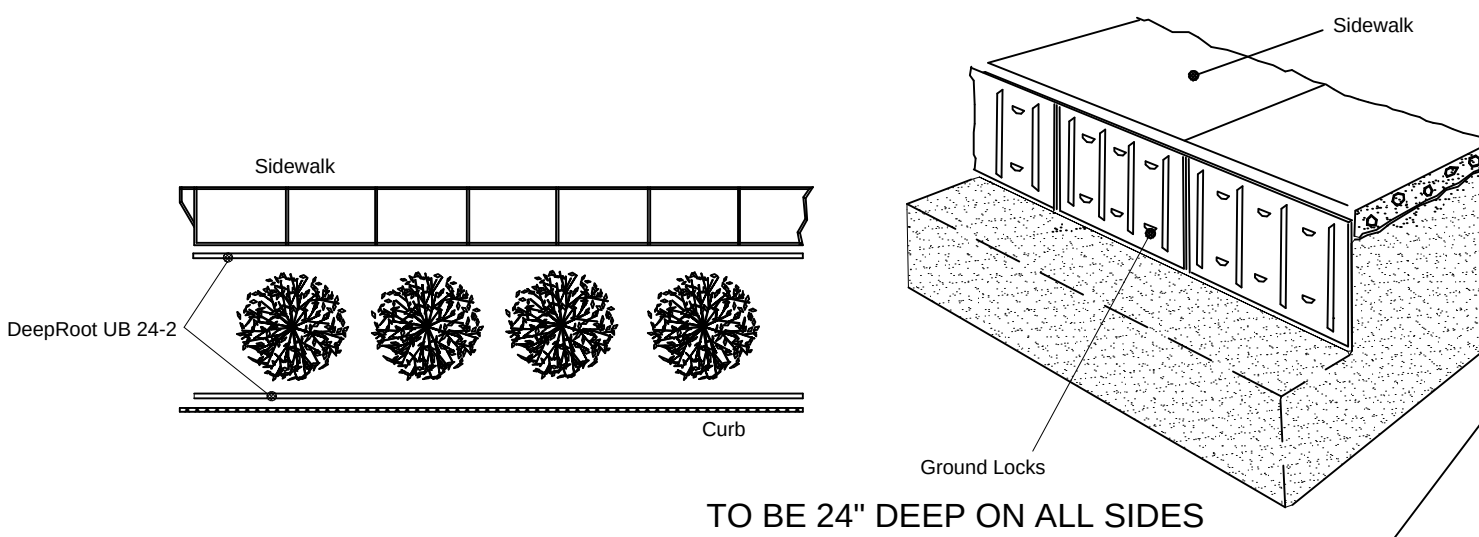
F. if the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arbogard® tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 liv root (458.7668), for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.8855).

For a simple formula to determine the quantity of panels required for a Linear application use:

Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

As little as one side of the tree may need barrier for root direction as there may be no hardscape elsewhere requiring protection.

For One Side of Tree		
Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
12' (3.6m) Diameter	+2' (61cm) = 14' (4.2m)	7 Panels
18' (5.5m) Diameter	+2' (61cm) = 20' (6.1m)	10 Panels
24' (7.3m) Diameter	+2' (61cm) = 26' (7.9m)	13 Panels



PLANT LEGEND

SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
		EXISTING TREE TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
	5	CERCIS CANADENSIS 'FOREST PANSY' FOREST PANSY REDBUD	48" BOX	20' O.C.	STANDARD	'G, I' L1.2
	4	QUERCUS TOMENTELLA ISLAND OAK	48" BOX ALT BID 60" BOX	40' O.C.	STANDARD	'G, I' L1.2 'H, I' L1.2
		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				THIS SHEET
SHRUBS						
		EXISTING SHRUB TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
MISCELLANEOUS						
		EXISTING TREES OR SHRUBS TO BE DEMO'D. GRIND STUMP DOWN BELOW GROUND 2' AND ALL ROOTS WITHIN 3' OF THE STUMP.				
		ALL PLANTER AREAS TO RECEIVE A 3" THICK LAYER OF FOREST FINES MULCH TO BE PLACED 2' AWAY FROM TREE TRUNKS AND 1' AWAY FROM ALL PLANT BASES.				

- NOTE:
- REFER TO PLANTING DETAILS AND NOTES.
 - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
 - LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
 - THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
 - PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BEFORE PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
 - BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
 - NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
 - THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- EXISTING FOUNTAIN TO BE PROTECTED IN PLACE.
- EXISTING MEMORIAL ROCK AND WISHING WELL TO BE PROTECTED IN PLACE.
- EXISTING PICNIC TABLE TO BE RELOCATED PER PLAN. FLAGSTONE TO BE MOVED FROM WISHING WELL AREA TO INFILL UNDER TABLE IN ORDER TO PROVIDE A SOLID SURFACE FOR THE TABLE TO SIT ON.
- EXISTING MEMORIAL ROCK TO BE PROTECTED IN PLACE.
- CUPANIOPSIS STUMP TO BE REMOVED PER LEGEND.
- EXISTING BRIDGE AND STREAMBED TO BE PROTECTED IN PLACE.
- STUMP TO BE REMOVED PER LEGEND.
- EXISTING WINDMILL TO BE RELOCATED PER PLAN.
- 3 OAK STUMPS TO BE REMOVED PER LEGEND.
- 1 OAK STUMP TO BE REMOVED PER LEGEND.



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LA MESA ARTS ACADEMY
4200 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
**PLANTING
PLAN**

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/18/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L2.0
OF 09 SHEETS

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOILS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL CARRY. THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION. OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATION SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.
- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.
- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
 - b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
 - c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
 - d. BULK MATERIALS:
- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF AND SOIL EROSION. PROVIDE PROTECTIVE COVERINGS TO ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FOLD TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.
- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

- 2) REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

- Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT
1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.

2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.
2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.
3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.
5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE FC, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMONOSCENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).
2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.
3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL INVOLVE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) OBSERVATION OF THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.

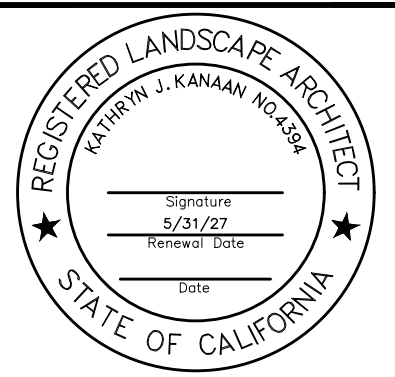
- (6) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM NURSERY PRODUCTION PRACTICES.

- 6) PLANT GROWER CERTIFICATION: THE FINAL PLANT GROWER SHALL BE RESPONSIBLE TO HAVE DETERMINED THAT THE PLANTS HAVE BEEN ROOT PRUNED AT EACH STEP IN THE PLANT PRODUCTION PROCESS TO REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS, OR THAT THE PREVIOUS PRODUCTION SYSTEM USED PRACTICES THAT PRODUCE A ROOT SYSTEM THROUGHOUT THE ROOT BALL THAT MEETS THESE SPECIFICATIONS. REGARDLESS OF THE WORK OF PREVIOUS GROWERS, THE PLANTS' ROOT SYSTEM SHALL BE MODIFIED AT THE FINAL PRODUCTION STAGE, IF NEEDED, TO PRODUCE THE REQUIRED PLANT ROOT QUALITY. THE FINAL GROWER SHALL CERTIFY IN WRITING THAT ALL PLANTS ARE REASONABLY FREE OF STEM GIRDLING AND KINKED ROOTS AS DEFINED IN THIS SPECIFICATION, AND THAT THE TREE HAS BEEN GROWN AND HARVESTED TO PRODUCE A PLANT THAT MEETS THESE SPECIFICATIONS.

- 7) AT TIME OF OBSERVATIONS AND DELIVERY, THE ROOT BALL SHALL BE MOIST THROUGHOUT. ROOTS SHALL NOT SHOW SIGNS OF EXCESS SOIL MOISTURE CONDITIONS AS INDICATED BY STUNTED, DISCOLORED, DISTORTED, OR DEAD ROOTS.

- 8) REJECTION OR SUBSTITUTION: ALL PLANTS NOT CONFORMING TO THE REQUIREMENTS HEREIN SPECIFIED SHALL BE CONSIDERED DEFECT

REVISIONS	DATE	BY



- M. LONG TERM MAINTENANCE
1. GENERAL
- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.

b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.
2. TREES
- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.

b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.

c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.

d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.
3. SHRUBS / VINES
- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.

c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.
4. GROUND COVERS
- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.

c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.
5. TURF
- a. AERATION OF BERMUDA GRASSES

b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.

c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM

d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.
6. DETHATCHING OF TURF GRASS
- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.

b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.

c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.

d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.
- END OF SECTION

KDA

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CUEWT:

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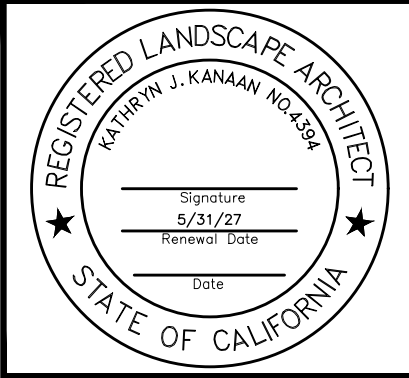


PROJECT:

LA MESA ARTS ACADEMY

4200 PARKS AVENUE
LA MESA, CA 91941
CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.3

OF 09 SHEETS

LA MESA DALE ES
4370 PARKS AVENUE
LA MESA, CA 91941

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

CONSULTANTS



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REVISIONS

NO.	REVISION FOR	BY	DATE	APPROVED BY
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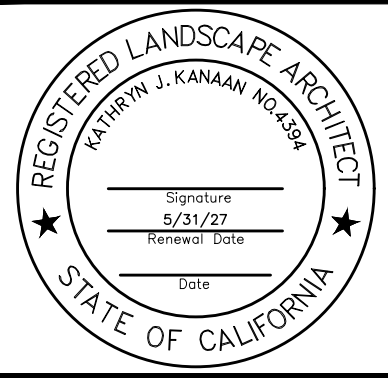
PROJECT:
LA MESA DALE ES
4370 PARKS AVENUE
LA MESA, CA 91941
CALFIRE GRANT LANDSCAPE PLAN

SHEET INDEX

SHEET	DESCRIPTION
L1.0	TITLE SHEET
L1.1	IRRIGATION PLAN
L1.2	IRRIGATION/PLANTING DETAILS
L1.3	IRRIGATION NOTES
L1.4	IRRIGATION NOTES
L2.0	PLANTING PLAN
L2.1	PLANTING NOTES
L2.2	PLANTING NOTES
L2.3	PLANTING NOTES



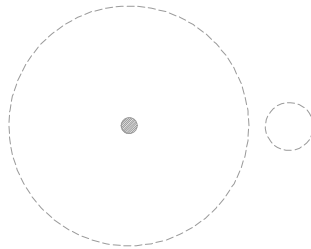
REVISIONS	DATE	BY



SHEET TITLE
TITLE SHEET

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L1.1
OF 09 SHEETS



EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE, SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	'C'/L1.2	(2, 3)
	RAINBIRD TBOS-BTLT BATTERY OPERATED CONTROLLER. 1 STATION FOR SMALLER SYSTEMS AS SHOWN, 3 TREES AND 2 STATION FOR 4+ TREES.	A,E,F=1 ST. B,C,D=2 ST.	'C'/L1.2	
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	NEW PVC CL 315 MAINLINE - 18" MIN. COVER	2"	'A, B'/ L1.1	(1, 2)
	NIBCO T-585 BALL VALVE	1"	'G'/ L1.2	(2, 3)
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS				
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P', RAINBIRD 1806-SAM W/ R-VAN18 NOZZLES FOR MATURE 'P' TREES PLANTERS. RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+ .5 .42 +.5	ESTABLISH MATURITY
MISCELLANEOUS				
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART

1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART

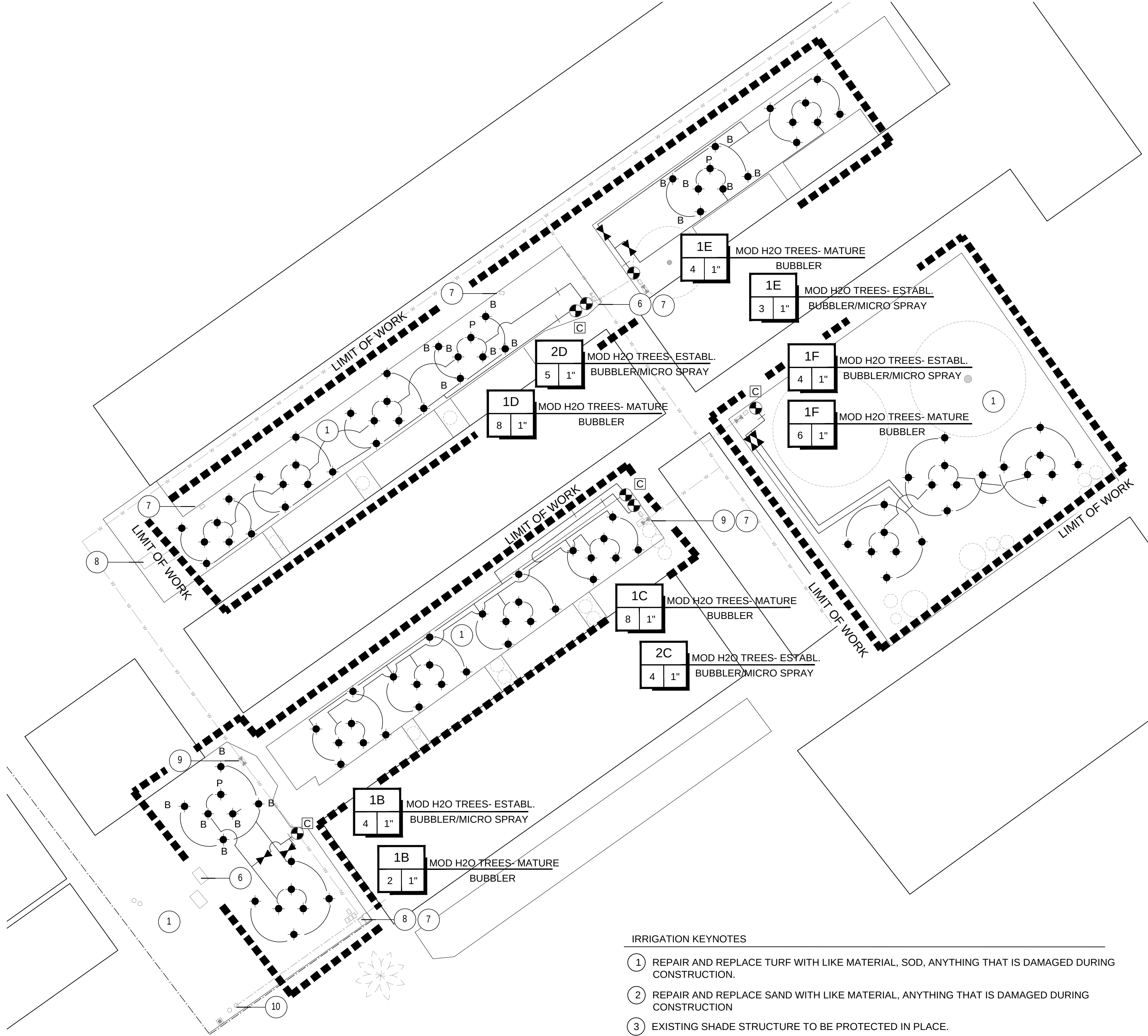
	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER

FLOW (GPM)	VALVE SIZE
1	1"
2	1"
3	1"
4	1"
5	1"
6	1"
7	1"
8	1"
9	1"
10	1"

IRRIGATION NOTES

- REFER TO IRRIGATION DETAILS AND NOTE SHEETS.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
- MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
- MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
- ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUND COVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
- ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
- LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
- ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
- THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.



IRRIGATION KEYNOTES

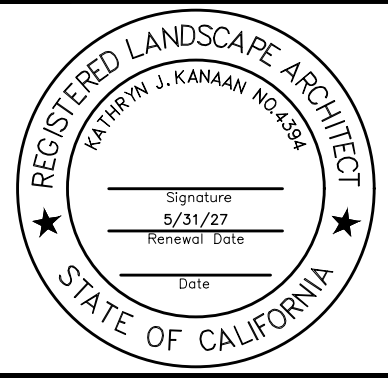
- REPAIR AND REPLACE TURF WITH LIKE MATERIAL, SOD, ANYTHING THAT IS DAMAGED DURING CONSTRUCTION.
- REPAIR AND REPLACE SAND WITH LIKE MATERIAL, ANYTHING THAT IS DAMAGED DURING CONSTRUCTION
- EXISTING SHADE STRUCTURE TO BE PROTECTED IN PLACE.
- EXISTING PLAY STRUCTURE TO BE PROTECTED IN PLACE.
- EXISTING HORIZONTAL BARS TO BE PROTECTED IN PLACE.
- FUTURE SOLAR CANOPY.
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING ELECTRICAL VAULTS TO BE PROTECTED IN PLACE.
- EXISTING BACKFLOW TO BE PROTECTED IN PLACE.
- EXISTING SEWER LINE AND CLEAN OUT TO BE PROTECTED IN PLACE.



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4370 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

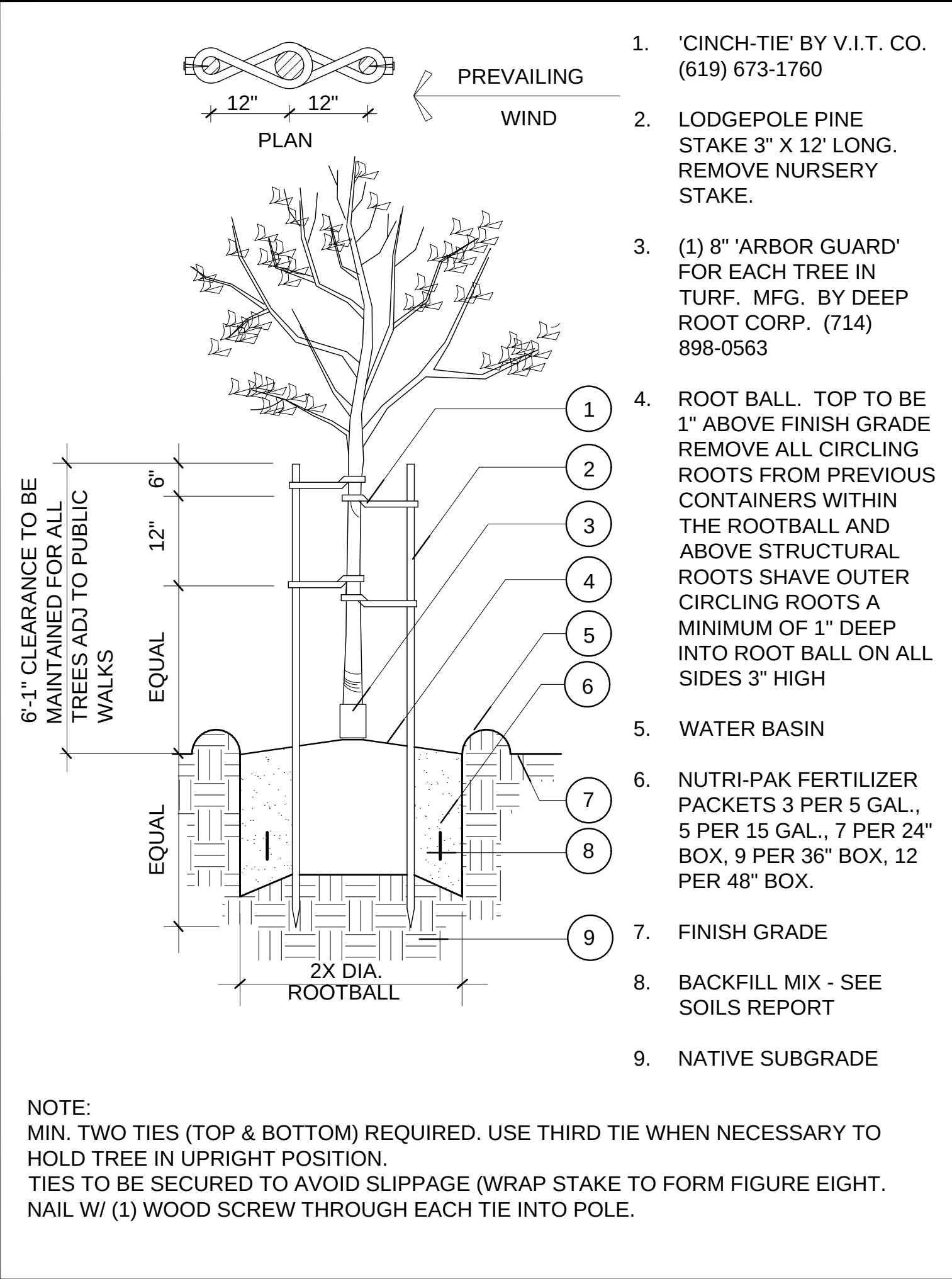
REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION
PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

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I DOUBLE STAKED TREE

Linear Style Planting with DeepRoot Barriers

Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2 feet (61cm). This will be the number of feet necessary for a linear style planting application. (See chart below.)

A. Choose the barrier that best suits the application.

B. Dig the trench to the depth based upon the particular barrier chosen.

C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the jointer at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.

D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow over the top.

E. plant the tree(s), the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area. take steps to ensure healthy growth of the tree at planting. consult with a local arborist for planting tips and recommendations.

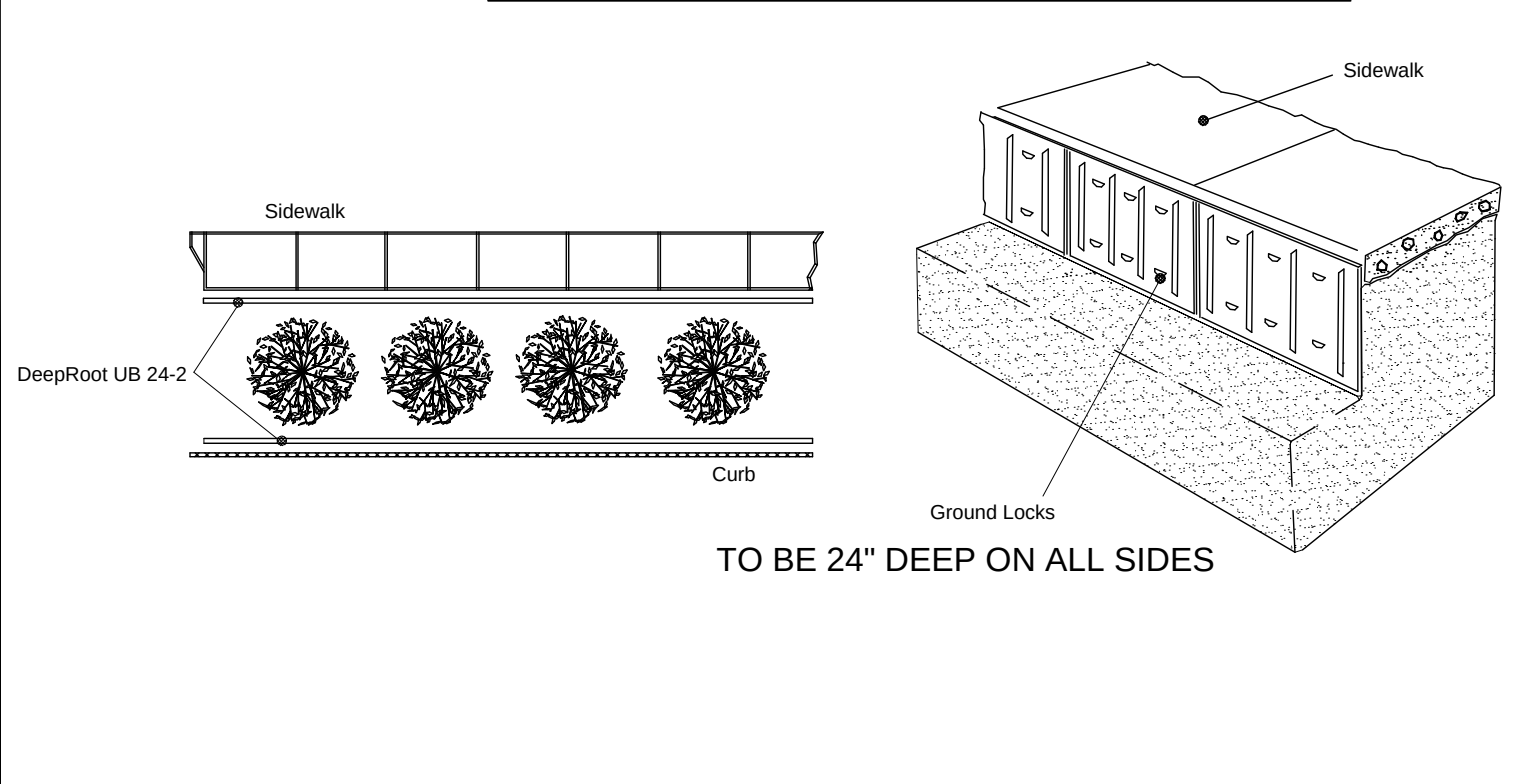
F. If the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arborgard® tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 4rv root (458-7668). for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.8835).

For a simple formula to determine the quantity of panels required for a Linear application use:

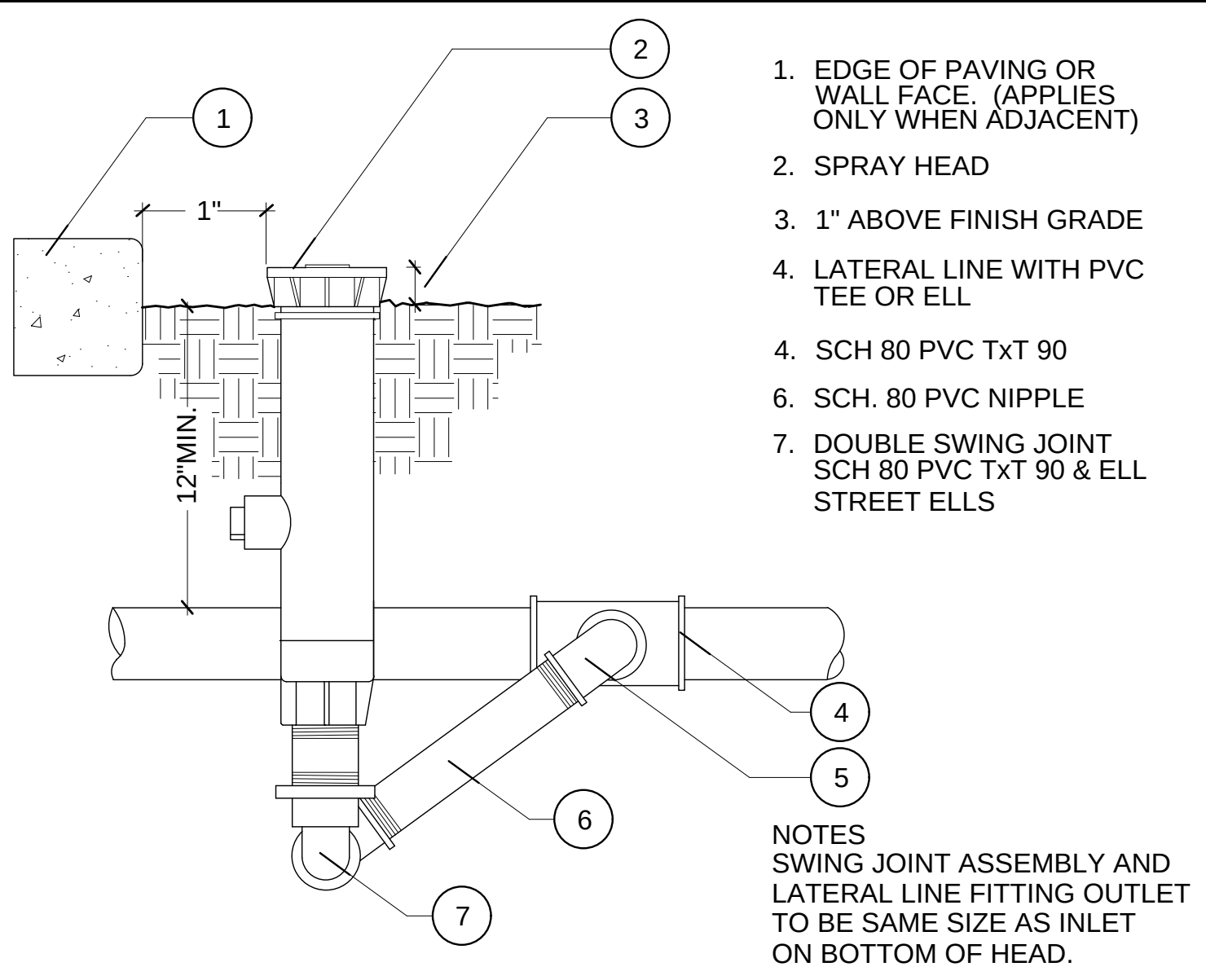
Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

As little as one side of the tree may need barrier for root direction as there may be no hardscape else where requiring protection.

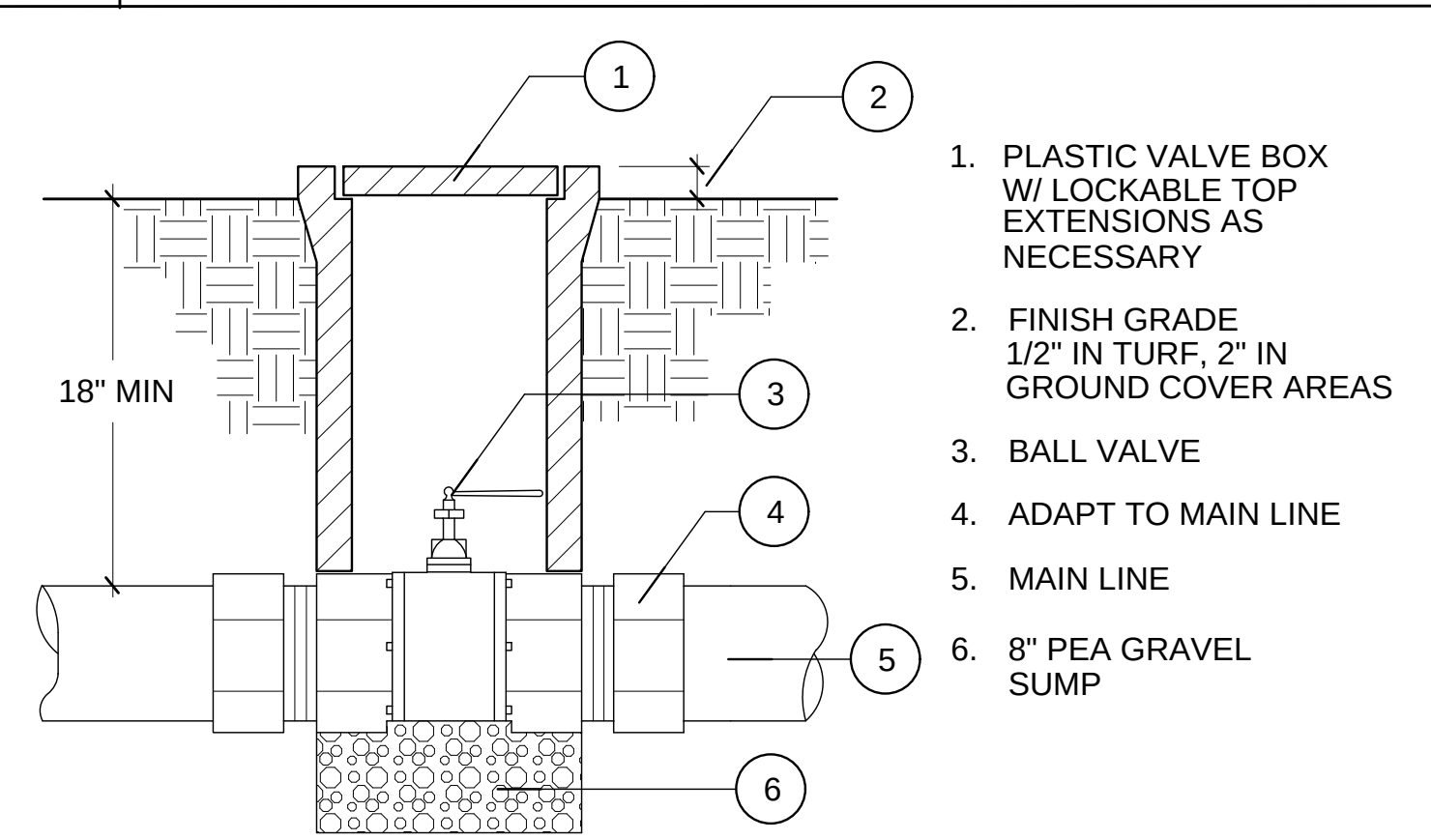
Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
12' (3.6m) Diameter +2' (61cm) = 14' (4.2m)	7 Panels	7 Panels
18' (5.5m) Diameter +2' (61cm) = 20' (6.1m)	10 Panels	10 Panels
24' (7.3m) Diameter +2' (61cm) = 26' (7.9m)	13 Panels	13 Panels



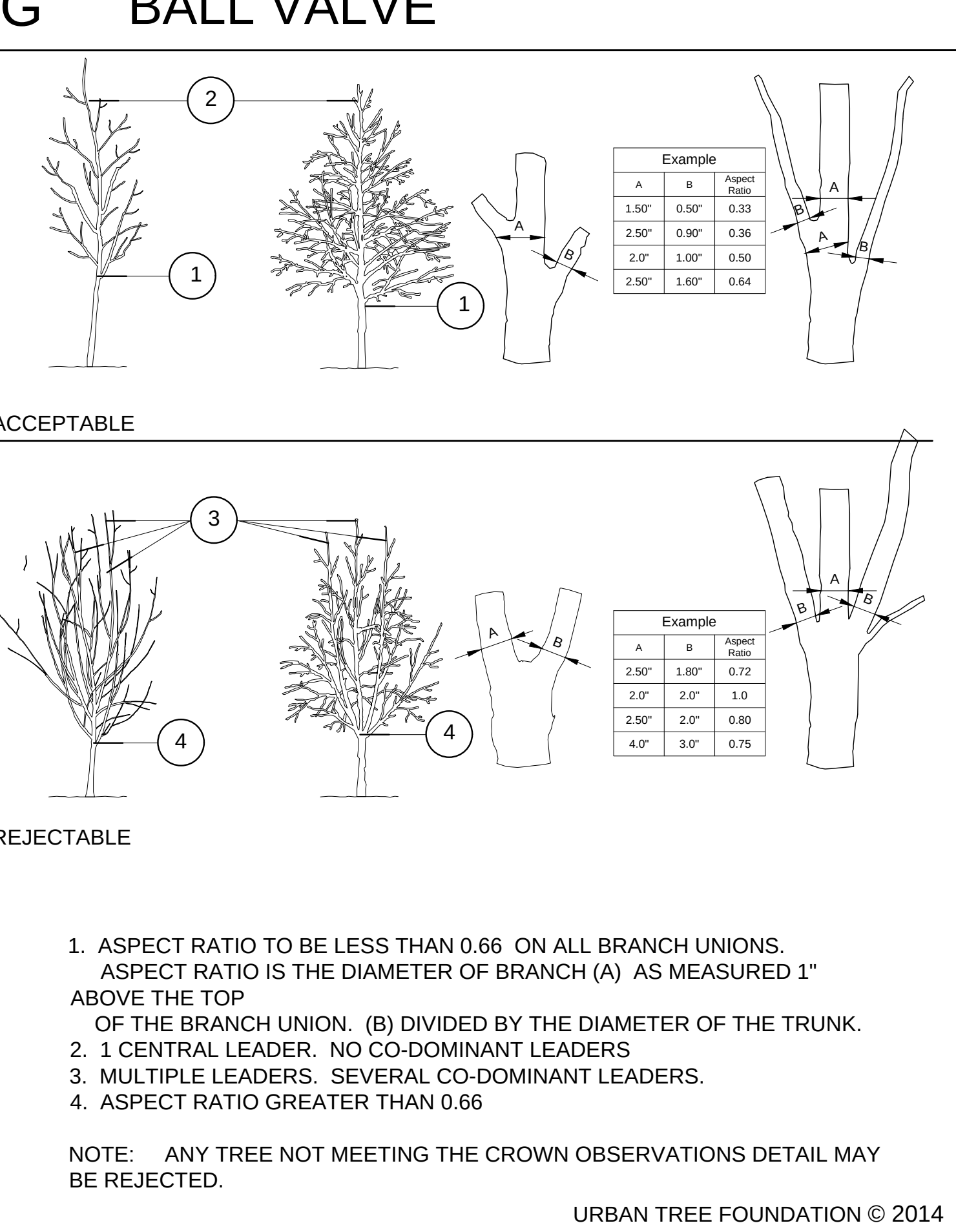
J DEEPROOT BARRIER



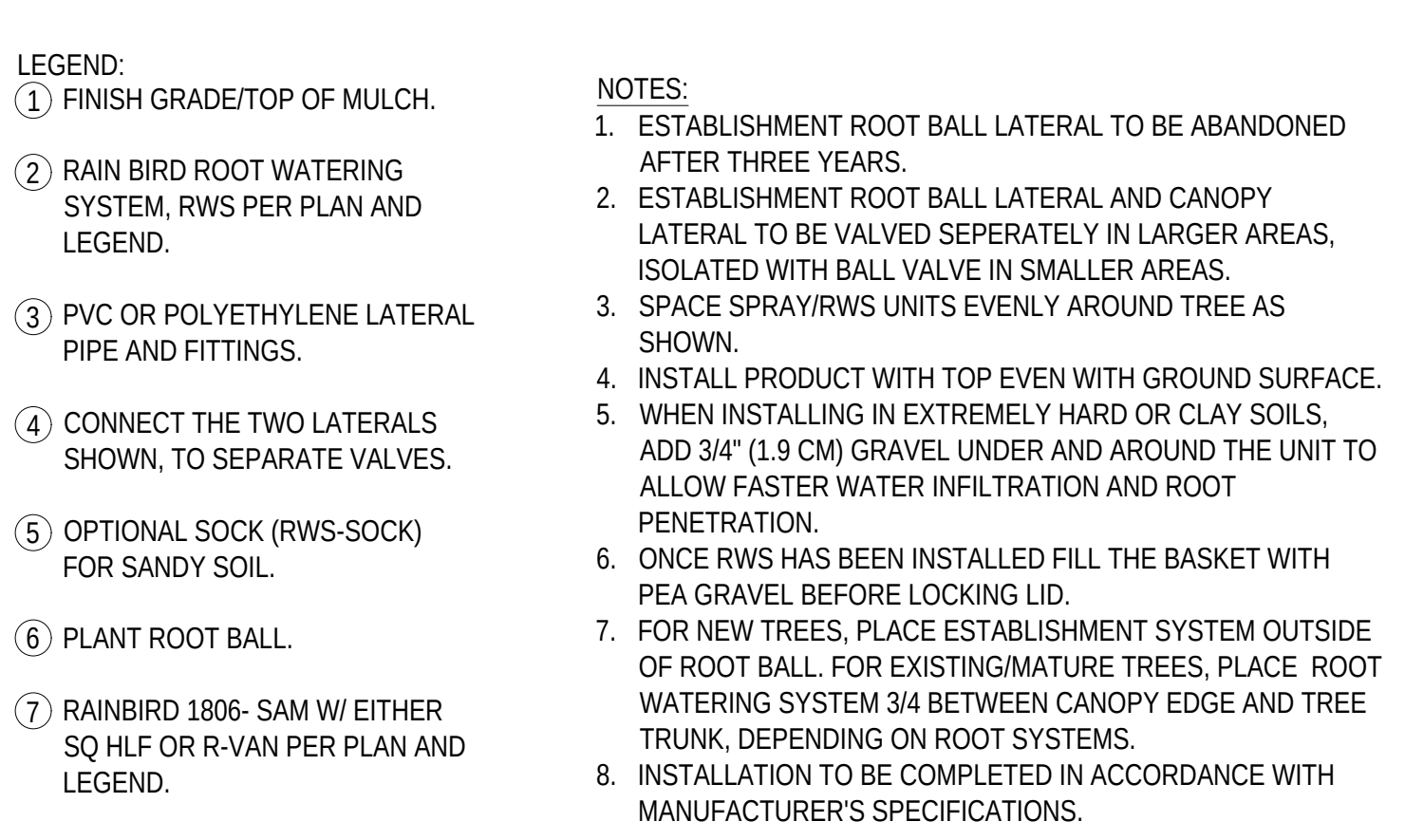
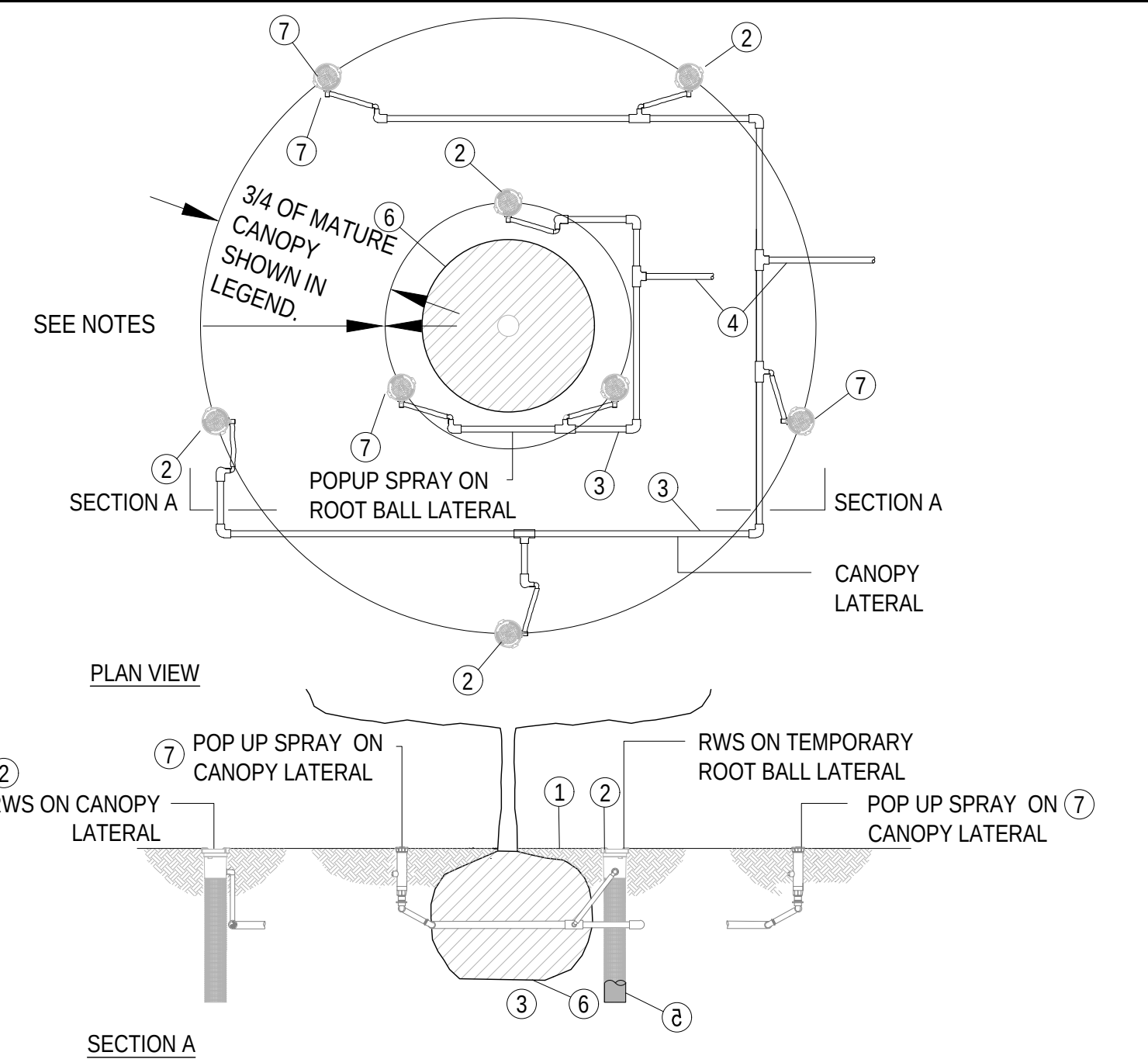
F SHRUB SPRAY HEAD



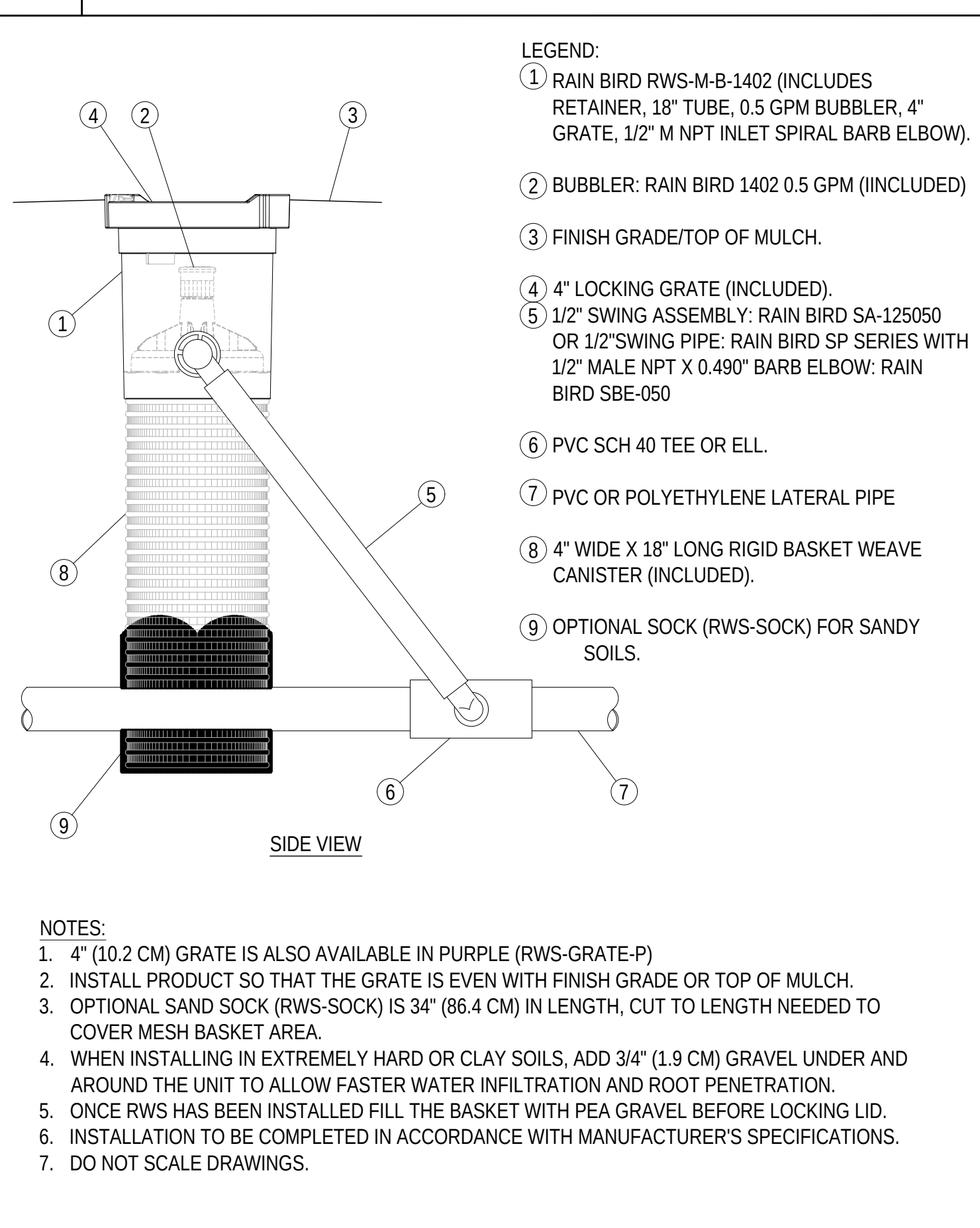
G BALL VALVE



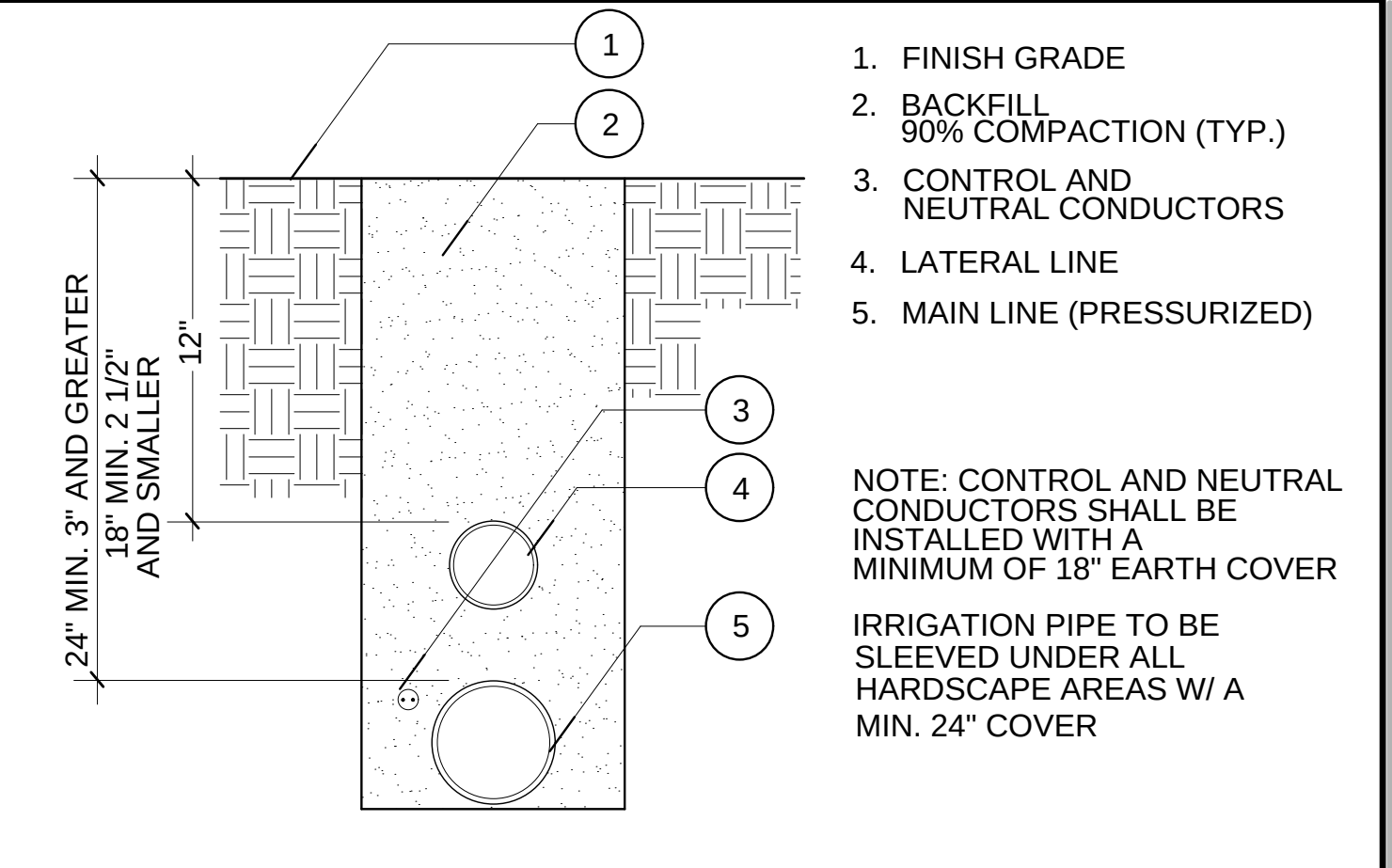
H HIGH BRANCHED CROWN OBSERV.



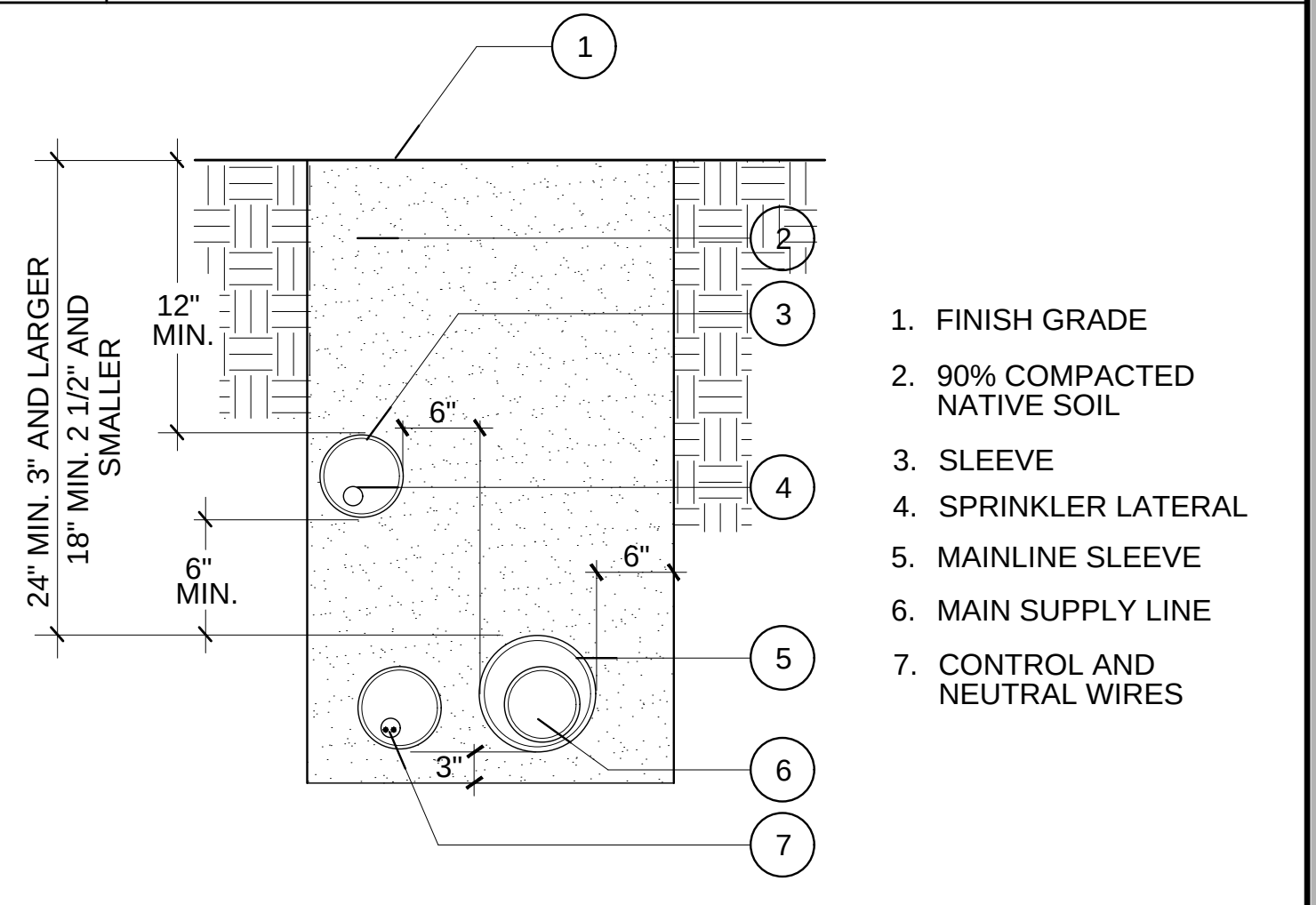
D TREE WATERING LAYOUT



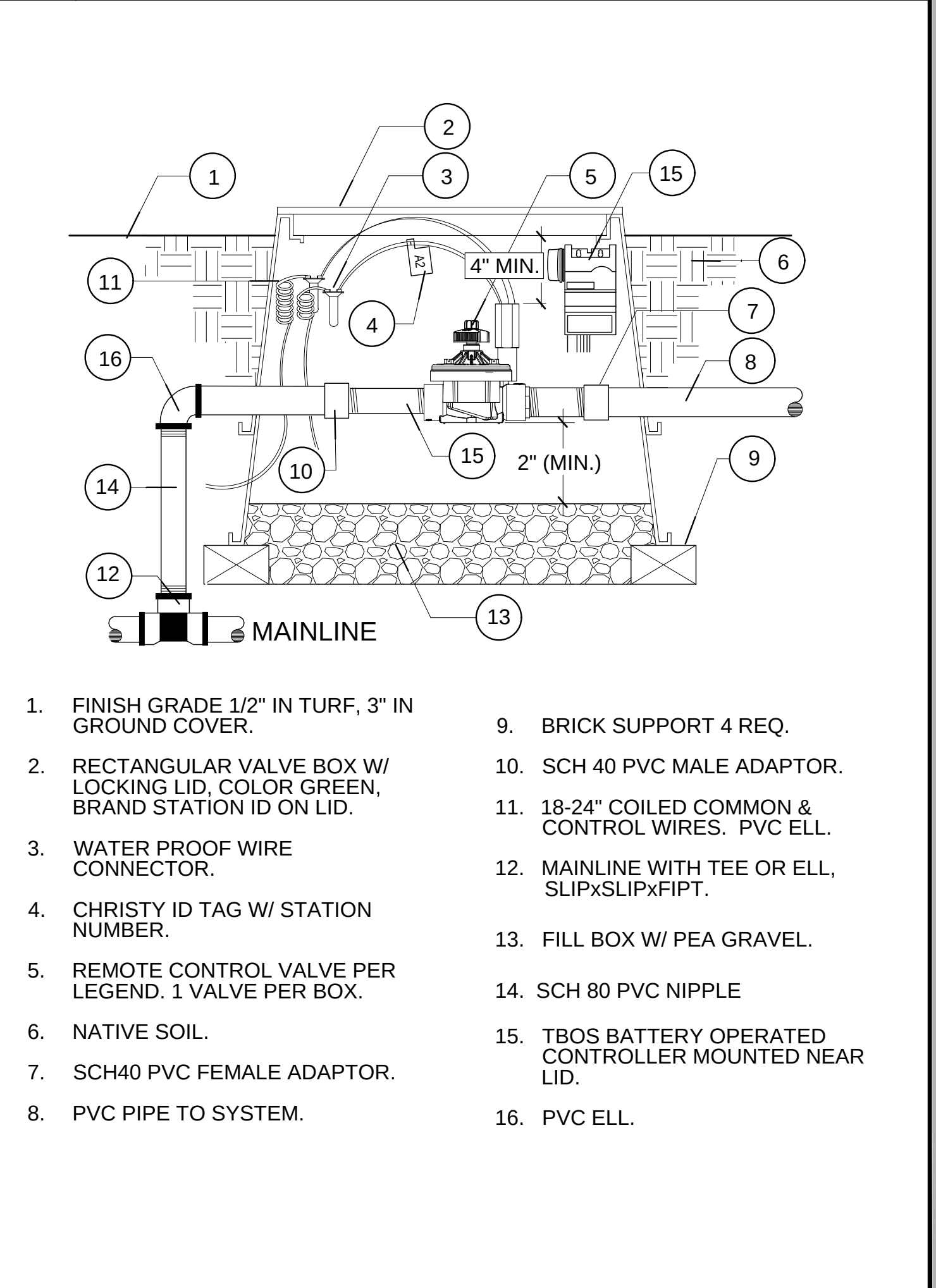
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER



CLIENT: LA MESA - SPRING VALLEY SCHOOLS
3888 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: LA MESA DALE ES
4370 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION/
PLANTING
DETAILS

DESIGNED KJK
DRAWN KJK
CHECKED
DATE 04/15/26
SCALE 1"=20'-0"
JOB NO. 26004

SHEET
L1.2
OF 09 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE KEPT TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.
- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
- § CONNECTIONS TO THE EXISTING WATER LINES
- § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
- § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
- § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
- § CONTROLLER LOCATIONS WITH GROUNDING RODS
- § WIRE RUNS, SPLICE LOCATIONS
- § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.
- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).
5. TESTING DATA FROM REQUIRED PRESSURE TESTING.
- G. PRODUCT HANDLING
1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
- J. TEMPORARY UTILITIES
1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.
- K. CUTTING, PATCHING, TRENCHING AND DIGGING
1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.
- C. SOLVENT CEMENTS AND THREAD LUBRICANT
6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.
- D. VALVES
1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.
- E. AUTOMATIC CONTROLLERS (ELECTRIC)
5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPIRATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPIRATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.
- F. CONTROL WIRE:
1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE ULV (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT I RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B_3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.
2. DISCREPANCIES:
- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.
- B. TRENCHING/SLEEVING MEASUREMENTS
1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|---|---|--|
| | | |
- b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER.
- c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS.
- d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS.
- e. BACKFILL SHALL BE TAMPED OR Puddled TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING.
4. LOCATION WIRE:
- a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN.
- C. PIPE INSTALLATION
1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.
- D. FLUSHING
6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.
- E. HYDROSTATIC PRESSURE TESTING
1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- F. BACKFILLING AND COMPACTING
1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.



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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L1.3
OF 09 SHEETS

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

I. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM. PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER CABLE LETTERS IN A BOXES AS AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 20 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURES REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSONBROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS NEW MV/F5?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP-UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION TWO 3-RING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION.

§ INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER. LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.

§ CATALOG AND PART'S SHEETS ON ALL MATERIAL AND EQUIPMENT.

§ COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.

§ IRRIGATION PRODUCT MANUFACTURERS WARRANTIES.

IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.

e. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY LA.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY LA.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY LA.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

- CLEANING OF PLUGGED IRRIGATION HEADS.

- IRRIGATION HEADS ADJUSTMENTS.

- VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)

- PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)

- REPAIRING LEAKING VALVES, ETC.

- ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.

- REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.

- LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

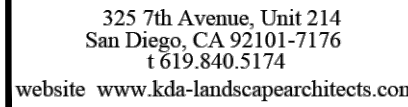
S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER.

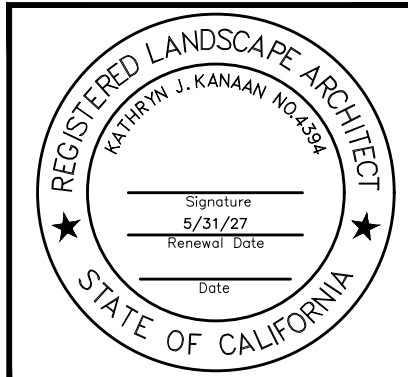
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CLIENT: **LA MESA - SPRING VALLEY SCHOOLS**
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: LA MESA DALE ES
4370 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

IRRIGATION
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

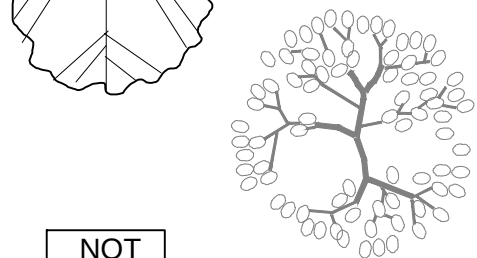
SHEET

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OF 09 SHEETS

5/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\SD CALIFIRE GRANT LANDSCAPE\AUTOCAD\CD\SLA MESA DALE ES\26004 LMD PP.DWG

PLANT LEGEND

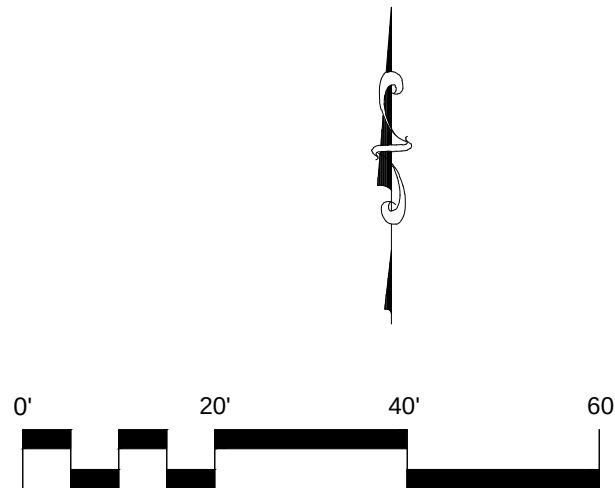
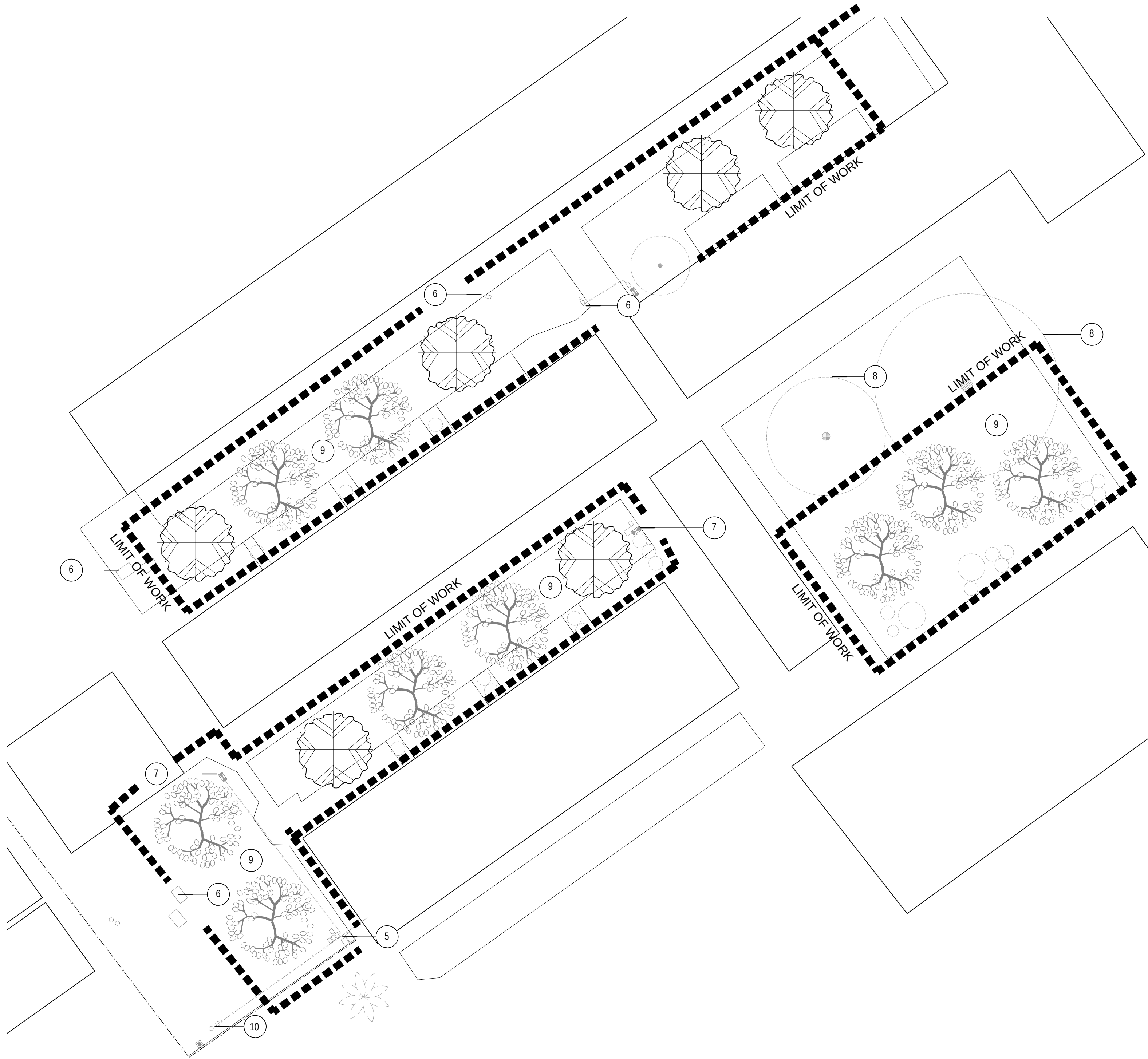
SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
		EXISTING TREE TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 11/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
	6	CERCIS CANADENSIS 'FOREST PANSY' FOREST PANSY REDBUD	48" BOX	20' O.C.	STANDARD	'H, I' L1.2
	9	ARBUTUS UNEDO 'MARINA' STRAWBERRY TREE	36" BOX	40' O.C.	MULTI	'H, I' L1.2
NOT SHOWN		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				'J'/L1.2
SHRUBS						
		EXISTING SHRUB TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
		EXISTING TREES OR SHRUBS TO BE DEMO'D. GRIND STUMP DOWN BELOW GROUND 2' AND ALL ROOTS WITHIN 3' OF THE STUMP.				
MISCELLANEOUS						
NOT SHOWN		ALL PLANTER AREAS TO RECEIVE A 3" THICK LAYER OF FOREST FINES MULCH TO BE PLACED 2' AWAY FROM TREE TRUNKS AND 1' AWAY FROM ALL PLANT BASES.				

NOTE:

- REFER TO PLANTING DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
- PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
- BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
- NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- EXISTING SHADE STRUCTURE TO BE PROTECTED IN PLACE.
- EXISTING PLAY STRUCTURE TO BE PROTECTED IN PLACE.
- EXISTING HORIZONTAL BARS TO BE PROTECTED IN PLACE.
- EXISTING SOLAR CANOPY TO BE PROTECTED IN PLACE.
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING ELECTRICAL VAULTS TO BE PROTECTED IN PLACE.
- EXISTING BACKFLOW TO BE PROTECTED IN PLACE.
- EXISTING LIQUIDAMBAR TO BE PROTECTED IN PLACE. AN ARBORIST IS TO ONSITE TO GUIDE THE LANDSCAPE CONTRACTOR ON ROOT PRUNING TO PLANT NEW TREES.
- REPAIR AND REPLACE ANY TURF, PLANT MATERIAL, DG OR PLAY EQUIPMENT DAMAGED DURING DEMO OR CONSTRUCTION. HAND DIG ONLY WITHIN DRIPLINE OF EXISTING TREES AND CONSULT AN ARBORIST IS ROOTS NEED TO BE PRUNED FOR NEW TREES.
- EXISTING SEWER LINE AND CLEAN OUT TO BE PROTECTED IN PLACE.



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PROJECT:

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4370 PARKS AVENUE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT
MATTHEW J. KANAAN NO. 6040
Signature
5/31/27
Return Date
Date
STATE OF CALIFORNIA

SHEET TITLE

PLANTING
PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L2.0

OF 09 SHEETS

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOIL IS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATIONS MUST BE CONDUCTED IN THE PRESENCE OF THE OWNER TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.

- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.

- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
- b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
- c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
- d. BULK MATERIALS:

- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, INCLUDING WATER RUNOFF, DRAINAGE, AND AIRBORNE DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FIND-THE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESISICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESISICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.
- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

- 2) REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.
2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.

2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.

3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.

5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMOHOSECENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZER WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).

2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.

3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL INVOLVE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.

- (6) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM

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 3838 CONRAD DRIVE
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CALIFIRE GRANT LANDSCAPE PLAN

619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

REVISIONS	DATE	BY

SHEET TITLE

PLANTING
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.2

OF 09 SHEETS

M. LONG TERM MAINTENANCE

1. GENERAL

- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.
- b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.

2. TREES

- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.
- b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.
- c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.
- d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.

3. SHRUBS / VINES

- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.
- c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.

4. GROUND COVERS

- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.
- c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.

5. TURF

- a. AERATION OF BERMUDA GRASSES
- b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.
- c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM
- d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.

6. DETHATCHING OF TURF GRASS

- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.
- b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.
- c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.
- d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.

END OF SECTION



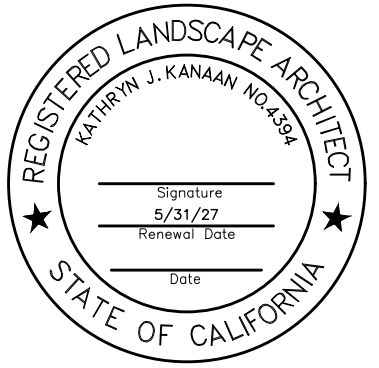
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REVISIONS	DATE	BY



SHEET TITLE
PLANTING NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L2.3
OF 09 SHEETS

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8305 EL PASO STREET
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CALFIRE GRANT LANDSCAPE PLANS

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GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

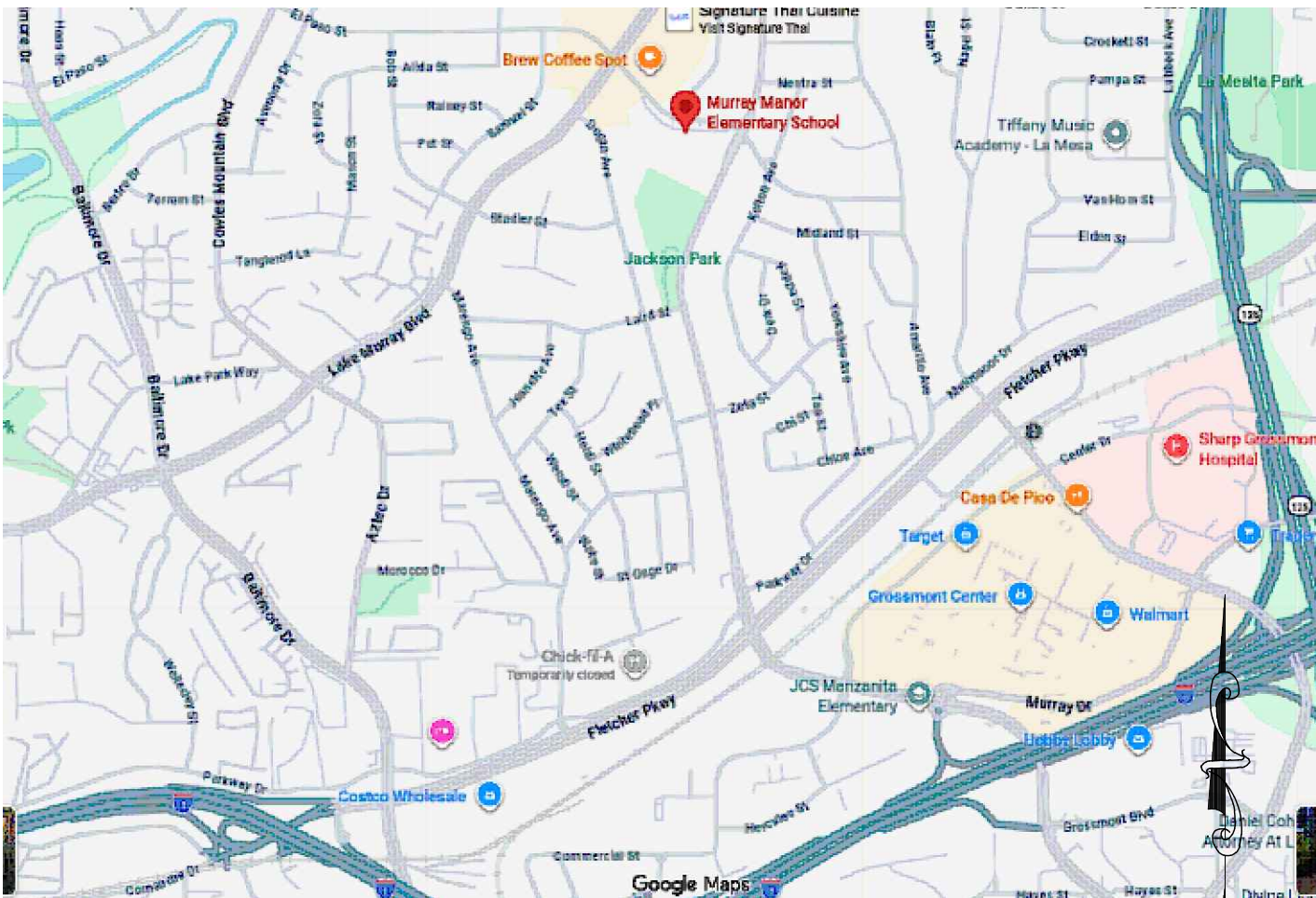
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

CONSULTANTS



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CALFIRE GRANT LANDSCAPE PLAN

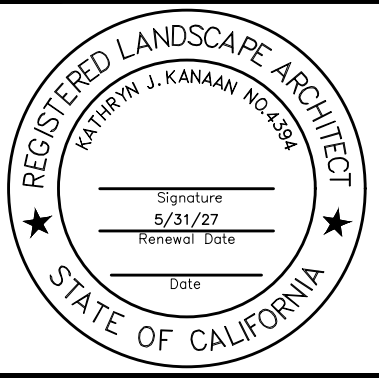
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SHEET INDEX

SHEET	DESCRIPTION
L1.0	TITLE SHEET
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L1.3	IRRIGATION NOTES
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L2.0	PLANTING PLAN
L2.1	PLANTING NOTES
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L2.3	PLANTING NOTES



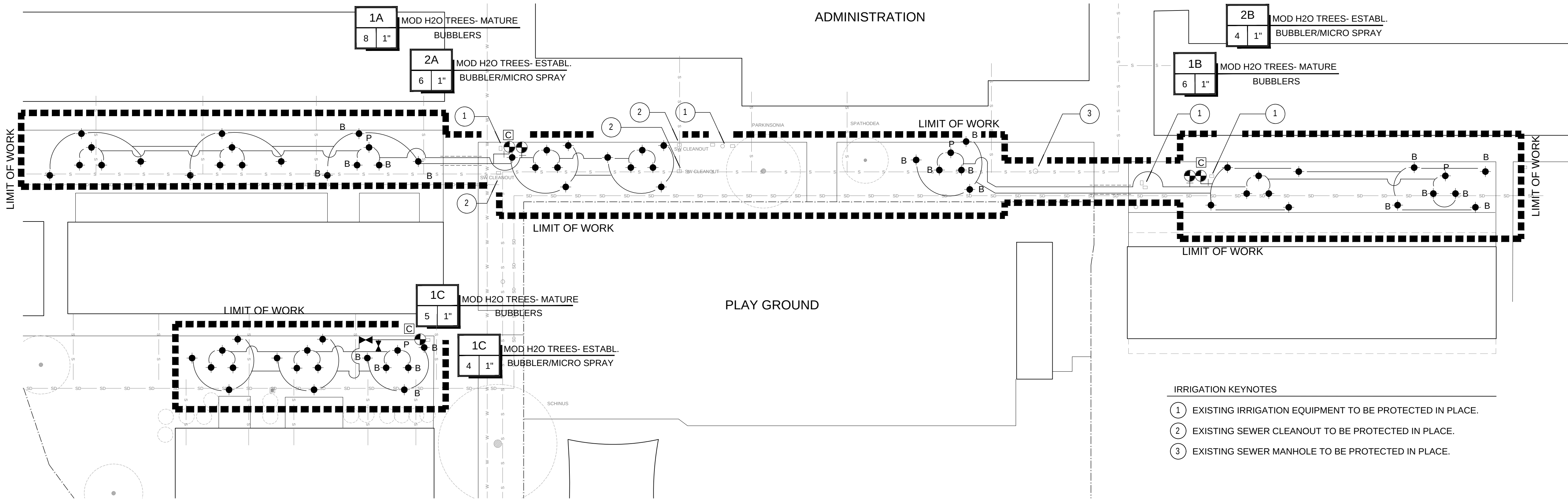
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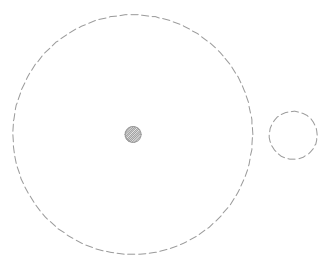
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OF 09 SHEETS



- IRRIGATION KEYNOTES
- 1 EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
 - 2 EXISTING SEWER CLEANOUT TO BE PROTECTED IN PLACE.
 - 3 EXISTING SEWER MANHOLE TO BE PROTECTED IN PLACE.



EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

IRRIGATION NOTES:

- REFER TO IRRIGATION DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
- MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
- MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
- ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUNDCOVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
- ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
- LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
- ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
- THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.

EQUIPMENT LEGEND

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE, SAME SIZE, TO NEW VALVE.	PER PLAN	'C'/L1.2	(2, 3)
	RAINBIRD TBOS-BT2LT BATTERY OPERATED CONTROLLER	2 ST.	'C'/L1.2	
	NIBCO T-585 BALL VALVE	1"	'G'/ L1.2	(2, 3)
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER. WATER BORE WHENEVER POSSIBLE WITHOUT DAMAGING EXISTING PLANT MATERIAL.	3"	'A, B'/ L1.2	(1, 2)
NOT SHOWN	UF RATED CONTROL WIRE, 12 GA COMMON, 14 GA PILOT - 18" MIN. COVER	12/14 GA	'A, B'/ L1.2	

- (1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.
- (2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.
- (3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.

IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL #	RAD.	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS					
	RAINBIRD 1806-SAM-SQ HLF PLUS 1 RWS-B-C-1402		30	.18+5	'D-F'/ L1.2
MISCELLANEOUS					
REPAIR AND REPLACE WITH LIKE MATERIAL ANY IRRIGATION EQUIPMENT DAMAGED, WITHIN SCOPE OF WORK, DURING INSTALLATION					
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.					

SCH 40 PVC SLEEVING CHART

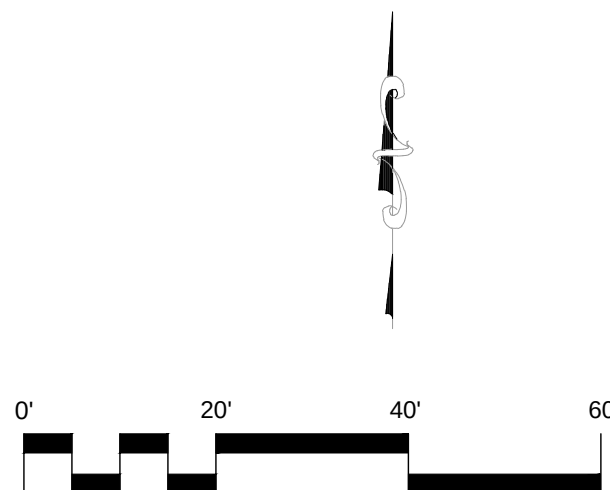
1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART

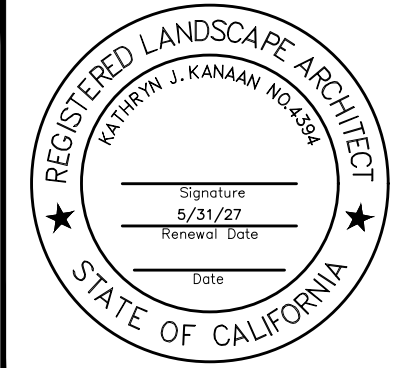
	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER

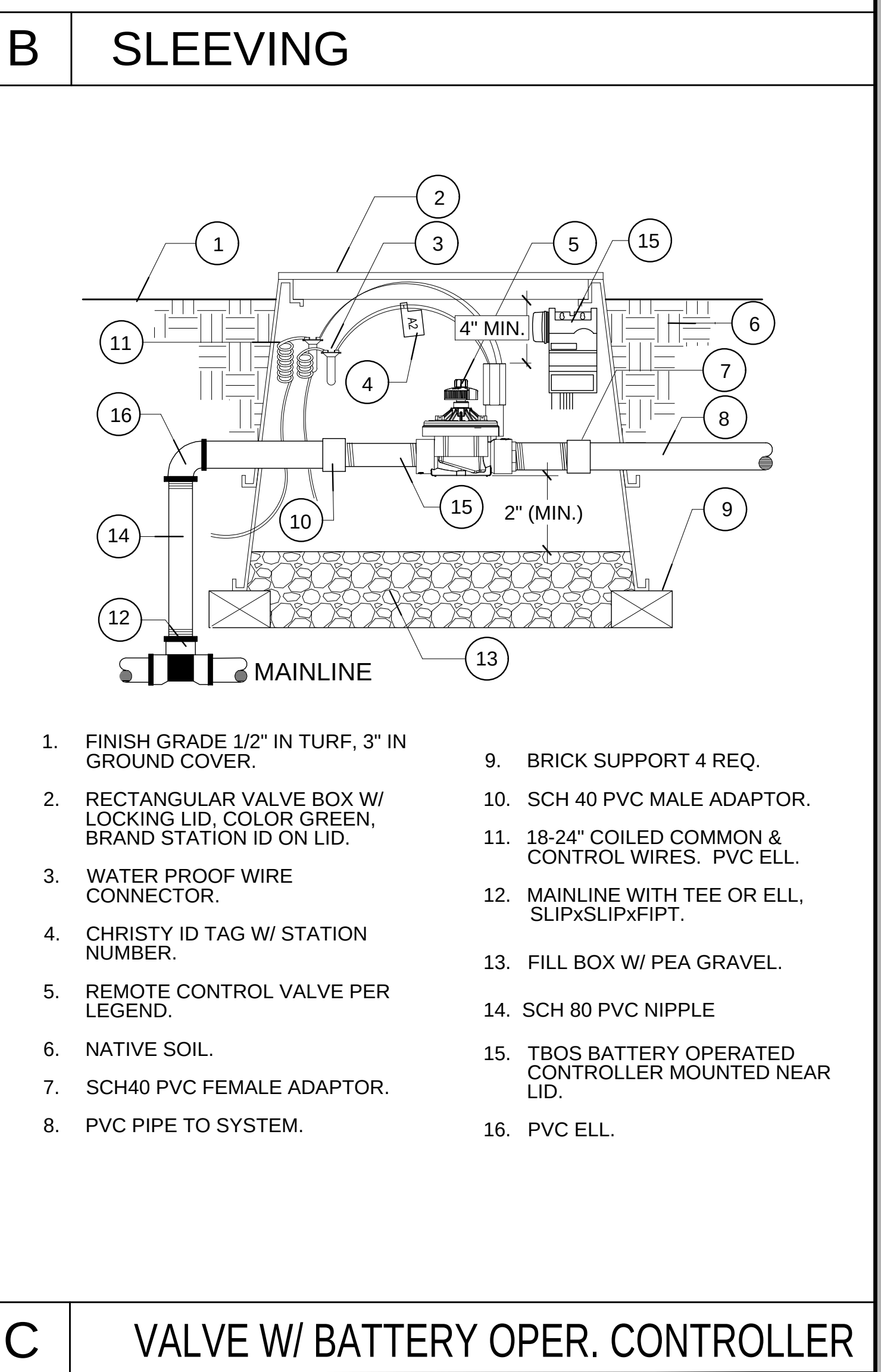
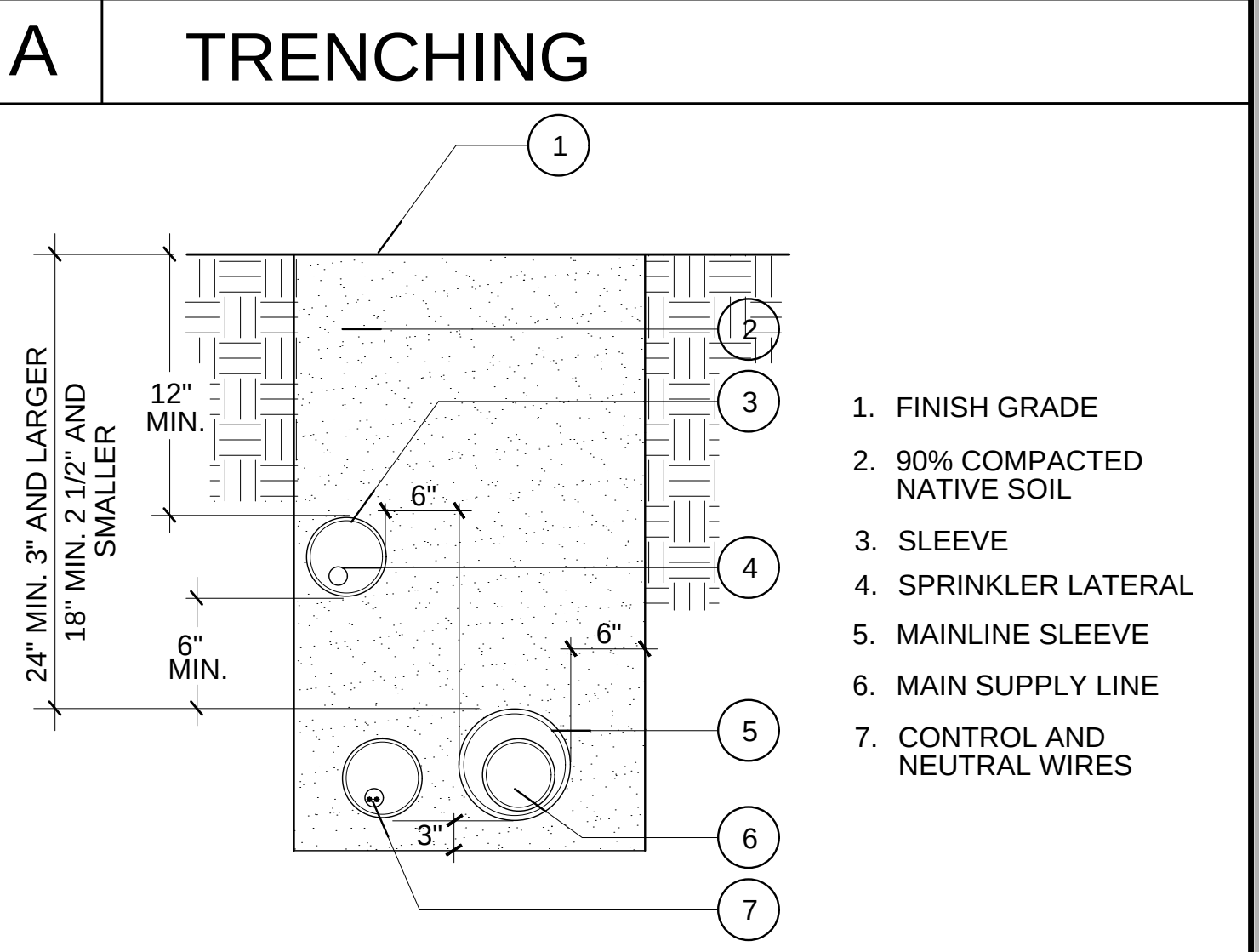
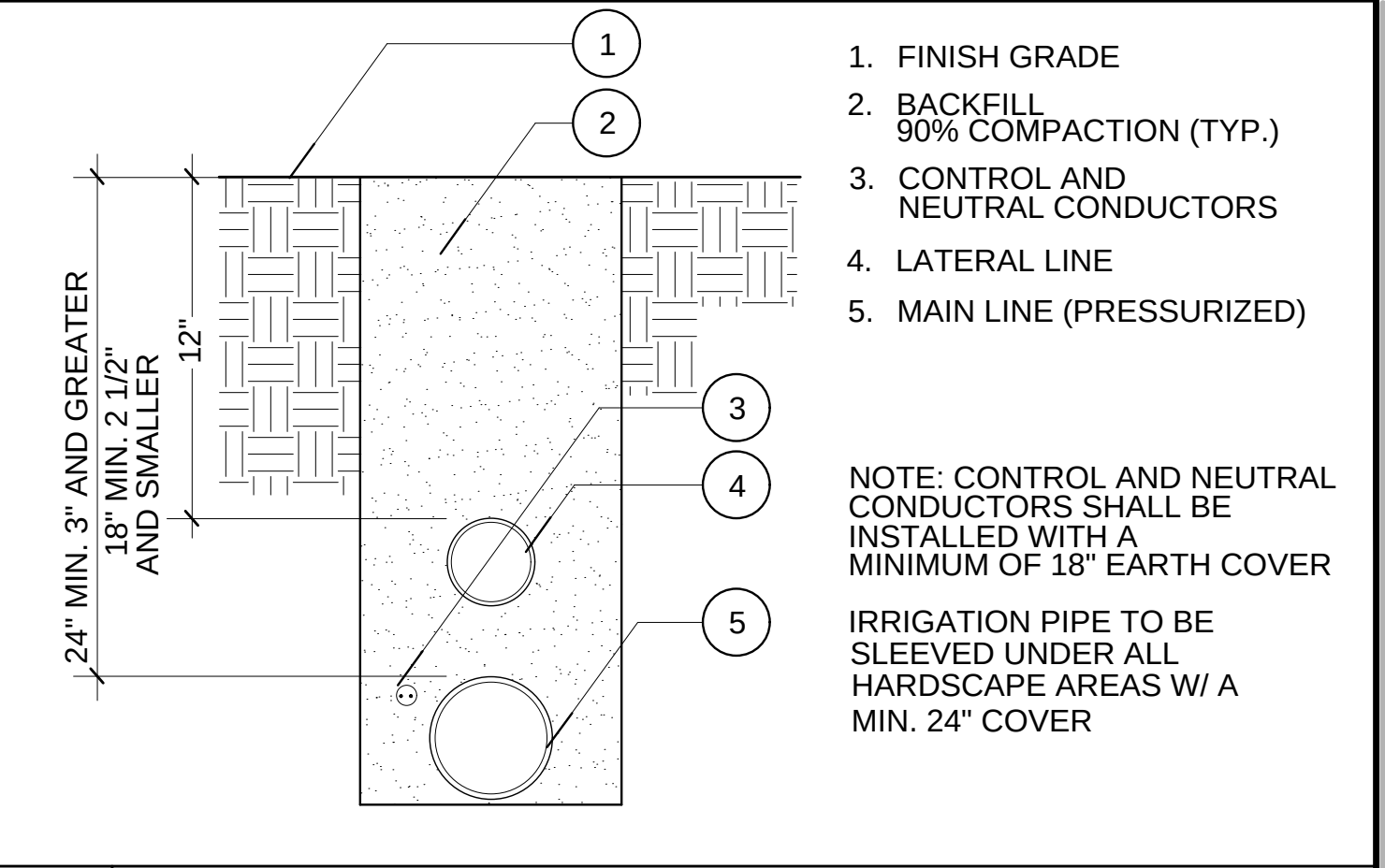
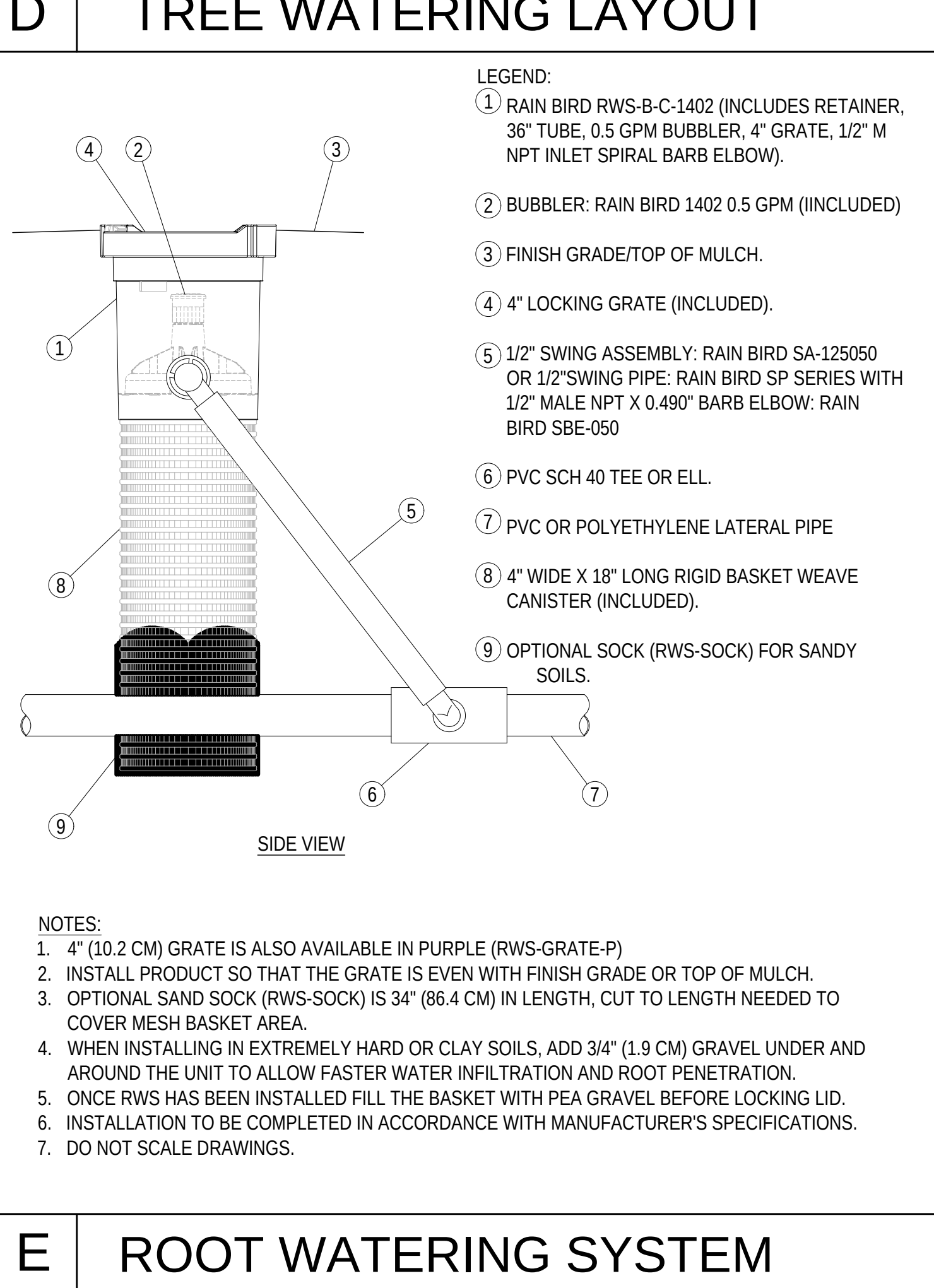
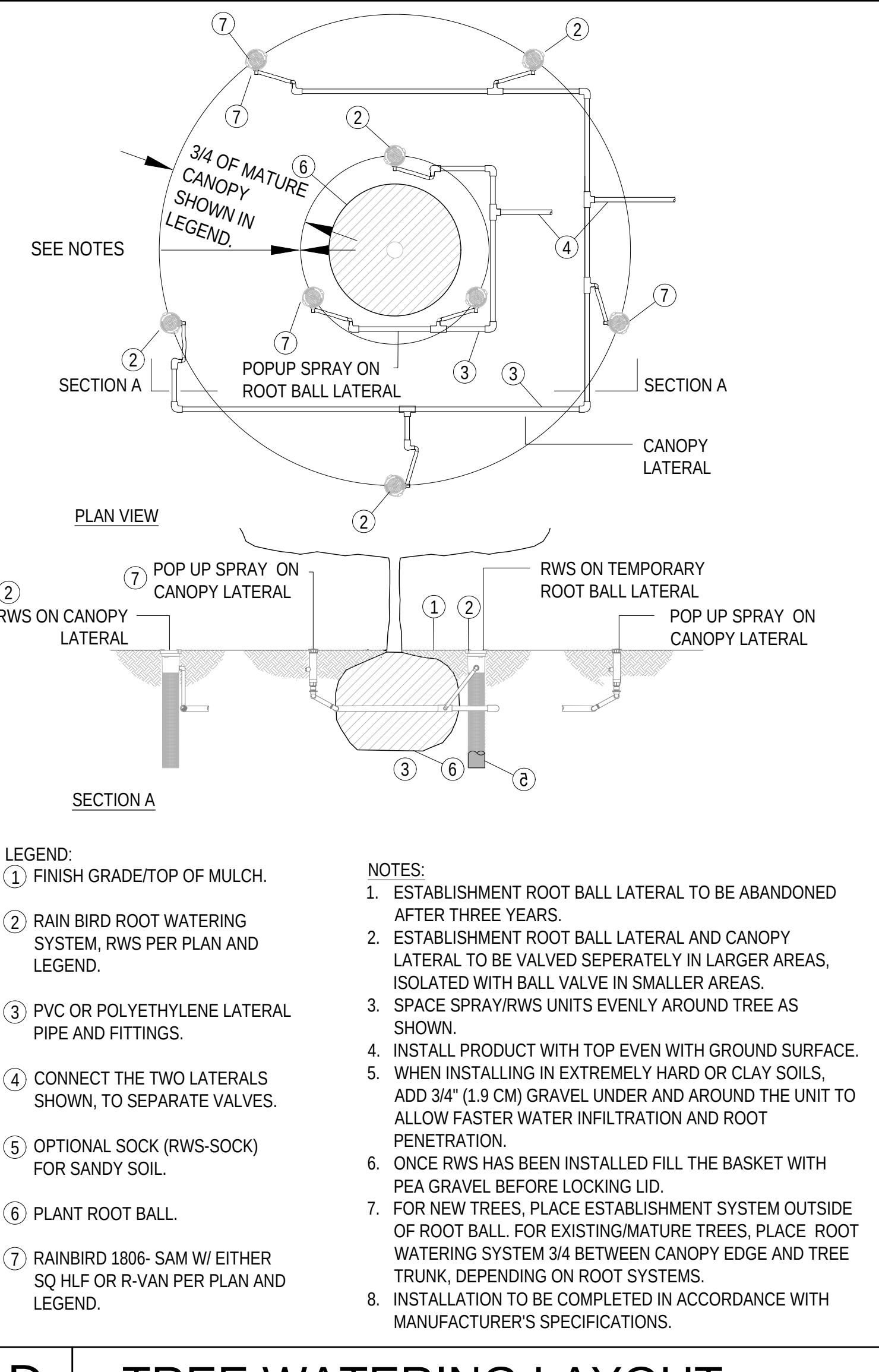
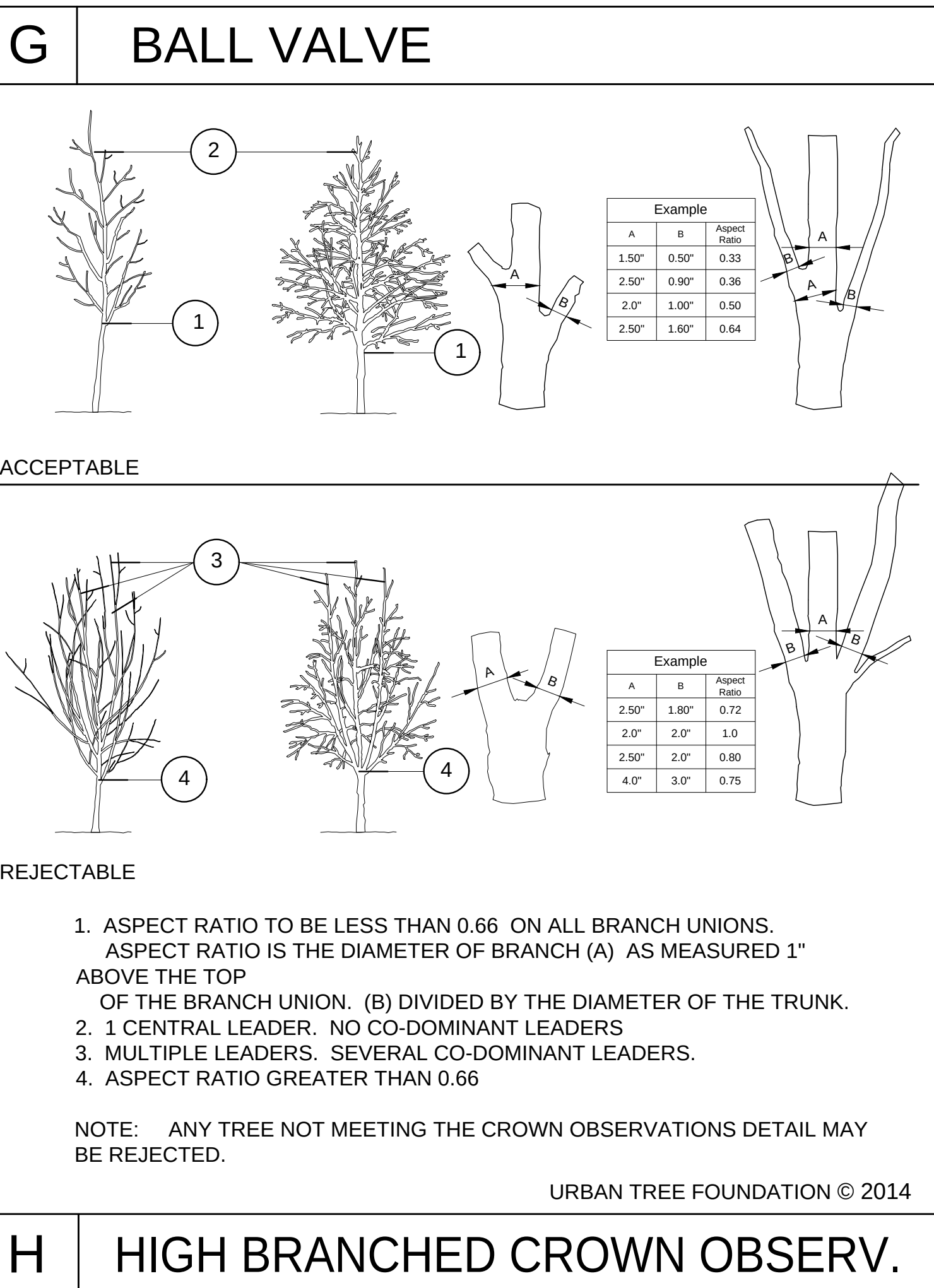
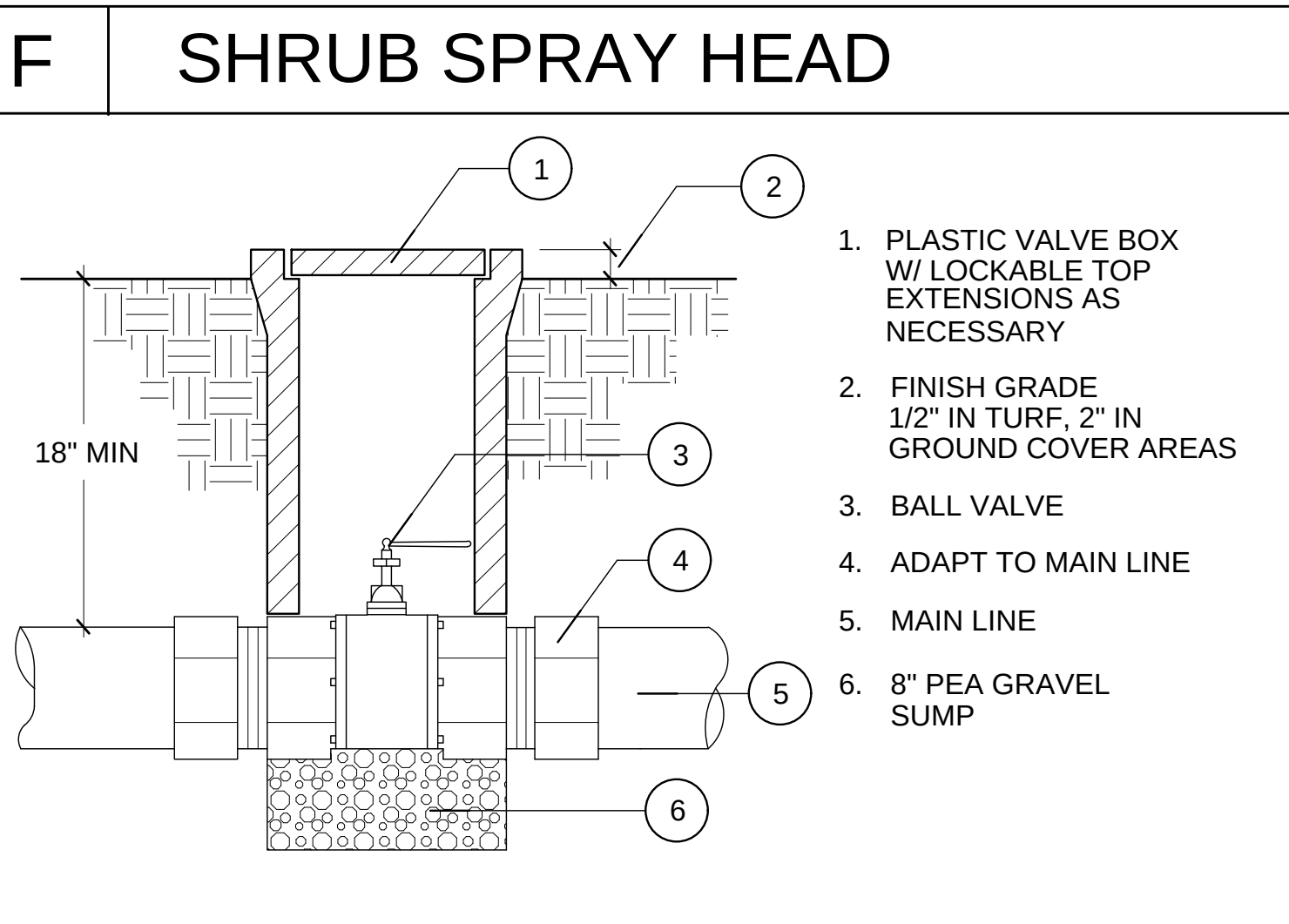
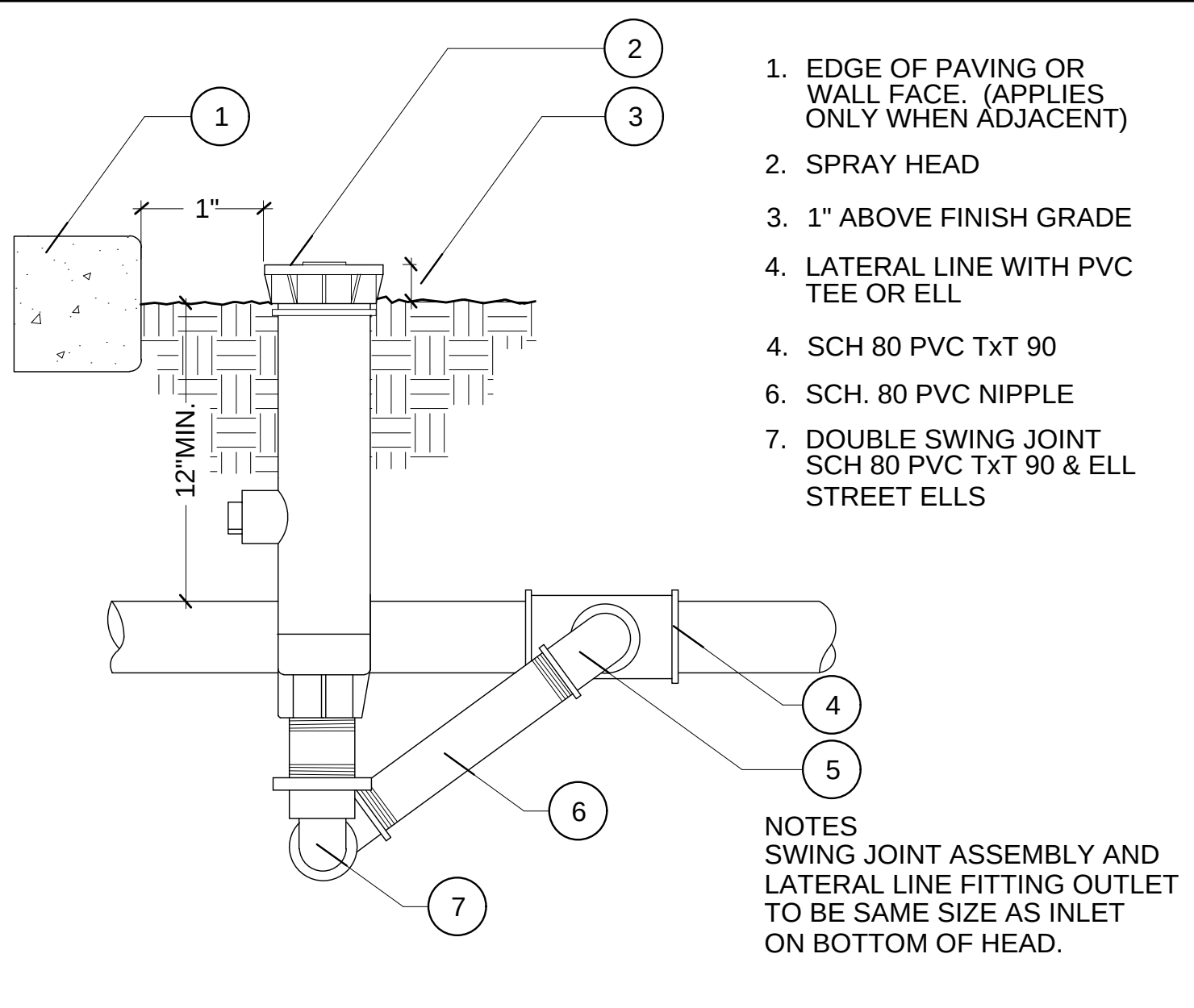
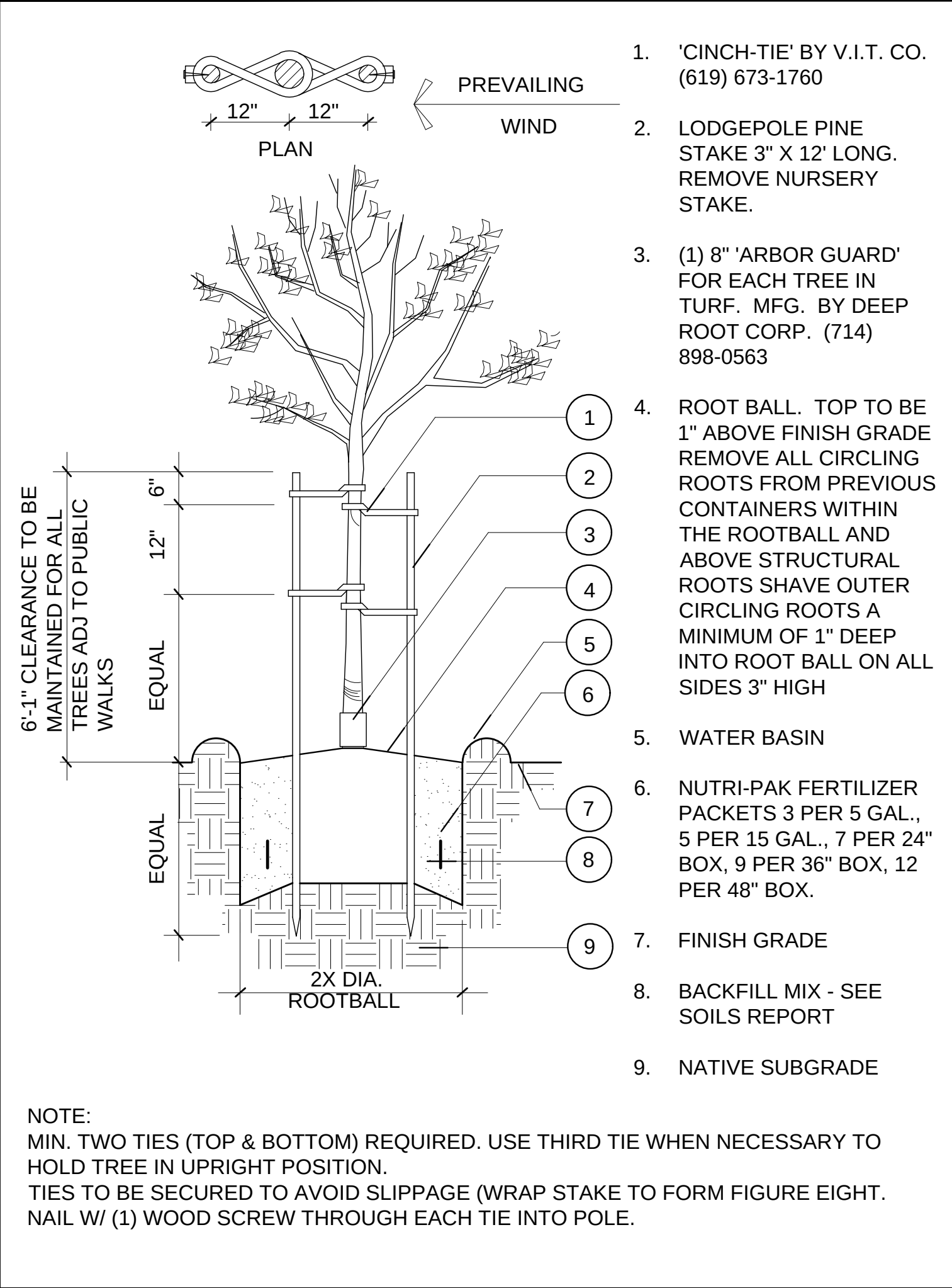
FLOW (GPM)	VALVE SIZE
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REVISIONS	DATE	BY



DESIGNED	KJK
DRAWN	KJK
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DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004



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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

KATHRYN J. KANAAN NGUYEN
Signature
8/31/27
Review Date
Date

STATE OF CALIFORNIA

SHEET TITLE

IRRIGATION/
PLANTING
DETAILS

DESIGNED	KJK
DRAWN	KJK
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DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

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OF 09 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE KEPT TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.

- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP, TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
- § CONNECTIONS TO THE EXISTING WATER LINES
- § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
- § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
- § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
- § CONTROLLER LOCATIONS WITH GROUNDING RODS
- § WIRE RUNS, SPLICE LOCATIONS
- § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.
- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).
5. TESTING DATA FROM REQUIRED PRESSURE TESTING.
- G. PRODUCT HANDLING
1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.
- I. EXCAVATING AROUND UTILITIES
1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
- J. TEMPORARY UTILITIES
1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.
- K. CUTTING, PATCHING, TRENCHING AND DIGGING
1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.
- C. SOLVENT CEMENTS AND THREAD LUBRICANT
6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.
- D. VALVES
1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.
- E. AUTOMATIC CONTROLLERS (ELECTRIC)
5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPIRATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPIRATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.
- F. CONTROL WIRE:
1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE ULV (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B-3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

- G. SPRINKLER HEADS:
1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.
- PART III- EXECUTION
- A. SURFACE CONDITIONS
8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.
2. DISCREPANCIES:
- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.
- B. TRENCHING/SLEEVING MEASUREMENTS
1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|--|--|--|
| b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER. | c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS. | d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS. |
- e. BACKFILL SHALL BE TAMPED OR PUDDLED TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING.
4. LOCATION WIRE:
- a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN.
- C. PIPE INSTALLATION
1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.
- D. FLUSHING
6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.
- E. HYDROSTATIC PRESSURE TESTING
1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- F. BACKFILLING AND COMPACTING
1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.



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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L1.3
OF 09 SHEETS

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

I. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM. PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER LETTERS IN ALL PULL BOXES AS AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 20 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURER'S REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSONBROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS NEW MV/F5?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP-UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION TWO 3-RING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION:

 - § INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.
 - § CATALOG AND PART'S SHEETS ON ALL MATERIAL AND EQUIPMENT.
 - § COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.
 - § IRRIGATION PRODUCT MANUFACTURERS WARRANTIES.

IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.

THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY LA.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY LA.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY LA.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

 - CLEANING OF PLUGGED IRRIGATION HEADS.
 - IRRIGATION HEADS ADJUSTMENTS.
 - VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - REPAIRING LEAKING VALVES, ETC.
 - ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.
 - REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.
 - LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART

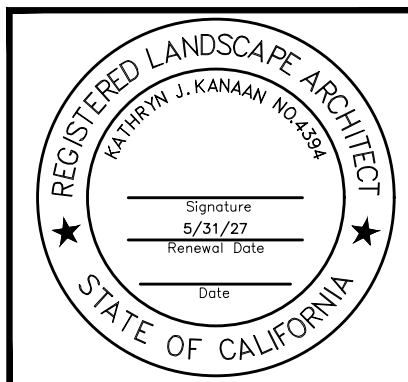


CLIENT: **LA MESA - SPRING VALLEY SCHOOLS**
3338 CONRAD DRIVE
SPRING VALLEY, CA 91977

619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: **MURRAY MANOR ELEMENTARY**
8305 EL PASO STREET
LA MESA, CA 91942
CALFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

IRRIGATION
NOTES

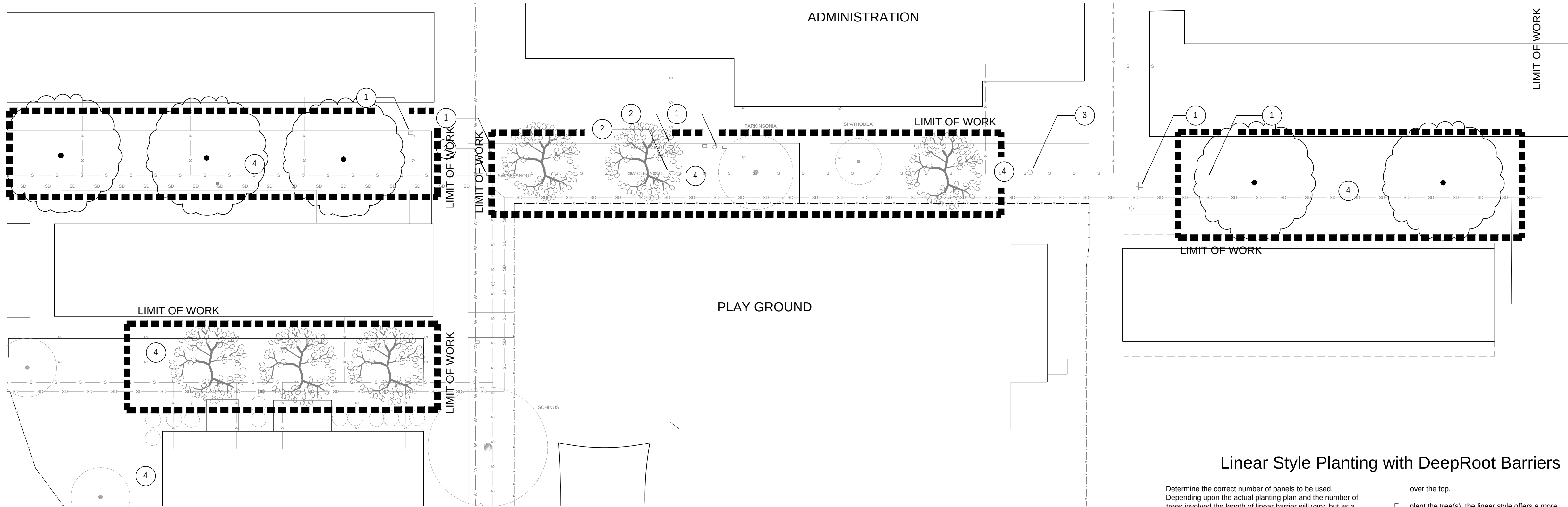
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

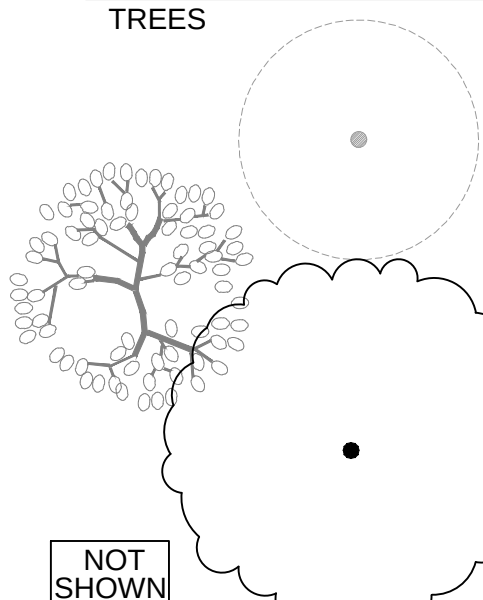
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OF 09 SHEETS

5/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\USD CAL FIRE GRANT LANDSCAPE\AUTOCAD\CD\S\MURRAY MANOR ES\26004.MM PP.DWG



PLANT LEGEND

SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
	6	ARBUSUS UNEDO 'MARINA' STRAWBERRY TREE	48" BOX	25' O.C.	STANDARD	'H, I/ L1.2
	5	ULMUS PARVIFOLIA 'TRUE GREEN' TRUE GREEN ELM	48" BOX	40' O.C.	STANDARD	'H, I/ L1.2
		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				THIS SHEET
		EXISTING SHRUB TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
		ALL PLANTER AREAS TO RECEIVE A 3" THICK LAYER OF FOREST FINES MULCH TO BE PLACED 2' AWAY FROM TREE TRUNKS AND 1' AWAY FROM ALL PLANT BASES.				

NOTE:

- REFER TO PLANTING DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
- PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
- BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
- NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

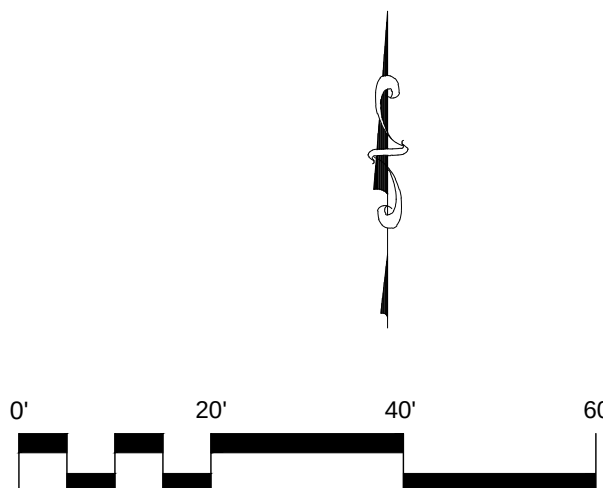
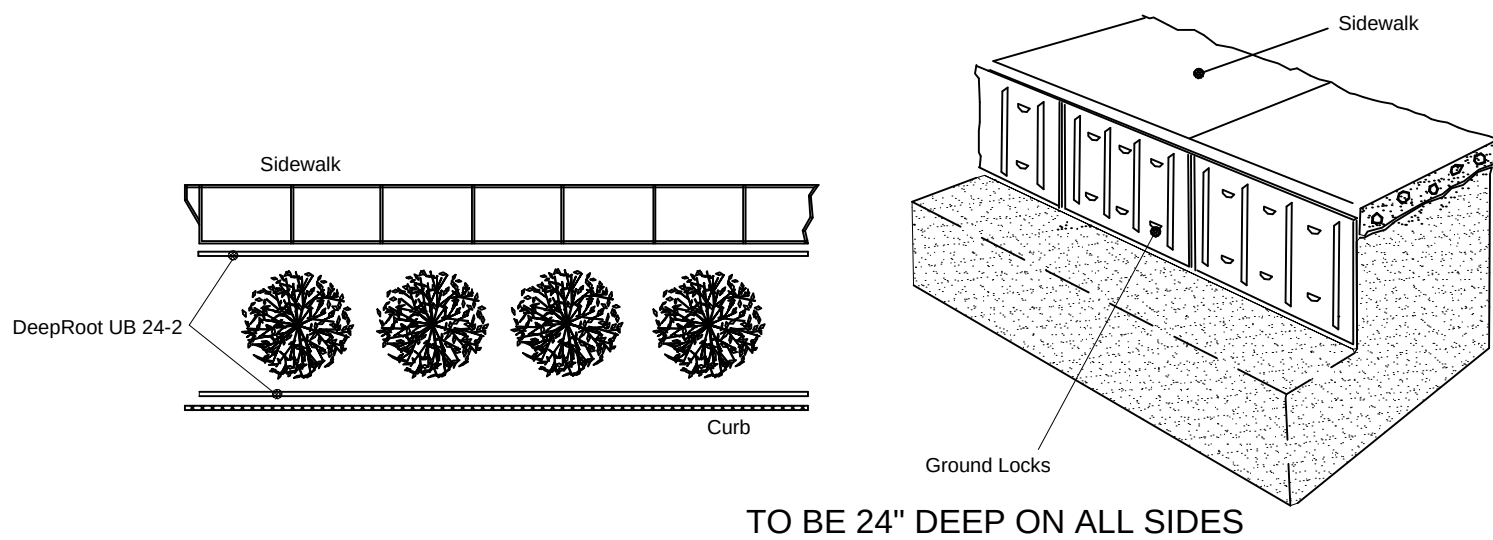
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING SEWER CLEANOUT TO BE PROTECTED IN PLACE.
- EXISTING SEWER MANHOLE TO BE PROTECTED IN PLACE.
- REPAIR AND REPLACE ANY TURF, PLANT MATERIAL OR DG DAMAGED DURING DEMO OR CONSTRUCTION.

Linear Style Planting with DeepRoot Barriers

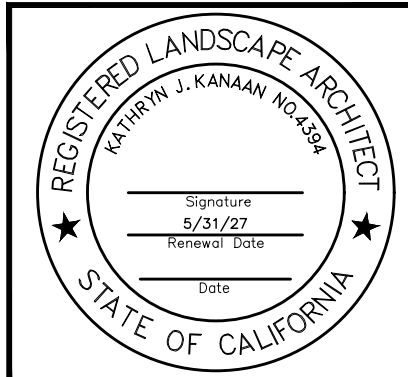
- Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2 feet (61cm). This will be the number of feet necessary for a Linear style planting application. (See chart below.)
- A. Choose the barrier that best suits the application.
- B. Dig the trench to the depth based upon the particular barrier chosen.
- C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the joinder at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.
- D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow over the top.
- E. plant the tree(s). the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area. take steps to ensure healthy growth of the tree at planting. consult with a local arborist for planting tips and recommendations.
- F. if the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arbogard+ tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 458 root (458.7668) for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.8835).

For a simple formula to determine the quantity of panels required for a Linear application use:
Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

As little as one side of the tree may need barrier for root direction as there may be no hardscape elsewhere requiring protection.	For One Side of Tree Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
	12' (3.6m) Diameter	+2' (61cm) = 14' (4.2m)	7 Panels
	18' (5.5m) Diameter	+2' (61cm) = 20' (6.1m)	10 Panels
	24' (7.3m) Diameter	+2' (61cm) = 26' (7.9m)	13 Panels



REVISIONS	DATE	BY



DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

PART I - GENERAL REQUIREMENTS

A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOIL IS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.
- I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.
- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.
- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.
- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.
- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.
- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY
- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATIONS SHOULD BE MADE TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE: SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.
2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.
- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.
- c. QUANTITY OF PLANT MATERIAL.

- SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

- THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

- ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:
- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
 - b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
 - c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
 - d. BULK MATERIALS:
- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF OR EXCESSIVE DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FIND-THE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.
- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.
- 8) APPLY ANTIDESCICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.
- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESCICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.
- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.
- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
 - b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.
 - c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.
2. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.
2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.
2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.
3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.
5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.
- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMOHS/CENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%
2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.
- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.
3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).
2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.
3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DEFECTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

- WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.
- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL INVOLVE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:
- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.
- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.
- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.
- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.
- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.
- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.
- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.
- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDES AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.
- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.
- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.
- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND, PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.
- (6) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM NURSERY PRODUCTION PRACTICES.

- 6) PLANT GROWER CERTIFICATION: THE FINAL PLANT GROWER SHALL BE RESPONSIBLE TO HAVE DETERMINED THAT THE PLANTS HAVE BEEN ROOT PRUNED AT EACH STEP IN THE PLANT PRODUCTION PROCESS TO REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS, OR THAT THE PREVIOUS PRODUCTION SYSTEM USED PRACTICES THAT PRODUCE A ROOT SYSTEM THROUGHOUT THE ROOT BALL THAT MEETS THESE SPECIFICATIONS. REGARDLESS OF THE WORK OF PREVIOUS GROWERS, THE PLANTS' ROOT SYSTEM SHALL BE MODIFIED AT THE FINAL PRODUCTION STAGE, IF NEEDED, TO PRODUCE THE REQUIRED PLANT ROOT QUALITY. THE FINAL GROWER SHALL CERTIFY IN WRITING THAT ALL PLANTS ARE REASONABLY FREE OF STEM GIRDLING AND KINKED ROOTS AS DEFINED IN THIS SPECIFICATION, AND THAT THE TREE HAS BEEN GROWN AND HARVESTED TO PRODUCE A PLANT THAT MEETS THESE SPECIFICATIONS.

- 7) AT TIME OF OBSERVATIONS AND DELIVERY, THE ROOT BALL SHALL BE MOIST THROUGHOUT. ROOTS SHALL NOT SHOW SIGNS OF EXCESS SOIL MOISTURE CONDITIONS AS INDICATED BY STUNTED, DISCOLORED, DISTORTED, OR DEAD ROOTS.

- 8) REJECTION OR SUBSTITUTION: ALL PLANTS NOT CONFORMING TO THE REQUIREMENTS HEREIN SPECIFIED SHALL BE CONSIDERED DEFECTIVE, AND SUCH PLANTS, WHETHER IN PLACE OR NOT, SHALL BE MARKED AS REJECTED AND IMMEDIATELY REMOVED FROM THE SITE OF THE WORK AND REPLACED WITH NEW PLANTS AT THE CONTRACTOR'S EXPENSE. THE PLANTS SHALL BE OF THE SPECIES, VARIETY, SIZE AND CONDITION SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS. UNDER NO CONDITION WILL THERE BE ANY SUBSTITUTION OF PLANTS OR SIZES FOR THOSE LISTED ON THE ACCOMPANYING PLANS, EXCEPT WITH THE EXPRESSED CONSENT OF THE LANDSCAPE ARCHITECT.
- 9) PRUNING: AT NO TIME SHALL THE TREE OR PLANT MATERIALS BE PRUNED, TRIMMED OR TOPPED PRIOR TO DELIVERY, AND ANY ALTERATION OF THEIR SHAPE SHALL BE CONDUCTED ONLY WITH THE RECOMMENDED APPROVAL AND WHEN IN THE PRESENCE OF THE LANDSCAPE ARCHITECT.

- 10) PROTECTION: ALL PLANTS AT ALL TIMES SHALL BE HANDLED AND STORED SO THAT THEY ARE ADEQUATELY PROTECTED FROM DRYING OUT, FROM WIND BURN, OR FROM ANY OTHER INJURY.
- 11) RIGHT OF REVIEW: THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO RECOMMEND APPROVAL OR REJECTION AT ANY TIME UPON DELIVERY OR DURING THE WORK, ANY OR ALL PLANT MATERIAL REGARDING SIZE, VARIETY OR CONDITION.

- 12) IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF PLANTS IS INDICATED ON THE DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD AND NUMBER THE LABELS TO ASSURE SYMMETRY IN PLANTING.

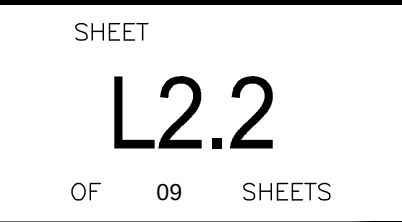


REVISIONS	DATE	BY



SHEET TITLE	
PLANTING NOTES	
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET	
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- M. LONG TERM MAINTENANCE
1. GENERAL
- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.

b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.
2. TREES
- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.

b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.

c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.

d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.
3. SHRUBS / VINES
- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.

c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.
4. GROUND COVERS
- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.

c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.
5. TURF
- a. AERATION OF BERMUDA GRASSES

b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.

c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM

d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.
6. DETHATCHING OF TURF GRASS
- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.

b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.

c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.

d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.
- END OF SECTION

KDA

LANDSCAPE ARCHITECTS

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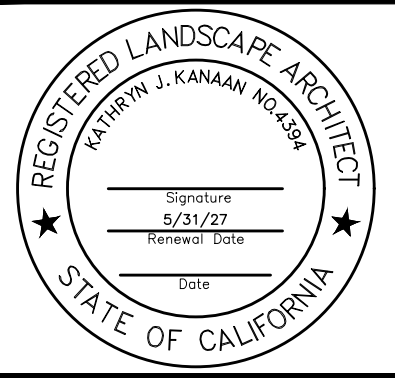
CLIENT:
LA MESA - SPRING VALLEY SCHOOLS
3338 CONRAD DRIVE
SPRING VALLEY, CA 91977

619.668.5760 X 4701
CONTACT: SHAUN GABRIELS



PROJECT:
MURRAY MANOR ELEMENTARY
8305 EL PASO STREET
LA MESA, CA 91942
CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

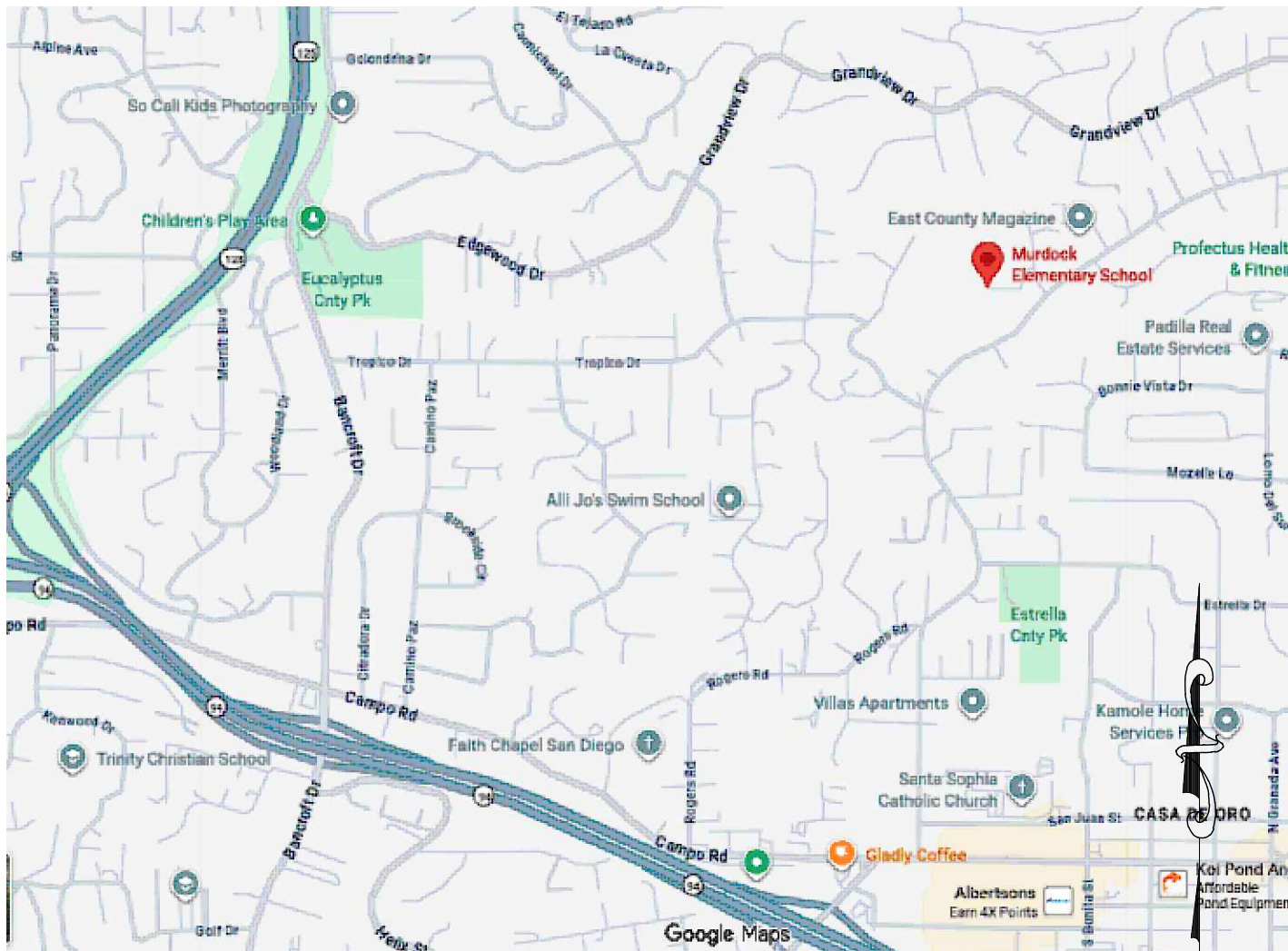
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

CONSULTANTS



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REVISIONS

NO.	REVISION	FOR	BY	DATE	APPROVED BY
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SHEET INDEX

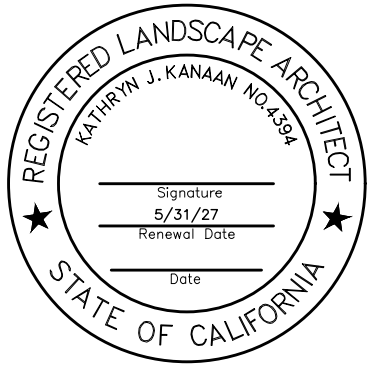
SHEET	DESCRIPTION
L10	TITLE SHEET
L11	IRRIGATION PLAN
L12	IRRIGATION/PLANTING DETAILS
L13	IRRIGATION NOTES
L14	IRRIGATION NOTES
L20	PLANTING PLAN
L21	PLANTING NOTES
L22	PLANTING NOTES
L23	PLANTING NOTES



Know what's below.
Call before you dig.

PROJECT:
MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941
CALFIRE GRANT LANDSCAPE PLAN

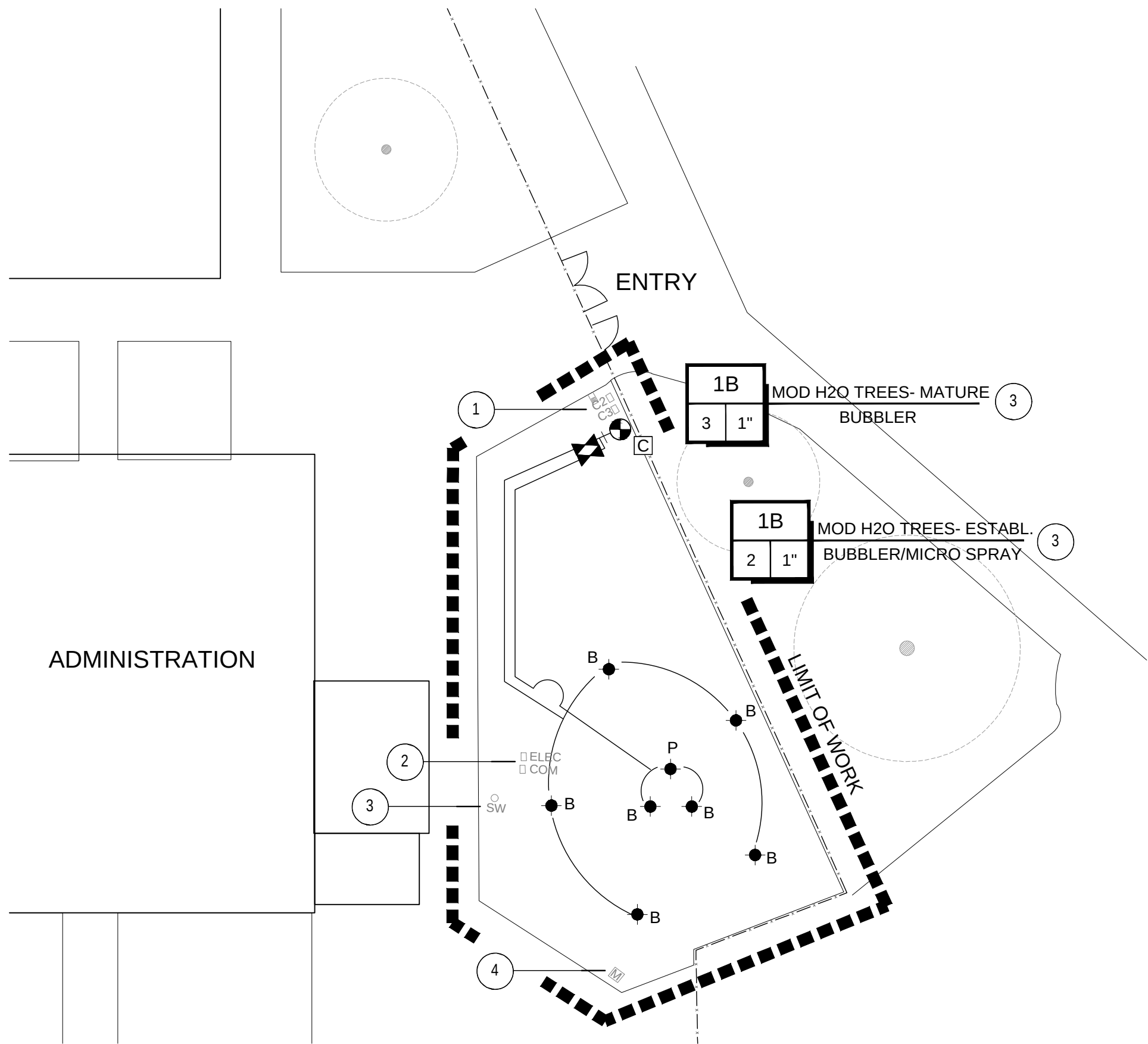
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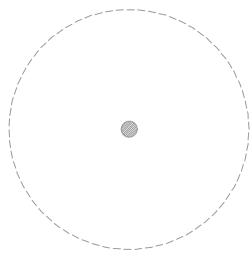
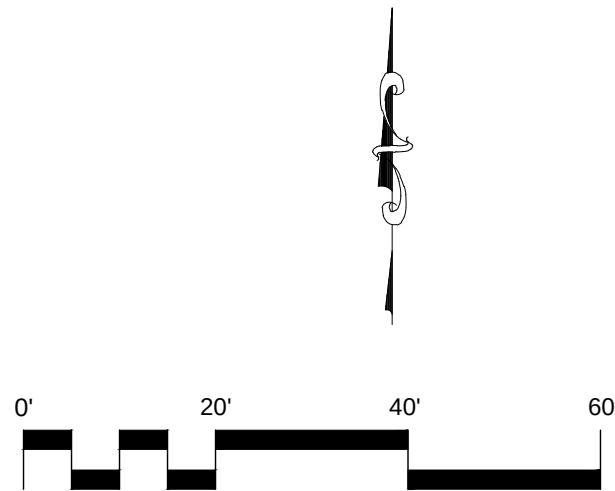
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IRRIGATION KEYNOTES

- EXISTING IRRIGATION VALVES TO BE PROTECTED IN PLACE.
- EXISTING ELECTRICAL AND COMMUNICATION VAULTS TO BE PROTECTED IN PLACE.
- EXISTING SPARE WIRES TO BE PROTECTED IN PLACE. IF POSSIBLE, ADD NEW VALVE INTO THE CONTROLLER. CONTRACTOR IS TO INFORM LANDSCAPE ARCHITECT IF THIS IS POSSIBLE AND WHAT STATION NUMBER IT BECOMES IF ADDED.
- EXISTING METER TO BE PROTECTED IN PLACE.



EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE, SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	'C'/L1.2	(2, 3)
	RAINBIRD TBOS-BTLT BATTERY OPERATED CONTROLLER. 1 STATION FOR SMALLER SYSTEMS AS SHOWN, 3 TREES AND 2 STATION FOR 4+ TREES.	A=2 ST. B=1 ST.	'C'/L1.2	(3)
	NIBCO T-585 BALL VALVE	1"	'G'/L1.2	(2, 3)
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	2"		
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
NOT SHOWN	UF RATED CONTROL WIRE, 12 GA COMMON, 14 GA PILOT - 18" MIN. COVER	12/14 GA	'A, B'/ L1.2	
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS				
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P'. RAINBIRD 1806-SAM W/ 24RNVAPRO NOZZLES FOR MATURE 'P' TREES PLANTERS. RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+.5 ESTABLISH 1.20 +.5 MATURITY	'D-F'/ L1.2
MISCELLANEOUS				
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART

1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART

	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER	
FLOW (GPM)	VALVE SIZE

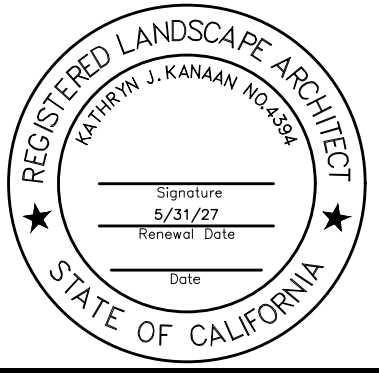
- REFER TO IRRIGATION DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
- MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
- MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
- ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUND COVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
- ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
- LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
- ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
- THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.



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4354 CONRAD DRIVE
LA MESA, CA 91941
CAL FIRE GRANT LANDSCAPE PLAN

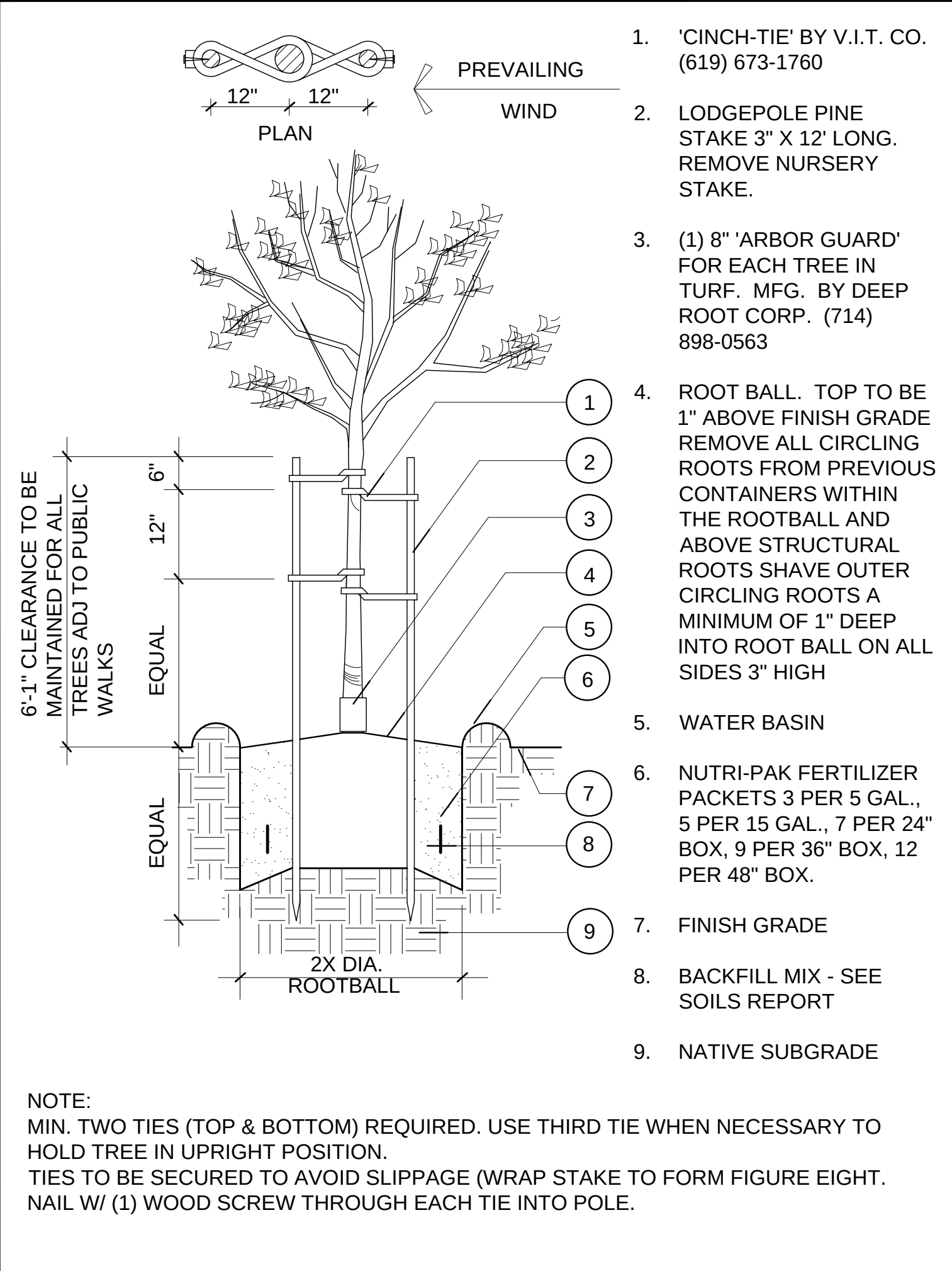
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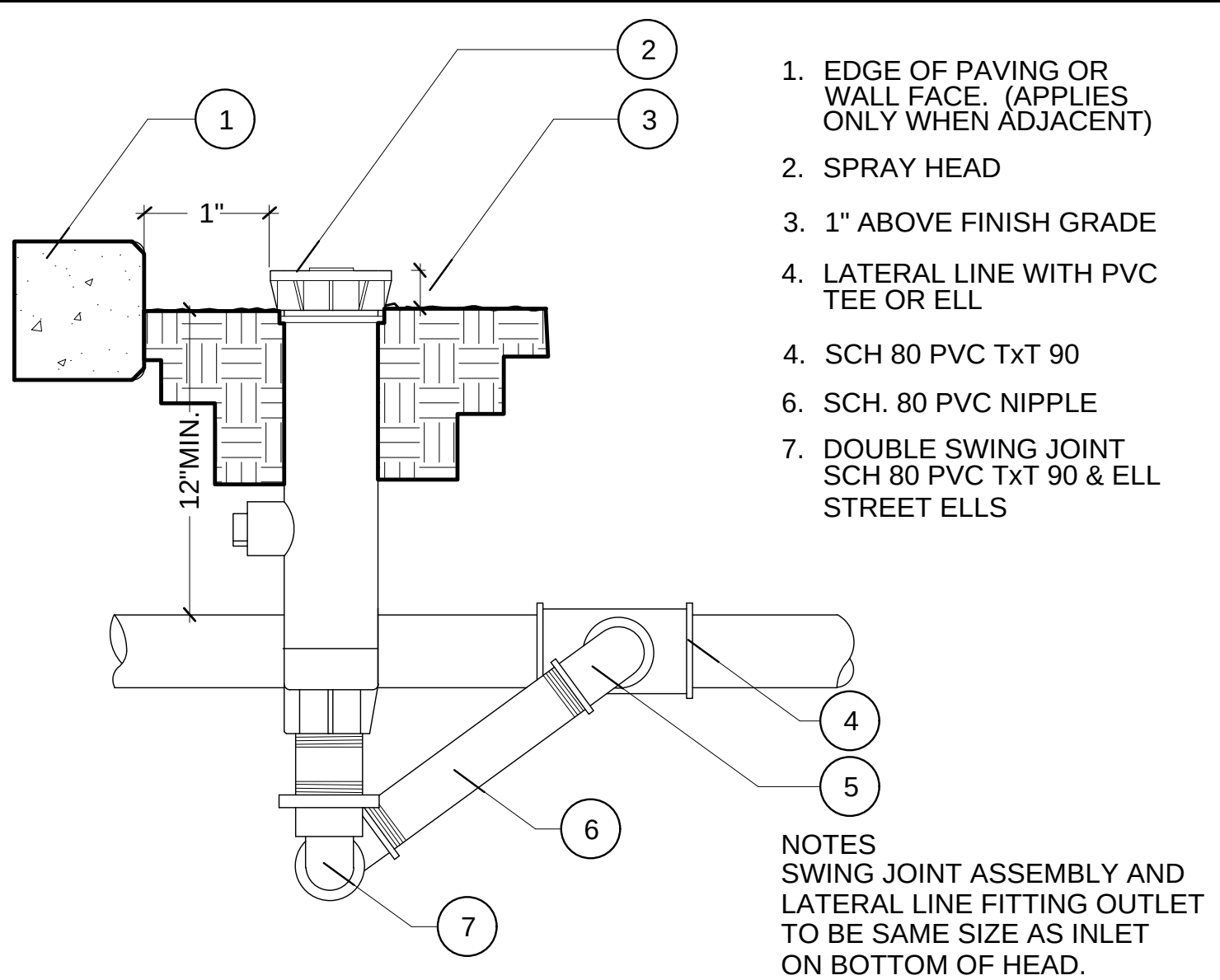
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IRRIGATION
PLAN

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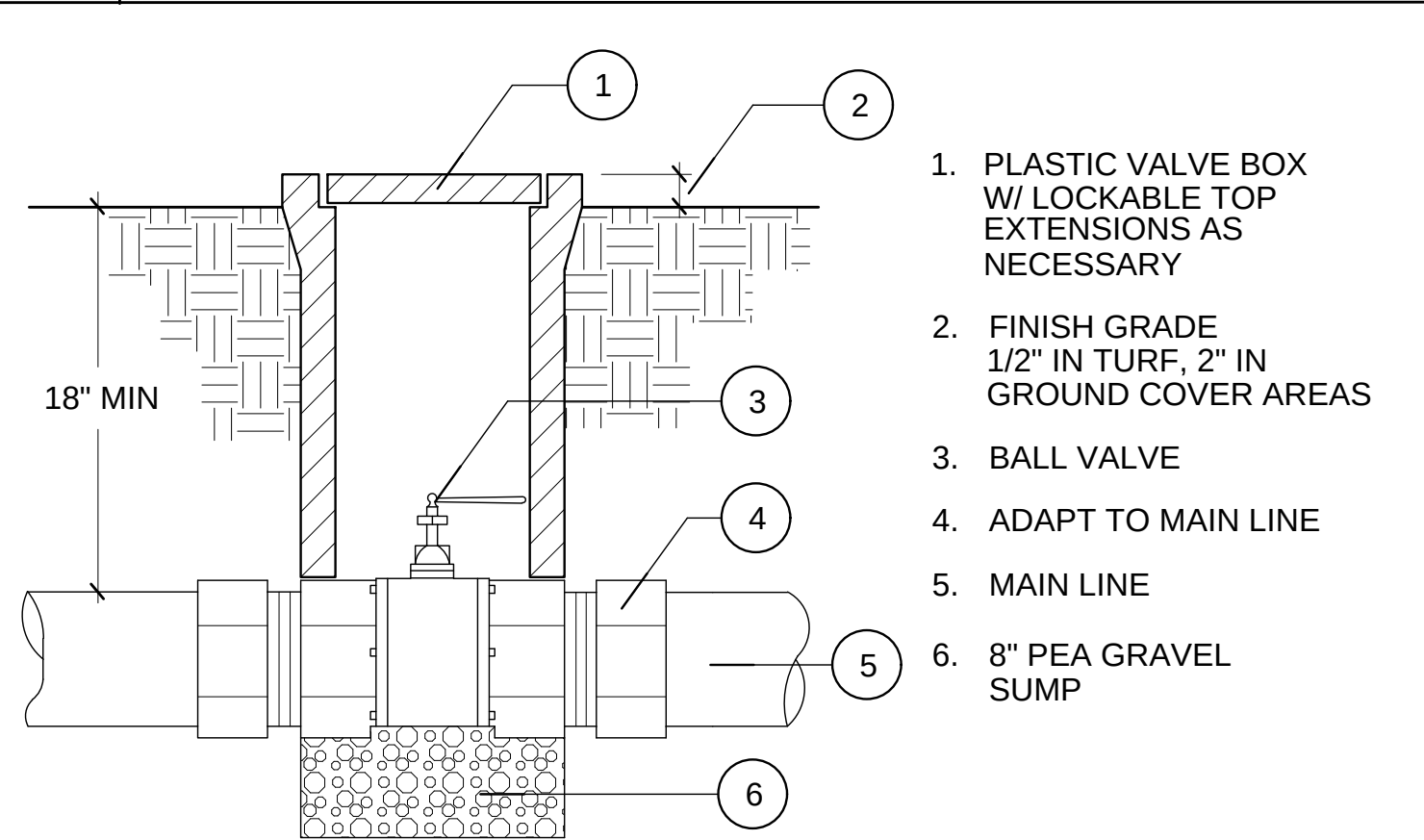
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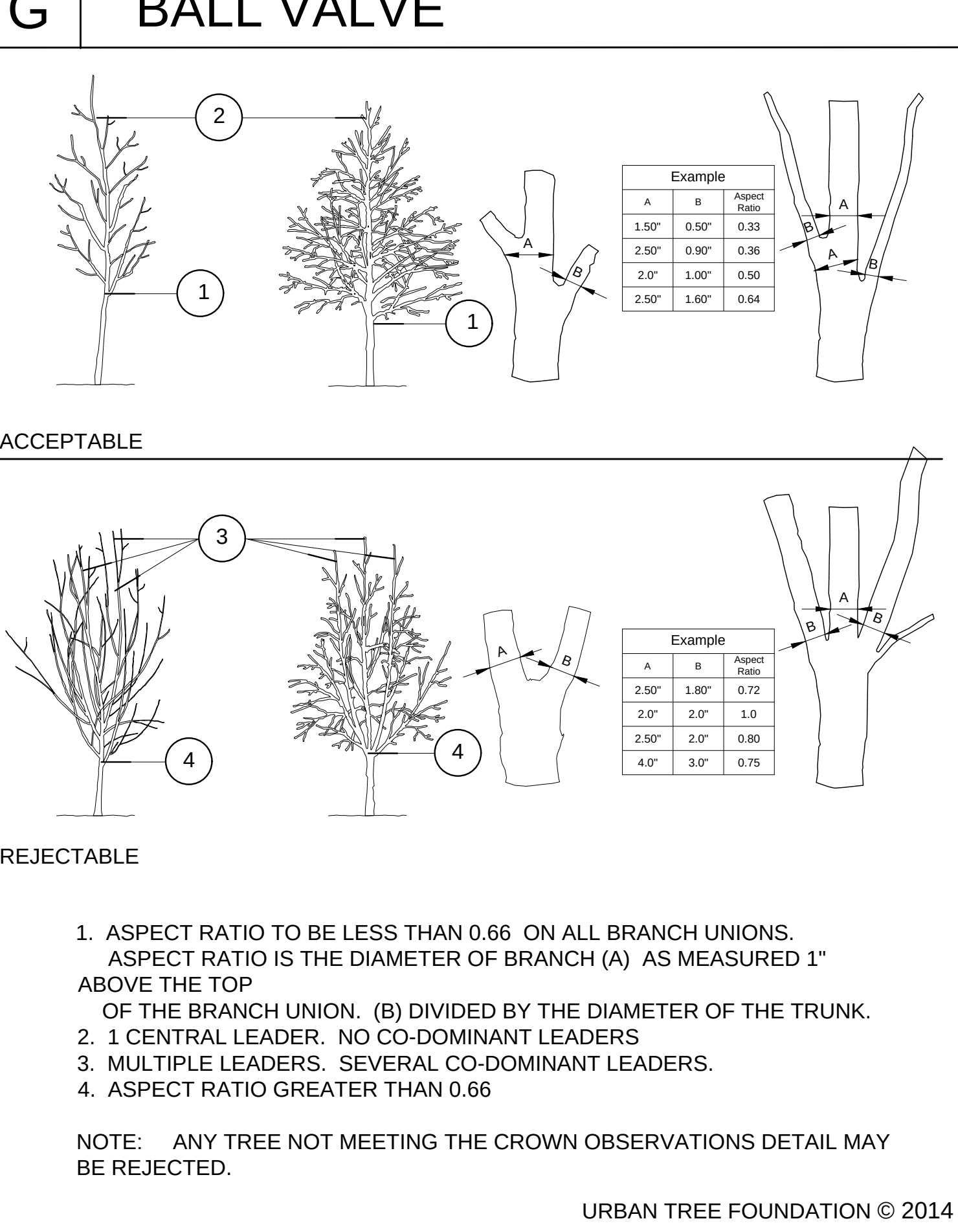
I DOUBLE STAKED TREE



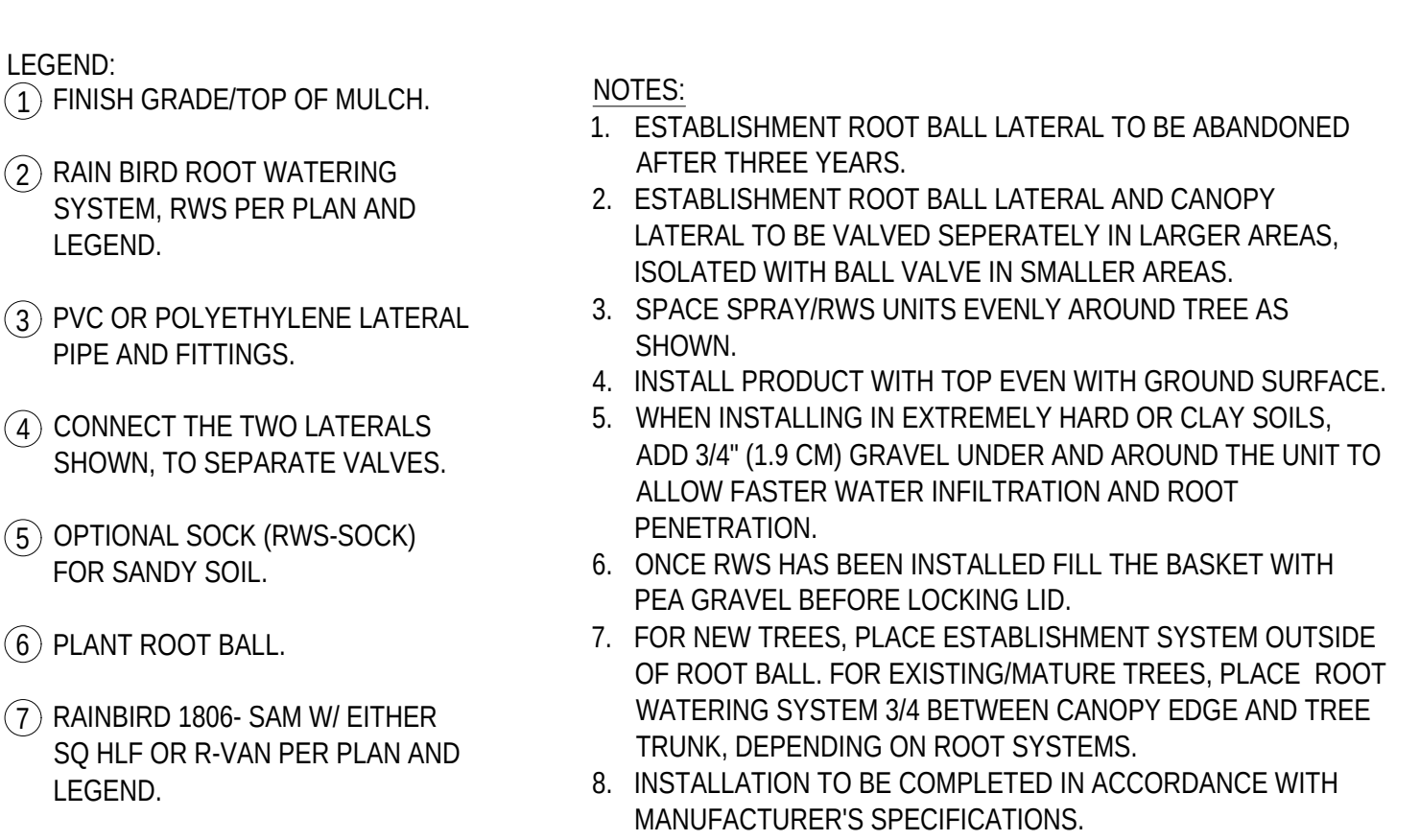
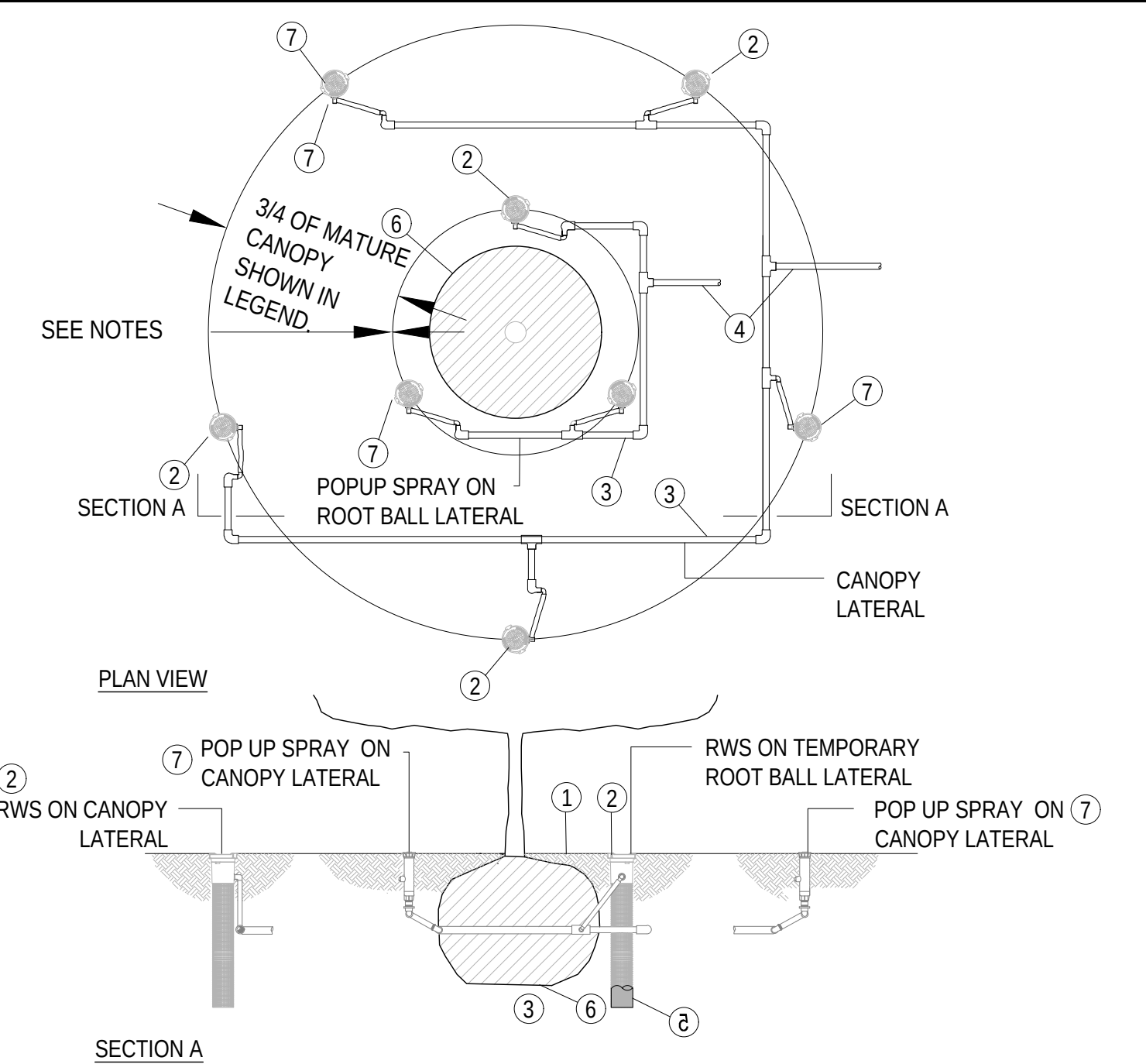
F SHRUB SPRAY HEAD



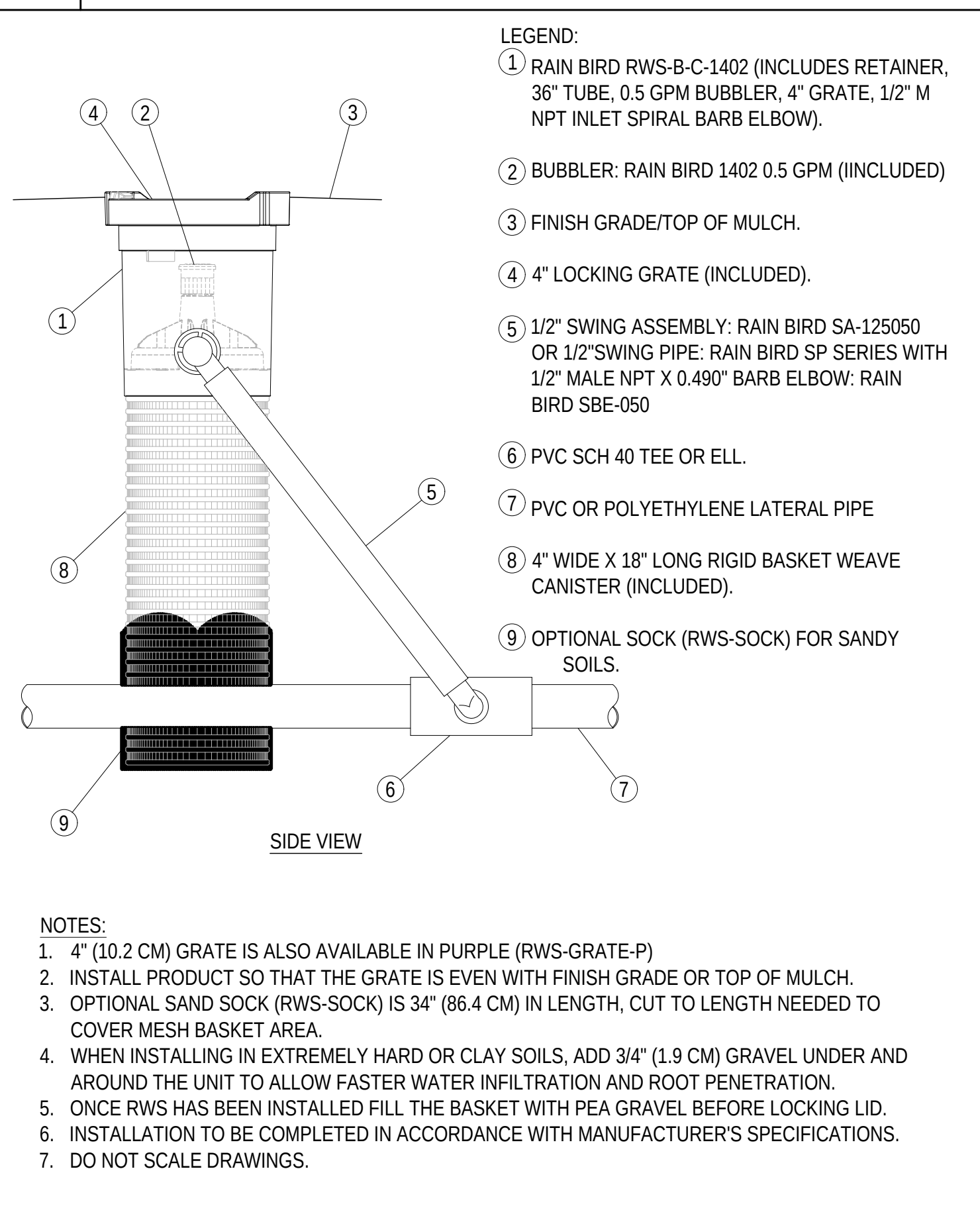
G BALL VALVE



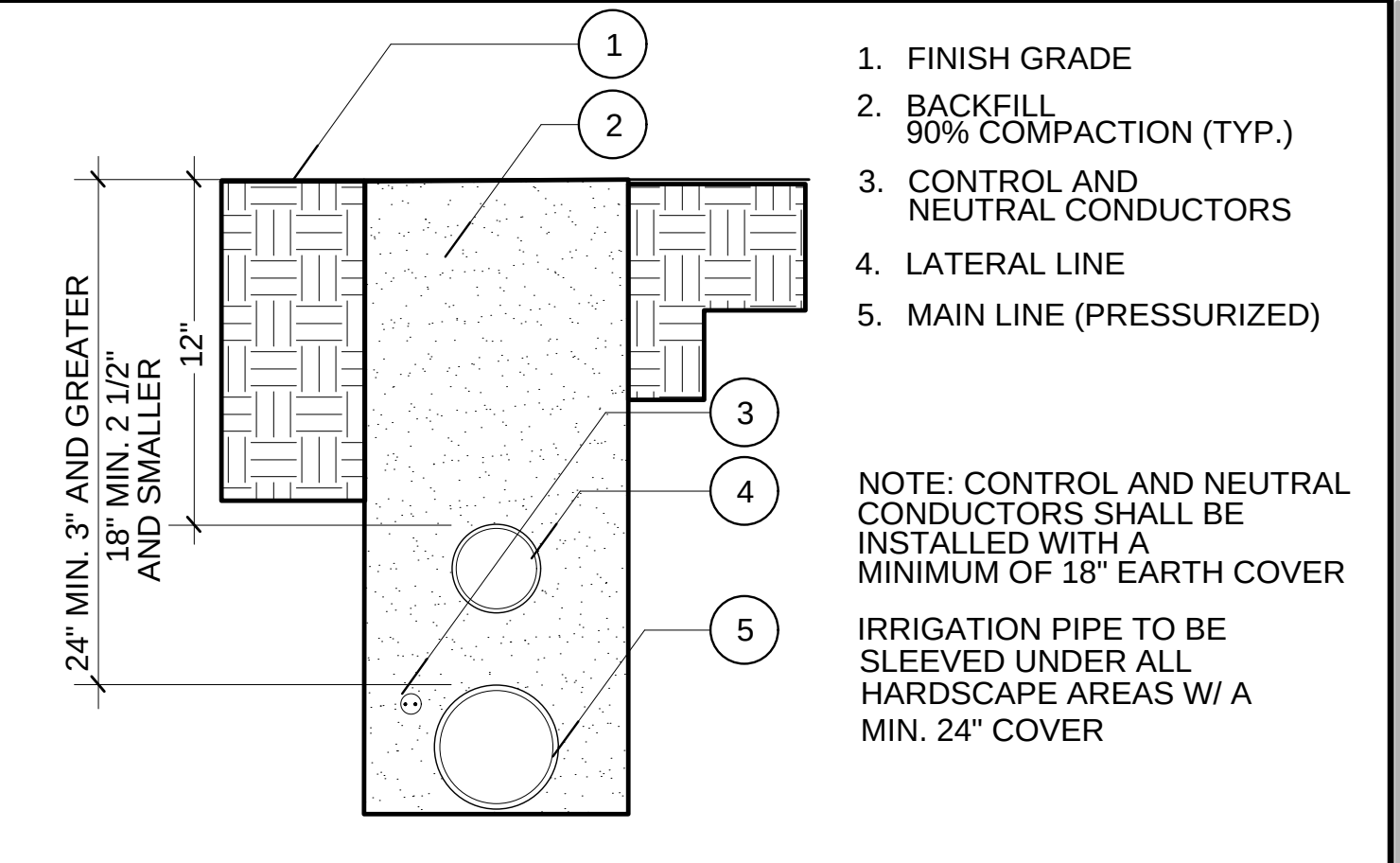
H HIGH BRANCHED CROWN OBSERV.



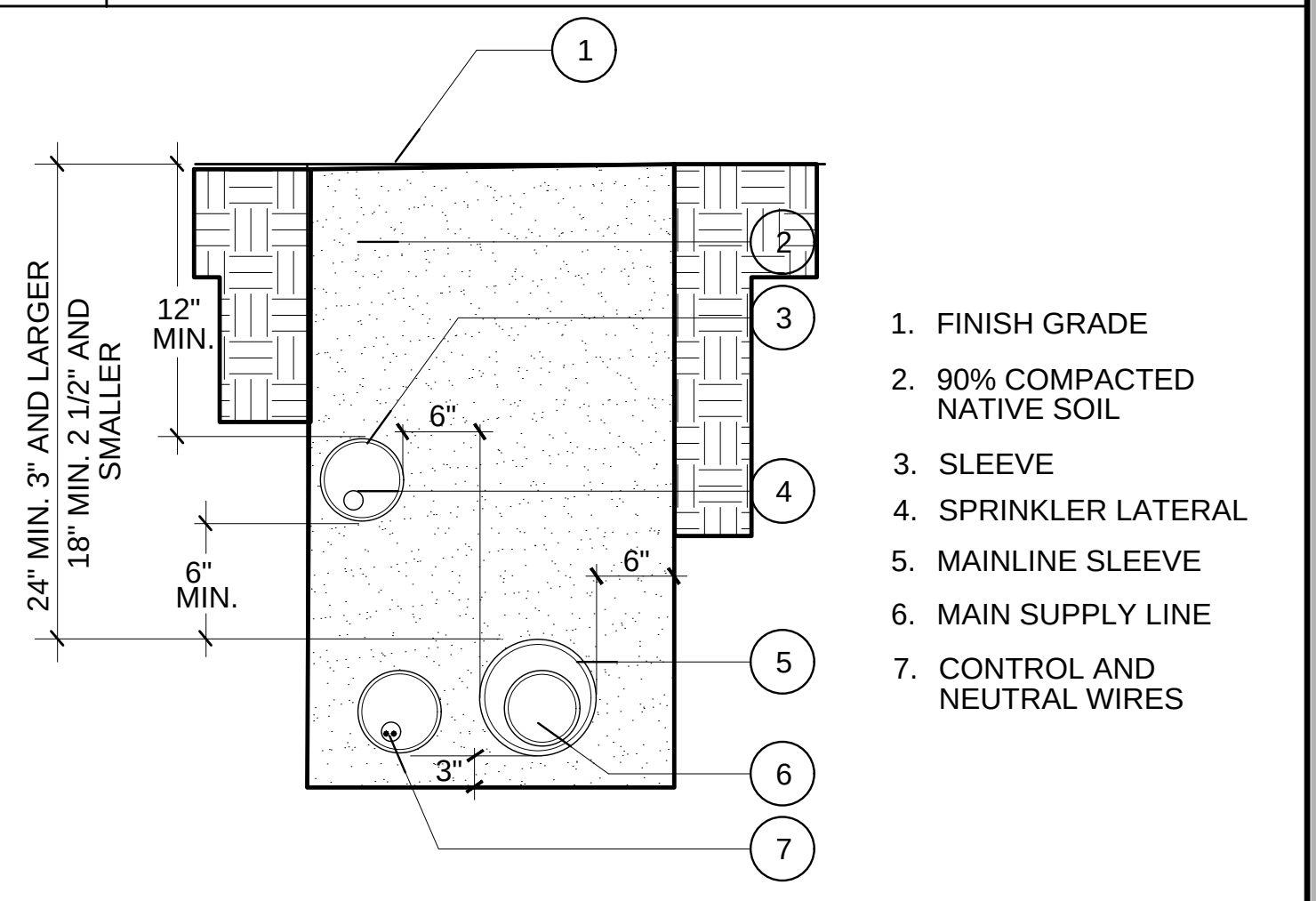
D TREE WATERING LAYOUT



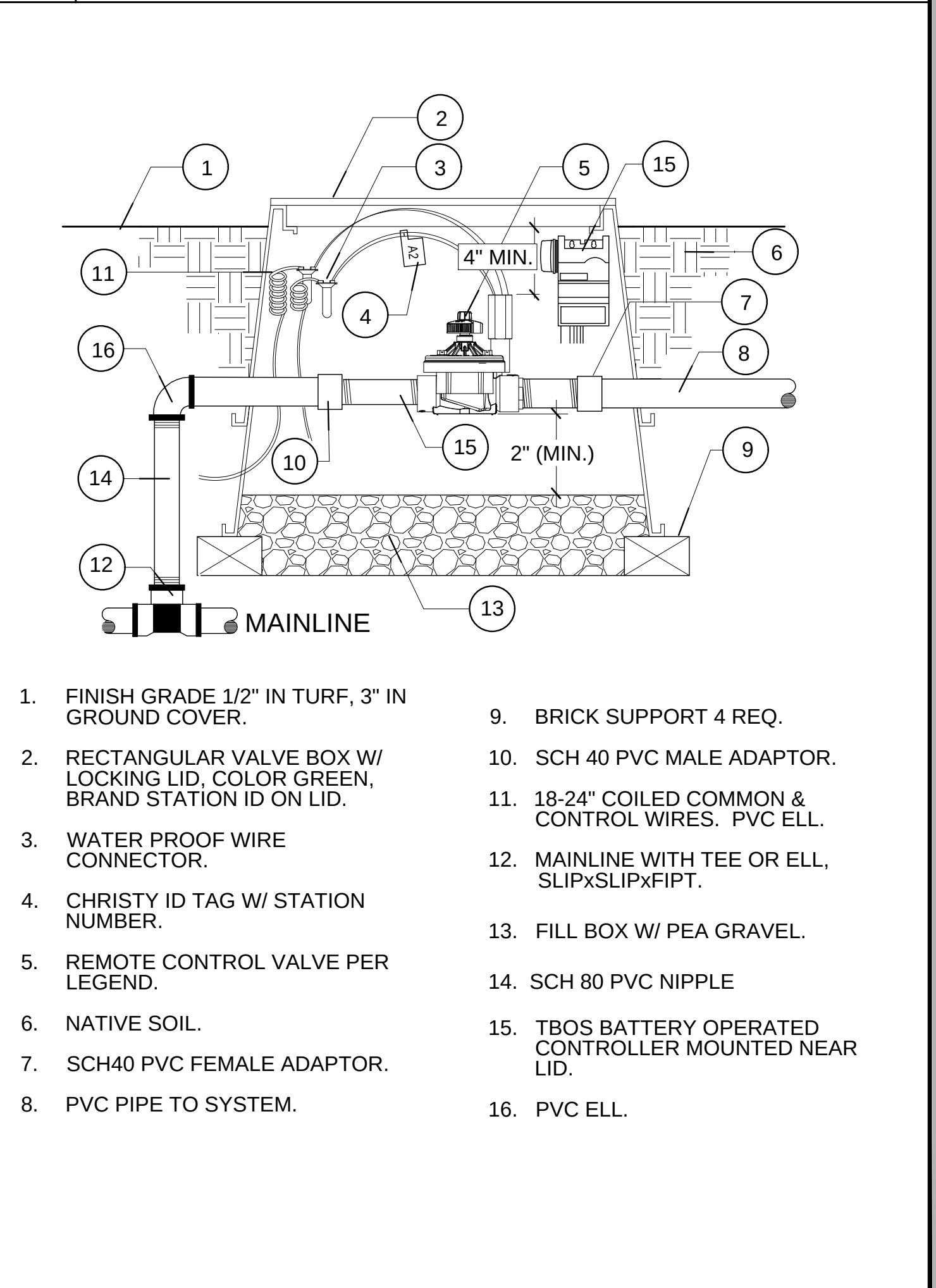
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER



CLIENT: LA MESA - SPRING VALLEY SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION/
PLANTING
DETAILS

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L1.2
OF 09 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.
- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
- § CONNECTIONS TO THE EXISTING WATER LINES
- § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
- § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
- § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
- § CONTROLLER LOCATIONS WITH GROUNDING RODS
- § WIRE RUNS, SPLICE LOCATIONS
- § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.
- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).
5. TESTING DATA FROM REQUIRED PRESSURE TESTING.
- G. PRODUCT HANDLING
1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.
- I. EXCAVATING AROUND UTILITIES
1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
- J. TEMPORARY UTILITIES
1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.
- K. CUTTING, PATCHING, TRENCHING AND DIGGING
1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD_STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- a. TYPE I, GRADE I, SCHEDULE 80, HIGH IMPACT MOLDED, MANUFACTURED FROM VIRGIN COMPOUNDS AS SPECIFIED FOR PIPING AND CONFORMING TO ASTM D-2464.
- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.
- c. SOLVENT CEMENTS AND THREAD LUBRICANT
6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.
- D. VALVES
1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.
- E. AUTOMATIC CONTROLLERS (ELECTRIC)
5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPARATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPARATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.
- F. CONTROL WIRE:
1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE UL (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT I RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B_3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)
- G. SPRINKLER HEADS:
1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.
2. DISCREPANCIES:
- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

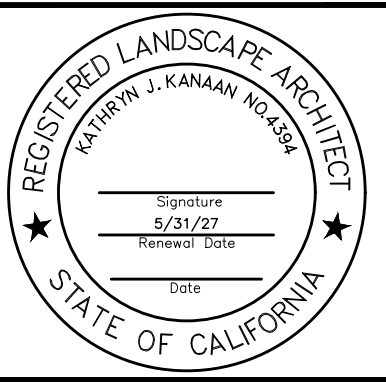
- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|--|--|--|
| b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER. | c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS. | d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS. |
| e. BACKFILL SHALL BE TAMPED OR PUDDLED TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING. | 4. LOCATION WIRE: | a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE WIRE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN. |
| C. PIPE INSTALLATION | 1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS. | 2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING. |
| 3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK. | 4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. | a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. |
| b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING. | c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY. | d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH. |
| e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN. | f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE. | g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED. |
| h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT. | i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE. | D. FLUSHING |
| 6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM. | 7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL. | E. HYDROSTATIC PRESSURE TESTING |
| 1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. | 2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED. | 3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET. |
| 4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED. | 5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE. | 6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS. |
| 7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. | F. BACKFILLING AND COMPACTING | 1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH. |
| 2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES | a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR. | |



CLIENT: LA MESA - SPRING VALLEY SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS
619.668.5760 X 4701

PROJECT: MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE	
IRRIGATION NOTES	
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET	
L1.3	
OF 09 SHEETS	

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

L. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM; PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER CLOCK LETTER IN ALL PULL BOXES AND AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 200 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER:

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURES REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSONBROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS NEW MV/F5?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP_UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION, TWO 3-RING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION:

§ INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.

§ CATALOG AND PARTS SHEETS ON ALL MATERIAL AND EQUIPMENT.

§ COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.

§ IRRIGATION PRODUCT MANUFACTURERS WARRANTIES.

- IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.
- e. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY L.A.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING. TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY L.A.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY L.A.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER. IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

- CLEANING OF PLUGGED IRRIGATION HEADS.

- IRRIGATION HEADS ADJUSTMENTS.

- VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)

- PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)

- REPAIRING LEAKING VALVES, ETC.

- ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.

- REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.

- LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER.

END OF SECTION



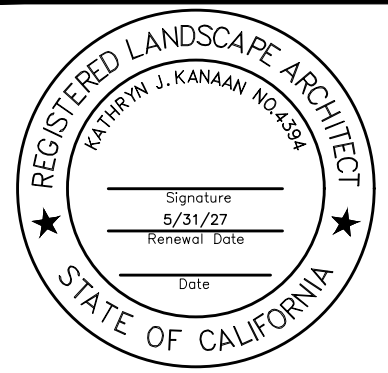
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CONTACT: SHAUN GABRIELS

PROJECT: MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

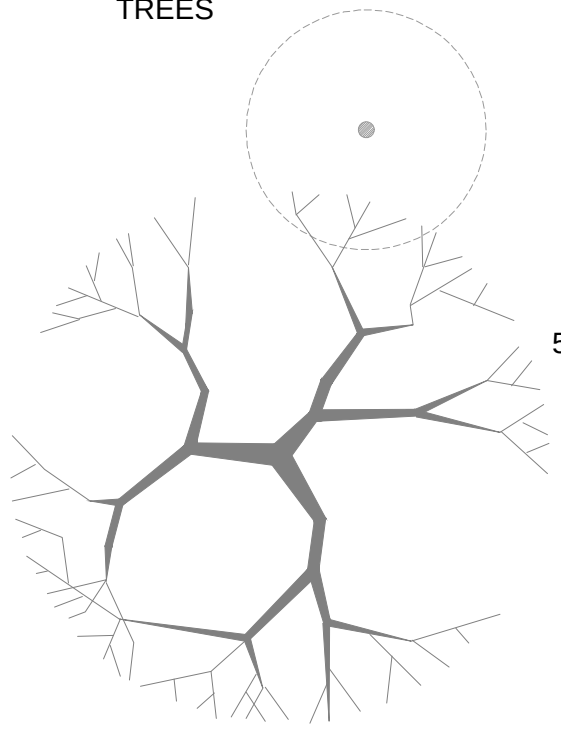


SHEET TITLE	
IRRIGATION NOTES	
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET		
L1.4		
OF	09	SHEETS

5/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\SD CAL FIRE GRANT LANDSCAPE\AUTOCAD\CD\S\MURDOCK ES\26004 M PP.DWG

PLANT LEGEND

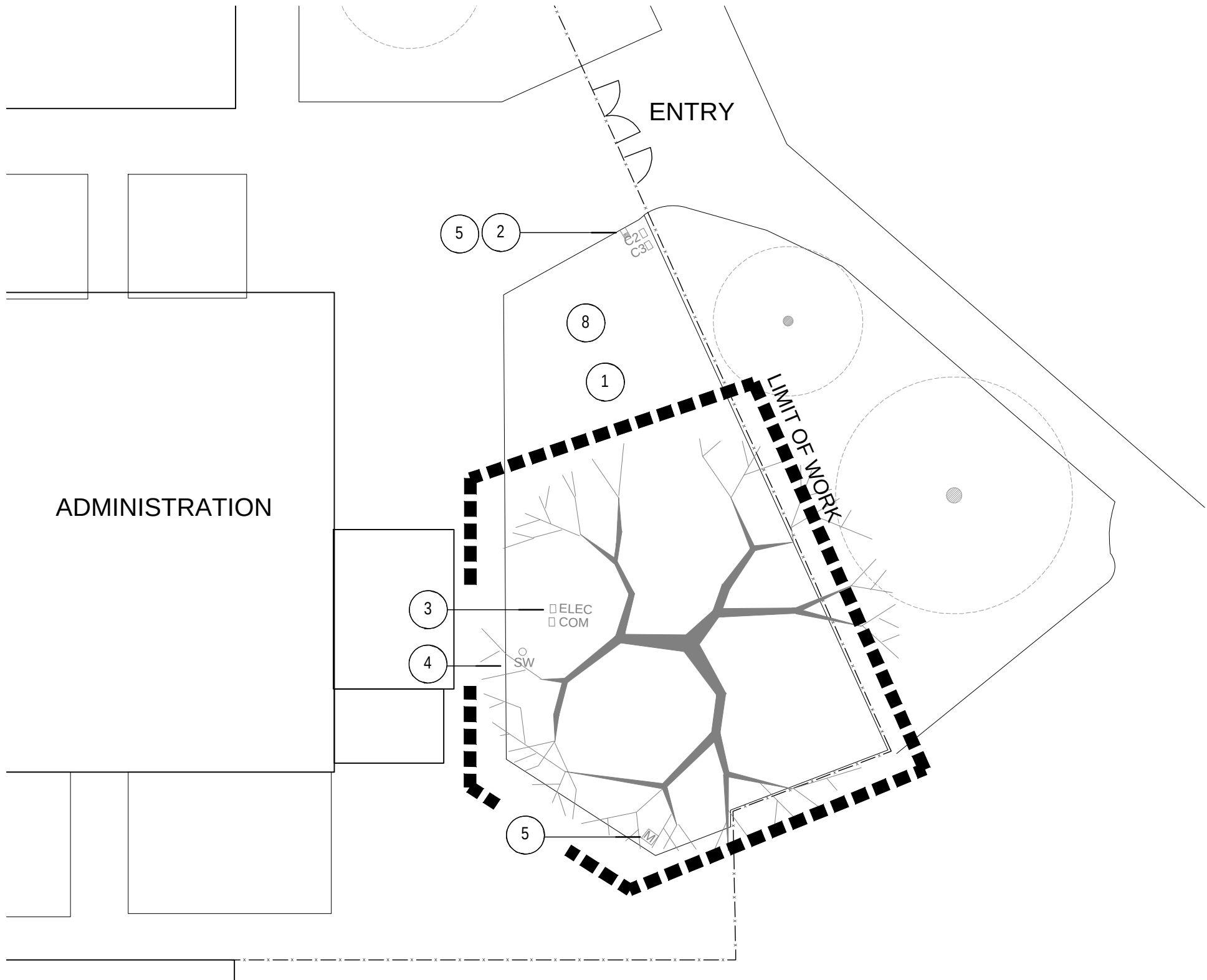
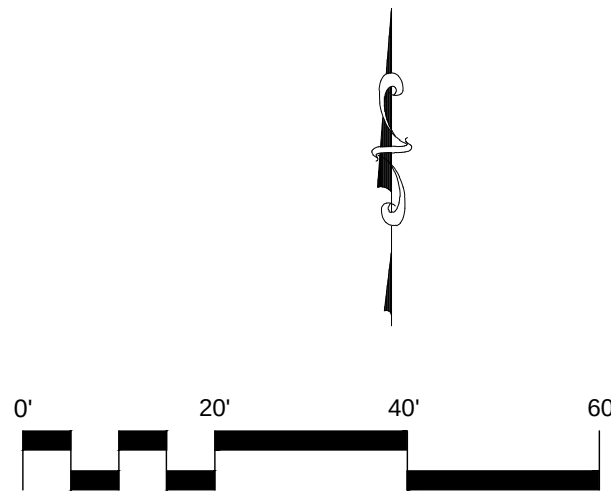
SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
	5	TIPUANA TIPU TIPU TREE	48" BOX	70' O.C.	STANDARD	'H, I/ L1.2

PLANTING KEYNOTES

- REPAIR AND REPLACE EXISTING TURF WITH LIKE MATERIAL, SOD, ANYTHING DAMAGED DURING CONSTRUCTION.
- EXISTING LIGHT STANDARD TO BE PROTECTED IN PLACE.
- EXISTING ELECTRICAL VAULT TO BE PROTECTED IN PLACE.
- EXISTING ELECTRIC WIRES TO BE PROTECTED IN PLACE.
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.

NOTE:

- REFER TO PLANTING DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
- PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
- BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
- NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.





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PROJECT:

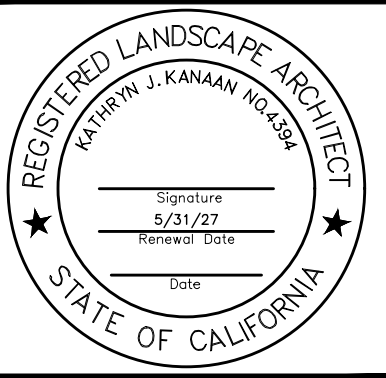
MURDOCK ELEMENTARY

4354 CONRAD DRIVE

LA MESA, CA 91941

CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING
PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L2.0

OF 09 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI26000\PROJECTS\26004 LMS\USD CALIFIRE GRANT LANDSCAPE\AUTOCAD\CD\SWURDOCK ES\26004 M.PN.DWG

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOIL IS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATIONS MUST BE CONDUCTED IN THE PRESENCE OF THE GROWER TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.

- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.

- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.

- b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.

- c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.

- d. BULK MATERIALS:

- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF AND SOIL EROSION. PREVENT DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.

- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FIND THE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.

- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.

- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

2. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.

2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.

2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.

3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.

2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.

3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.

5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36%-.84% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMOHS/CENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).

2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.

3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL INVOLVE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.

- 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UN

H. ROOTBALL PACKAGE OPTIONS	6) FOOT TRAFFIC.	SIZE THAT IS AT LEAST TWO TIMES THE WIDTH AND DEPTH OF THE ORIGINAL PLANT CONTAINER. THE HOLES SHALL BE, IN ALL CASES, LARGE ENOUGH TO PERMIT HANDLING AND PLANTING WITHOUT INJURY OR BREAKAGE TO THE ROOTS OR ROOT BALL.	9) DO NOT DISTORT OR BEND ROOT BARRIER DURING CONSTRUCTION ACTIVITIES.
1. SPADE HARVESTED AND TRANSPLANTED	7) ERECTION OF SHEDS OR STRUCTURES.		d. DO NOT INSTALL ROOT BARRIER SURROUNDING THE ROOT BALL OF TREE
e. SPADE HARVESTED AND TRANSPLANTED PLANTS SHALL MEET ALL THE REQUIREMENTS FOR FIELD GROWN TREES. ROOT BALL DIAMETERS SHALL BE OF SIMILAR SIZE AS THE ANSI Z60.1 REQUIREMENTS FOR BALLED AND BURLAPPED PLANTS.	8) DRAINAGE CHANGES OR IMPOUNDMENT OF WATER.	d. HARDPAN LAYER: DRILL 6-INCH DIAMETER HOLES, 24 INCHES APART, INTO FREE-DRAINING STRATA OR TO A DEPTH OF 10 FEET, WHICHEVER IS LESS, AND BACKFILL WITH FREE-DRAINING MATERIAL.	MAINTENANCE - THREE (3) WEEKS FOLLOWING INSTALLATION OF TURFGRASS, AREAS SHALL BE MOWED REGULARLY AT INTERVALS NOT EXCEEDING ONE PER WEEK. MOWING SHALL BE DONE WITH SHARP, WELL ADJUSTED MOWERS OR CUT MORE THAN HALF THE EXISTING TOP GROWTH IN ONE MOWING. MOWING HEIGHTS SHALL BE 2" TO 2 1/2" DURING HOT WEATHER SEASONS NEVER LESS THAN 2" AND SHALL BE 1 1/2" TO 2" DURING COOL WEATHER SEASONS. TURFGRASS AREAS THAT DO NOT PROPERLY GROW SHALL BE RESEDED AS NECESSARY. AT THE TERMINATION OF THE MAINTENANCE PERIOD ALL TURFGRASS AREAS SHALL BE COMPLETELY COVERED, LEAVING NOT BARREN SPOTS LARGER THAN THREE INCHES (3") X THREE INCHES (3").
f. TREES SHALL BE HARVESTED PRIOR TO LEAVING OUT (BUD BREAK) IN THE SPRING OR DURING THE FALL PLANTING PERIOD EXCEPT FOR PLANTS KNOW TO BE CONSIDERED AS FALL PLANTING HAZARDS. PLANTS THAT ARE FALL PLANTING HAZARDS SHALL ONLY BE HARVESTED PRIOR TO LEAVING OUT IN THE SPRING.	9) EXCAVATION OR OTHER DIGGING UNLESS OTHERWISE INDICATED.	e. DRAINAGE: NOTIFY DISTRICT CONSTRUCTION MANAGER IF SUBSOIL CONDITIONS EVIDENCE WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.	A. WATERING
g. TREES SHALL BE MOVED AND PLANTED WITHIN 48 HOURS OF THE INITIAL HARVESTING AND SHALL REMAIN IN THE SPADE MACHINE UNTIL PLANTED.	10) ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES OR PLANTS UNLESS OTHERWISE INDICATED.	F. PLANTING:	APPLY WATER TO ALL PLANTED AREAS DURING OPERATIONS AND THEREAFTER, UNTIL ACCEPTANCE OF THE WORK.
2. CONTAINER (INCLUDING ABOVE-GROUND FABRIC CONTAINERS AND BOXES) PLANTS	11) THE USE OF A TREE AS A TEMPORARY POWER POLE, BACKSTOP, WINCH SUPPORT, ANCHORAGE, OR OTHER SIMILAR FUNCTION.	a. NO PLANTING SHALL BE DONE IN ANY AREA UNTIL THE AREA CONCERNED HAS BEEN SATISFACTORILY PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS.	IMMEDIATELY AFTER PLANTING, APPLY WATER TO EACH SHRUB BY MEANS OF A HOSE. APPLY WATER IN A MODERATE STREAM IN THE PLANTING HOLE UNTIL THE MATERIAL ABOVE THE ROOTS ARE COMPLETELY SATURATED FROM THE BOTTOM OF THE HOLE TO THE TOP OF THE GROUND.
a. CONTAINER PLANTS MAY BE PERMITTED ONLY WHEN INDICATED ON THE DRAWING, IN THIS SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.	12) DO NOT DIRECT VEHICLE OR EQUIPMENT EXHAUST TOWARD PROTECTION ZONES.	b. NO MORE PLANTS SHALL BE DISTRIBUTED IN THE PLANTING AREA ON ANY DAY THAN CAN BE PLANTED AND WATERED ON THAT DAY.	APPLY WATER IN SUFFICIENT QUANTITIES AND AS OFTEN AS SEASONAL CONDITIONS REQUIRE TO KEEP THE PLANTED AREAS SUFFICIENTLY MOIST AT ALL TIMES, WELL BELOW THE ROOT SYSTEM OF GRASS AND PLANTS.
b. PROVIDE PLANTS SHALL BE ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS.	13) PROHIBIT HEAT SOURCES, FLAMES, IGNITION SOURCES, AND SMOKING WITHIN OR NEAR PROTECTION ZONES AND ORGANIC MULCH.	c. INSPECTION: AT TIME OF PLANTING, VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL ACCORDING TO ANSI Z60.1. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL TO EXPOSE THE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS.	ALL TURF AND GROUNDCOVER AREAS SHALL BE KEPT DAMP AT ALL TIMES AND IRRIGATION SHOULD BE ADJUSTED ACCORDINGLY. THIS NORMALLY WOULD INVOLVE FOUR (4) TO SIX (6) WATERING PERIODS DAILY, EACH WATERING PERIOD (ON) REGULATED TO JUST DAMPEN THE MULCH WITHOUT CREATING RUN OFF.
c. CONTAINER CLASS SIZE SHALL CONFORM TO ANSI Z60.1 FOR CONTAINER PLANTS FOR EACH SIZE AND TYPE OF PLANT.	2. INSTALL EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.	d. ROOTS: REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS. REMOVE INJURED ROOTS BY CUTTING CLEANLY, DO NOT BREAK. PLANT WILL NOT BE ACCEPTED IF THE ROOTBALL IS BROKEN OR CRACKED, EITHER BEFORE, DURING OR AFTER THE INSTALLATION PROCESS.	B. PLANTING AREA MULCHING
i. SODDED TURF	3. UNACCEPTABLE MATERIALS: REMOVE FROM SOIL ALL CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, PAINT, THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.	e. PERMITTED ROOT BALL PACKAGES AND SPECIAL PLANTING REQUIREMENTS	1. MULCH BACKFILLED SURFACES OF PLANTING AREAS AND OTHER AREAS INDICATED.
SOD TYPE AND SUPPLIER IN ACCORDANCE WITH THE TYPE INDICATED ON THE DRAWINGS.	4. LAY OUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, ADJUST LOCATIONS WHEN REQUESTED, AND OBTAIN LANDSCAPE ARCHITECTS ACCEPTANCE OF LAYOUT BEFORE EXCAVATING OR PLANTING. MAKE MINOR ADJUSTMENTS AS REQUIRED.	1) CONTAINER (INCLUDES BOXED AND ABOVE-GROUND FABRIC CONTAINERS) PLANTS	a. ORGANIC MULCH IN PLANTING AREAS: APPLY 3-INCH AVERAGE THICKNESS OF ORGANIC MULCH OVER WHOLE SURFACE OF PLANTING AREA, AND FINISH LEVEL WITH ADJACENT FINISH GRADES. DO NOT PLACE MULCH WITHIN 2 INCHES OF TRUNKS OR STEMS.
I. MULCH	5. PRIOR TO EXCAVATING PLANTING HOLES, LOCATE UNDERGROUND UTILITIES AND STRUCTURES IN THE AREA OF EXCAVATIONS. DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.	a) THIS SPECIFICATION ASSUMES THAT MOST CONTAINER PLANTS HAVE SIGNIFICANT STEM GIRDLING AND CIRCLING ROOTS, AND THAT THE ROOT COLLAR IS TOO LOW IN THE ROOT BALL.	b. DO NOT APPLY ORGANIC MULCH IN PLANTER AREAS THAT EXCEED 3:1 SLOPE.
1. ORGANIC BARK MULCH: LOCAL GROUND WOOD PRODUCT SHALL BE "WALK ON" GRADE, COARSE, GROUND, FROM TREE AND WOODY BRUSH SOURCES. SUBMIT SUPPLIER PRODUCT SPECIFICATION DATA SHEET AND A ONE GALLON SAMPLE FOR APPROVAL.	C. ADVERSE WEATHER CONDITIONS	b) REMOVE THE CONTAINER.	c. MINERAL MULCH IN PLANTING AREAS: APPLY THICKNESS PER DRAWINGS. DO NOT PLACE MULCH WITHIN [3 INCHES (75 MM)] [6 INCHES (150 MM)] <INSERT DISTANCE> OF TRUNKS OR STEMS.
2. MINERAL MULCH: HARD, DURABLE STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES, IN ACCORDANCE WITH THE TYPE, SIZE RANGE, AND COLOR RANGE ON THE DRAWINGS:	NO PLANTING SHALL TAKE PLACE DURING EXTREMELY HOT, DRY, WINDY, OR FREEZING WEATHER.	c) PERFORM ROOT BALL SHAVING AS DEFINED IN INSTALLATION OF PLANTS: GENERAL ABOVE.	d. NO MULCH IS TO BE PLACED AROUND NOR TOUCHING FRONDS CACTI AND SUCCULENTS.
K. PESTICIDES	D. WEED ERADICATION	d) REMOVE ALL ROOTS AND SUBSTRATE ABOVE THE ROOT COLLAR AND THE MAIN STRUCTURAL ROOTS ACCORDING TO ROOT CORRECTION DETAILS SO ROOT SYSTEM CONFORMS TO ROOT OBSERVATIONS DETAIL.	J. ESTABLISHMENT AND MAINTENANCE PERIOD
1. GENERAL: PESTICIDE REGISTERED AND APPROVED BY THE EPA, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND OF TYPE RECOMMENDED BY MANUFACTURER FOR EACH SPECIFIC PROBLEM AND AS REQUIRED FOR PROJECT CONDITIONS AND APPLICATION. DO NOT USE RESTRICTED PESTICIDES UNLESS AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION.	1. PRIOR TO THE INSTALLATION OF THE IRRIGATION SYSTEM, ALL WEED GROWTH SHALL BE REMOVED WITHIN THE AREAS DESIGNATED TO BE CLEARED AND GRUBBED. REFER TO PLANS FOR LIMIT OF WORK.	e) REMOVE ALL SUBSTRATE AT THE BOTTOM OF THE ROOT BALL THAT DOES NOT CONTAIN ROOTS.	1. PLANT ESTABLISHMENT PERIOD: THE CONTRACTUAL ESTABLISHMENT PERIOD SHALL BE FOR NO LESS THAN THIRTY (30) CONTINUOUS CALENDAR DAYS. THE CONTRACTUAL ESTABLISHMENT PERIOD BEGINS ON THE FIRST DAY AFTER ALL PLANTING IN THIS PROJECT IS COMPLETED AND ACCEPTED AND THE PLANTED AREAS ARE BROUGHT TO A NEAT, CLEAN AND WEED FREE CONDITION.
a.	a. IF IN THE OPINION OF THE PEST CONTROL ADVISOR, PERENNIAL GRASSES AND WEEDS EXISTING IN THE PLANTING AREAS WILL REQUIRE CONTROL PRIOR TO REMOVAL, SPRAY THESE AREAS PER PEST CONTROL ADVISOR'S RECOMMENDATIONS. ALLOW HERBICIDE TO KILL ALL WEEDS. RAKE OR HOE OFF ALL DEAD WEEDS TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. PHYSICALLY REMOVE ALL WEEDS FROM THE SITE.	f) USING A HOSE, POWER WASHER OR AIR EXCAVATION DEVICE, WASH OUT THE SUBSTRATE FROM AROUND THE TRUNK AND TOP OF THE REMAINING ROOT BALL AND FIND AND REMOVE ALL STEM GIRDLING ROOTS WITHIN THE ROOT BALL ABOVE THE TOP OF THE STRUCTURAL ROOTS.	a. ANY DAY UPON WHICH NO WORK WILL BE REQUIRED, AS DETERMINED BY THE LANDSCAPE ARCHITECT, WILL BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS REGARDLESS OF WHETHER OR NOT THE CONTRACTOR PERFORMS PLANT ESTABLISHMENT WORK.
L. TREE SUPPORTS	2. UPON COMPLETION OF THE IRRIGATION SYSTEM AND ROTOTILLING OF SOIL AMENDMENTS INTO THE SOIL AND IMMEDIATELY PRECEDING THE INSTALLATION OF PLANT MATERIAL, PERFORM WEED ABATEMENT AS FOLLOWS, AND PER PEST CONTROL ADVISORS RECOMMENDATION.	2) THE AMENDED SURFACE SOIL CAN BE USED FOR BACKFILL AROUND TREES AND SHRUBS. ADDITIONAL QUANTITIES OR PROCEDURES MAY BE REQUIRED PER REQUIRED AGRONOMIC SOILS TEST, AT NO ADDITIONAL COST TO THE OWNER. USE THE FOLLOWING FORMULA (THOROUGHLY BLENDED) FOR BIDDING PURPOSES ONLY:	b. ANY DAY WHEN THE CONTRACTOR FAILS TO ADEQUATELY MAINTAIN PLANTINGS, REPLACE UNSUITABLE PLANTS OR DO WEED CONTROL OR OTHER WORK, AS DETERMINED NECESSARY BY THE LANDSCAPE ARCHITECT, WILL NOT BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS.
1. TRUNK-STABILIZATION MATERIALS:	a. APPLY SULFATE OF AMMONIA AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 SF.) TO ALL PLANTING AREAS.	NATIVE ON-SITE SOIL (NO ROCK LARGER THAN 1") 6 PARTS NITROLIZED WOOD SHAVINGS 4 PARTS COMMERCIAL FERTILIZER GRO-POWER PLUS, 5-3-1 15 LBS/CY IRON SULFATE 2 LBS/CY	c. IN ORDER TO CARRY OUT THE PLANT ESTABLISHMENT WORK, THE CONTRACTOR SHALL FURNISH SUFFICIENT MEN AND ADEQUATE EQUIPMENT TO PERFORM THE WORK DURING THE PLANT ESTABLISHMENT PERIOD.
a. UPRIGHT STAKES: ROUGH-SAWN, SOUND, NEW LODGEPOLE PINE OR DOUGLAS FIR CORES WITH ALKALINE COPPER QUATERNARY (ACQ) WOOD PRESSURE-PRESERVATIVE TREATMENT, NO CHROMATED COPPER ARSENATE (CCA) TREATMENT, FREE OF KNOTS, HOLES, CROSS GRAIN, AND OTHER DEFECTS, 2-BY-2-INCH NOMINAL BY LENGTH INDICATED, POINTED AT ONE END.	b. IRRIGATE AREA FOR FOURTEEN (14) CONSECUTIVE DAYS, TO GERMINATE EXISTING WEED SEEDS.	d) FOR OVER EXCAVATED SITES, EXPECT ALL LANDSCAPE AREAS TO BE LEACHED TO REDUCE SALINITY AFTER AMENDING THE SOILS PER AGRONOMIC ANALYSIS, SOILS RETESTED, AND POTENTIALLY REPEATED UNTIL LEVELS BECOME WITHIN NOR TOXIC LEVELS. THIS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.	d. IMPROPER MAINTENANCE OR POSSIBLE POOR CONDITION OF ANY PLANTING AT THE TERMINATION OF THE SCHEDULED ESTABLISHMENT PERIOD MAY CAUSE POSTPONEMENT OF THE FINAL ACCEPTANCE OF PLANT ESTABLISHMENT. CONTRACTOR SHALL BEAR ALL COSTS FOR EXTENSION OF THE PLANT ESTABLISHMENT PERIOD.
b. FLEXIBLE TIES: MANUFACTURED OF VIRGIN FLEXIBLE VINYL MEETING ASTM D-412 STANDARDS FOR TENSILE AND ELONGATION STRENGTH, BLACK FOR ULTRAVIOLET RESISTANCE, MANUFACTURED WITH A DOUBLE BACK LOCKING CONFIGURATION. FLEXIBLE TIES SHALL ELONGATE WITH TREE GROWTH WHILE PREVENTING DAMAGE TO THE TREE.	c. APPLY BY SPRAY A NON_SELECTIVE HERBICIDE TO ERADICATE ALL EXISTING WEEDS. DO NOT IRRIGATE FOR SEVEN (7) DAYS AFTER APPLICATION.	e) MAINTAIN ALL PLANTS IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. STRAIGHTEN ALL TREES THAT MOVE OUT OF PLUMB INCLUDING THOSE NOT STAKED. PLANTS TO BE STRAIGHTENED SHALL BE EXCAVATED AND THE ROOT BALL MOVED TO A PLUMB POSITION, AND THEN RE-BACKFILLED. DO NOT STRAIGHTEN PLANTS BY PULLING THE TRUNK WITH GUYS.	2. PLANT MAINTENANCE PERIOD: THE CONTRACTUAL MAINTENANCE PERIOD SHALL BE NO LESS THAN NINETY (90) CONTINUOUS CALENDAR DAYS AND, SHALL BEGIN AT THE ACCEPTANCE OF THE PLANT ESTABLISHMENT PERIOD.
c. PROPRIETARY STAKING-AND-GUYING DEVICES: PROPRIETARY STAKE OR ANCHOR AND ADJUSTABLE TIE SYSTEMS TO SECURE EACH NEW PLANTING BY PLANT STEM, SIZED AS INDICATED AND ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.	d. REMOVE WEEDS AFTER HERBICIDE HAS HAD TIME TO SUFFICIENTLY KILL. REMOVE ALL DEAD WEEDS BY RAKE OR HOE TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. REMOVE ALL WEED RESIDUE AND TOP GROWTH AND DISPOSE OF IN A LEGAL MANNER.	f) AFTER THE WATER SETTLING OF THE PLANT HAS COMPLETELY DRAINED, NUT-PAK FERTILIZER PACKETS SHALL BE PLACED AS INDICATED BELOW. SET THE PACKETS TO BE USED WITH EACH PLANT ON THE TOP OF THE ROOT BALL WHILE THE PLANTS ARE STILL IN THEIR CONTAINERS SO THE REQUIRED NUMBER OF TABLETS TO BE USED IN EACH HOLE CAN BE EASILY VERIFIED:	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDED AT INTERVALS
1) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ARBORBRACE, J. R. PARTNERS, VILLA ROOT BARRIER, OR EQUAL	E. TREE AND SHRUB INSTALLATION	3 PACKETS PER FIVE GALLON CONTAINER. 12 PACKETS PER 48" BOX CONTAINER. 16 PACKETS PER 60" BOX CONTAINER. THE REMAINDER OF THE HOLE SHALL THEN BE BACKFILLED.	3. ALL TREES WILL BE GUARANTEED FOR 1 YEAR.
M. MISCELLANEOUS PRODUCTS	1. TREE AND PLANT PROTECTION AREA: THE TREE AND PLANT PROTECTION AREA IS DEFINED AS ALL AREAS INDICATED ON THE TREE PROTECTION PLAN. WHERE NO LIMIT OF THE TREE AND PLANT PROTECTION AREA IS DEFINED ON THE DRAWINGS, THE LIMIT SHALL BE THE DRIP LINE (OUTER EDGE OF THE BRANCH CROWN) OF EACH TREE.	g) AFTER BACKFILLING, AN EARTHEN BASIN SHALL BE CONSTRUCTED AROUND EACH PLANT. EACH BASIN SHALL BE OF A DEPTH SUFFICIENT TO HOLD AT LEAST TWO INCHES (2") OF WATER. BASINS SHALL BE OF A SIZE SUITABLE FOR THE INDIVIDUAL PLANT. IN NO CASE, SHALL THE BASIN FOR A FIFTEEN (15) GALLON PLANT BE LESS THAN FOUR FEET (4") IN DIAMETER; A FIVE (5) GALLON PLANT LESS THAN THREE FEET (3") IN DIAMETER; AND A ONE (1) GALLON PLANT LESS THAN TWO FEET (2") IN DIAMETER. THE BASINS SHALL BE CONSTRUCTED OF AMENDED BACKFILL MATERIAL. RAKE OUT BASINS PRIOR TO PLANTING LAWN AREAS OR GROUNDCOVER AREAS.	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDED AT INTERVALS OF NOT MORE THAN TEN (10) DAYS. WATERING, TRIMMING, FERTILIZATION, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED, SHALL BE INCLUDED IN THE MAINTENANCE PERIOD. MAINTENANCE SHALL INCLUDE GOPHER CONTROL.
a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY DEEPROOT GREEN INFRASTRUCTURE, LLC, NOS INC, VILLA ROOT BARRIER, OR EQUAL	2. ROOT PRUNING - PRIOR TO ANY EXCAVATING INTO THE EXISTING SOIL, GRADE WITHIN 25 FEET OF THE LIMIT OF THE TREE AND PLANT PROTECTION AREA OR TREES TO REMAIN, ROOT PRUNE ALL EXISTING TREES TO A DEPTH OF 24 INCHES BELOW EXISTING GRADE IN ALIGNMENTS FOLLOWING THE EDGES OF THE TREE AND PLANT PROTECTION AREA OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ROOT PRUNING SHALL BE IN CONFORMANCE WITH ANSI A300 (PART 8) LATEST EDITION.	h) PRUNING: PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE INJURED TWIGS AND BRANCHES, AND TO COMPENSATE FOR LOSS OF ROOTS DURING TRANSPLANTING, BUT NEVER TO EXCEED ONE-THIRD (1/3) OF THE BRANCHING STRUCTURE. UPON RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, PRUNING MAY BE DONE BEFORE DELIVERY OF PLANTS, BUT NOT BEFORE PLANTS HAVE BEEN REVIEWED AND RECOMMENDED FOR APPROVAL. CUTS OVER THREE QUARTERS OF AN INCH (3/4") IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE WOUND PAINT.	b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS (OF MAINTENANCE) AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.) USING AMMONIUM SULFATE, EVENLY APPLIED AND THOROUGHLY WATERED IN. POST FERTILIZE ALL GROUNDCOVER AREAS AT THE END OF EVERY THIRTY (30) DAYS (OF MAINTENANCE) AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.), USING 5_3_1 GRO. POWER. FOR THE FINAL FEEDING OF ALL AREAS, USE 12_8_0 GRO. POWER CONTROLLED RELEASE NITROGEN AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.).
2. ANTIDISECCANT: WATER-INSOLUBLE EMULSION, PERMEABLE MOISTURE RETARDER, FILM FORMING, FOR TREES AND SHRUBS. DELIVER IN ORIGINAL, SEALED, AND FULLY LABELED CONTAINERS AND MIX ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.	1) USING A ROCK SAW, CHAIN TRENCHER OR SIMILAR TRENCHING DEVICE, MAKE A VERTICAL CUT WITHIN 2 FEET OF THE LIMIT OF GRADING.	i) STAKING AND TYING:	c. MOWING OF TURF WILL COMMENCE WHEN TURF GRASS HAS REACHED A HEIGHT OF TWO INCHES (2"), THE HEIGHT OF CUT WILL BE ONE AND ONE-HALF INCHES TO TWO INCHES (1 1/2" TO 2"). MOWING WILL BE AT LEAST WEEKLY AFTER THE FIRST CUT. TURF MUST BE WELL ESTABLISHED AND FREE OF BARE SPOTS AND WEEDS TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT PRIOR TO FINAL ACCEPTANCE BY THE CITY. EXCESS GRASS CLIPPINGS, AS DETERMINED BY THE LANDSCAPE ARCHITECT, SHALL BE PICKED UP AND REMOVED FROM THE SITE AND PREMISES.
3. BURLAP: NON-SYNTHETIC, BIODEGRADABLE.	2) AFTER COMPLETION OF THE CUT, MAKE CLEAN CUTS WITH A LOPPER, SAW OR PRUNER TO REMOVE ALL TORN ROOT ENDS ON THE TREE SIDE OF THE EXCAVATION, AND BACKFILL THE TRENCH IMMEDIATELY WITH EXISTING SOIL, FILLING ALL VOIDS.	a. SUPPORT STAKES TALL ENOUGH TO SUPPORT THE PARTICULAR TREE SHALL BE DRIVEN THIRTY-SIX INCHES (36") INTO THE SOIL. STAKE SHALL BE PLACED ON THE LEeward SIDE OF THE TREE FROM THE MOST TROUBLESOME DIRECTION, REFER TO DETAILS ON DRAWINGS.	d. THE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEMS IN A LIKE NEW OPERATING CONDITION; ADJUSTING HEAD HEIGHTS AND SPRAY ARCS AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROPER WATERING OF ALL PLANTING AREAS, FOR PROVIDING ANY NECESSARY SUPPLEMENTAL WATER AS MAY BE REQUIRED, AND SHALL REPLACE ANY MATERIAL DAMAGED DUE TO IMPROPER MOISTURE.
4. PLANTER DRAINAGE GRAVEL: WASHED, SOUND CRUSHED STONE OR GRAVEL COMPLYING WITH (ASTM D 448 FOR SIZE NO. 8) (INSERT REQUIREMENTS).	b. TREE GROWTH REGULATOR - AT THE START OF THE CONSTRUCTION CONTRACT PERIOD, TREAT ALL TREES, INDICATED ON THE PLAN, WITH TREE GROWTH REGULATOR AT RECOMMENDED RATES, TIME OF YEAR AND METHODS INDICATED BY THE PRODUCT DISTRIBUTOR	c. TO FIND THE PROPER HEIGHT FOR THE LOCATIONS, HOLD THE TRUNK IN ONE HAND, PULL THE TOP TO ONE SIDE AND RELEASE. THE HEIGHT AT WHICH THE TRUNK WILL JUST RETURN TO THE UPRIGHT WHEN THE TOP IS RELEASED IS THE HEIGHT AT WHICH TO ATTACH THE TIES.	e. DURING THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE PROTECTION FOR ALL PLANTING AREAS. ANY DAMAGED AREAS SHALL BE REPAIRED AND ANY PLANT MATERIALS REPLACED AT THE CONTRACTOR'S EXPENSE.
5. PLANTER FILTER FABRIC: NONWOVEN GEOTEXTILE MANUFACTURED FOR SEPARATION APPLICATIONS AND MADE OF POLYPROPYLENE OR POLYESTER FABRIC, 3 OZ./SQ. YD. MINIMUM, COMPOSED OF FIBERS FORMED INTO A STABLE NETWORK SO THAT FIBERS RETAIN THEIR RELATIVE POSITION. FABRIC SHALL BE INERT TO BIOLOGICAL DEGRADATION AND RESIST NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS.	c. ANY TREES OR PLANTS DESIGNATED TO REMAIN AND WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT THE OWNER'S EXPENSE. TREES SHALL BE REPLACED WITH A TREE OF SIMILAR SPECIES AND OF EQUAL SIZE OR 6 INCH CALIPER WHICHEVER IS LESS. SHRUBS SHALL BE REPLACED WITH A PLANT OF SIMILAR SPECIES AND EQUAL SIZE OR THE LARGEST SIZE PLANTS REASONABLY AVAILABLE. WHERE REPLACEMENT IS REQUIRED, THE REPLACEMENT SHALL BE LESS THAN THE SIZE OF THE PLANT THAT IS DAMAGED, THE OWNER'S REPRESENTATIVE SHALL APPROVE THE SIZE AND QUALITY OF THE REPLACEMENT PLANT.	d. TIES ARE TO FORM A LOOSE LOOP AROUND THE TREE TRUNK SO THAT THE TRUNK CANNOT WORK TOWARDS THE SUPPORT STAKES.	f. THE CONTRACTOR'S MAINTENANCE PERIOD WILL BE EXTENDED PAST NINETY (90) DAYS IF THESE PROVISIONS ARE NOT FILLED.
a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY TENGATE GEOSYNTHETICS AMERICA, US FABRICS, PROPEX, OR EQUAL.	1) ALL TREES AND PLANTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THIS SPECIFICATION SECTION.	7. ROOT-BARRIER INSTALLATION	K. GUARANTEE AND REPLACEMENT
PART III - EXECUTION	d. PLANTS THAT ARE DAMAGED SHALL BE CONSIDERED AS REQUIRING REPLACEMENT OR APPRAISAL IN THE EVENT THAT THE DAMAGE AFFECTS MORE THAN 25% OF THE CROWN, 25% OF THE TRUNK CIRCUMFERENCE, OR ROOT PROTECTION AREA, OR THE TREE IS DAMAGED IN SUCH A MANNER THAT THE TREE COULD DEVELOP INTO A POTENTIAL HAZARD. TREES AND SHRUBS TO BE REPLACED SHALL BE REMOVED BY THE CONTRACTOR AT HIS OWN EXPENSE.	a. INSTALL ROOT BARRIER WHERE TREES ARE PLANTED WITHIN 120 INCHES (10 FEET) OF PAVING OR OTHER HARDSCAPE ELEMENTS, SUCH AS WALLS, CURBS, AND WALKWAYS, UNLESS OTHERWISE INDICATED ON DRAWINGS.	1. GENERAL: REPAIR OR REPLACE EXISTING OR NEW TREES AND OTHER PLANTS THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER APPROVED BY DISTRICT CONSTRUCTION MANAGER.
A. GENERAL	e. ANY TREE THAT IS DETERMINED TO BE DEAD, DAMAGED OR POTENTIALLY HAZARDOUS BY THE OWNER'S ARBORIST AND UPON THE REQUEST OF THE OWNER'S REPRESENTATIVE SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. TREE REMOVAL SHALL INCLUDE ALL CLEAN-UP OF ALL WOOD PARTS AND GRINDING OF THE STUMP TO A DEPTH SUFFICIENT TO PLANT THE REPLACEMENT TREE OR PLANT. REMOVAL OF ALL CHIPS FROM THE STUMP SITE AND FILLING THE RESULTING HOLE WITH TOPSOIL.	b. ALIGN ROOT BARRIER VERTICALLY WITH BOTTOM EDGE ANGLED AT 20 DEGREES AWAY FROM THE PAVING OR OTHER HARDSCAPE ELEMENT, AND RUN IT LINEARLY ALONG AND ADJACENT TO THE PAVING OR OTHER HARDSCAPE ELEMENTS TO BE PROTECTED FROM INVASIVE ROOTS.	a. SUBMIT DETAILS OF PROPOSED PRUNING AND REPAIRS.
1. EXAMINE AREAS TO RECEIVE PLANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE OF THE WORK.	f. ANY REMEDIAL WORK ON DAMAGED EXISTING PLANTS RECOMMENDED BY THE CONSULTING ARBORIST SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE OWNER. REMEDIAL WORK SHALL INCLUDE BUT IS NOT LIMITED TO: SOIL COMPACTION REMEDIATION AND VERTICAL MULCHING, PRUNING AND OR CABLING, INSECT AND DISEASE CONTROL INCLUDING INJECTIONS, COMPENSATORY WATERING, ADDITIONAL MULCHING, AND COULD INCLUDE APPLICATION TREE GROWTH REGULATORS (TGR).	c. INSTALL ROOT BARRIER CONTINUOUSLY FOR A DISTANCE OF 10 FEET IN EACH DIRECTION FROM THE TREE TRUNK, FOR A TOTAL DISTANCE OF 20 FEET PER TREE. IF TREES ARE SPACED CLOSER, USE A SINGLE CONTINUOUS PIECE OF ROOT BARRIER.	b. PERFORM REPAIRS OF DAMAGED TRUNKS, BRANCHES, AND ROOTS WITHIN 24 HOURS, IF APPROVED.
a. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN A PLANTING AREA.	g. REMEDIAL WORK MAY EXTEND UP TO TWO YEARS FOLLOWING THE COMPLETION OF CONSTRUCTION TO ALLOW FOR ANY REQUIREMENTS OF MULTIPLE APPLICATIONS OR THE NEED TO UNDERTAKE APPLICATIONS AT REQUIRED SEASONS OF THE YEAR.	d. POSITION TOP OF ROOT BARRIER 1/2-INCH ABOVE ADJACENT SOFT FINISH GRADE BUT BELOW HARDSCAPE.	c. REPLACE PLANT MATERIALS THAT CANNOT BE REPAIRED AND RESTORED TO HEALTHY, LONG TERM FULL-GROWTH STATUS, AS DETERMINED BY DISTRICT CONSTRUCTION MANAGER, WITHIN 14 DAYS AFTER NOTIFICATION, AT NO ADDITIONAL COST TO THE DISTRICT.
b. VERIFY THAT PLANTS AND VEHICLES LOADED WITH PLANTS CAN TRAVEL TO PLANTING LOCATIONS WITH ADEQUATE OVERHEAD CLEARANCE.	2. ALL IRRIGATION WORK SHALL HAVE BEEN REVIEWED BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY PLANTING.	8. GPS MAPPING:	2. REMOVE AND REPLACE PLANT MATERIALS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION BEFORE THE END OF THE MAINTENANCE PERIOD OR ARE DAMAGED DURING CONSTRUCTION OPERATIONS THAT DISTRICT CONSTRUCTION MANAGER DETERMINES ARE INCAPABLE OF RESTORING TO NORMAL GROWTH PATTERN, AT NO ADDITIONAL COST TO THE DISTRICT.
c. SUSPEND PLANTING OPERATIONS DURING PERIODS OF EXCESSIVE SOIL MOISTURE UNTIL THE MOISTURE CONTENT REACHES ACCEPTABLE LEVELS TO ATTAIN THE REQUIRED RESULTS.	3. INSTALLATION OF ALL PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE DETAILS ON THE PLANTING PLANS.	a. ALL NEW TREES ARE TO BE GPS MAPPED, LATITUDE AND LONGITUDE, A MAP CREATED FOR ALL NEW TREES WITHIN THIS SCOPE OF WORK, AND TURNED OVER TO THE DISTRICT FOR SUBMITTAL TO CAL FIRE. CAL FIRE, AS TREE GRANT PROVIDER, HAS THE ULTIMATE APPROVAL OF GPS MAPPING.	a. PROVIDE NEW PLANT MATERIALS OF SAME SIZE AS THOSE BEING REPLACED.
d. UNIFORMLY MOISTEN EXCESSIVELY DRY SOIL THAT IS NOT WORKABLE OR WHICH IS DUSTY.	4. LOCATIONS FOR PLANTS AND OUTLINES OF AREAS TO BE PLANTED SHALL BE MARKED ON THE GROUND BY THE CONTRACTOR BEFORE ANY PLANT PITS ARE DUG. ALL SUCH LOCATIONS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AND OWNERS' AGREEMENT. IF AN UNDERGROUND CONSTRUCTION OR UTILITY LINE IS ENCOUNTERED IN THE EXCAVATION OF PLANTING AREAS, NOTIFY LANDSCAPE ARCHITECT SO THAT OTHER LOCATIONS FOR PLANTING MAY BE SELECTED.	b. SODDED COOL SEASON TURF	b. SPECIES OF REPLACEMENT PLANT MATERIALS: SAME SPECIES, VARIETY, AND/OR CULTIVAR BEING REPLACED.
2. IF CONTAMINATION BY FOREIGN OR DELETERIOUS MATERIAL OR LIQUID IS PRESENT IN SOIL WITHIN A PLANTING AREA, REMOVE THE SOIL, AND CONTAMINATION AS DIRECTED BY DISTRICT CONSTRUCTION MANAGER AND REPLACE WITH NEW PLANTING SOIL.	5. EXCAVATION FOR PLANTING:	1. TURF GRASS SHALL BE PLANTED BY SOD LAYING, AS INDICATED PER PLAN. TURF SOD SHALL BE SPECIFIED ON PLANTING PLAN AND LEGEND.	L. REVIEWS
3. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.	SODDING - IRRIGATE AREAS TO BE SODDED PRIOR TO INSTALLATION. MOISTURE SHALL BE UNIFORMLY PRESENT TO A DEPTH OF 2". SOD SHALL BE INSTALLED WITHIN ONE DAY OF DELIVERY. ROLLS SHALL BE PLACED IN SHADED AREAS PRIOR TO INSTALLATION. SOD SHALL CONFORM TO ALL LAWN SHAPES AS DESIGNATED PER PLAN AND SHALL BE INSTALLED IN SUCH A MANNER AS TO VISUALLY ELIMINATE ALL JOINTS AND EDGES OF SOD STRIPS. FOLLOWING INSTALLATION, IRRIGATE TURF AREAS THOROUGHLY TO PROVIDE EVEN MOISTURE PENETRATION. ROLL ALL SOD PRIOR TO BEGINNING INSTALLATION WITHIN TWO (2) HOURS. PRIOR TO BEGINNING IRRIGATION, SOD SHALL BE UNIFORMLY SMOOTH IN APPEARANCE AND SHALL BE FLUSH WITH THE FINISHED GRADE OF ALL WALKS, CURBS, ETC.	1. NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE LANDSCAPE ARCHITECT AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF AN ANTICIPATED INSPECTION. A REVIEW WILL BE MADE BY THE LANDSCAPE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SODDING STEPS OF WORK UNTIL THE SUCCESS RECEIVED WRITTEN RECOMMENDATION OF APPROVAL TO PROCEED BY THE LANDSCAPE ARCHITECT.
4. LOCATE ALL EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS PRIOR TO EXCAVATING. BRING TO THE ATTENTION OF THE DISTRICT CONSTRUCTION MANAGER ANY INTERFERENCES FOUND.	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.	8) OVERLAP ROOT BARRIER A MINIMUM OF 12 INCHES AT JOINTS.	a. SPOTTING OF ALL TREES AND PALMS, AND MINOR ADJUSTMENTS PRIOR TO PLANTING.
B. PREPARATION	c. ALL EXCAVATED HOLES SHALL HAVE VERTICAL SIDES WITH ROUGHENED SURFACES AND SHALL BE OF A		b. ALL PLANT MATERIAL PRIOR TO INSTALLATION FOR PLANT AND ROOT STRUCTURE.
1. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES AND TURF AREAS AND EXISTING PLANTS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.			c. REVIEW AND START OF ESTABLISHMENT PERIOD.
a. EXISTING TREES AND SHRUBS TO REMAIN ARE TO BE PROTECTED IN PLACE. EXISTING DRIPLINE IS CONSIDERED A PROTECTION ZONE AND THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN THAT ZONE:			d. FINAL ACCEPTANCE OF PROJECT/NINETY (90) DAY MAINTENANCE.
1) STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL.			
2) STORAGE OR USE OF EQUIPMENT AND NON-RELATED CONSTRUCTION ACTIVITIES, INCLUDING PIPE-CUTTING MACHINES, TILE-CUTTING MACHINES, AND LUMBER SAWS.			
3) STORAGE OR DUMPING OF DELETERIOUS MATERIALS HARMFUL TO PLANT GROWTH. DELETERIOUS MATERIALS MIGHT INCLUDE FUELS, OILS, OTHER PETROLEUM PRODUCTS, ACIDS, LIQUIDS, CONCRETE MIX OR CONCRETE WASHOUT, STUCCO MIX OR STUCCO WASHOUT, PAINT OR PAINT WASHOUT, AND ZINC GRINDINGS FROM WORKING WITH GALVANIZED PRODUCTS IN THE FIELD.			
4) SOIL DISTURBANCE OR GRADE CHANGE.			
5) MOVING OR PARKING VEHICLES OR EQUIPMENT, EVEN TEMPORARILY.			

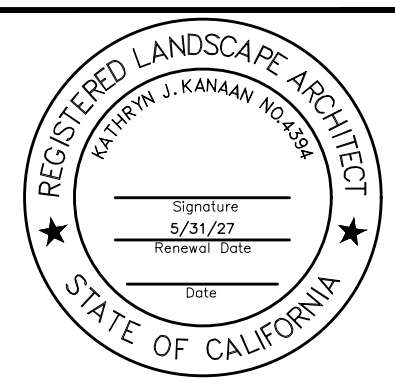


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LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
PLANTING NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L2.2
OF 09 SHEETS

M. LONG TERM MAINTENANCE

1. GENERAL

- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.
- b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.

2. TREES

- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.
- b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.
- c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.
- d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.

3. SHRUBS / VINES

- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.
- c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.

4. GROUND COVERS

- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.
- c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.

5. TURF

- a. AERATION OF BERMUDA GRASSES
- b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.
- c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM
- d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.

6. DETHATCHING OF TURF GRASS

- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.
- b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.
- c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.
- d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.

END OF SECTION



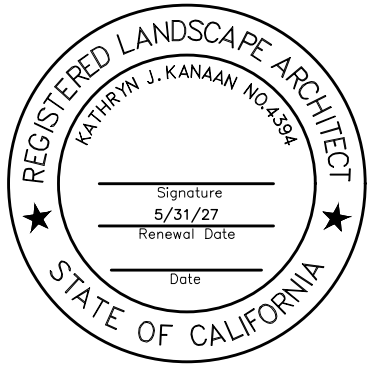
325 7th Avenue, Unit 214
San Diego, CA 92101-7176
1 (619) 840-5174
website www.kda-landscapearchitects.com



CLIENT:
LA MESA - SPRING VALLEY SCHOOLS
3338 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT:
MURDOCK ELEMENTARY
4354 CONRAD DRIVE
LA MESA, CA 91941
CALIFIRE GRANT LANDSCAPE PLAN

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SHEET
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NORTHMONT ELEMENTARY
9405 GREGORY STREET
LA MESA, CA 91942

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

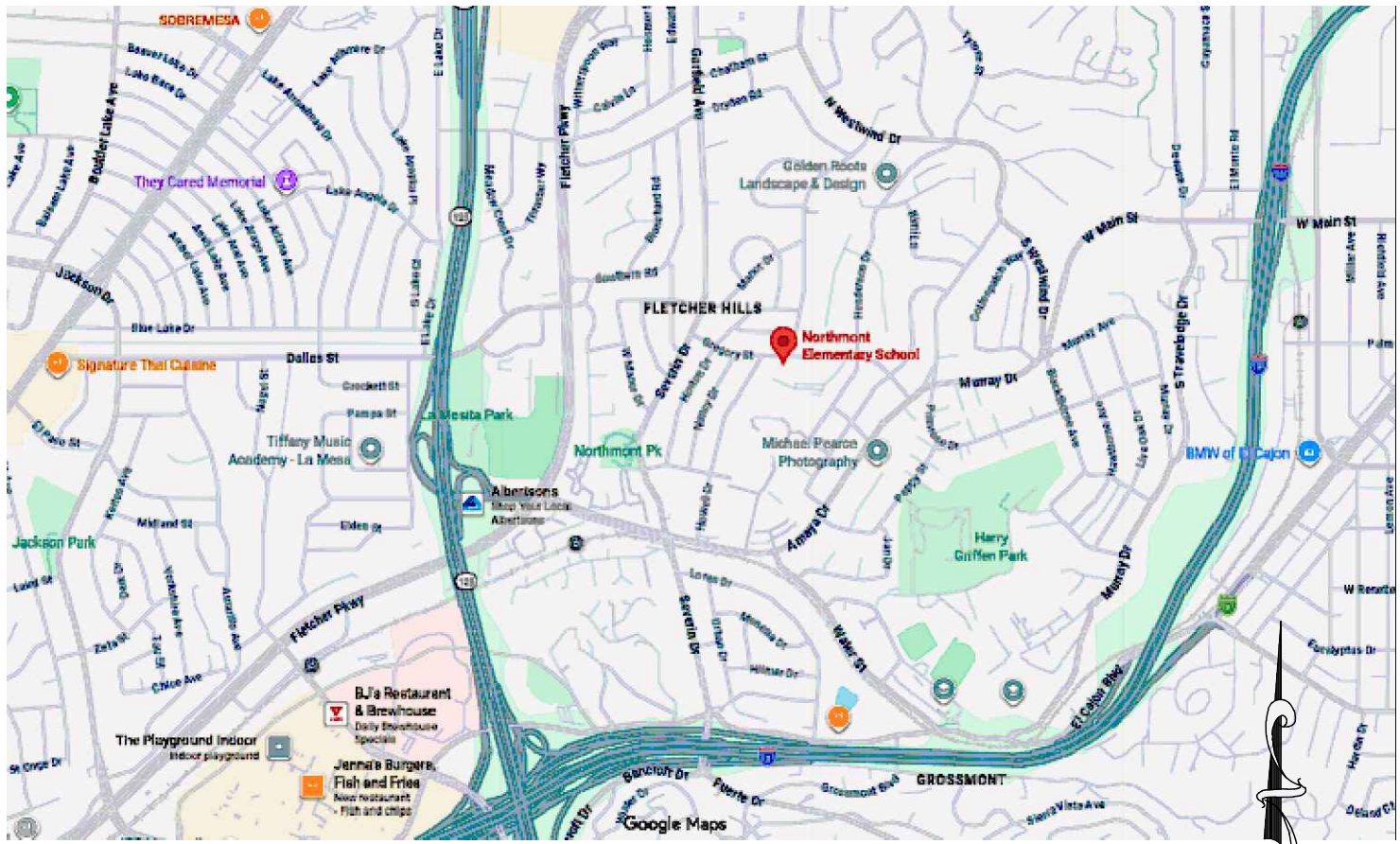
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

CONSULTANTS



LANDSCAPE ARCHITECTS

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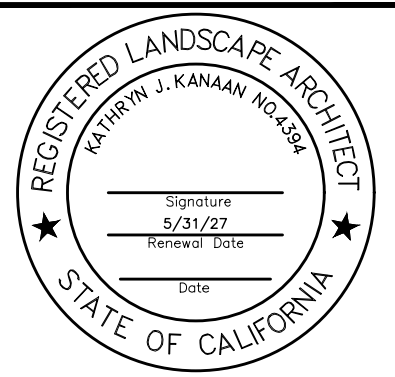
NO.	REVISION	FOR	BY	DATE	APPROVED BY
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SHEET INDEX

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L10	TITLE SHEET
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L2.0	PLANTING PLAN
L2.1	PLANTING NOTES
L2.2	PLANTING NOTES
L2.3	PLANTING NOTES



REVISIONS	DATE	BY



SHEET TITLE

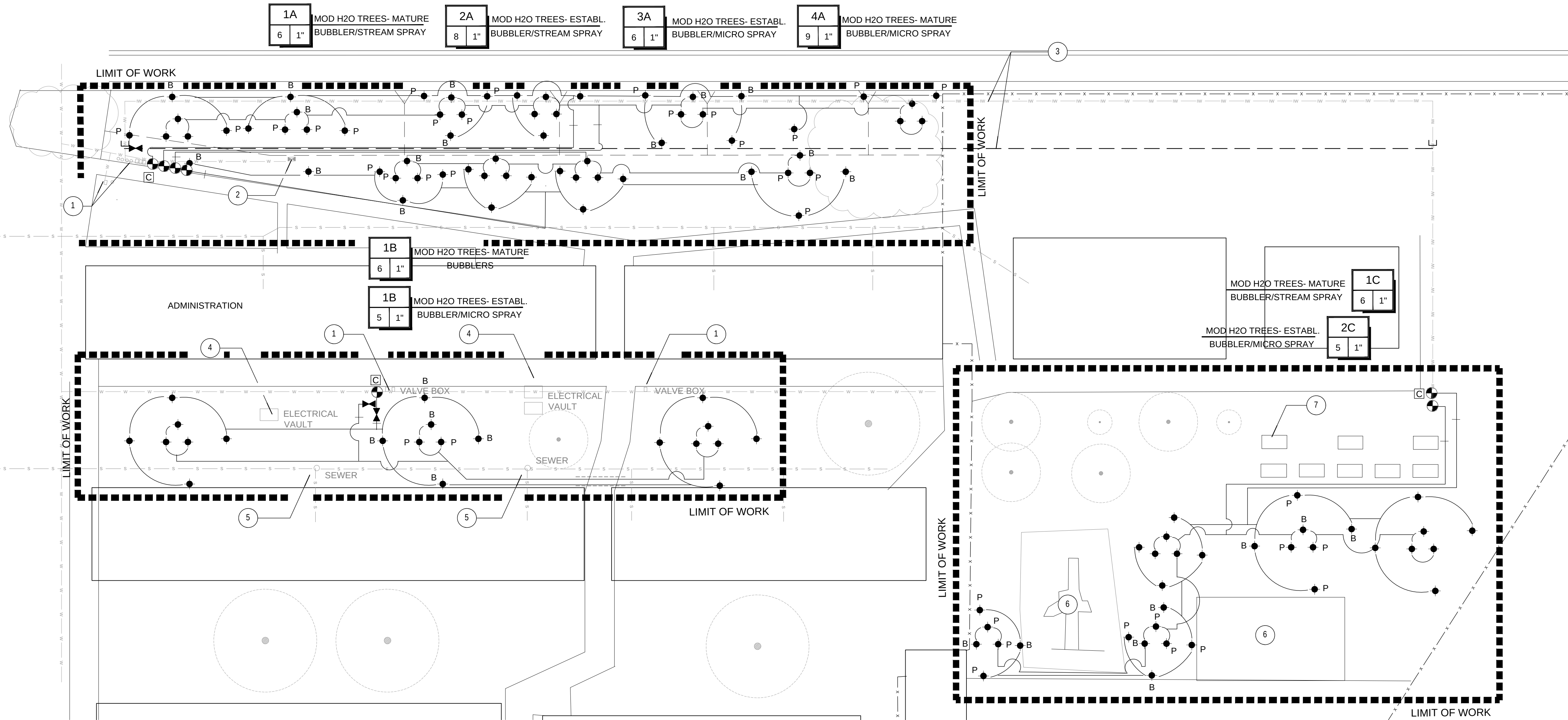
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SHEET

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EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE, SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	C/L1.2	(2, 3)
	RAINBIRD TBOS-BTLT BATTERY OPERATED CONTROLLER. 1 STATION FOR SMALLER SYSTEMS AS SHOWN, 3 TREES AND 2 STATION FOR 4+ TREES.	A=4 ST. B=1 ST. C=2 ST.	C/L1.2	
	EXISTING POTABLE WATER LINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	NEW PVC CL 315 MAINLINE - 18" MIN. COVER	2"	A, B/L1.2	(1, 2)
	NIBCO T-585 BALL VALVE	1" ON LATERAL 2" ON MAINLINE	G/L1.2	(2, 3)
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	A, B/L1.2	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER. WATER BORE WHENEVER POSSIBLE WITHOUT DAMAGING EXISTING PLANT MATERIAL.	3"	A, B/L1.2	(1, 2)
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS				
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P', RAINBIRD 1806-SAM W/ R-VAN18 NOZZLES FOR MATURE 'P' TREES PLANTERS. RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+5 .42 +5	ESTABLISH MATURITY
MISCELLANEOUS				
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART

1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART

	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

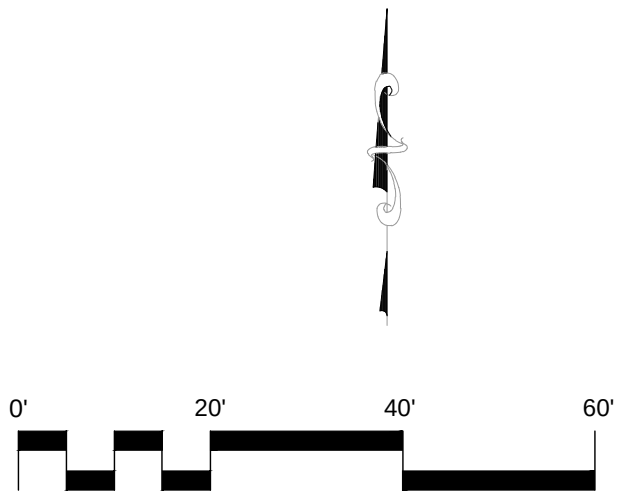
STATION NUMBER	
FLOW (GPM)	VALVE SIZE

IRRIGATION KEYNOTES

- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING BACKFLOW TO BE PROTECTED IN PLACE.
- EXISTING HIGH LINED STEEL IRRIGATION PIPE TO BE REPLACED WITH PVC AND RELC PER PLAN, CONNECTED TO EXISTING SYSTEM ON BOTH ENDS AND THEN REMOVED.
- EXISTING ELECTRICAL VAULTS TO BE PROTECTED IN PLACE.
- EXISTING SEWER TO BE PROTECTED IN PLACE.
- EXISTING PLAY EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING RAISED GARDEN BEDS TO BE PROTECTED IN PLACE.

IRRIGATION NOTES:

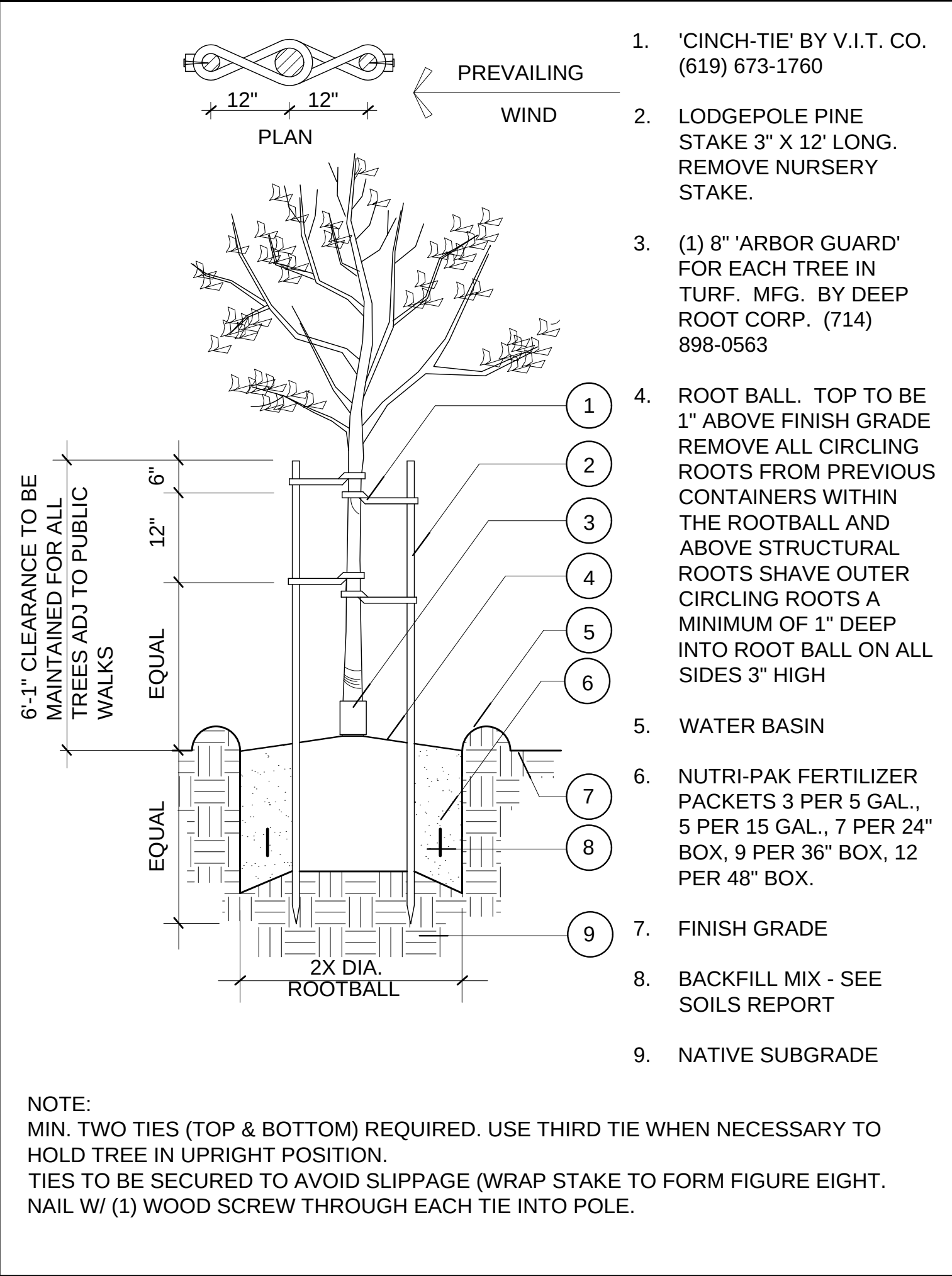
- REFER TO IRRIGATION DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
- MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
- MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
- ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUNDCOVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
- ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
- LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
- ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
- THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.



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I DOUBLE STAKED TREE

Linear Style Planting with DeepRoot Barriers

Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2 feet (61cm). This will be the number of feet necessary for a Linear style planting application. (See chart below.)

A. Choose the barrier that best suits the application.

B. Dig the trench to the depth based upon the particular barrier chosen.

C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the joiner at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.

D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow over the top.

E. plant the tree(s), the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area, take steps to ensure healthy growth of the tree at planting, consult with a local arborist for planting tips and recommendations.

F. If the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arborist- tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 liv root (458.7668), for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.8835).

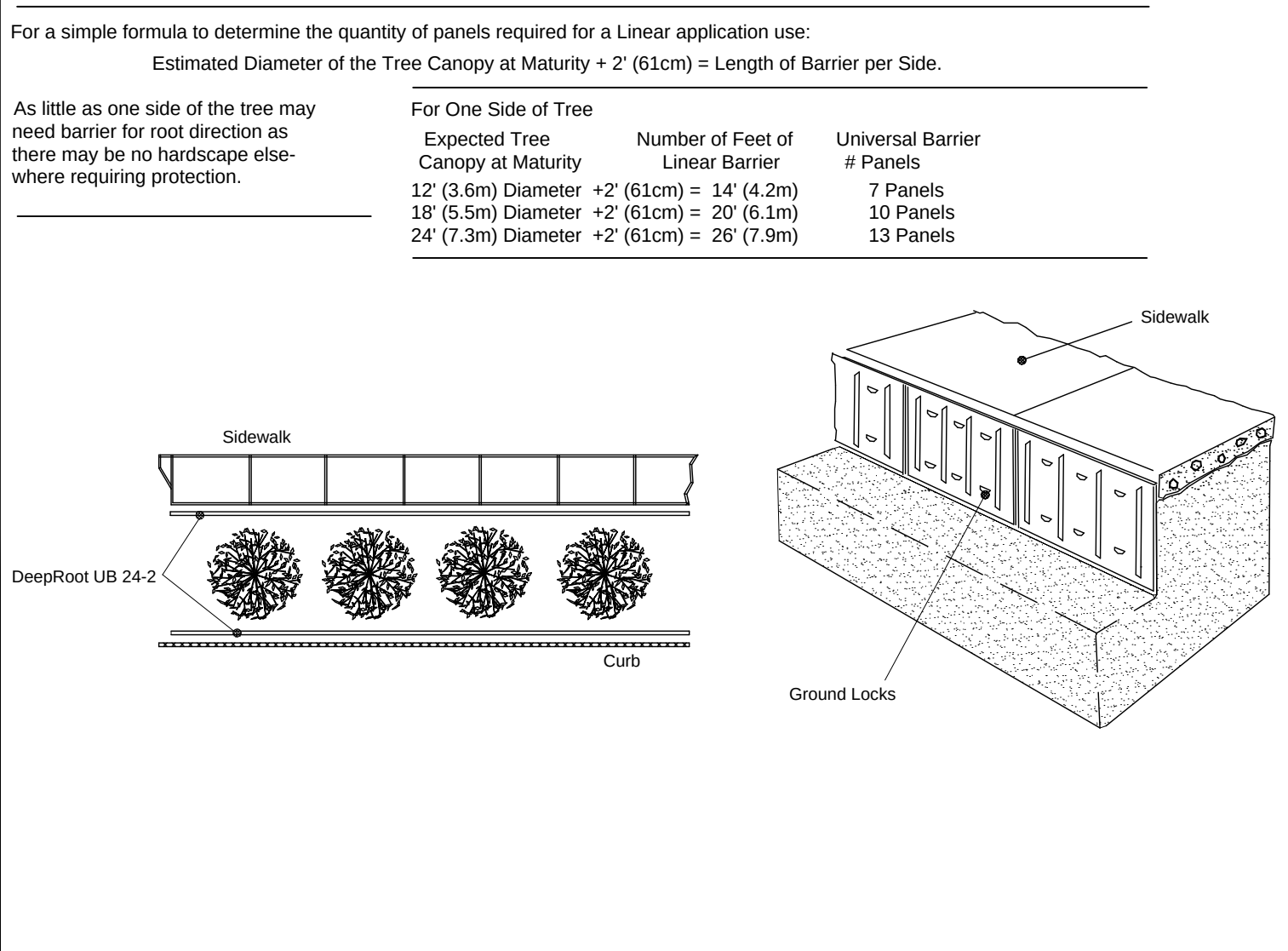
For a simple formula to determine the quantity of panels required for a Linear application use:

Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

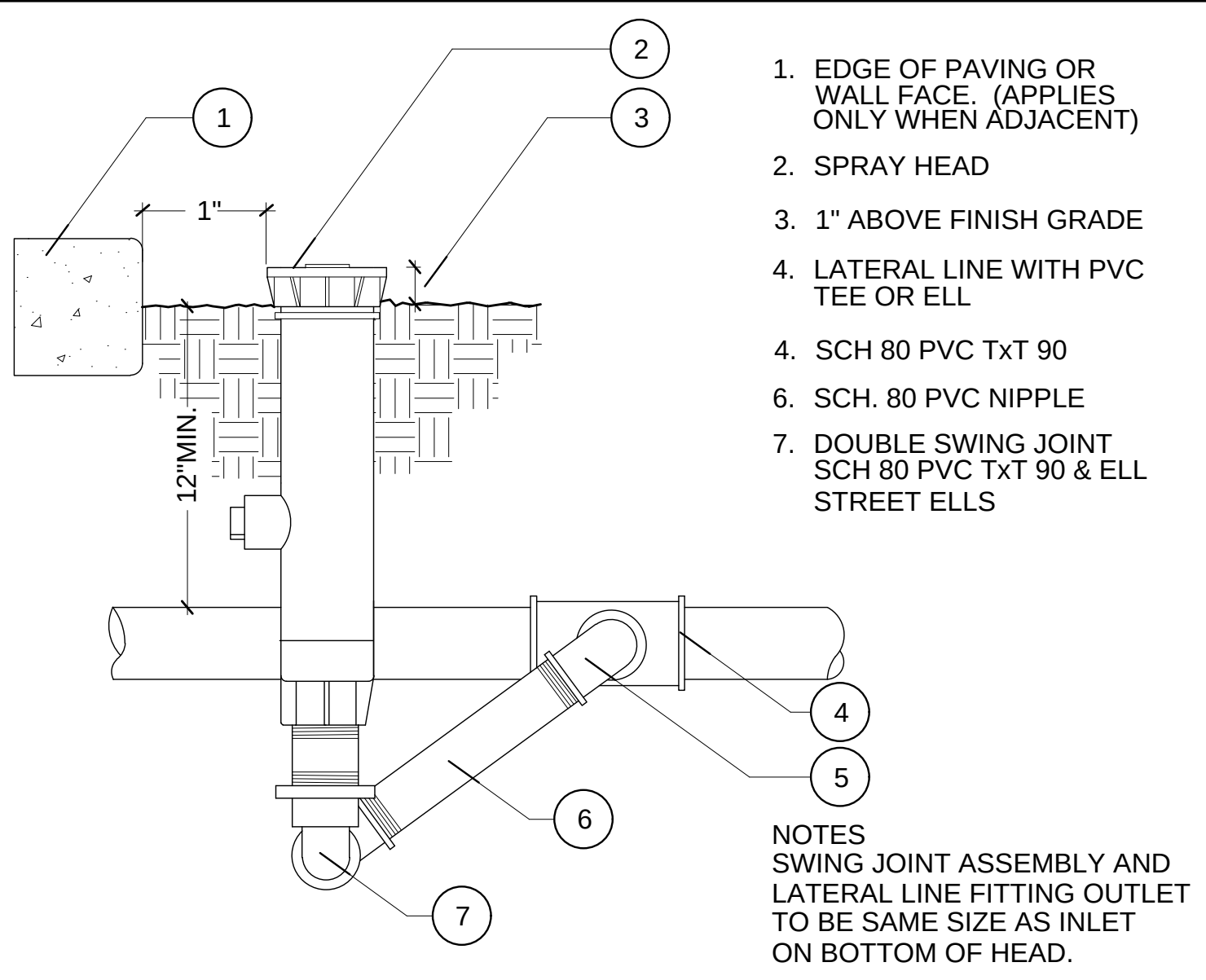
As little as one side of the tree may need barrier for root direction as there may be no hardscape elsewhere requiring protection.

For One Side of Tree

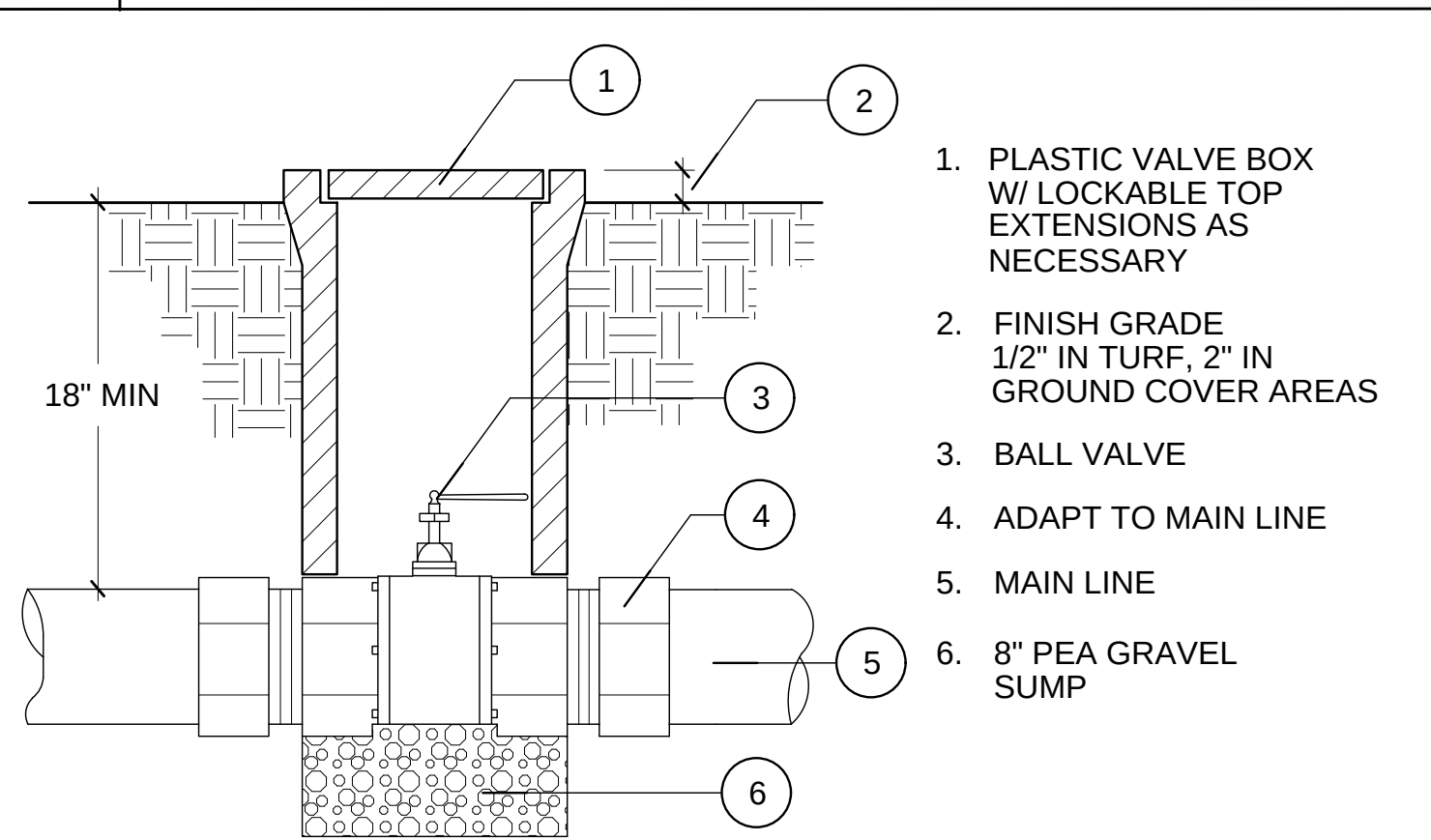
Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
12' (3.6m) Diameter +2' (61cm) = 14' (4.2m)	12' (3.6m) Diameter +2' (61cm) = 14' (4.2m)	7 Panels
18' (5.5m) Diameter +2' (61cm) = 20' (6.1m)	18' (5.5m) Diameter +2' (61cm) = 20' (6.1m)	10 Panels
24' (7.3m) Diameter +2' (61cm) = 26' (7.9m)	24' (7.3m) Diameter +2' (61cm) = 26' (7.9m)	13 Panels



J DEEPROOT BARRIER TO BE 24" DEEP ON ALL SIDES



F SHRUB SPRAY HEAD



G BALL VALVE

ACCEPTABLE

REJECTABLE

1. ASPECT RATIO TO BE LESS THAN 0.66 ON ALL BRANCH UNIONS. ASPECT RATIO IS THE DIAMETER OF BRANCH (A) AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION. (B) DIVIDED BY THE DIAMETER OF THE TRUNK.

2. 1 CENTRAL LEADER. NO CO-DOMINANT LEADERS

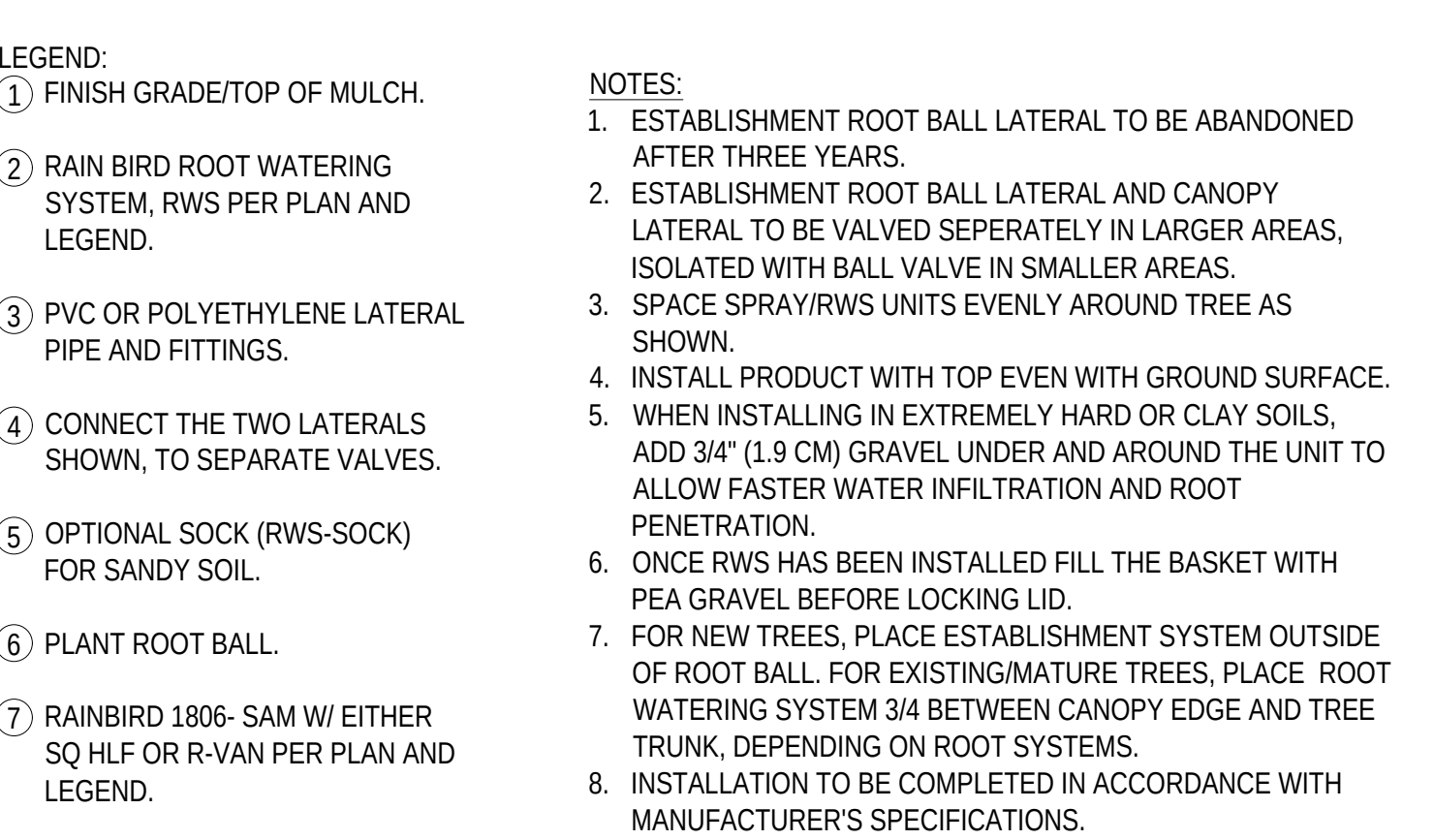
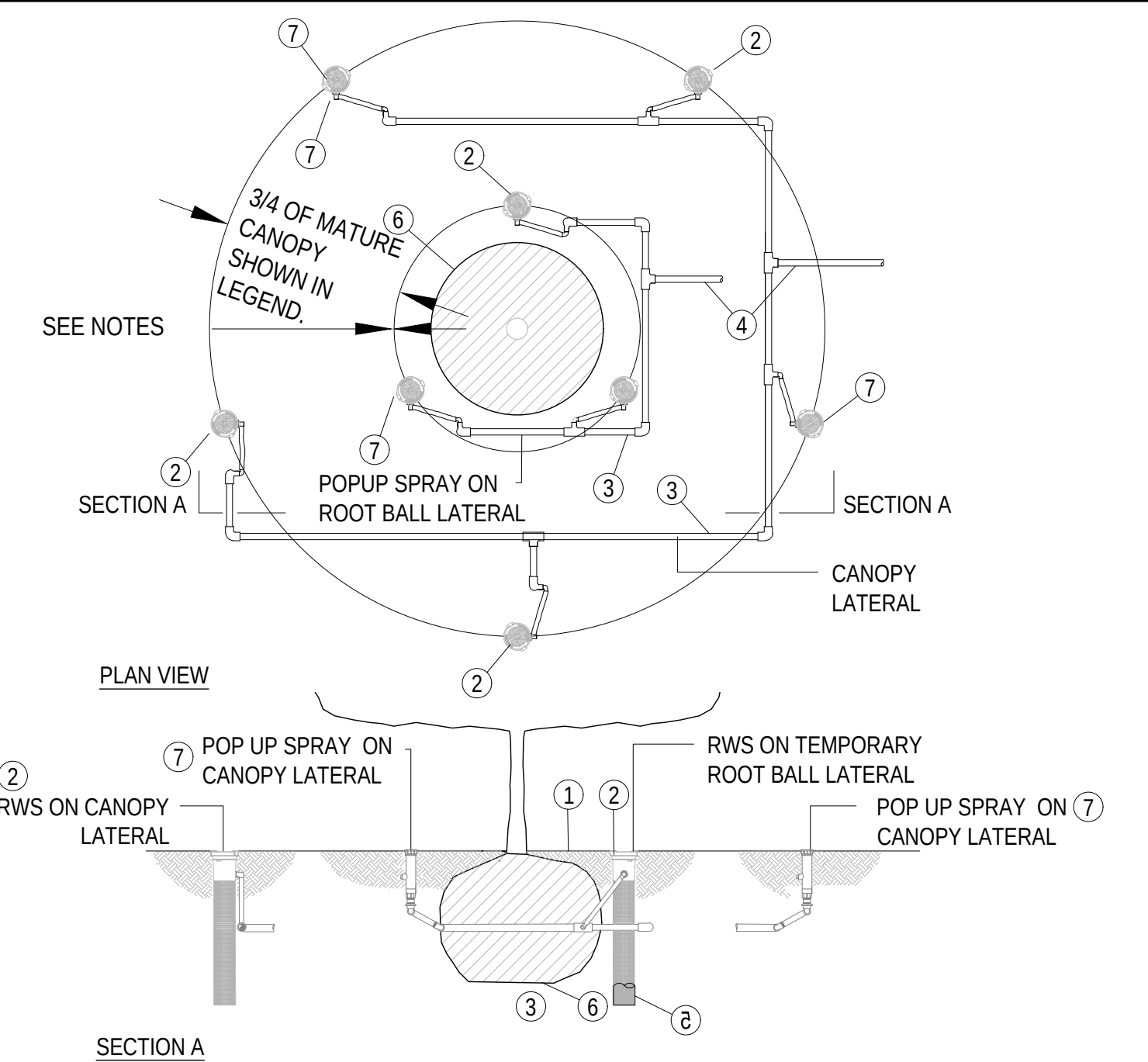
3. MULTIPLE LEADERS. SEVERAL CO-DOMINANT LEADERS.

4. ASPECT RATIO GREATER THAN 0.66

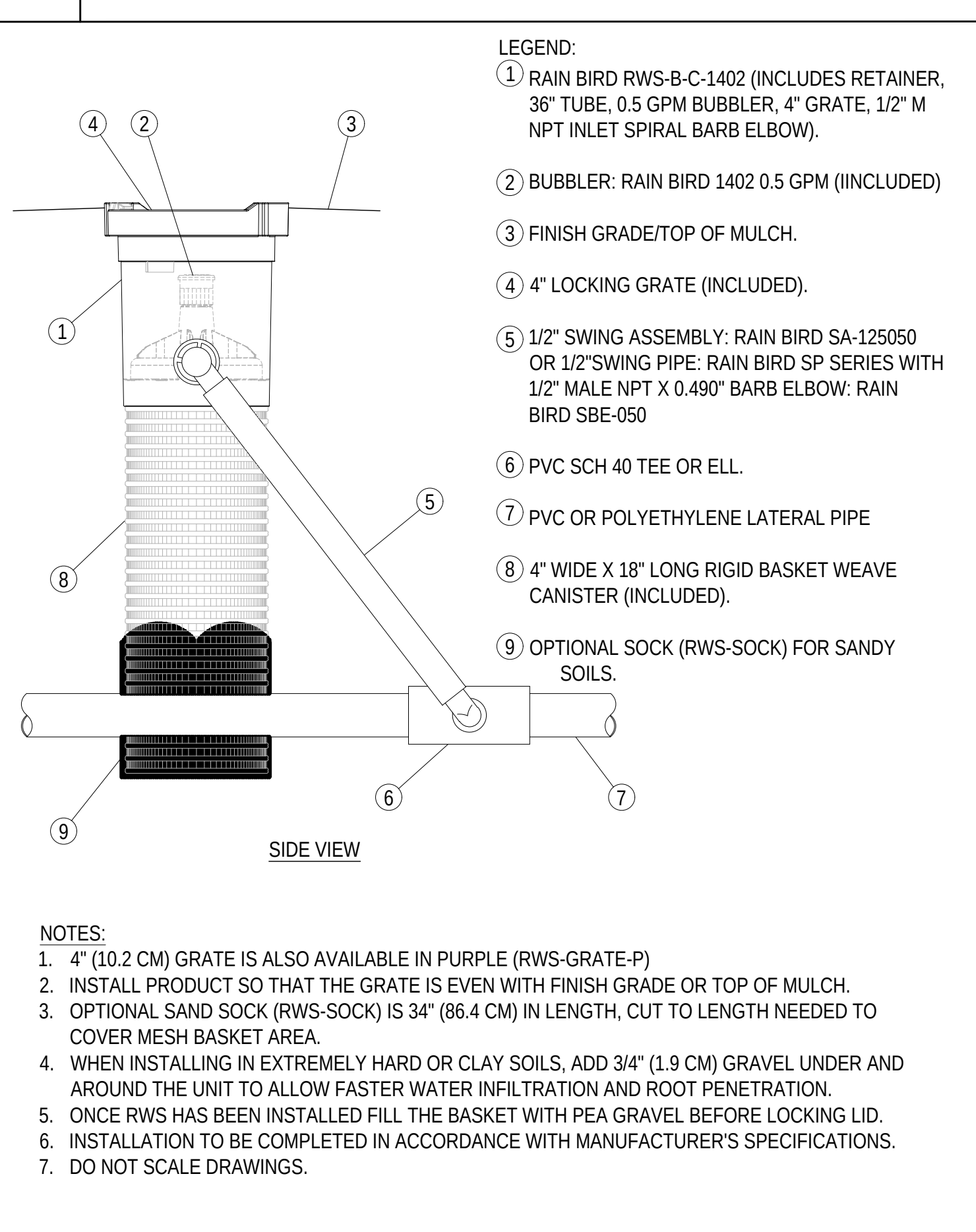
NOTE: ANY TREE NOT MEETING THE CROWN OBSERVATIONS DETAIL MAY BE REJECTED.

URBAN TREE FOUNDATION © 2014

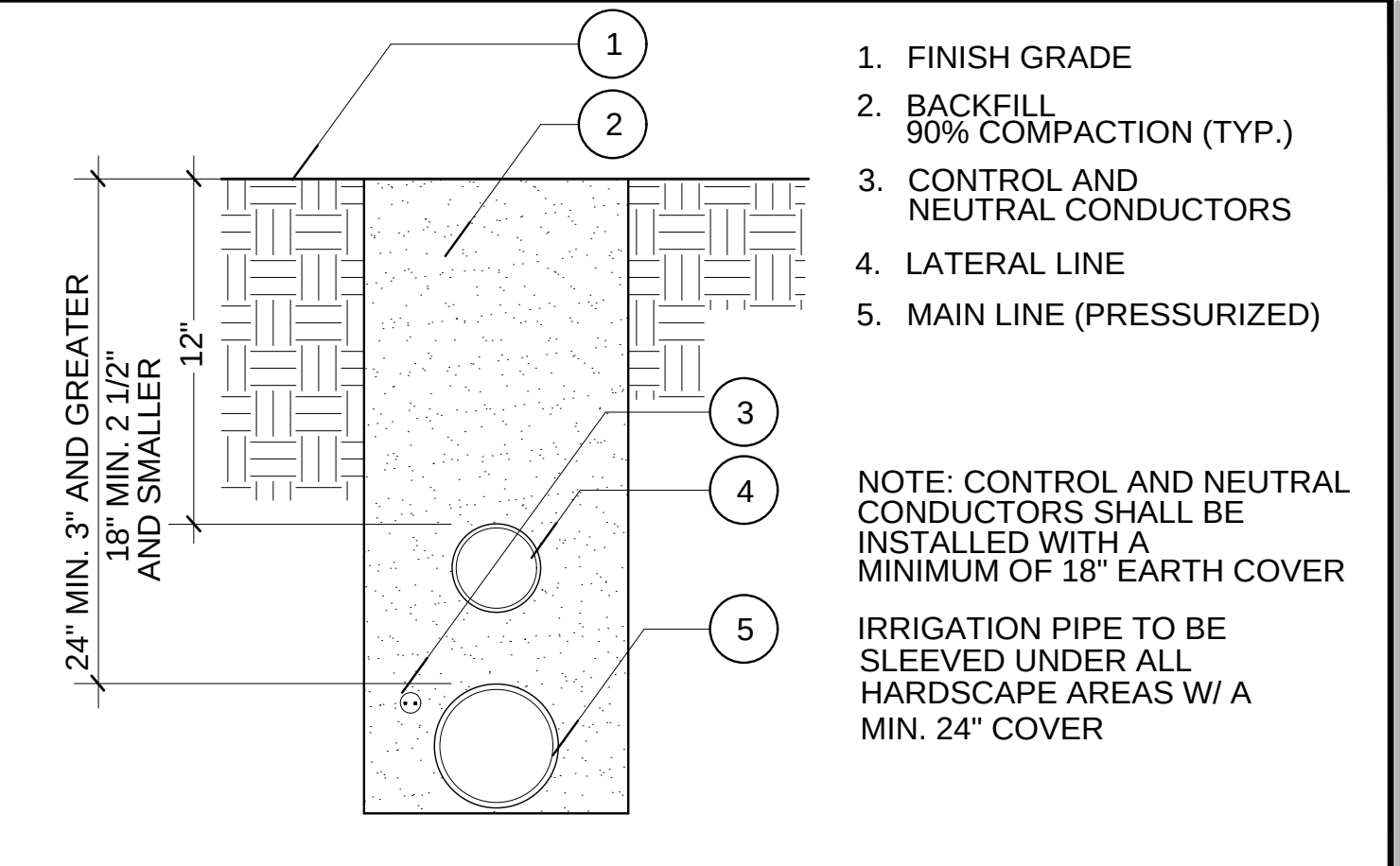
H HIGH BRANCHED CROWN OBSERV.



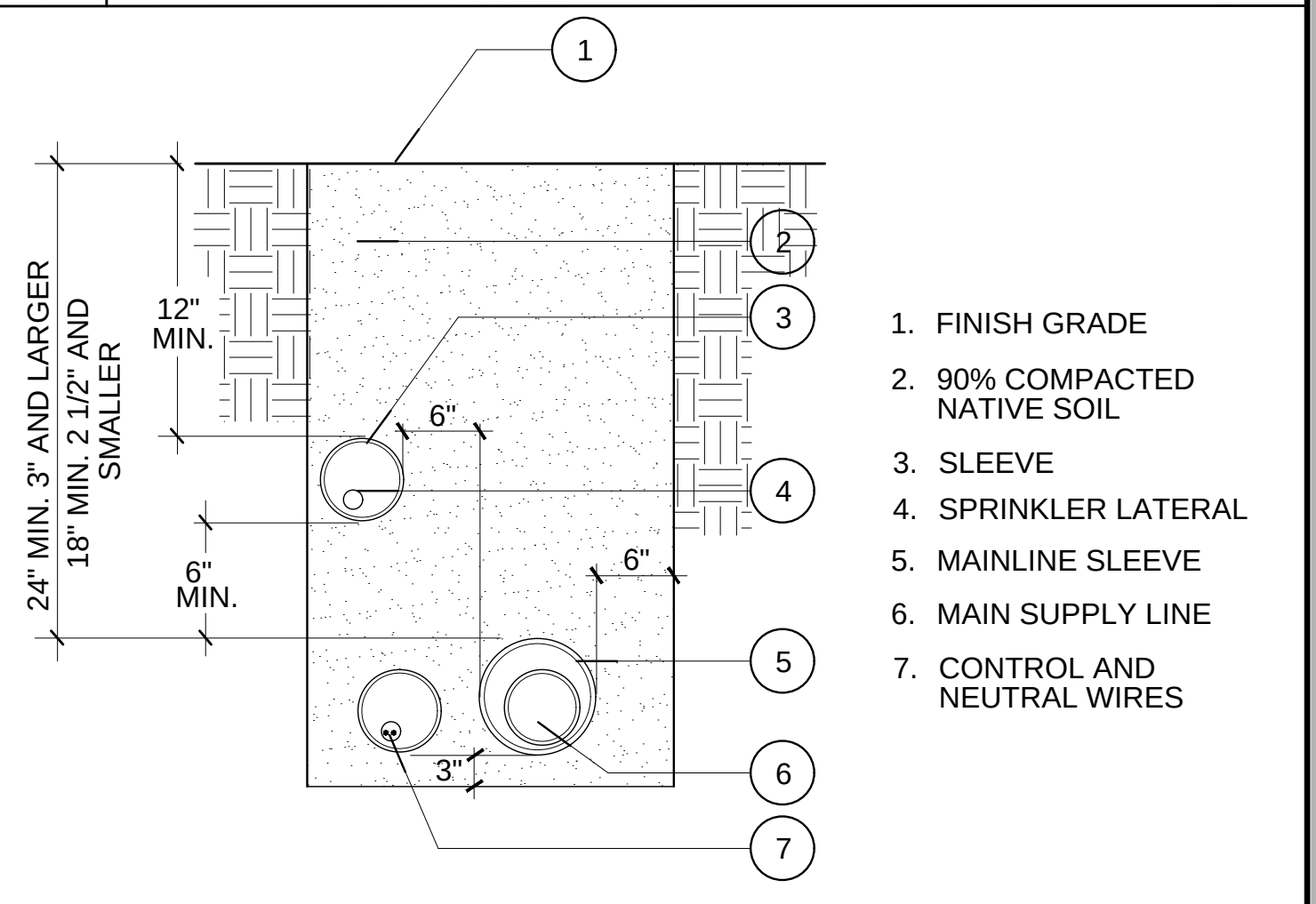
D TREE WATERING LAYOUT



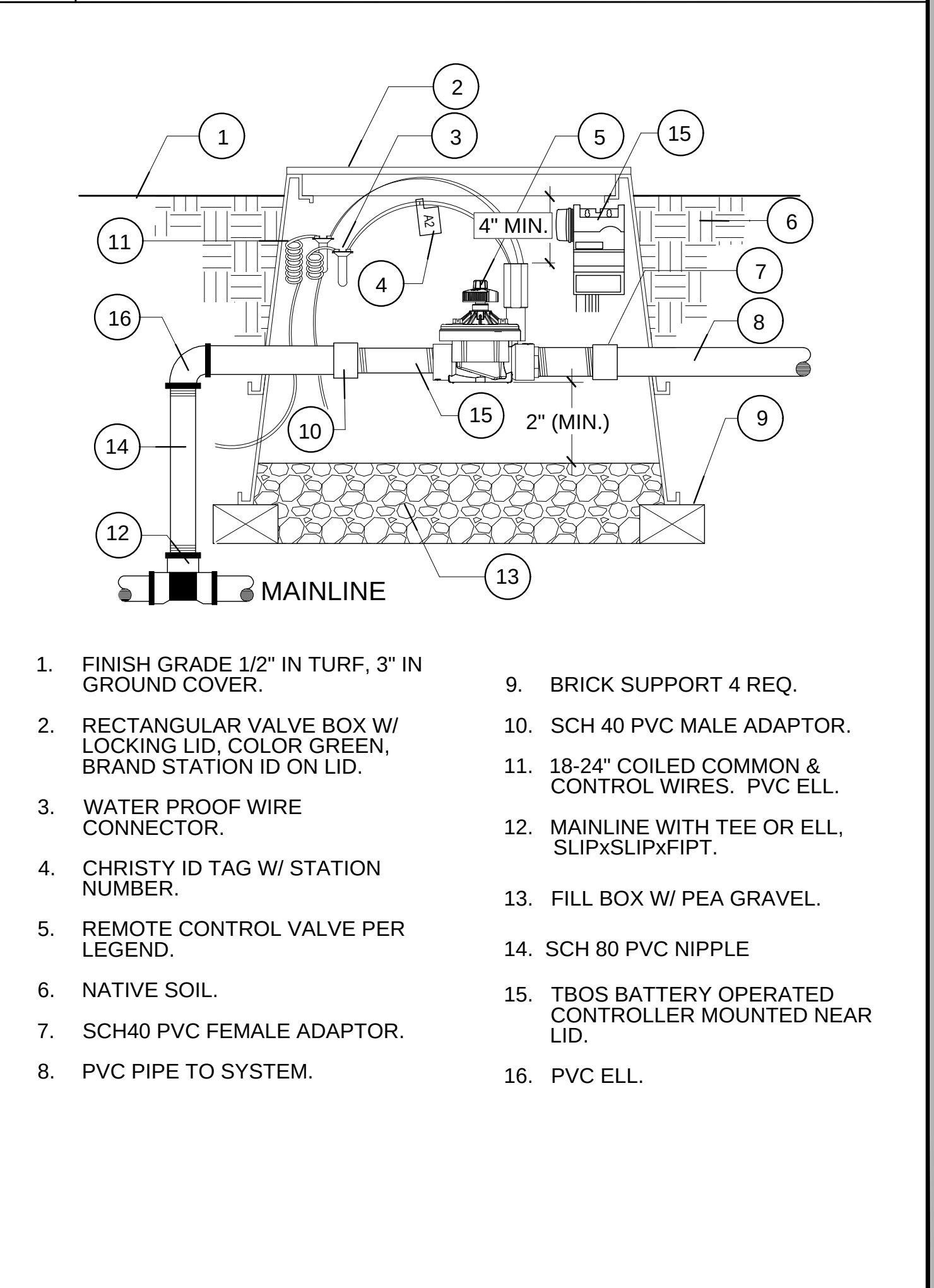
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER

KDA
LANDSCAPE ARCHITECTS

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9405 GREGORY STREET
LA MESA, CA 91942

CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT

MATTHEW J. KANAAN REG.#10426

Signature: 5/31/27
Return Date: _____

STATE OF CALIFORNIA

SHEET TITLE

**IRRIGATION/
PLANTING
DETAILS**

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PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE KEPT TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.

- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
 - § CONNECTIONS TO THE EXISTING WATER LINES
 - § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
 - § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
 - § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
 - § CONTROLLER LOCATIONS WITH GROUNDING RODS
 - § WIRE RUNS, SPLICE LOCATIONS
 - § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.

- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).

5. TESTING DATA FROM REQUIRED PRESSURE TESTING.

G. PRODUCT HANDLING

1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALKS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

J. TEMPORARY UTILITIES

1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.

K. CUTTING, PATCHING, TRENCHING AND DIGGING

1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.

C. SOLVENT CEMENTS AND THREAD LUBRICANT

6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.

D. VALVES

1. BALL VALVES:

- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.

2. BUTTERFLY VALVES:

- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.

3. REMOTE CONTROL VALVES

- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.

4. VALVE BOXES:

- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.

E. AUTOMATIC CONTROLLERS (ELECTRIC)

5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPIRATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPIRATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.

F. CONTROL WIRE:

1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE ULV (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT I RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B-3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:

- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.
2. DISCREPANCIES:
- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.

- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.

- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.

- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.

- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.

3. BACKFILL MATERIAL:

- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.

THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES	THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES	THICKNESS AT SIDE MINIMUM TWO (2) INCHES
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- b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER.
- c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS.
- d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS.
- e. BACKFILL SHALL BE TAMPED OR PUDDLED TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING.

4. LOCATION WIRE:

- a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN.

C. PIPE INSTALLATION

1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.

D. FLUSHING

6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.

E. HYDROSTATIC PRESSURE TESTING

1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

F. BACKFILLING AND COMPACTING

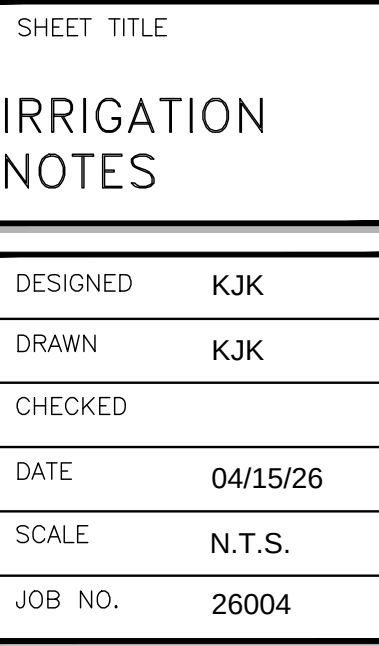
1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

KDA

LANDSCAPE ARCHITECTS



PROJECT: NORTHMONT ELEMENTARY
9405 GREGORY STREET
LA MESA, CA 91942
CALFIRE GRANT LANDSCAPE PLAN



SHEET

L1.4

OF 09 SHEETS

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL, BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL, COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL."

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF-SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

I. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/FST?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10" O/C MAXIMUM; PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER CLOCK LETTER IN ALL PULL BOXES AND AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 200 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURER'S REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A HINGED, LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS- NEW MV/FST?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP-UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION, TWO 3-RING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION:

 - § INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.
 - § CATALOG AND PARTS SHEETS ON ALL MATERIAL AND EQUIPMENT.
 - § COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.
 - § IRRIGATION PRODUCT MANUFACTURERS' WARRANTIES.

- IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.

e. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY LA.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY LA.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY LA.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

 - CLEANING OF PLUGGED IRRIGATION HEADS.
 - IRRIGATION HEADS ADJUSTMENTS.
 - VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - REPAIRING LEAKING VALVES, ETC.
 - ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.
 - REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.
 - LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

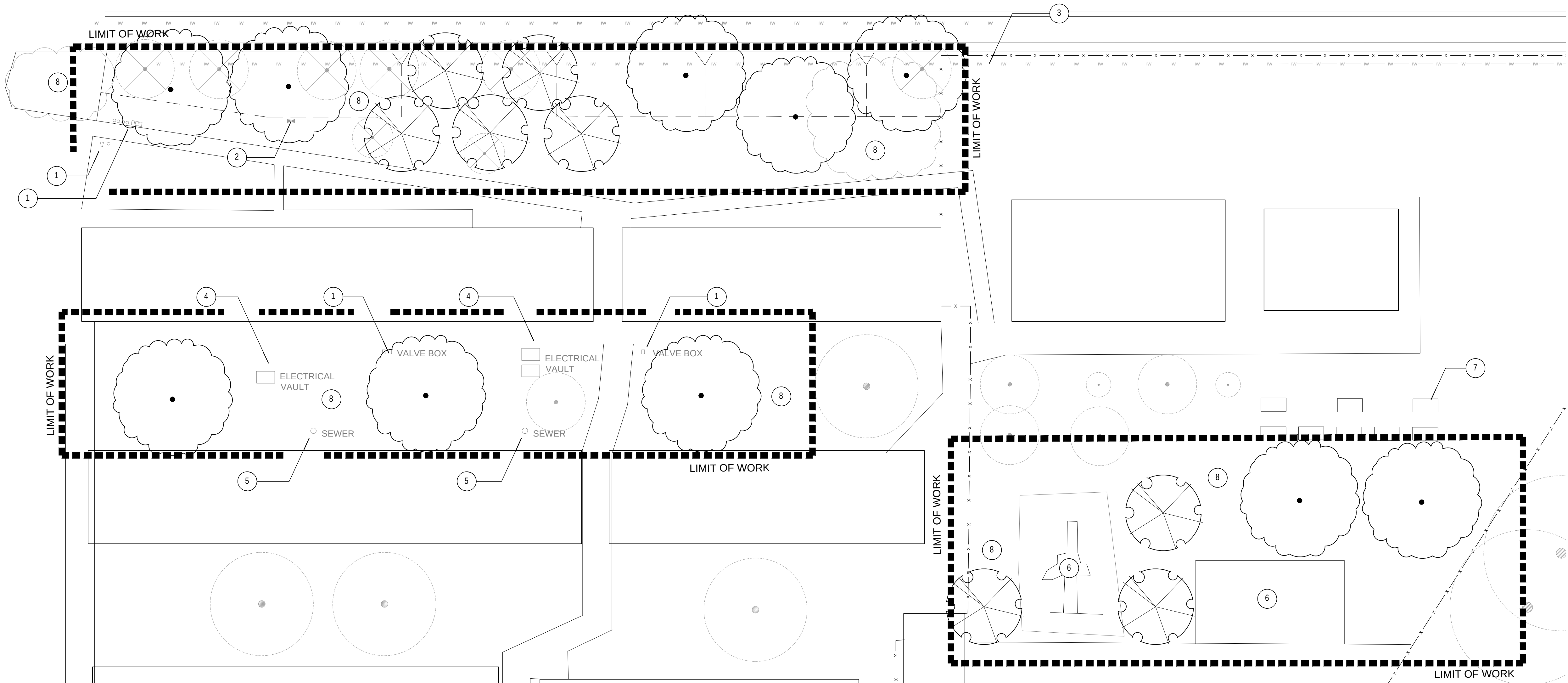
S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINT

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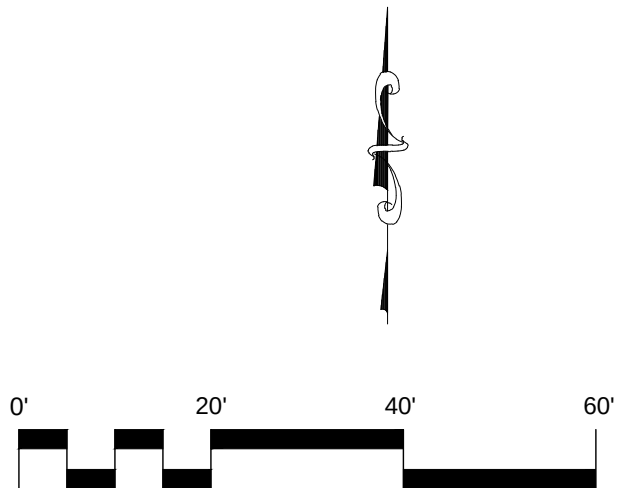
PLANT LEGEND

SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
		EXISTING TREE TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
		EXISTING TREES TO BE REMOVED. GRIND STUMP DOWN BELOW GROUND 2' AND ALL ROOTS WITHIN 3' OF THE STUMP OR LOCATION OF A NEW TREE TRUNK.				
	8	RHUS LANCEA AFRICAN SUMAC	48" BOX	25' O.C.	STANDARD	'H-I'/ L1.2
	10	ULMUS PARV. 'TRUE GREEN' TRUE GREEN CHINESE ELM	48" BOX	40' O.C.	STANDARD	'H-I'/ L1.2
		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				'J'/L1.2
SHRUBS						
		EXISTING SHRUB TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
MISCELLANEOUS						
		ALL PLANTER AREAS TO RECEIVE A 3" THICK LAYER OF FOREST FINES MULCH TO BE PLACED 2' AWAY FROM TREE TRUNKS AND 1' AWAY FROM ALL PLANT BASES.				

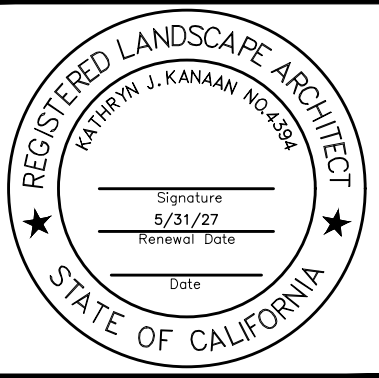
- NOTE:
- REFER TO PLANTING DETAILS AND NOTES.
 - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
 - LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
 - THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
 - PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
 - BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
 - NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
 - THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING BACKFLOW TO BE PROTECTED IN PLACE.
- EXISTING HIGH LINED STEEL IRRIGATION PIPE TO BE PROTECTED IN PLACE.
- EXISTING ELECTRICAL VAULTS TO BE PROTECTED IN PLACE.
- EXISTING SEWER TO BE PROTECTED IN PLACE.
- EXISTING PLAY EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING RAISED GARDEN BEDS TO BE PROTECTED IN PLACE.
- REPAIR AND REPLACE ANY TURF, PLANT MATERIAL OR DG DAMAGED DURING DEMO OR CONSTRUCTION.



REVISIONS	DATE	BY



SHEET TITLE
**PLANTING
PLAN**

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L2.0
OF 09 SHEETS

4/15/2026 C:\KDA PROJECTS\NINI\26000 PROJECTS\26004 LANSVSD CALIFRE GRANT LANDSCAPE\AUTOCAD\CD\NORTHMONT ES\26004 N PN.DWG

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE BE AS REQUIRED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATIONS SHALL BE CONDUCTED IN THE PRESENCE OF THE GROWER TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.

- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.

- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
- b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
- c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
- d. BULK MATERIALS:

- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF OR EXCESSIVE DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SHRINKING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FIND-THE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.

- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.

- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

2. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.

2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.

2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.

3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.

5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0.30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .56% - .84% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe. ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMOHS/CENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212.1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED TO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).

2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.

3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL REQUIRE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) OBSERVED AT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE TOXICITY AND INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.

- (6) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM NURSERY PRODUCTION PRACTICES.

H. ROOTBALL PACKAGE OPTIONS	6) FOOT TRAFFIC.	SIZE THAT IS AT LEAST TWO TIMES THE WIDTH AND DEPTH OF THE ORIGINAL PLANT CONTAINER. THE HOLES SHALL BE, IN ALL CASES, LARGE ENOUGH TO PERMIT HANDLING AND PLANTING WITHOUT INJURY OR BREAKAGE TO THE ROOTS OR ROOT BALL.	9) DO NOT DISTORT OR BEND ROOT BARRIER DURING CONSTRUCTION ACTIVITIES.
	7) ERECTION OF SHEDS OR STRUCTURES.		d. DO NOT INSTALL ROOT BARRIER SURROUNDING THE ROOT BALL OF TREE
1. SPADE HARVESTED AND TRANSPLANTED	8) DRAINAGE CHANGES OR IMPOUNDMENT OF WATER.	d. HARDPAN LAYER: DRILL 6-INCH-DIAMETER HOLES, 24 INCHES APART, INTO FREE-DRAINING STRATA OR TO A DEPTH OF 10 FEET, WHICHEVER IS LESS, AND BACKFILL WITH FREE-DRAINING MATERIAL.	MAINTENANCE - INTERVALS (3) WEEKS FOLLOWING INSTALLATION OF TURFGRASS, AREAS SHALL BE MOWED REGULARLY AT INTERVALS NOT EXCEEDING ONCE PER WEEK. MOWING SHALL BE DONE WITH SHARP, WELL ADJUSTED MOWERS OR CUT MORE THAT HALF THE EXISTING TOP GROWTH IN ONE MOWING. MOWING HEIGHTS SHALL BE 2" TO 2 1/2"; DURING HOT WEATHER SEASONS NEVER LESS THAN 2" AND SHALL BE 1 1/2" TO 2" DURING COOL WEATHER SEASONS. TURFGRASS AREAS THAT DO NOT PROPERLY GROW SHALL BE RESODDED AS NECESSARY. AT THE TERMINATION OF THE MAINTENANCE PERIOD ALL TURFGRASS AREAS SHALL BE COMPLETELY COVERED, LEAVING NO BARREN SPOTS LARGER THAN THREE INCHES (3") X THREE INCHES (3").
6. SPADE HARVESTED AND TRANSPLANTED PLANTS SHALL MEET ALL THE REQUIREMENTS FOR FIELD GROWN TREES. ROOT BALL DIAMETERS SHALL BE OF SIMILAR SIZE AS THE ANSI Z60.1 REQUIREMENTS FOR BALLED AND BURLAPPED PLANTS.	9) EXCAVATION OR OTHER DIGGING UNLESS OTHERWISE INDICATED.	e. DRAINAGE: NOTIFY DISTRICT CONSTRUCTION MANAGER IF SUBSOIL CONDITIONS EVIDENCE WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.	
f. TREES SHALL BE HARVESTED PRIOR TO LEAFING OUT (BUD BREAK) IN THE SPRING OR DURING THE FALL PLANTING PERIOD EXCEPT FOR PLANTS KNOWN TO BE CONSIDERED AS FALL PLANTING HAZARDS. PLANTS THAT ARE FALL PLANTING HAZARDS SHALL ONLY BE HARVESTED PRIOR TO LEAFING OUT IN THE SPRING.	10) ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES OR PLANTS UNLESS OTHERWISE INDICATED.	F. PLANTING:	A. WATERING
g. TREES SHALL BE MOVED AND PLANTED WITHIN 48 HOURS OF THE INITIAL HARVESTING AND SHALL REMAIN IN THE SPADE MACHINE UNTIL PLANTED.	11) THE USE OF A TREE AS A TEMPORARY POWER POLE, BACKSTOP, WINCH SUPPORT, ANCHORAGE, OR OTHER SIMILAR FUNCTION.	a. NO PLANTING SHALL BE DONE IN ANY AREA UNTIL THE AREA CONCERNED HAS BEEN SATISFACTORILY PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS.	APPLY WATER TO ALL PLANTED AREAS DURING OPERATIONS AND THEREAFTER, UNTIL ACCEPTANCE OF THE WORK.
2. CONTAINER (INCLUDING ABOVE-GROUND FABRIC CONTAINERS AND BOXES) PLANTS	12) DO NOT DIRECT VEHICLE OR EQUIPMENT EXHAUST TOWARD PROTECTION ZONES.	b. NO MORE PLANTS SHALL BE DISTRIBUTED IN THE PLANTING AREA ON ANY DAY THAN CAN BE PLANTED AND WATERED ON THAT DAY.	IMMEDIATELY AFTER PLANTING, APPLY WATER TO EACH SHRUB BY MEANS OF A HOSE. APPLY WATER IN A MODERATE STREAM IN THE PLANTING HOLE UNTIL THE MATERIAL ABOVE THE ROOTS ARE COMPLETELY SATURATED FROM THE BOTTOM OF THE HOLE TO THE TOP OF THE GROUND.
a. CONTAINER PLANTS MAY BE PERMITTED ONLY WHEN INDICATED ON THE DRAWING, IN THIS SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.	13) PROHIBIT HEAT SOURCES, FLAMES, IGNITION SOURCES, AND SMOKING WITHIN OR NEAR PROTECTION ZONES AND ORGANIC MULCH.	c. INSPECTION: AT TIME OF PLANTING, VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL ACCORDING TO ANSI Z60.1. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL TO EXPOSE THE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS.	APPLY WATER IN SUFFICIENT QUANTITIES AND AS OFTEN AS SEASONAL CONDITIONS REQUIRE TO KEEP THE PLANTED AREAS SUFFICIENTLY MOIST AT ALL TIMES, WELL BELOW THE ROOT SYSTEM OF GRASS AND PLANTS.
b. PROVIDE PLANTS SHALL BE ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS.	2. INSTALL EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.	d. ROOTS: REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS. REMOVE INJURED ROOTS BY CUTTING CLEARLY; DO NOT BREAK. PLANT WILL NOT BE ACCEPTED IF THE ROOTBALL IS BROKEN OR CRACKED, EITHER BEFORE, DURING OR AFTER THE INSTALLATION PROCESS.	ALL TURF AND GROUNDCOVER AREAS SHALL BE KEPT DAMP AT ALL TIMES AND IRRIGATION SHOULD BE ADJUSTED ACCORDINGLY. THIS NORMALLY WOULD INVOLVE FOUR (4) TO SIX (6) WATERING PERIODS DAILY, EACH WATERING PERIOD (ON) REGULATED TO JUST DAMPEN THE MULCH WITHOUT CREATING RUN OFF.
c. CONTAINER CLASS SIZE SHALL CONFORM TO ANSI Z60.1 FOR CONTAINER PLANTS FOR EACH SIZE AND TYPE OF PLANT.	3. UNACCEPTABLE MATERIALS: REMOVE FROM SOIL ALL CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, ASPHALT, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.	e. PERMITTED ROOT BALL PACKAGES AND SPECIAL PLANTING REQUIREMENTS	B. PLANTING AREA MULCHING
i. SODDED TURF	4. LAY OUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, ADJUST LOCATIONS WHEN REQUESTED, AND OBTAIN LANDSCAPE ARCHITECTS ACCEPTANCE OF LAYOUT BEFORE EXCAVATING OR PLANTING. MAKE MINOR ADJUSTMENTS AS REQUIRED.	1) CONTAINER (INCLUDES BOXED AND ABOVE-GROUND FABRIC CONTAINERS) PLANTS	1. MULCH BACKFILLED SURFACES OF PLANTING AREAS AND OTHER AREAS INDICATED.
SOD TYPE AND SUPPLIER IN ACCORDANCE WITH THE TYPE INDICATED ON THE DRAWINGS.	5. PRIOR TO EXCAVATING PLANTING HOLES, LOCATE UNDERGROUND UTILITIES AND STRUCTURES IN THE AREA OF EXCAVATIONS. DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.	a) THIS SPECIFICATION ASSUMES THAT MOST CONTAINER PLANTS HAVE SIGNIFICANT STEM GIRDLING AND CIRCLING ROOTS, AND THAT THE ROOT COLLAR IS TOO LOW IN THE ROOT BALL.	a. ORGANIC MULCH IN PLANTING AREAS: APPLY 3-INCH AVERAGE THICKNESS OF ORGANIC MULCH OVER WHOLE SURFACE OF PLANTING AREA, AND FINISH LEVEL WITH ADJACENT FINISH GRADES. DO NOT PLACE MULCH WITHIN 2 INCHES OF TRUNKS OR STEMS.
I. MULCH	C. ADVERSE WEATHER CONDITIONS	b) REMOVE THE CONTAINER.	b. DO NOT APPLY ORGANIC MULCH IN PLANTER AREAS THAT EXCEED 3:1 SLOPE.
1. ORGANIC BARK MULCH: LOCAL GROUND WOOD PRODUCT SHALL BE "WALK ON" GRADE, COARSE, GROUND, FROM TREE AND WOODY BRUSH SOURCES. SUBMIT SUPPLIER PRODUCT SPECIFICATION DATA SHEET AND A ONE GALLON SAMPLE FOR APPROVAL.	NO PLANTING SHALL TAKE PLACE DURING EXTREMELY HOT, DRY, WINDY, OR FREEZING WEATHER.	c) PERFORM ROOT BALL SHAVING AS DEFINED IN INSTALLATION OF PLANTS: GENERAL ABOVE.	c. MINERAL MULCH IN PLANTING AREAS: APPLY THICKNESS PER DRAWINGS. DO NOT PLACE MULCH WITHIN [3 INCHES (75 MM)] [6 INCHES (150 MM)]-INSERT DISTANCE- OF TRUNKS OR STEMS.
2. MINERAL MULCH: HARD, DURABLE STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES, IN ACCORDANCE WITH THE TYPE, SIZE RANGE, AND COLOR RANGE ON THE DRAWINGS.	D. WEED ERADICATION	d) REMOVE ALL ROOTS AND SUBSTRATE ABOVE THE ROOT COLLAR AND THE MAIN STRUCTURAL ROOTS ACCORDING TO ROOT CORRECTION DETAILS SO ROOT SYSTEM CONFORMS TO ROOT OBSERVATIONS DETAIL.	d. NO MULCH IS TO BE PLACED AROUND NOR TOUCHING FRONDS CACTI AND SUCCULENTS.
K. PESTICIDES	1. PRIOR TO THE INSTALLATION OF THE IRRIGATION SYSTEM, ALL WEED GROWTH SHALL BE REMOVED WITHIN THE AREAS DESIGNATED TO BE CLEARED AND GRUBBED. REFER TO PLANS FOR LIMIT OF WORK.	e) REMOVE ALL SUBSTRATE AT THE BOTTOM OF THE ROOT BALL THAT DOES NOT CONTAIN ROOTS.	J. ESTABLISHMENT AND MAINTENANCE PERIOD
1. GENERAL: PESTICIDE REGISTERED AND APPROVED BY THE EPA, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND OF TYPE RECOMMENDED BY MANUFACTURER FOR EACH SPECIFIC PROBLEM AND AS REQUIRED FOR PROJECT CONDITIONS AND APPLICATION. DO NOT USE RESTRICTED PESTICIDES UNLESS AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION.	a. IF IN THE OPINION OF THE PEST CONTROL ADVISOR, PERENNIAL GRASSES AND WEEDS EXISTING IN THE PLANTING AREAS WILL REQUIRE CONTROL PRIOR TO REMOVAL, SPRAY THESE AREAS PER PEST CONTROL ADVISORS RECOMMENDATIONS. ALLOW HERBICIDE TO KILL ALL WEEDS. RAKE OR HOE OFF ALL DEAD WEEDS TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. PHYSICALLY REMOVE ALL WEEDS FROM THE SITE.	f) USING A HOSE, POWER WASHER OR AIR EXCAVATION DEVICE, WASH OUT THE SUBSTRATE FROM AROUND THE TRUNK AND TOP OF THE REMAINING ROOT BALL AND FIND AND REMOVE ALL STEM GIRDLING ROOTS WITHIN THE ROOT BALL ABOVE THE TOP OF THE STRUCTURAL ROOTS.	1. PLANT ESTABLISHMENT PERIOD: THE CONTRACTUAL ESTABLISHMENT PERIOD SHALL BE FOR NO LESS THAN THIRTY (30) CONTINUOUS CALENDAR DAYS. THE CONTRACTUAL ESTABLISHMENT PERIOD BEGINS ON THE FIRST DAY AFTER ALL PLANTING IN THIS PROJECT IS COMPLETED AND ACCEPTED AND THE PLANTED AREAS ARE BROUGHT TO A NEAT, CLEAN AND WEED FREE CONDITION.
L. TREE SUPPORTS	2. UPON COMPLETION OF THE IRRIGATION SYSTEM AND ROTOTILLING OF SOIL AMENDMENTS INTO THE SOIL AND IMMEDIATELY PRECEDING THE INSTALLATION OF PLANT MATERIAL, PERFORM WEED ABATEMENT AS FOLLOWS, AND PER PEST CONTROL ADVISORS RECOMMENDATION.	2) THE AMENDED SURFACE SOIL CAN BE USED FOR BACKFILL AROUND TREES AND SHRUBS; ADDITIONAL QUANTITIES OR PROCEDURES MAY BE REQUIRED PER REQUIRED AGRONOMIC SOILS TEST, AT NO ADDITIONAL COST TO THE OWNER. USE THE FOLLOWING FORMULA (THOROUGHLY BLENDED) FOR BIDDING PURPOSES ONLY:	a. ANY DAY UPON WHICH NO WORK WILL BE REQUIRED, AS DETERMINED BY THE LANDSCAPE ARCHITECT, WILL BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS REGARDLESS OF WHETHER OR NOT THE CONTRACTOR PERFORMS PLANT ESTABLISHMENT WORK.
1. TRUNK-STABILIZATION MATERIALS:	a. APPLY SULFATE OF AMMONIA AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 SF.) TO ALL PLANTING AREAS.	NATIVE ON-SITE SOIL (NO ROCK LARGER THAN 1") 6 PARTS NITROLIZED WOOD SHAVINGS 4 PARTS COMMERCIAL FERTILIZER GRO-POWER PLUS, 5-3-1 15 LBS/CY IRON SULFATE 2 LBS/CY	b. ANY DAY WHEN THE CONTRACTOR FAILS TO ADEQUATELY MAINTAIN PLANTINGS, REPLACE UNSUITABLE PLANTS OR DO WEED CONTROL OR OTHER WORK, AS DETERMINED NECESSARY BY THE LANDSCAPE ARCHITECT, WILL NOT BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS.
a. UPRIGHT STAKES: ROUGH-SAWN, SOUND, NEW LODGEPOLE PINE OR DOUGLAS FIR CORES WITH ALKALINE COPPER QUATERNARY (ACQ) WOOD PRESSURE-PRESERVATIVE TREATMENT, NO CHROMATED COPPER ARSENATE (CCA) TREATMENT, FREE OF KNOTS, HOLES, CROSS GRAIN, AND OTHER DEFECTS, 2-BY-2-INCH NOMINAL BY LENGTH INDICATED, POINTED AT ONE END.	b. IRRIGATE AREA FOR FOURTEEN (14) CONSECUTIVE DAYS, TO GERMINATE EXISTING WEED SEEDS.	d) FOR OVER EXCAVATED SITES, EXPECT ALL LANDSCAPE AREAS TO BE LEACHED TO REDUCE SALINITY AFTER AMENDING THE SOILS PER AGRONOMIC ANALYSIS, SOILS RETESTED, AND POTENTIALLY REPEATED UNTIL LEVELS BECOME WITHIN NON TOXIC LEVELS. THIS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.	c. IN ORDER TO CARRY OUT THE PLANT ESTABLISHMENT WORK, THE CONTRACTOR SHALL FURNISH SUFFICIENT MEN AND ADEQUATE EQUIPMENT TO PERFORM THE WORK DURING THE PLANT ESTABLISHMENT PERIOD.
b. FLEXIBLE TIES: MANUFACTURED OF VIRGIN FLEXIBLE VINYL MEETING ASTM D-412 STANDARDS FOR TENSILE AND ELONGATION STRENGTH, BLACK FOR ULTRAVIOLET RESISTANCE, MANUFACTURED WITH A DOUBLE BACK LOCKING CONFIGURATION. FLEXIBLE TIES SHALL ELONGATE WITH TREE GROWTH WHILE PREVENTING DAMAGE TO THE TREE.	c. APPLY BY SPRAY A NON_SELECTIVE HERBICIDE TO ERADICATE ALL EXISTING WEEDS. DO NOT IRRIGATE FOR SEVEN (7) DAYS AFTER APPLICATION.	e) MAINTAIN ALL PLANTS IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. STRAIGHTEN ALL TREES THAT HAVE MOVED OUT OF PLUMB INCLUDING THOSE NOT STAKED. PLANTS TO BE STRAIGHTENED SHALL BE EXCAVATED AND THE ROOT BALL MOVED TO A PLUMB POSITION, AND THEN RE-BACKFILLED. DO NOT STRAIGHTEN PLANTS BY PULLING THE TRUNK WITH GUVYS.	d. IMPROPER MAINTENANCE OR POSSIBLE POOR CONDITION OF ANY PLANTING AT THE TERMINATION OF THE SCHEDULED ESTABLISHMENT PERIOD MAY CAUSE POSTPONEMENT OF THE FINAL ACCEPTANCE OF PLANT ESTABLISHMENT. CONTRACTOR SHALL BEAR ALL COSTS FOR EXTENSION OF THE PLANT ESTABLISHMENT PERIOD.
c. PROPRIETARY STAKING-AND-GUYING DEVICES: PROPRIETARY STAKE OR ANCHOR AND ADJUSTABLE TIE SYSTEMS TO SECURE EACH NEW PLANTING BY PLANT STEM; SIZED AS INDICATED AND ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.	d. REMOVE WEEDS AFTER HERBICIDE HAS HAD TIME TO SUFFICIENTLY KILL. REMOVE ALL DEAD WEEDS BY RAKE OR HOE TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. REMOVE ALL WEED RESIDUE AND TOP GROWTH AND DISPOSE OF IN A LEGAL MANNER.	f) AFTER THE WATER SETTLING OF THE PLANT HAS COMPLETELY DRAINED, MULTI-PAK FERTILIZER PACKETS SHALL BE PLACED AS INDICATED BELOW. SET THE PACKETS TO BE USED WITH EACH PLANT ON THE TOP OF THE ROOT BALL WHILE THE PLANTS ARE STILL IN THEIR CONTAINERS SO THE REQUIRED NUMBER OF TABLETS TO BE USED IN EACH HOLE CAN BE EASILY VERIFIED:	2. PLANT MAINTENANCE PERIOD: THE CONTRACTUAL MAINTENANCE PERIOD SHALL BE NO LESS THAN NINETY (90) CONTINUOUS CALENDAR DAYS AND, SHALL BEGIN AT THE ACCEPTANCE OF THE PLANT ESTABLISHMENT PERIOD.
1) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ARBORBRACE, J. R. PARTNERS, VILLA ROOT BARRIER, OR EQUAL	E. TREE AND SHRUB INSTALLATION	3 PACKETS PER FIVE GALLON CONTAINER. 12 PACKETS PER 48" BOX CONTAINER. 16 PACKETS PER 60" BOX CONTAINER. THE REMAINDER OF THE HOLE SHALL THEN BE BACKFILLED.	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDDED AT INTERVALS
M. MISCELLANEOUS PRODUCTS	1. TREE AND PLANT PROTECTION AREA: THE TREE AND PLANT PROTECTION AREA IS DEFINED AS ALL AREAS INDICATED ON THE TREE PROTECTION PLAN, WHERE NO LIMIT OF THE TREE AND PLANT PROTECTION AREA IS DEFINED ON THE DRAWINGS, THE LIMIT SHALL BE THE DRIP LINE (OUTER EDGE OF THE BRANCH CROWN) OF EACH TREE.	g) AFTER EXCAVATED SITES, EXPECT ALL LANDSCAPE AREAS TO BE LEACHED TO REDUCE SALINITY AFTER AMENDING THE SOILS PER AGRONOMIC ANALYSIS, SOILS RETESTED, AND POTENTIALLY REPEATED UNTIL LEVELS BECOME WITHIN NON TOXIC LEVELS. THIS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.	3. ALL TREES WILL BE GUARANTEED FOR 1 YEAR.
1. ROOT BARRIER: BLACK, MOLDED, MODULAR PANELS 24 INCHES HIGH (DEEP), 85 MILS THICK, AND WITH VERTICAL ROOT DEFLECTING RIBS PROTRUDING 3/4-INCH OUT FROM PANEL SURFACE, MANUFACTURED WITH MINIMUM 50 PERCENT RECYCLED POLYETHYLENE PLASTIC WITH UV INHIBITORS. PANELS SHALL HAVE AN INTEGRATED, SELF-INTERLOCKING JOINING SYSTEM THAT SLIDE INTO EACH OTHER.	a. ROOT PRUNING - PRIOR TO ANY EXCAVATING INTO THE EXISTING SOIL GRADE WITHIN 25 FEET OF THE LIMIT OF THE TREE AND PLANT PROTECTION AREA OR TREES TO REMAIN, ROOT PRUNE ALL EXISTING TREES TO A DEPTH OF 24 INCHES BELOW EXISTING GRADE IN ALIGNMENTS FOLLOWING THE EDGES OF THE TREE AND PLANT PROTECTION AREA OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ROOT PRUNING SHALL BE IN CONFORMANCE WITH ANSI A300 (PART 8) LATEST EDITION.	h) AFTER THE WATER SETTLING OF THE PLANT HAS COMPLETELY DRAINED, MULTI-PAK FERTILIZER PACKETS SHALL BE PLACED AS INDICATED BELOW. SET THE PACKETS TO BE USED WITH EACH PLANT ON THE TOP OF THE ROOT BALL WHILE THE PLANTS ARE STILL IN THEIR CONTAINERS SO THE REQUIRED NUMBER OF TABLETS TO BE USED IN EACH HOLE CAN BE EASILY VERIFIED:	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDDED AT INTERVALS OF NOT MORE THAN TEN (10) DAYS. WATERING, TRIMMING, FERTILIZATION, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED, SHALL BE INCLUDED IN THE MAINTENANCE PERIOD. MAINTENANCE SHALL INCLUDE GOPHER CONTROL.
a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY DEEPROOT GREEN INFRASTRUCTURE, LLC, NDS INC, VILLA ROOT BARRIER, OR EQUAL.	1) USING A ROCK SAW, CHAIN TRENCHER OR SIMILAR TRENCHING DEVICE, MAKE A VERTICAL CUT WITHIN 2 FEET OF THE LIMIT OF GRADING.	3 PACKETS PER FIVE GALLON CONTAINER. 12 PACKETS PER 48" BOX CONTAINER. 16 PACKETS PER 60" BOX CONTAINER. THE REMAINDER OF THE HOLE SHALL THEN BE BACKFILLED.	b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS (OF MAINTENANCE) AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.) USING AMMONIUM SULFATE, EVENLY APPLIED AND THOROUGHLY WATERED IN. POST FERTILIZE ALL GROUNDCOVER AREAS AT THE END OF EVERY THIRTY (30) DAYS (OF MAINTENANCE) AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.), USING 5, 3, 1 G, GRO, POWER. FOR THE FINAL FEEDING OF ALL AREAS, USE 12, 8, 8 G, GRO, POWER CONTROLLED RELEASE NITROGEN AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.).
2. ANTIDISECCANT: WATER-INSOLUBLE EMULSION, PERMEABLE MOISTURE RETARDER, FILM FORMING, FOR TREES AND SHRUBS; DELIVER AND ORIGINAL, SEALED, AND FULLY LABELED CONTAINERS AND MIX ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.	2) AFTER COMPLETION OF THE CUT, MAKE CLEAN CUTS WITH A LOPPER, SAW OR PRUNER TO REMOVE ALL TORN ROOT ENDS ON THE TREE SIDE OF THE EXCAVATION, AND BACKFILL THE TRENCH IMMEDIATELY WITH EXISTING SOIL, FILLING ALL VOIDS.	i) AFTER BACKFILLING, AN EARTHEN BASIN SHALL BE CONSTRUCTED AROUND EACH PLANT. EACH BASIN SHALL BE OF A DEPTH SUFFICIENT TO HOLD AT LEAST TWO INCHES (2") OF WATER. BASINS SHALL BE OF A SIZE SUITABLE FOR THE INDIVIDUAL PLANT. IN NO CASE, SHALL THE BASIN FOR A FIFTEEN (15) GALLON PLANT BE LESS THAN FOUR FEET (4') IN DIAMETER; A FIVE (5) GALLON PLANT LESS THAN THREE FEET (3') IN DIAMETER; AND A ONE (1) GALLON PLANT LESS THAN TWO FEET (2') IN DIAMETER. THE BASINS SHALL BE CONSTRUCTED OF AMENDED BACKFILL MATERIAL. RAKE OUT BASINS PRIOR TO PLANTING LAWN AREAS OR GROUNDCOVER AREAS.	c. MOVING OF TURF WILL COMMENCE WHEN TURF GRASS HAS REACHED A HEIGHT OF TWO INCHES (2"). THE HEIGHT OF CUT WILL BE ONE AND ONE-HALF INCHES TO TWO INCHES (1 1/2" TO 2"). MOWING WILL BE AT LEAST WEEKLY AFTER THE FIRST CUT. TURF MUST BE WELL ESTABLISHED AND FREE OF BARE SPOTS AND WEEDS TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT PRIOR TO FINAL ACCEPTANCE BY THE CITY. EXCESS GRASS CLIPPINGS, AS DETERMINED BY THE LANDSCAPE ARCHITECT, SHALL BE PICKED UP AND REMOVED FROM THE SITE AND PREMISES.
3. BURLAP: NON-SYNTHETIC, BIODEGRADABLE.	b. TREE GROWTH REGULATOR - AT THE START OF THE CONSTRUCTION CONTRACT PERIOD, TREAT ALL TREES, INDICATED ON THE PLAN, WITH TREE GROWTH REGULATOR AT RECOMMENDED RATES, TYPE OF YEAR AND METHODS INDICATED BY THE PRODUCT DISTRIBUTOR	j) PRUNING: PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE INJURED TWIGS AND BRANCHES, AND TO COMPENSATE FOR LOSS OF ROOTS DURING TRANSPLANTING, BUT NEVER TO EXCEED ONE-THIRD (1/3) OF THE BRANCHING STRUCTURE. UPON RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, PRUNING MAY BE DONE BEFORE DELIVERY OF PLANTS, BUT NOT BEFORE PLANTS HAVE BEEN REVIEWED AND RECOMMENDED FOR APPROVAL. CUTS OVER THREE QUARTERS OF AN INCH (3/4") IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE WOUND PAINT.	d. THE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEMS IN A LIKE NEW OPERATING CONDITION; ADJUSTING HEAD HEIGHTS AND SPRAY ARCS AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROPER WATERING OF ALL PLANTING AREAS, FOR PROVIDING ANY NECESSARY SUPPLEMENTAL WATER AS MAY BE REQUIRED, AND SHALL REPLACE ANY MATERIAL DAMAGED DUE TO IMPROPER MOISTURE.
4. PLANTER DRAINAGE GRAVEL: WASHED, SOUND CRUSHED STONE OR GRAVEL COMPLYING WITH (ASTM D 448 FOR SIZE NO. 8) (INSERT REQUIREMENTS)	c. ANY TREES OR PLANTS DESIGNATED TO REMAIN AND WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT THEIR OWN EXPENSE. TREES SHALL BE REPLACED WITH A TREE OF SIMILAR SPECIES AND OF EQUAL SIZE OR 6 INCH CALIPER WHICHEVER IS LESS. SHRUBS SHALL BE REPLACED WITH A PLANT OF SIMILAR SPECIES AND EQUAL SIZE OR THE LARGEST SIZE PLANTS REASONABLY AVAILABLE. WHICHEVER IS LESS, WHERE REPLACEMENT PLANTS ARE TO BE LESS THAN THE SIZE OF THE PLANT THAT IS DAMAGED, THE OWNER'S REPRESENTATIVE SHALL APPROVE THE SIZE AND QUALITY OF THE REPLACEMENT PLANT.	k) STAKING AND TYING:	e. DURING THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE PROTECTION FOR ALL PLANTING AREAS. ANY DAMAGED AREAS SHALL BE REPAIRED AND ANY PLANT MATERIALS REPLACED AT THE CONTRACTOR'S EXPENSE.
5. PLANTER FILTER FABRIC: NONWOVEN GEOTEXTILE MANUFACTURED FOR SEPARATION APPLICATIONS AND MADE OF POLYPROPYLENE OR POLYESTER FABRIC, 3/32-INCH, YD. MINIMUM, COMPOSED OF FIBERS FORMED INTO A STABLE NETWORK SO THAT FIBERS RETAIN THEIR RELATIVE POSITION. FABRIC SHALL BE INERT TO BIOLOGICAL DEGRADATION AND RESIST NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS.	1) THE OWNER'S REPRESENTATIVE MAY ENGAGE AN INDEPENDENT ARBORIST TO ASSESS ANY TREE OR PLANT THAT APPEARS TO HAVE BEEN DAMAGED TO DETERMINE THEIR HEALTH OR CONDITION.	a. SUPPORT STAKES TALL ENOUGH TO SUPPORT THE PARTICULAR TREE SHALL BE DRIVEN THIRTY-SIX INCHES (36") INTO THE SOIL. STAKE SHALL BE PLACED ON THE LEeward SIDE OF THE TREE FROM THE MOST TROUBLEsome DIRECTION, REFER TO DETAILS ON DRAWINGS.	f. THE CONTRACTOR'S MAINTENANCE PERIOD WILL BE EXTENDED PAST NINETY (90) DAYS IF THESE PROVISIONS ARE NOT FILLED.
a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY TENGATE GEOSYNTHETICS AMERICA, US FABRICS, PROPEX, OR EQUAL.	e. ANY TREE THAT IS DETERMINED TO BE DEAD, DAMAGED OR POTENTIALLY HAZARDOUS BY THE OWNER'S ARBORIST AND UPON THE REQUEST OF THE OWNER'S REPRESENTATIVE SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. TREE REMOVAL SHALL INCLUDE ALL CLEAN-UP OF ALL WOOD PARTS AND GRINDING OF THE STUMP TO A DEPTH SUFFICIENT TO PLANT THE REPLACEMENT TREE OR PLANT, REMOVAL OF ALL CHIPS FROM THE STUMP SITE AND FILLING THE RESULTING HOLE WITH TOPSOIL.	b. TIES SHALL BE PLACED AS LOW ON THE TRUNK AS POSSIBLE BUT HIGH ENOUGH SO THE TREE WILL RETURN TO UPRIGHT AFTER DEFLECTION.	g. THE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEMS IN A LIKE NEW OPERATING CONDITION; ADJUSTING HEAD HEIGHTS AND SPRAY ARCS AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROPER WATERING OF ALL PLANTING AREAS, FOR PROVIDING ANY NECESSARY SUPPLEMENTAL WATER AS MAY BE REQUIRED, AND SHALL REPLACE ANY MATERIAL DAMAGED DUE TO IMPROPER MOISTURE.
PART III - EXECUTION	f. ANY REMEDIAL WORK ON DAMAGED EXISTING PLANTS RECOMMENDED BY THE CONSULTING ARBORIST SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE OWNER. REMEDIAL WORK SHALL INCLUDE BUT IS NOT LIMITED TO: SOIL COMPACTION REMEDIATION AND VERTICAL MULCHING, PRUNING AND OR CABLING, INSECT AND DISEASE CONTROL INCLUDING INJECTIONS, COMPENSATORY WATERING, ADDITIONAL MULCHING, AND COULD INCLUDE APPLICATION TREE GROWTH REGULATORS (TGR).	c. TO FIND THE PROPER HEIGHT FOR THE LOCATIONS, HOLD THE TRUNK IN ONE HAND, PULL THE TOP TO ONE SIDE AND RELEASE. THE HEIGHT AT WHICH THE TRUNK WILL JUST RETURN TO THE UPRIGHT WHEN THE TOP IS RELEASED IS THE HEIGHT AT WHICH TO ATTACH THE TIES.	h. DURING THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE PROTECTION FOR ALL PLANTING AREAS. ANY DAMAGED AREAS SHALL BE REPAIRED AND ANY PLANT MATERIALS REPLACED AT THE CONTRACTOR'S EXPENSE.
A. GENERAL	g. REMEDIAL WORK MAY EXTEND UP TO TWO YEARS FOLLOWING THE COMPLETION OF CONSTRUCTION TO ALLOW FOR ANY REQUIREMENTS OF MULTIPLE APPLICATIONS OR THE NEED TO UNDERTAKE APPLICATIONS AT REQUIRED SEASONS OF THE YEAR.	d. TIES ARE TO FORM A LOOSE LOOP AROUND THE TREE TRUNK SO THAT THE TRUNK CANNOT WORK TOWARDS THE SUPPORT STAKES.	i. THE CONTRACTOR'S MAINTENANCE PERIOD WILL BE EXTENDED PAST NINETY (90) DAYS IF THESE PROVISIONS ARE NOT FILLED.
1. EXAMINE AREAS TO RECEIVE PLANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE OF THE WORK.	2. ALL IRRIGATION WORK SHALL HAVE BEEN REVIEWED BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY PLANTING.	7. ROOT-BARRIER INSTALLATION	K. GUARANTEE AND REPLACEMENT
a. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN A PLANTING AREA.	3. INSTALLATION OF ALL PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE DETAILS ON THE PLANTING PLANS.	a. INSTALL ROOT BARRIER WHERE TREES ARE PLANTED WITHIN 120 INCHES (10 FEET) OF PAVING OR OTHER HARDSCAPE ELEMENTS, SUCH AS WALLS, CURBS, AND WALKWAYS, UNLESS OTHERWISE INDICATED ON DRAWINGS.	1. GENERAL: REPAIR OR REPLACE EXISTING OR NEW TREES AND OTHER PLANTS THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER APPROVED BY DISTRICT CONSTRUCTION MANAGER.
b. VERIFY THAT PLANTS AND VEHICLES LOADED WITH PLANTS CAN TRAVEL TO PLANTING LOCATIONS WITH ADEQUATE OVERHEAD CLEARANCE.	4. LOCATIONS FOR PLANTS AND OUTLINES OF AREAS TO BE PLANTED SHALL BE MARKED ON THE GROUND BY THE CONTRACTOR BEFORE ANY PLANT PITS ARE DUG. ALL SUCH LOCATIONS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AND OWNER/AGENT. IF AN UNDERGROUND CONSTRUCTION OR UTILITY LINE IS ENCOUNTERED IN THE EXCAVATION OF PLANTING AREAS, NOTIFY LANDSCAPE ARCHITECT SO THAT OTHER LOCATIONS FOR PLANTING MAY BE SELECTED.	b. ALIGN ROOT BARRIER VERTICALLY WITH BOTTOM EDGE ANGLED AT 20 DEGREES AWAY FROM THE PAVING OR OTHER HARDSCAPE ELEMENT, AND RUN IT LINEARLY ALONG AND ADJACENT TO THE PAVING OR OTHER HARDSCAPE ELEMENTS TO BE PROTECTED FROM INVASIVE ROOTS.	a. SUBMIT DETAILS OF PROPOSED PRUNING AND REPAIRS.
c. SUSPEND PLANTING OPERATIONS DURING PERIODS OF EXCESSIVE SOIL MOISTURE UNTIL THE MOISTURE CONTENT REACHES ACCEPTABLE LEVELS TO ATTAIN THE REQUIRED RESULTS.	5. EXCAVATION FOR PLANTING:	c. INSTALL ROOT BARRIER CONTINUOUSLY FOR A DISTANCE OF 10 FEET IN EACH DIRECTION FROM THE TREE TRUNK, FOR A TOTAL DISTANCE OF 20 FEET PER TREE. IF TREES ARE SPACED CLOSER, USE A SINGLE CONTINUOUS PIECE OF ROOT BARRIER.	b. PERFORM REPAIRS OF DAMAGED TRUNKS, BRANCHES, AND ROOTS WITHIN 24 HOURS, IF APPROVED.
d. UNIFORMLY MOISTEN EXCESSIVELY DRY SOIL THAT IS NOT WORKABLE OR WHICH IS DUSTY.	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.	d. POSITION TOP OF ROOT BARRIER 1/2-INCH ABOVE ADJACENT SOFT FINISH GRADE BUT BELOW HARDSCAPE.	c. REPLACE PLANT MATERIALS THAT CANNOT BE REPAIRED AND RESTORED TO HEALTHY, LONG TERM FULL-GROWTH STATUS, AS DETERMINED BY DISTRICT CONSTRUCTION MANAGER, WITHIN 14 DAYS AFTER NOTIFICATION, AT NO ADDITIONAL COST TO THE DISTRICT.
2. IF CONTAMINATION BY FOREIGN OR DELETERIOUS MATERIAL OR LIQUID IS PRESENT IN SOIL WITHIN A PLANTING AREA, REMOVE THE SOIL AND CONTAMINATION AS DIRECTED BY DISTRICT CONSTRUCTION MANAGER AND REPLACE WITH NEW PLANTING SOIL.	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.	8. GPS MAPPING:	2. REMOVE AND REPLACE PLANT MATERIALS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION BEFORE THE END OF THE MAINTENANCE PERIOD OR ARE DAMAGED DURING CONSTRUCTION OPERATIONS THAT DISTRICT CONSTRUCTION MANAGER DETERMINES ARE INCAPABLE OF RESTORING TO NORMAL GROWTH PATTERN, AT NO ADDITIONAL COST TO THE DISTRICT.
3. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.	c. ALL EXCAVATED HOLES SHALL HAVE VERTICAL SIDES WITH ROUGHENED SURFACES AND SHALL BE OF A	a. ALL NEW TREES ARE TO BE GPS MAPPED, LATITUDE AND LONGITUDE. A MAP CREATED FOR ALL NEW TREES WITHIN THIS SCOPE OF WORK, AND TURNED OVER TO THE DISTRICT FOR SUBMITTAL TO CAL FIRE, CAL FIRE, AS TREE GRANT PROVIDER, HAS THE ULTIMATE APPROVAL OF GPS MAPPING.	a. PROVIDE NEW PLANT MATERIALS OF SAME SIZE AS THOSE BEING REPLACED.
4. LOCATE ALL EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS PRIOR TO EXCAVATING. BRING TO THE ATTENTION OF THE DISTRICT CONSTRUCTION MANAGER ANY INTERFERENCES FOUND.	5. EXCAVATION FOR PLANTING:	b. TURF GRASS SHALL BE PLANTED BY SOD LAYING, AS INDICATED PER PLAN. TURF SOD SHALL BE SPECIFIED ON PLANTING PLAN AND LEGEND.	b. SPECIES OF REPLACEMENT PLANT MATERIALS: SAME SPECIES, VARIETY, AND/OR CULTIVAR BEING REPLACED.
B. PREPARATION	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.	SODDING - IRRIGATE AREAS TO BE SODDED PRIOR TO INSTALLATION. MOISTURE SHALL BE UNIFORMLY PRESENT TO A DEPTH OF 2". SOD SHALL BE INSTALLED WITHIN ONE DAY OF DELIVERY. ROLLS SHALL BE PLACED IN SHADED AREAS PRIOR TO INSTALLATION. SOD SHALL CONFORM TO ALL LAWN SHARES AS DESIGNATED PER PLAN AND SHALL BE INSTALLED IN SUCH A MANNER AS TO VISUALLY ELIMINATE ALL JOINTS AND EDGES OF SOD STRIPS. FOLLOWING INSTALLATION, IRRIGATE TURF AREAS THOROUGHLY TO PROVIDE EVEN MOISTURE PENETRATION. ROLL ALL SOD PRIOR TO BEGINNING INSTALLATION WITHIN TWO (2) HOURS - PRIOR TO BEGINNING IRRIGATION, SOD SHALL BE UNIFORMLY SMOOTH IN APPEARANCE AND SHALL BE FLUSH WITH THE FINISHED GRADE OF ALL WALKS, CURBS, ETC.	L. REVIEWS
1. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES AND TURF AREAS AND EXISTING PLANTS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.	5) OVERLAP ROOT BARRIER A MINIMUM OF 12 INCHES AT JOINTS.	1. NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE LANDSCAPE ARCHITECT AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF AN ANTICIPATED INSPECTION. A REVIEW WILL BE MADE BY THE LANDSCAPE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL THE SUCCEEDING STEPS HAS RECEIVED WRITTEN RECOMMENDATION OF APPROVAL TO PROCEED BY THE LANDSCAPE ARCHITECT.
a. EXISTING TREES AND SHRUBS TO REMAIN ARE TO BE PROTECTED IN PLACE. EXISTING DRIPLINE IS CONSIDERED A PROTECTION ZONE AND THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN THAT ZONE:	c. ALL EXCAVATED HOLES SHALL HAVE VERTICAL SIDES WITH ROUGHENED SURFACES AND SHALL BE OF A		a. SPOTTING OF ALL TREES AND PALMS, AND MINOR ADJUSTMENTS PRIOR TO PLANTING.
1) STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL.			b. ALL PLANT MATERIAL PRIOR TO INSTALLATION FOR PLANT AND ROOT STRUCTURE.
2) STORAGE OR USE OF EQUIPMENT AND NON-RELATED CONSTRUCTION ACTIVITIES, INCLUDING PIPE-CUTTING MACHINES, TILE-CUTTING MACHINES, AND LUMBER SAWS.			c. REVIEW AND START OF ESTABLISHMENT PERIOD.
3) STORAGE OR DUMPING OF DELETERIOUS MATERIALS HARMFUL TO PLANT GROWTH. DELETERIOUS MATERIALS MIGHT INCLUDE FUELS, OILS, OTHER PETROLEUM PRODUCTS, ACIDS, LIQUIDS, CONCRETE MIX OR CONCRETE WASHOUT, STUCCO MIX OR STUCCO WASHOUT, PAINT OR PAINT WASHOUT, AND ZINC GRINDINGS FROM WORKING WITH GALVANIZED PRODUCTS IN THE FIELD.			d. FINAL ACCEPTANCE OF PROJECT/NINETY (90) DAY MAINTENANCE.
4) SOIL DISTURBANCE OR GRADE CHANGE.			
5) MOVING OR PARKING VEHICLES OR EQUIPMENT, EVEN TEMPORARILY.			

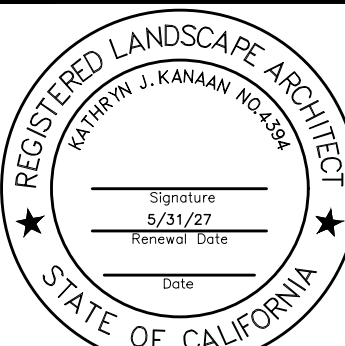


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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.2

OF 09 SHEETS

M. LONG TERM MAINTENANCE

1. GENERAL

- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.
- b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.

2. TREES

- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.
- b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.
- c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.
- d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.

3. SHRUBS / VINES

- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.
- c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.

4. GROUND COVERS

- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.
- c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.

5. TURF

- a. AERATION OF BERMUDA GRASSES
- b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.
- c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM
- d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.

6. DETHATCHING OF TURF GRASS

- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.
- b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.
- c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.
- d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.

END OF SECTION

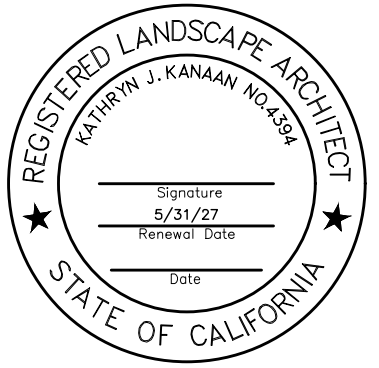


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PROJECT: NORTHMONT ELEMENTARY
9405 GREGORY STREET
LA MESA, CA 91942
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
PLANTING
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
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OF 09 SHEETS

RANCHO ELEMENTARY
8845 NOELINE AVENUE
SPRING VALLEY, CA 91977

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
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GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

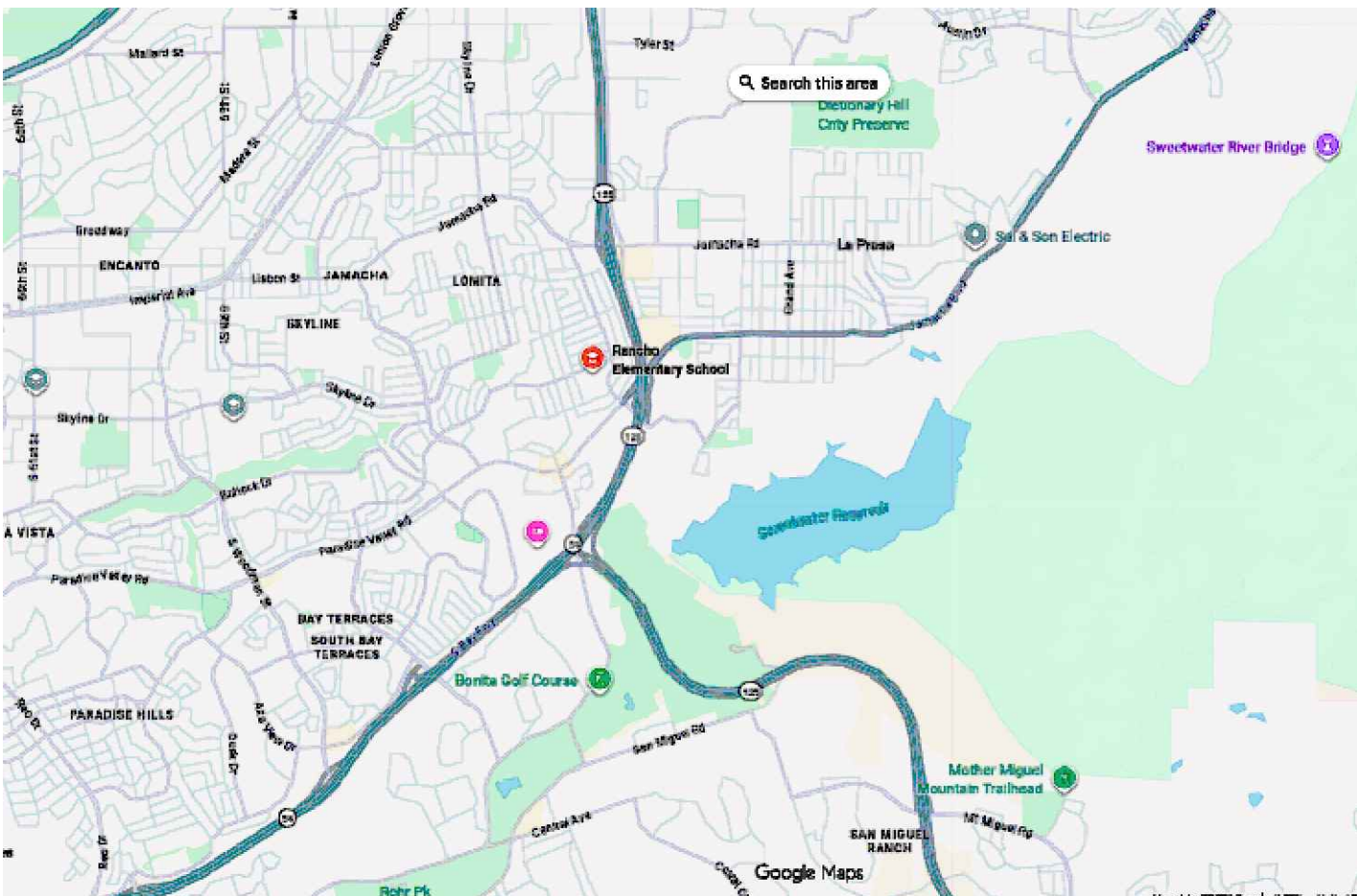
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

CONSULTANTS



LANDSCAPE ARCHITECTS

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REVISIONS

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PROJECT:

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8845 NOELINE AVENUE
SPRING VALLEY, CA 91977
CALFIRE GRANT LANDSCAPE PLAN

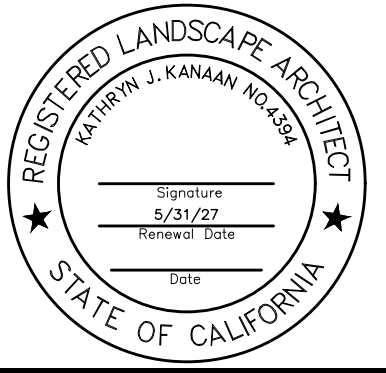
SHEET INDEX

SHEET	DESCRIPTION
L1.0	TITLE SHEET
L1.1	IRRIGATION PLAN
L1.2	IRRIGATION/PLANTING DETAILS
L1.3	IRRIGATION NOTES
L1.4	IRRIGATION NOTES
L2.0	PLANTING PLAN
L2.1	PLANTING NOTES
L2.2	PLANTING NOTES
L2.3	PLANTING NOTES



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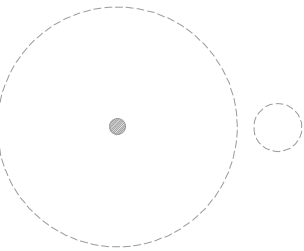
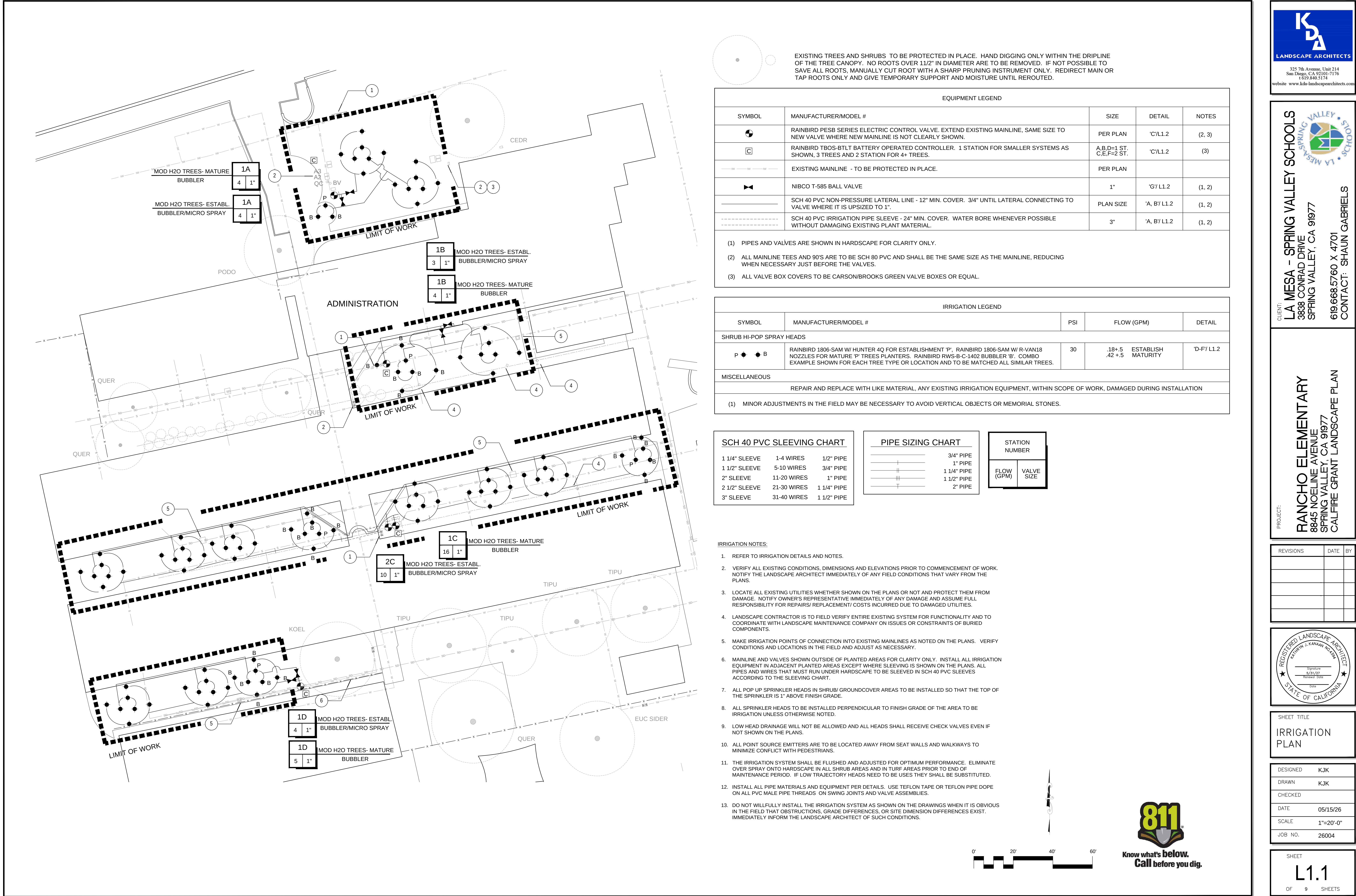
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EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE, SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	'C/L1.2	(2, 3)
	RAINBIRD TBOS-BTLT BATTERY OPERATED CONTROLLER. 1 STATION FOR SMALLER SYSTEMS AS SHOWN, 3 TREES AND 2 STATION FOR 4+ TREES.	A,B,D=1 ST. C,E,F=2 ST.	'C/L1.2	(3)
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	NIBCO T-585 BALL VALVE	1"	'G/L1.2	(1, 2)
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER. WATER BORE WHENEVER POSSIBLE WITHOUT DAMAGING EXISTING PLANT MATERIAL.	3"	'A, B'/ L1.2	(1, 2)
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
SHRUB HI-POP SPRAY HEADS				
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P', RAINBIRD 1806-SAM W/ R-VAN18 NOZZLES FOR MATURE 'P' TREES PLANTERS. RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE OR LOCATION AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+5 .42 +5	ESTABLISH MATURITY
MISCELLANEOUS				
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART

1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART

	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER

FLOW (GPM)	VALVE SIZE

IRRIGATION NOTES:

- REFER TO IRRIGATION DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
- MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
- MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
- ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUNDCOVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
- ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
- LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
- ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
- THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
- INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.



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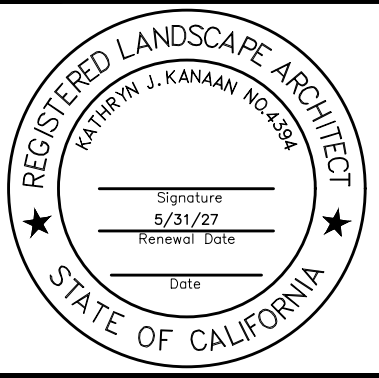
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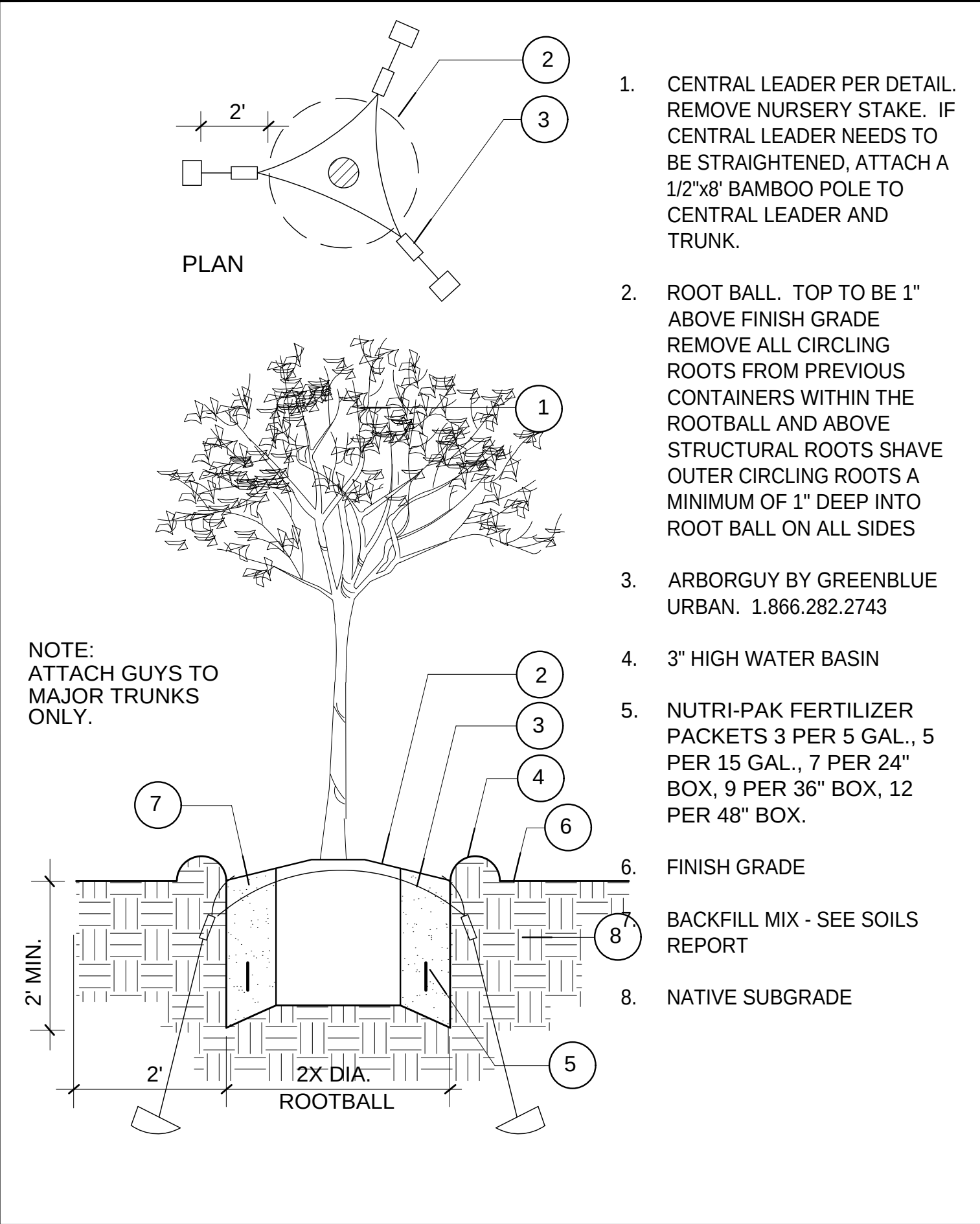
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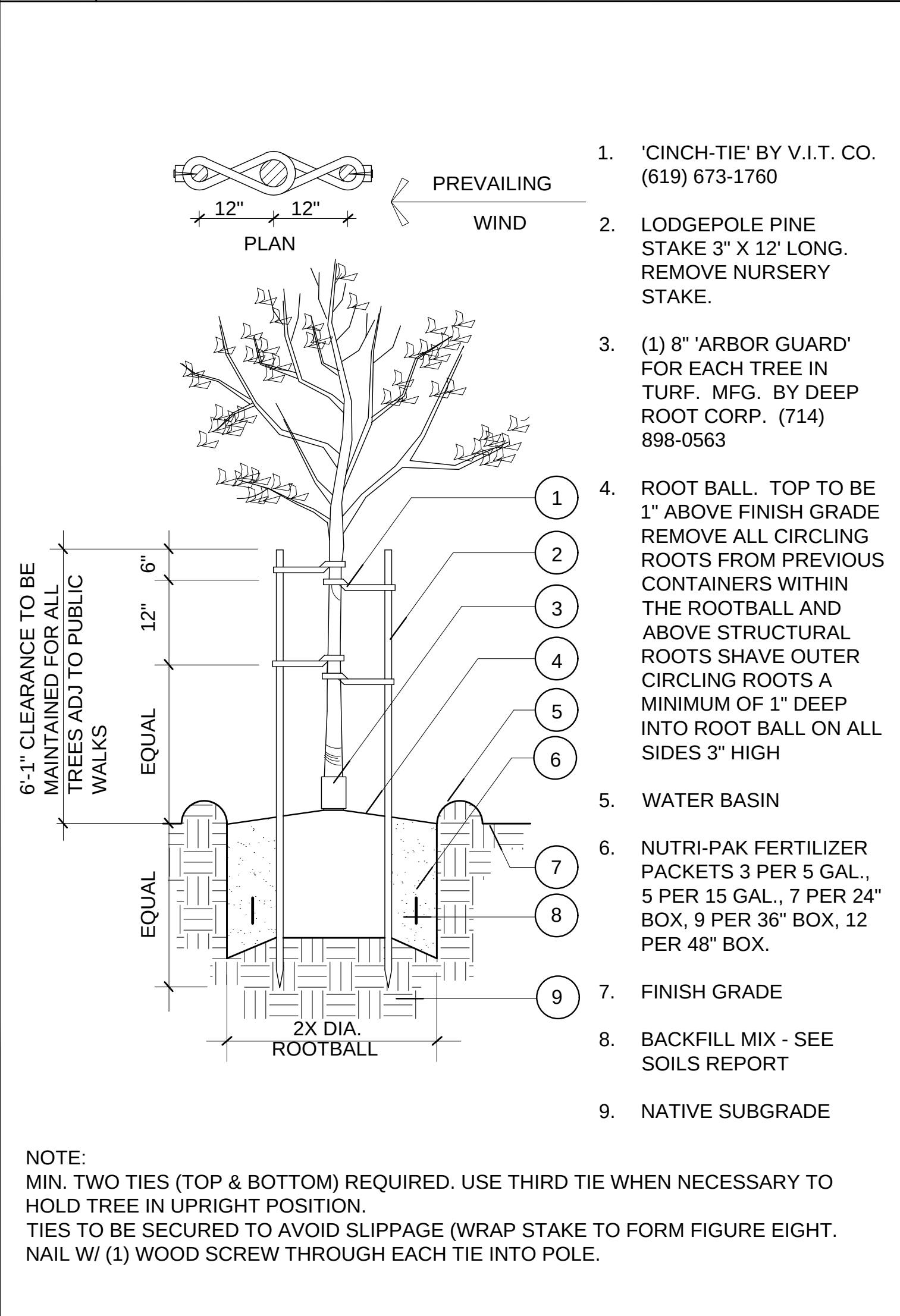
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IRRIGATION
PLAN

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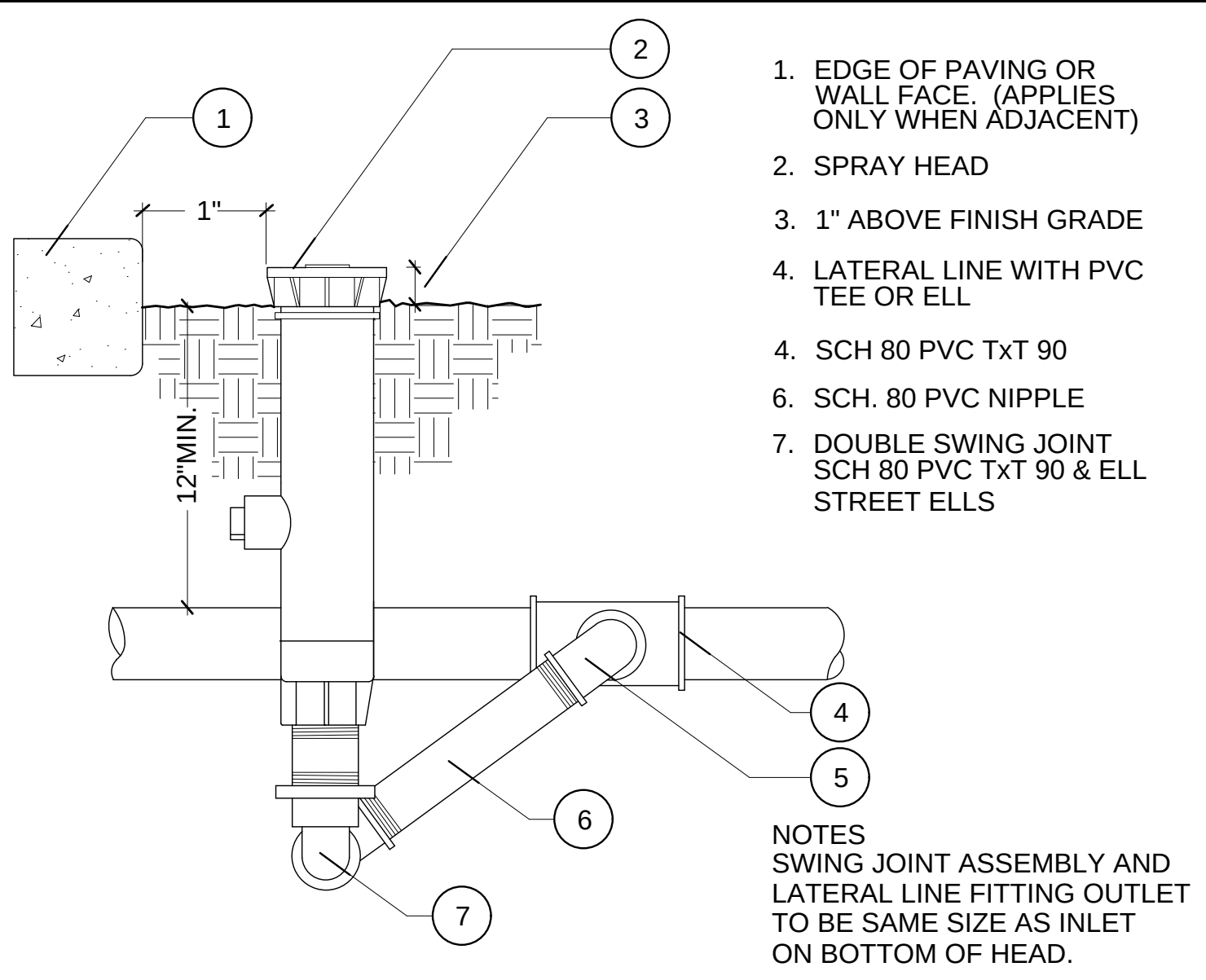
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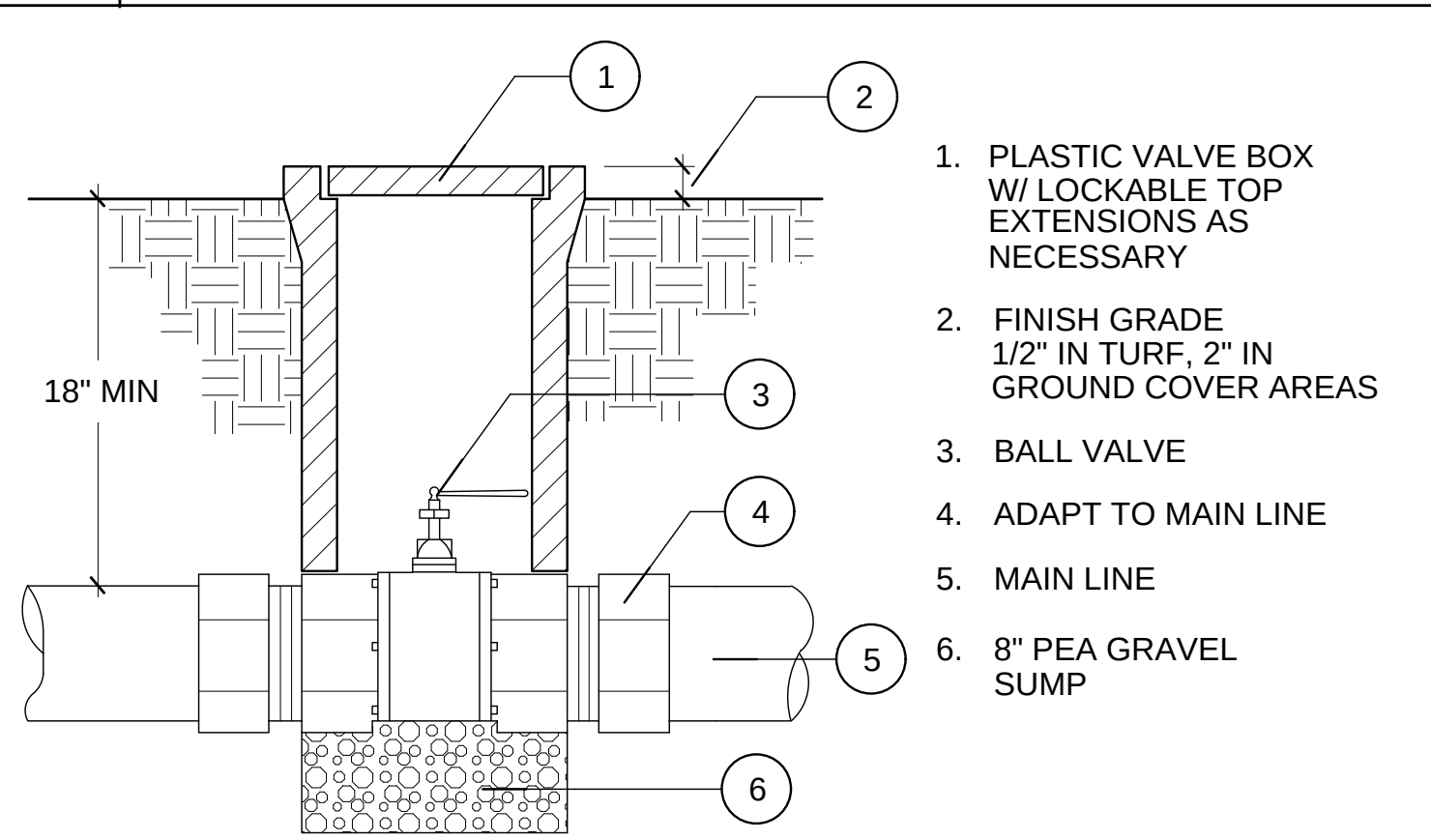
I TREE DUCKBILL GUY



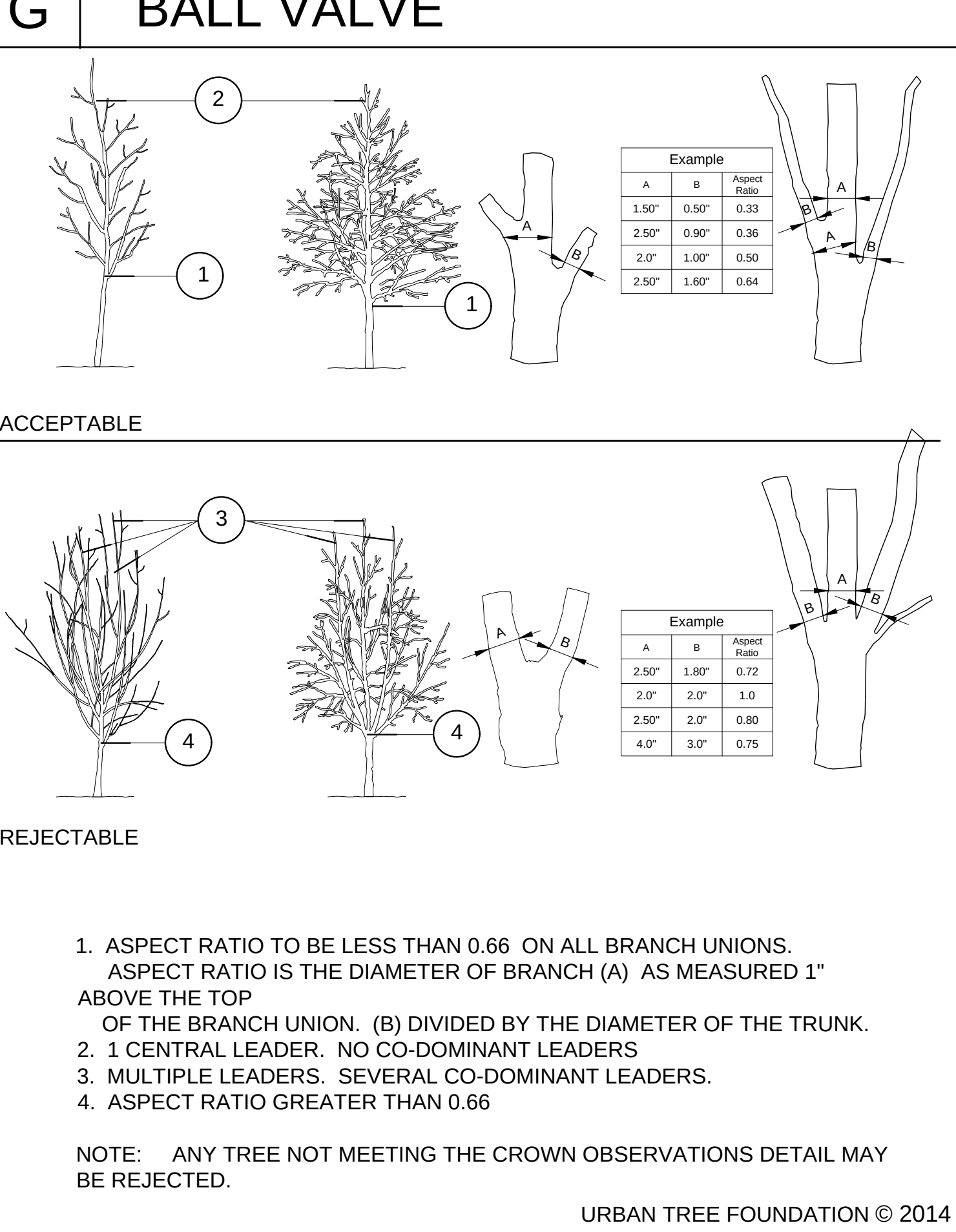
J DOUBLE STAKED TREE



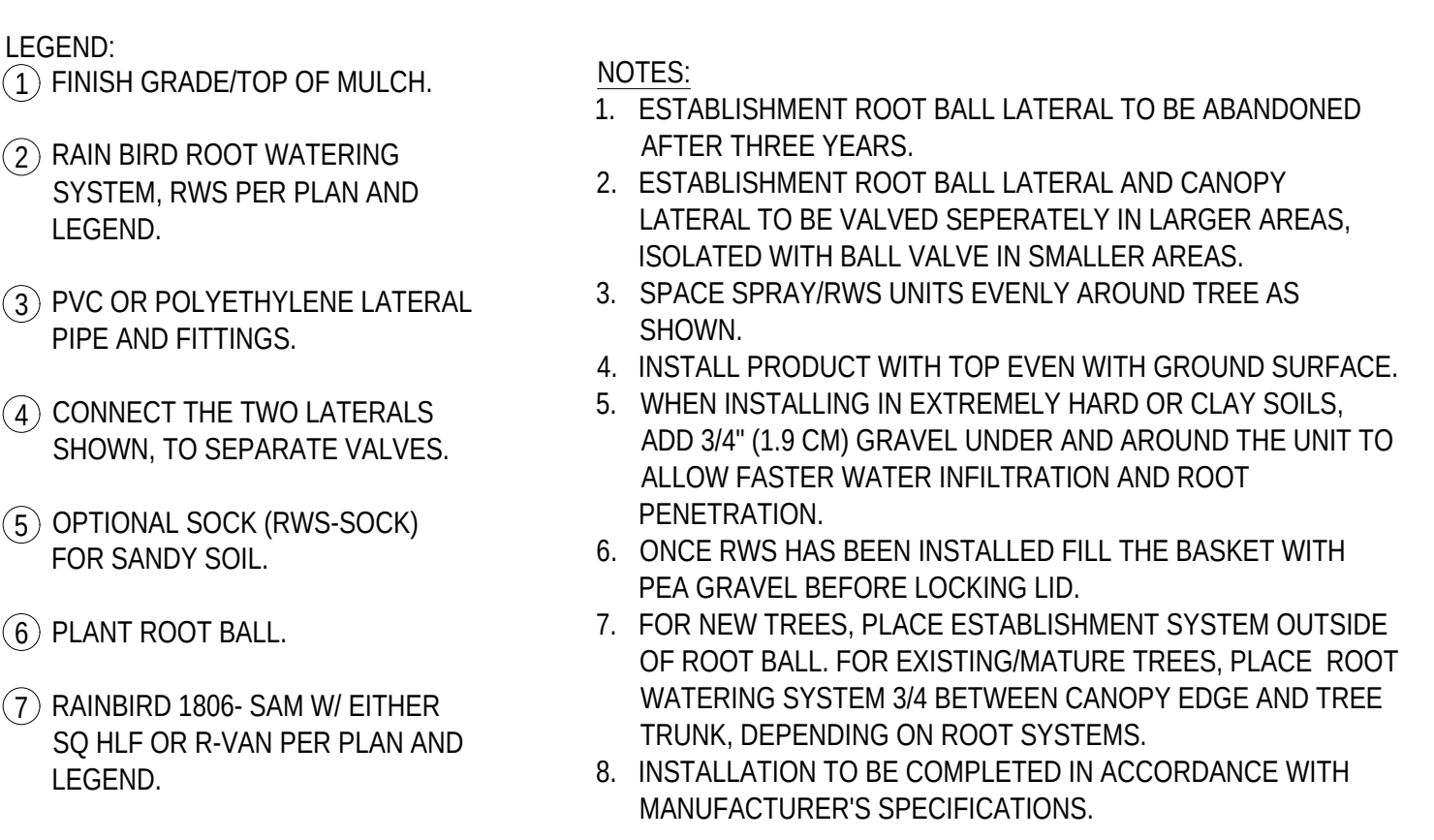
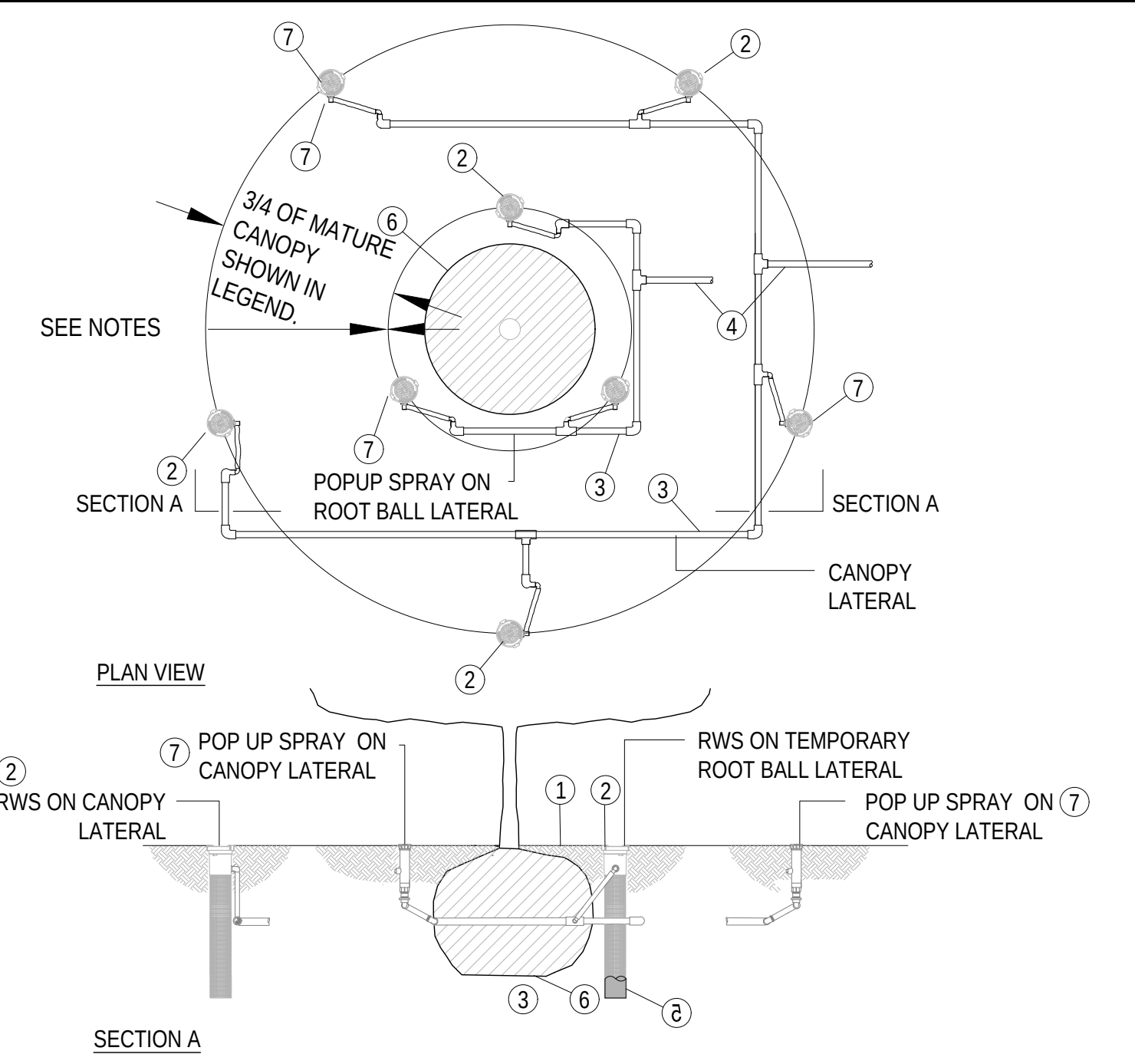
F SHRUB SPRAY HEAD



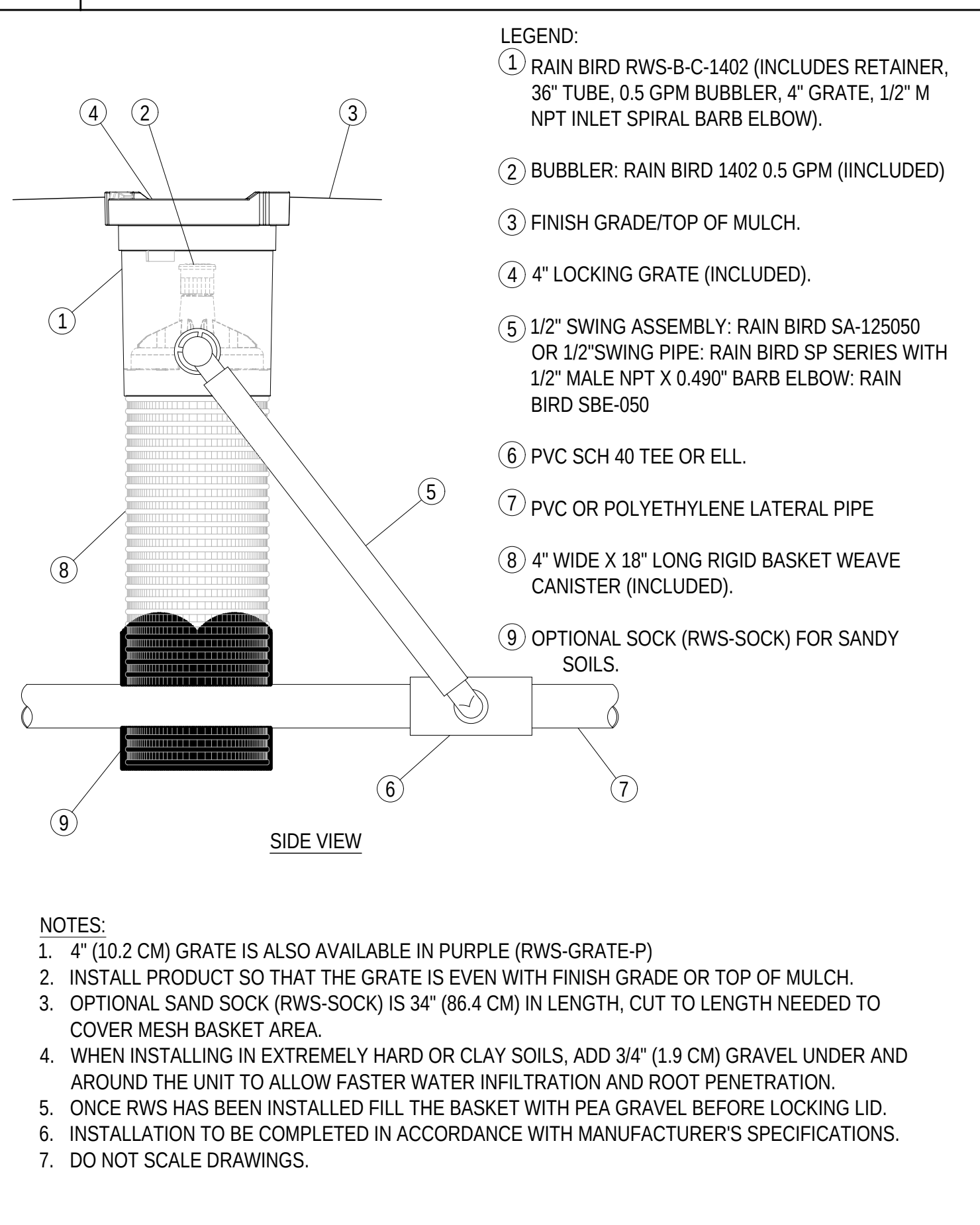
G BALL VALVE



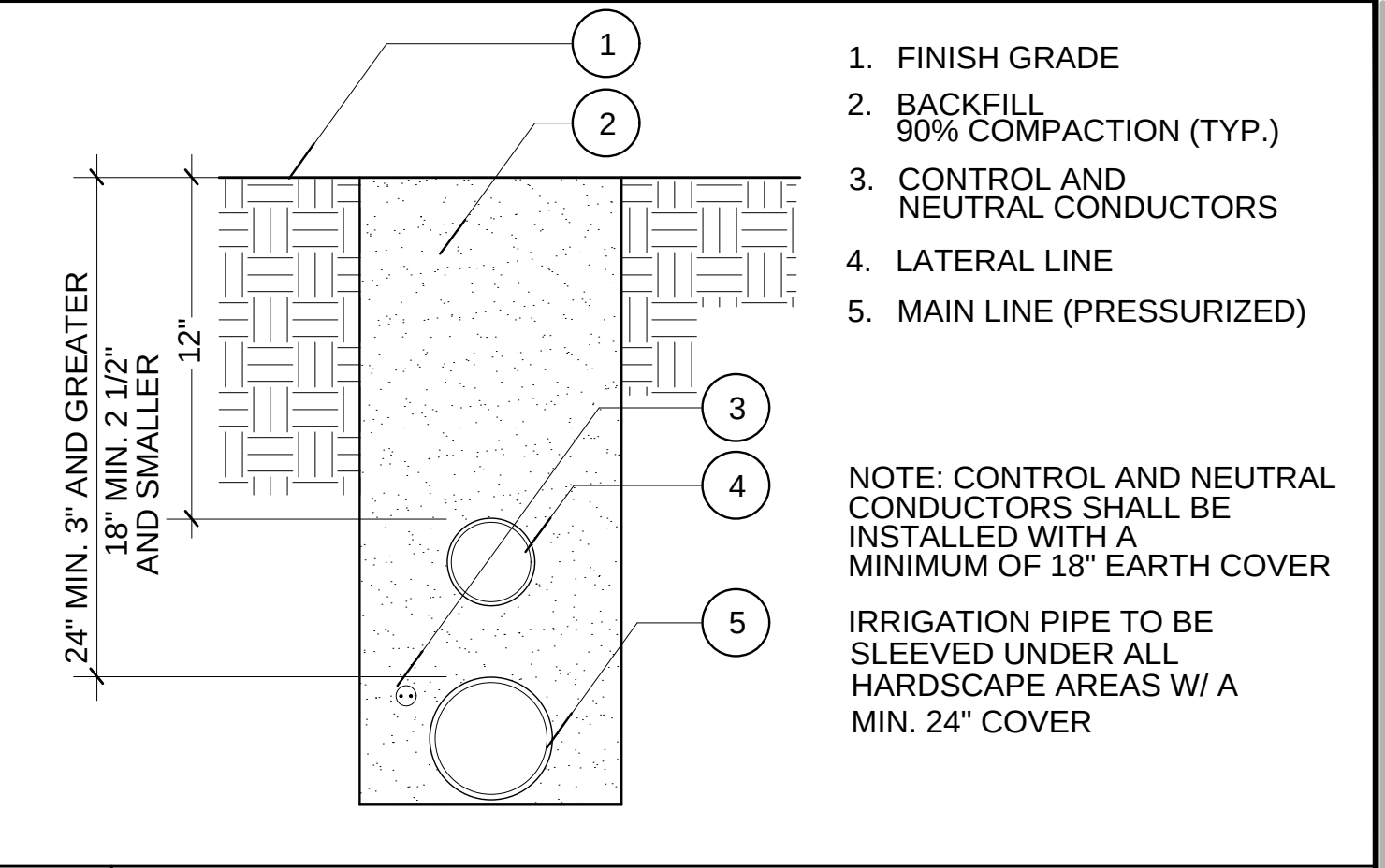
H HIGH BRANCHED CROWN OBSERV.



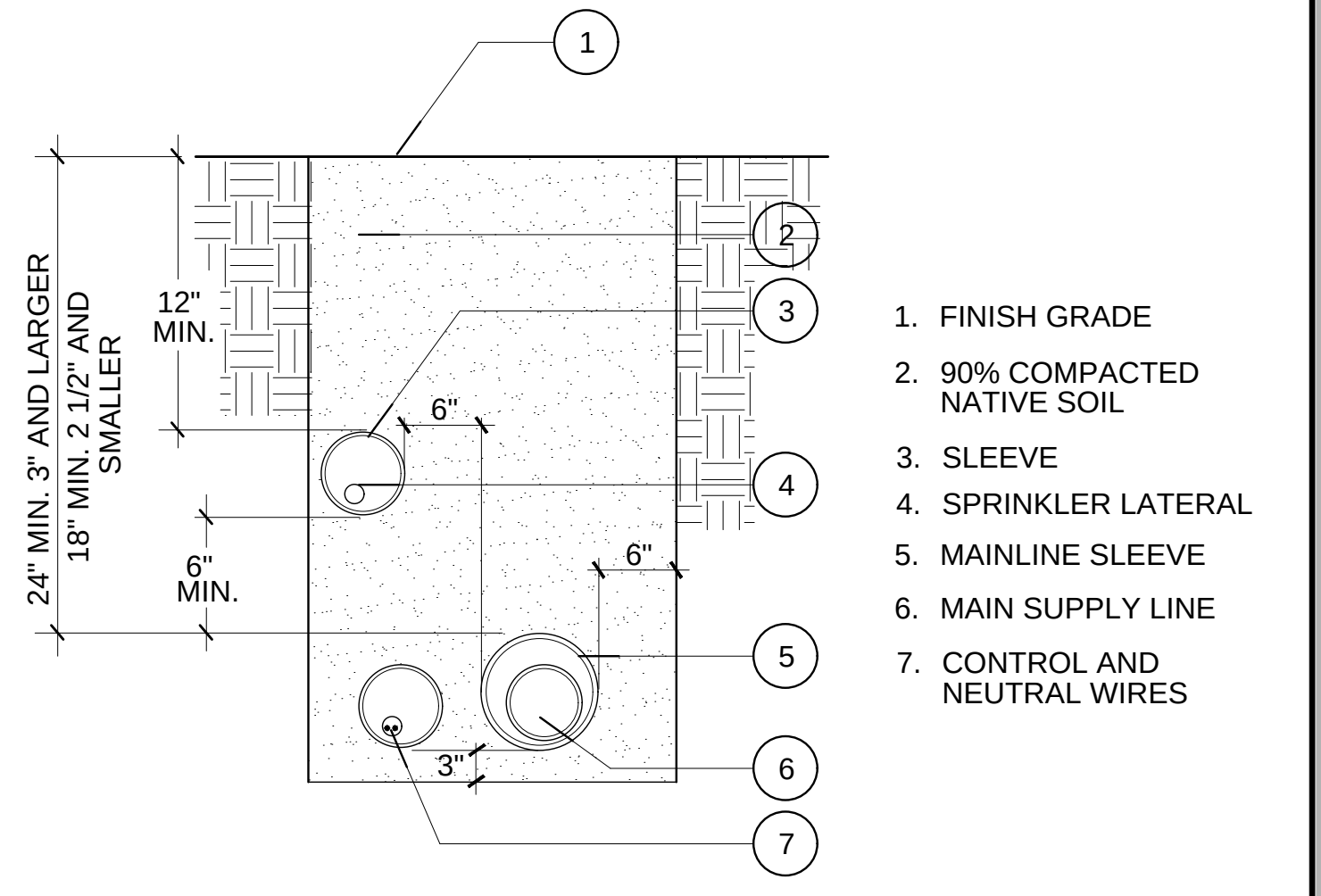
D TREE WATERING LAYOUT



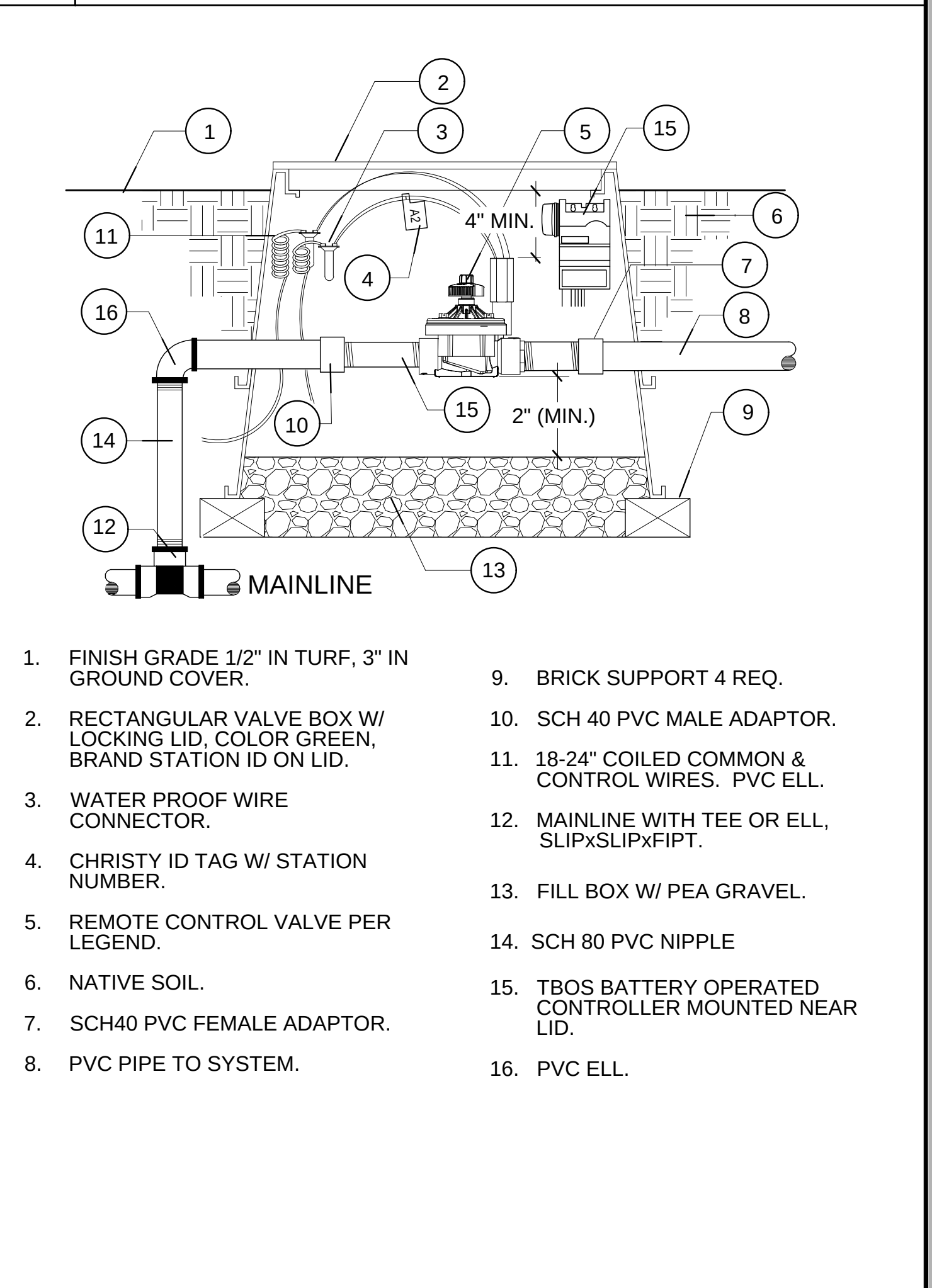
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER



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DETAILS

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PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.

- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT A LIST OF THE MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
 - § CONNECTIONS TO THE EXISTING WATER LINES
 - § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
 - § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
 - § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
 - § CONTROLLER LOCATIONS WITH GROUNDING RODS
 - § WIRE RUNS, SPLICE LOCATIONS
 - § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.

- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).

5. TESTING DATA FROM REQUIRED PRESSURE TESTING.

G. PRODUCT HANDLING

1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

J. TEMPORARY UTILITIES

1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.

K. CUTTING, PATCHING, TRENCHING AND DIGGING

1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- a. TYPE I, GRADE 1, SCHEDULE 80, HIGH IMPACT MOLDED, MANUFACTURED FROM VIRGIN COMPOUNDS AS SPECIFIED FOR PIPING AND CONFORMING TO ASTM D-2464.

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.

C. SOLVENT CEMENTS AND THREAD LUBRICANT

6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.

D. VALVES

1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.

E. AUTOMATIC CONTROLLERS (ELECTRIC)

5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPARATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPARATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.

F. CONTROL WIRE:

1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE UF (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT, RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B-3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB. NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, 12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.

2. DISCREPANCIES:

- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|---|--|--|
|---|--|--|
- b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER.
- c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS.
- d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS.
- e. BACKFILL SHALL BE TAMPED OR Puddled TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING.
4. LOCATION WIRE:
- a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN.

C. PIPE INSTALLATION

1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.

D. FLUSHING

6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.

E. HYDROSTATIC PRESSURE TESTING

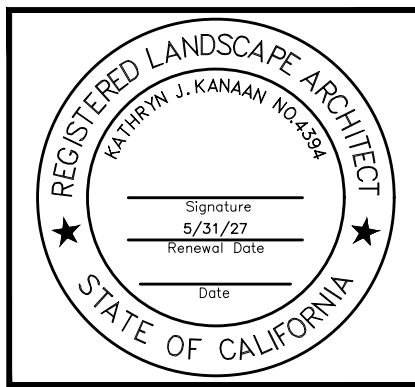
1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- F. BACKFILLING AND COMPACTING
1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.



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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE	
IRRIGATION NOTES	
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	N.T.S.
JOB NO.	26004

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

I. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW M/VF/5?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM. PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER OR PULL BOXES AND AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 200 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER, IN THE EVENT THAT THE MANUFACTURES REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSON/BROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS NEW M/VF/5?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP-UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION, TWO SPRING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION:

 - § INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.
 - § CATALOG AND PARTS SHEETS ON ALL MATERIAL AND EQUIPMENT.
 - § COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.
 - § IRRIGATION PRODUCT MANUFACTURERS WARRANTIES.
 - IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.

e. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY LA.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY LA.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY LA.

2. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

 - CLEANING OF PLUGGED IRRIGATION HEADS.
 - IRRIGATION HEADS ADJUSTMENTS.
 - VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - REPAIRING LEAKING VALVES, ETC.
 - ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.
 - REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.
 - LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

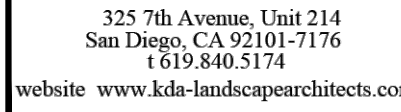
S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER.

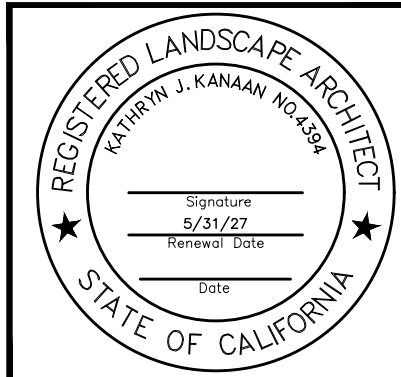
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REVISIONS	DATE	BY



SHEET TITLE

IRRIGATION
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

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OF 9 SHEETS

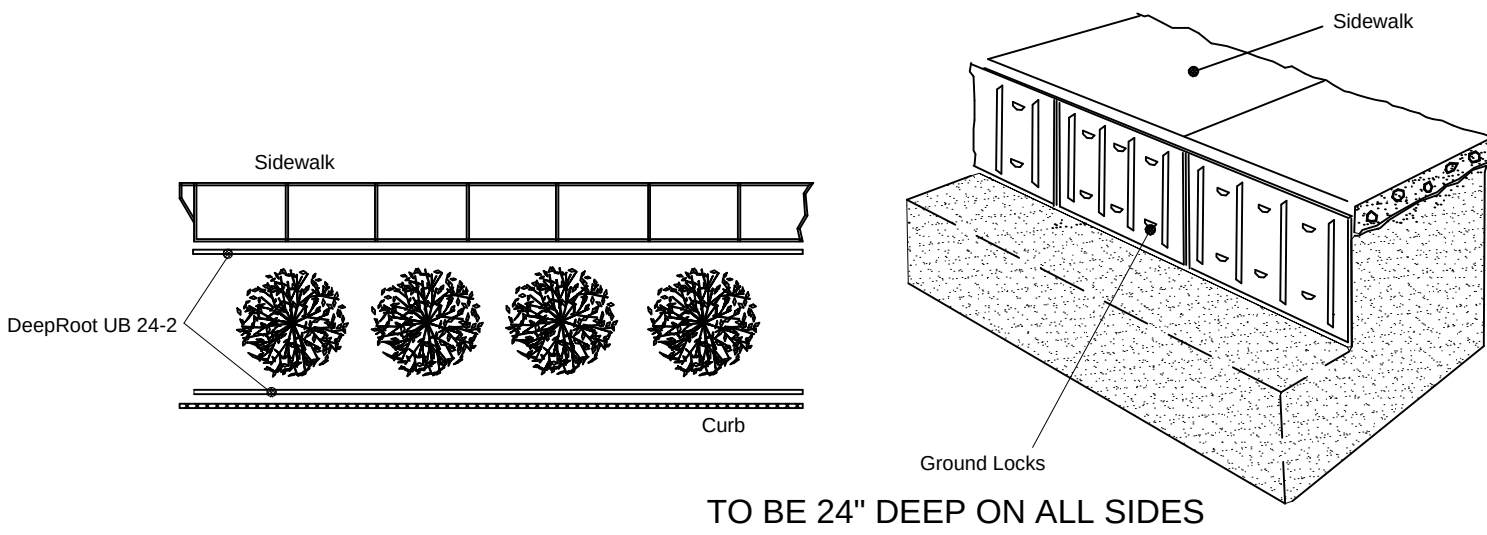


Linear Style Planting with DeepRoot Barriers

- Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2' feet (61cm). This will be the number of feet necessary for a Linear style planting application. (See chart below.)
- A. Choose the barrier that best suits the application.
- B. Dig the trench to the depth based upon the particular barrier chosen.
- C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the joier at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.
- D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow over the top.
- E. plant the tree(s), the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area, take steps to ensure healthy growth of the tree at planting, consult with a local arborist for planting tips and recommendations.
- F. if the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arbogard+ tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 ilv root (458.7668), for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.8835).

For a simple formula to determine the quantity of panels required for a Linear application use:
Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

As little as one side of the tree may need barrier for root direction as there may be no hardscape elsewhere requiring protection.	For One Side of Tree Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
	12' (3.6m) Diameter	+2' (61cm) = 14' (4.2m)	7 Panels
	18' (5.5m) Diameter	+2' (61cm) = 20' (6.1m)	10 Panels
	24' (7.3m) Diameter	+2' (61cm) = 26' (7.9m)	13 Panels



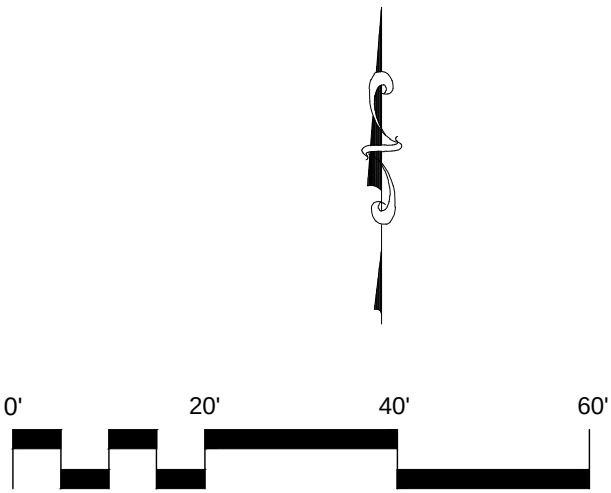
PLANT LEGEND

SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
	14	ARBUTUS UNEDO 'MARINA' MARINA STRAWBERRY TREE	48" BOX	20' O.C.	STANDARD	'H, J'/ L1.2
	2	QUERCUS TOMENTELLA ISLAND OAK	60" BOX	40' O.C.	STANDARD	'H-I'/ L1.2
SHRUBS						
MISCELLANEOUS						

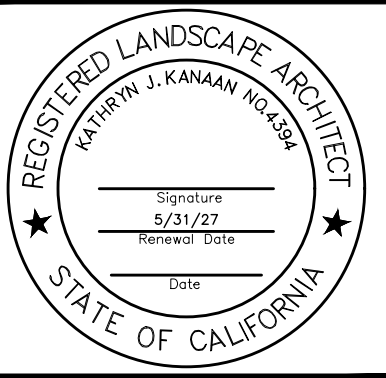
- NOTE:
- REFER TO PLANTING DETAILS AND NOTES.
 - VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
 - LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
 - THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
 - PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
 - BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
 - NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
 - THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- EXISTING SCHOOL MONUMENT TO BE PROTECTED IN PLACE.
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE..
- EXISTING ELECTRICAL VAULTS TO BE PROTECTED IN PLACE..
- EXISTING SEWER TO BE PROTECTED IN PLACE.
- EXISTING DRAIN TO BE PROTECTED IN PLACE.
- EXISTING GUARDRAIL TO BE PROTECTED IN PLACE.
- EXISTING SHADE SAIL TO BE PROTECTED IN PLACE.
- EXISTING STORAGE CONTAINERS TO BE PROTECTED IN PLACE.
- REPAIR AND REPLACE ANY TURF, PLANT MATERIAL OR DG DAMAGED DURING DEMO OR CONSTRUCTION.



REVISIONS	DATE	BY



DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

5/15/2026 C:\KDA PROJECTS\MINI26000\PROJECTS\26004.LNS\USD CALIFRE GRANT LANDSCAPE\AUTOCAD\CD\BRANCHO ES26004.R PLNDWG

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOIL IS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATION OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.

- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.

- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
 - b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
 - c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
 - d. BULK MATERIALS:
- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF AND EROSION DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FOLD TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESISICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESISICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.

- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.

- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

2. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.

2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.

2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.

3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.

5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMONOSCENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).

2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.

3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL INVOLVE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.

- 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.
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H. ROOTBALL PACKAGE OPTIONS	1. SPADE HARVESTED AND TRANSPLANTED	6. FOOT TRAFFIC.	SIZE THAT IS AT LEAST TWO TIMES THE WIDTH AND DEPTH OF THE ORIGINAL PLANT CONTAINER. THE HOLES SHALL BE, IN ALL CASES, LARGE ENOUGH TO PERMIT HANDLING AND PLANTING WITHOUT INJURY OR BREAKAGE TO THE ROOTS OR ROOT BALL.	9) DO NOT DISTORT OR BEND ROOT BARRIER DURING CONSTRUCTION ACTIVITIES.
	6. SPADE HARVESTED AND TRANSPLANTED PLANTS SHALL MEET ALL THE REQUIREMENTS FOR FIELD GROWN TREES. ROOT BALL DIAMETERS SHALL BE OF SIMILAR SIZE AS THE ANSI Z60.1 REQUIREMENTS FOR BALLED AND BURLAPPED PLANTS.	7) ERECTION OF SHEDS OR STRUCTURES.		d. DO NOT INSTALL ROOT BARRIER SURROUNDING THE ROOT BALL OF TREE
2. CONTAINER (INCLUDING ABOVE-GROUND FABRIC CONTAINERS AND BOXES) PLANTS	a. CONTAINER PLANTS MAY BE PERMITTED ONLY WHEN INDICATED ON THE DRAWING, IN THIS SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.	8) DRAINAGE CHANGES OR IMPOUNDMENT OF WATER.	d. HARDPAN LAYER: DRILL 6-INCH-DIAMETER HOLES, 24 INCHES APART, INTO FREE-DRAINING STRATA OR TO A DEPTH OF 10 FEET, WHICHEVER IS LESS, AND BACKFILL WITH FREE-DRAINING MATERIAL.	MAINTENANCE - THREE (3) WEEKS FOLLOWING INSTALLATION OF TURFGRASS, AREAS SHALL BE MOWED REGULARLY AT INTERVALS NOT EXCEEDING ONCE PER WEEK. MOWING SHALL BE DONE WITH SHARP, WELL ADJUSTED MOWERS OR CUT MORE THAN THAT HALF THE EXISTING TOP GROWTH IN ONE MOWING. MOWING HEIGHTS SHALL BE 2" TO 2 1/2" DURING HOT AND WET WEATHER SEASONS NEVER LESS THAN 2" AND SHALL BE 1 1/2" TO 2" DURING COOL WEATHER SEASONS. TURFGRASS AREAS THAT DO NOT PROPERLY GROW SHALL BE RESODDED AS NECESSARY. AT THE TERMINATION OF THE MAINTENANCE PERIOD ALL TURFGRASS AREAS SHALL BE COMPLETELY COVERED, LEAVING NOT BARREN SPOTS LARGER THAN THREE INCHES (3") X THREE INCHES (3").
	b. PROVIDE PLANTS SHALL BE ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS.	9) EXCAVATION OR OTHER DIGGING UNLESS OTHERWISE INDICATED.	e. DRAINAGE: NOTIFY DISTRICT CONSTRUCTION MANAGER IF SUBSOIL CONDITIONS EVIDENCE WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.	A. WATERING
SOD TYPE AND SUPPLIER IN ACCORDANCE WITH THE TYPE INDICATED ON THE DRAWINGS.	c. CONTAINER CLASS SIZE SHALL CONFORM TO ANSI Z60.1 FOR CONTAINER PLANTS FOR EACH SIZE AND TYPE OF PLANT.	10) ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES OR PLANTS UNLESS OTHERWISE INDICATED.	F. PLANTING:	APPLY WATER TO ALL PLANTED AREAS DURING OPERATIONS AND THEREAFTER, UNTIL ACCEPTANCE OF THE WORK.
	i. SODDED TURF	11) THE USE OF A TREE AS A TEMPORARY POWER POLE, BACKSTOP, WINCH SUPPORT, ANCHORAGE, OR OTHER SIMILAR FUNCTION.	a. NO PLANTING SHALL BE DONE IN ANY AREA UNTIL THE AREA CONCERNED HAS BEEN SATISFACTORILY PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS.	IMMEDIATELY AFTER PLANTING, APPLY WATER TO EACH SHRUB BY MEANS OF A HOSE. APPLY WATER IN A MODERATE STREAM IN THE PLANTING HOLE UNTIL THE MATERIAL ABOVE THE ROOTS ARE COMPLETELY SATURATED FROM THE BOTTOM OF THE HOLE TO THE TOP OF THE GROUND.
I. MULCH	1. ORGANIC BARK MULCH: LOCAL GROUND WOOD PRODUCT SHALL BE "WALK ON" GRADE, COARSE, GROUND, FROM TREE AND WOODY BRUSH SOURCES. SUBMIT SUPPLIER PRODUCT SPECIFICATION DATA SHEET AND A ONE GALLON SAMPLE FOR APPROVAL.	12) DO NOT DIRECT VEHICLE OR EQUIPMENT EXHAUST TOWARD PROTECTION ZONES.	b. NO MORE PLANTS SHALL BE DISTRIBUTED IN THE PLANTING AREA ON ANY DAY THAN CAN BE PLANTED AND WATERED ON THAT DAY.	APPLY WATER IN SUFFICIENT QUANTITIES AND AS OFTEN AS SEASONAL CONDITIONS REQUIRE TO KEEP THE PLANTED AREAS SUFFICIENTLY MOIST AT ALL TIMES, WELL BELOW THE ROOT SYSTEM OF GRASS AND PLANTS.
	2. MINERAL MULCH: HARD, DURABLE STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES, IN ACCORDANCE WITH THE TYPE, SIZE RANGE, AND COLOR RANGE ON THE DRAWINGS.	13) PROHIBIT HEAT SOURCES, FLAMES, IGNITION SOURCES, AND SMOKING WITHIN OR NEAR PROTECTION ZONES AND ORGANIC MULCH.	c. INSPECTION: AT TIME OF PLANTING, VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL ACCORDING TO ANSI Z60.1. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL TO EXPOSE THE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS.	ALL TURF AND GROUNDCOVER AREAS SHALL BE KEPT DAMP AT ALL TIMES AND IRRIGATION SHOULD BE ADJUSTED ACCORDINGLY. THIS NORMALLY WOULD INVOLVE FOUR (4) TO SIX (6) WATERING PERIODS DAILY, EACH WATERING PERIOD (ON) REGULATED TO JUST DAMPEN THE MULCH WITHOUT CREATING RUN OFF.
K. PESTICIDES	1. GENERAL- PESTICIDE REGISTERED AND APPROVED BY THE EPA, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND OF TYPE RECOMMENDED BY MANUFACTURER FOR EACH SPECIFIC PROBLEM AND AS REQUIRED FOR PROJECT CONDITIONS AND APPLICATION, DO NOT USE RESTRICTED PESTICIDES UNLESS AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION.	2. INSTALL EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.	d. ROOTS: REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS, REMOVE INJURED ROOTS BY CUTTING CLEANLY, DO NOT BREAK. PLANT WILL NOT BE ACCEPTED IF THE ROOTBALL IS BROKEN OR CRACKED, EITHER BEFORE, DURING OR AFTER THE INSTALLATION PROCESS.	B. PLANTING AREA MULCHING
	3. PROPRIETARY STAKING-AND-GUYSING DEVICES: PROPRIETARY STAKE OR ANCHOR AND ADJUSTABLE TIE SYSTEMS TO SECURE EACH NEW PLANTING BY PLANT STEM, SIZED AS INDICATED AND ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.	3. UNACCEPTABLE MATERIALS: REMOVE FROM SOIL ALL CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, BUILDING DEBRIS, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.	e. PERMITTED ROOT BALL PACKAGES AND SPECIAL PLANTING REQUIREMENTS	1. MULCH BACKFILLED SURFACES OF PLANTING AREAS AND OTHER AREAS INDICATED.
L. TREE SUPPORTS	1. TRUNK-STABILIZATION MATERIALS:	4. LAY OUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, ADJUST LOCATIONS WHEN REQUESTED, AND OBTAIN LANDSCAPE ARCHITECTS ACCEPTANCE OF LAYOUT BEFORE EXCAVATING OR PLANTING. MAKE MINOR ADJUSTMENTS AS REQUIRED.	1) CONTAINER (INCLUDES BOXED AND ABOVE-GROUND FABRIC CONTAINERS) PLANTS	a. ORGANIC MULCH IN PLANTING AREAS: APPLY 3-INCH AVERAGE THICKNESS OF ORGANIC MULCH OVER WHOLE SURFACE OF PLANTING AREA, AND FINISH LEVEL WITH ADJACENT FINISH GRADES. DO NOT PLACE MULCH WITHIN 2 INCHES OF TRUNKS OR STEMS.
	a. UPRIGHT STAKES: ROUGH-SAWN, SOUND, NEW LODGEPOLE PINE OR DOUGLAS FIR CORES WITH ALKALINE COPPER QUATERNARY (ACQ) WOOD PRESURE-PRESERVATIVE TREATMENT, NO CHROMATED COPPER ARSENATE (CCA) TREATMENT, FREE OF KNOTS, HOLES, CROSS GRAIN, AND OTHER DEFECTS, 2-BY-2-INCH NOMINAL BY LENGTH INDICATED, POINTED AT ONE END.	5. PRIOR TO EXCAVATING PLANTING HOLES, LOCATE UNDERGROUND UTILITIES AND STRUCTURES IN THE AREA OF EXCAVATIONS. DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.	a) THIS SPECIFICATION ASSUMES THAT MOST CONTAINER PLANTS HAVE SIGNIFICANT STEM GIRDLING AND CIRCLING ROOTS, AND THAT THE ROOT COLLAR IS TOO LOW IN THE ROOT BALL.	b. DO NOT APPLY ORGANIC MULCH IN PLANTER AREAS THAT EXCEED 3:1 SLOPE.
M. MISCELLANEOUS PRODUCTS	b. FLEXIBLE TIES: MANUFACTURED OF VIRGIN FLEXIBLE VINYL MEETING ASTM D-412 STANDARDS FOR TENSILE AND ELONGATION STRENGTH, BLACK FOR ULTRAVIOLET RESISTANCE, MANUFACTURED WITH A DOUBLE BACK LOCKING CONFIGURATION. FLEXIBLE TIES SHALL ELONGATE WITH TREE GROWTH WHILE PREVENTING DAMAGE TO THE TREE.	C. ADVERSE WEATHER CONDITIONS	b) REMOVE THE CONTAINER.	c. MINERAL MULCH IN PLANTING AREAS: APPLY THICKNESS PER DRAWINGS. DO NOT PLACE MULCH WITHIN [3 INCHES (75 MM)] [6 INCHES (150 MM)] <INSERT DISTANCE> OF TRUNKS OR STEMS.
	c. PROPRIETARY STAKING-AND-GUYSING DEVICES: PROPRIETARY STAKE OR ANCHOR AND ADJUSTABLE TIE SYSTEMS TO SECURE EACH NEW PLANTING BY PLANT STEM, SIZED AS INDICATED AND ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.	NO PLANTING SHALL TAKE PLACE DURING EXTREMELY HOT, DRY, WINDY, OR FREEZING WEATHER.	c) PERFORM ROOT BALL SHAVING AS DEFINED IN INSTALLATION OF PLANTS: GENERAL ABOVE.	d. NO MULCH IS TO BE PLACED AROUND NOR TOUCHING FRONDS CACTI AND SUCCULENTS.
PART III - EXECUTION	a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY DEEPROOF GREEN INFRASTRUCTURE, LLC, NDS INC., VILLA ROOT BARRIER, OR EQUAL.	D. WEED ERADICATION	d) REMOVE ALL ROOTS AND SUBSTRATE ABOVE THE ROOT COLLAR AND THE MAIN STRUCTURAL ROOTS ACCORDING TO ROOT CORRECTION DETAILS SO ROOT SYSTEM CONFORMS TO ROOT OBSERVATIONS DETAIL.	J. ESTABLISHMENT AND MAINTENANCE PERIOD
	2. ANTIDESICCANT: WATER-INSOLUBLE EMULSION, PERMEABLE MOISTURE RETARDER, FILM FORMING, FOR TREES AND SHRUBS. DELIVER IN ORIGINAL, SEALED, AND FULLY LABELED CONTAINERS AND MIX ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.	1. PRIOR TO THE INSTALLATION OF THE IRRIGATION SYSTEM, ALL WEED GROWTH SHALL BE REMOVED WITHIN THE AREAS DESIGNATED TO BE CLEARED AND GRUBBED. REFER TO PLANS FOR LIMIT OF WORK.	e) REMOVE ALL SUBSTRATE AT THE BOTTOM OF THE ROOT BALL THAT DOES NOT CONTAIN ROOTS.	1. PLANT ESTABLISHMENT PERIOD: THE CONTRACTUAL ESTABLISHMENT PERIOD SHALL BE FOR NO LESS THAN THIRTY (30) CONTINUOUS CALENDAR DAYS. THE CONTRACTUAL ESTABLISHMENT PERIOD BEGINS ON THE FIRST DAY AFTER ALL PLANTING IN THIS PROJECT IS COMPLETED AND ACCEPTED AND THE PLANTED AREAS ARE BROUGHT TO A NEAT, CLEAN AND WEED FREE CONDITION.
A. GENERAL	3. BURLAP: NON-SYNTHETIC, BIODEGRADABLE.	a. IF IN THE OPINION OF THE PEST CONTROL ADVISOR, PERENNIAL GRASSES AND WEEDS EXISTING IN THE PLANTING AREAS WILL REQUIRE CONTROL PRIOR TO REMOVAL, SPRAY THESE AREAS PER PEST CONTROL ADVISER'S RECOMMENDATIONS. ALLOW HERBICIDE TO KILL ALL WEEDS. RAKE OR HOE OFF ALL DEAD WEEDS TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. PHYSICALLY REMOVE ALL WEEDS FROM THE SITE.	f) USING A HOSE, POWER WASHER OR AIR EXCAVATION DEVICE, WASH OUT THE SUBSTRATE FROM AROUND THE TRUNK AND TOP OF THE REMAINING ROOT BALL AND FIND AND REMOVE ALL STEM GIRDLING ROOTS WITHIN THE ROOT BALL ABOVE THE TOP OF THE STRUCTURAL ROOTS.	a. ANY DAY UPON WHICH NO WORK WILL BE REQUIRED, AS DETERMINED BY THE LANDSCAPE ARCHITECT, WILL BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS REGARDLESS OF WHETHER OR NOT THE CONTRACTOR PERFORMS PLANT ESTABLISHMENT WORK.
	4. PLANTER DRAINAGE GRAVEL: WASHED, SOUND CRUSHED STONE OR GRAVEL COMPLYING WITH (ASTM D 448 FOR SIZE NO. 8) (INSERT REQUIREMENTS).	2. UPON COMPLETION OF THE IRRIGATION SYSTEM AND ROTOTILLING OF SOIL AMENDMENTS INTO THE SOIL, AND IMMEDIATELY PRECEDING THE INSTALLATION OF PLANT MATERIAL, PERFORM WEED ABATEMENT AS FOLLOWS, AND PER PEST CONTROL ADVISORS RECOMMENDATION.	2) THE AMENDED SURFACE SOIL CAN BE USED FOR BACKFILL AROUND TREES AND SHRUBS; ADDITIONAL QUANTITIES OR PROCEDURES MAY BE REQUIRED PER REQUIRED AGRONOMIC SOILS TEST. AT NO ADDITIONAL COST TO THE OWNER. USE THE FOLLOWING FORMULA (THOROUGHLY BLENDED) FOR BIDDING PURPOSES ONLY:	b. ANY DAY WHEN THE CONTRACTOR FAILS TO ADEQUATELY MAINTAIN PLANTINGS, REPLACE UNSUITABLE PLANTS OR DO WEED CONTROL OR OTHER WORK, AS DETERMINED NECESSARY BY THE LANDSCAPE ARCHITECT, WILL NOT BE CREDITED AS ONE OF THE PLANT ESTABLISHMENT WORKING DAYS.
1. EXAMINE AREAS TO RECEIVE PLANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE OF THE WORK.	a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY DEEPROOF GREEN INFRASTRUCTURE, LLC, NDS INC., VILLA ROOT BARRIER, OR EQUAL.	a. APPLY SULFATE OF AMMONIA AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 SF.) TO ALL PLANTING AREAS.	NATIVE ON-SITE SOIL (NO ROCK LARGER THAN 1") 6 PARTS NITROLIZED WOOD SHAVINGS 4 PARTS COMMERCIAL FERTILIZER GRO-POWER PLUS, 5-3-1 15 LBS/CY IRON SULFATE 2 LBS/CY	c. IN ORDER TO CARRY OUT THE PLANT ESTABLISHMENT WORK, THE CONTRACTOR SHALL FURNISH SUFFICIENT MEN AND ADEQUATE EQUIPMENT TO PERFORM THE WORK DURING THE PLANT ESTABLISHMENT PERIOD.
	b. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN A PLANTING AREA.	b. IRRIGATE AREA FOR FOURTEEN (14) CONSECUTIVE DAYS, TO GERMINATE EXISTING WEED SEEDS.	d) FOR OVER EXCAVATED SITES, EXPECT ALL LANDSCAPE AREAS TO BE LEACHED TO REDUCE SALINITY AFTER AMENDING THE SOILS PER AGRONOMIC ANALYSIS, SOILS RETESTED, AND POTENTIALLY REPEATED UNTIL LEVELS BECOME WITHIN NON TOXIC LEVELS. THIS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.	d. IMPROPER MAINTENANCE OR POSSIBLE POOR CONDITION OF ANY PLANTING AT THE TERMINATION OF THE SCHEDULED ESTABLISHMENT PERIOD MAY CAUSE POSTPONEMENT OF THE FINAL ACCEPTANCE OF PLANT ESTABLISHMENT. CONTRACTOR SHALL BEAR ALL COSTS FOR EXTENSION OF THE PLANT ESTABLISHMENT PERIOD.
2. IF CONTAMINATION BY FOREIGN OR DELETERIOUS MATERIAL OR LIQUID IS PRESENT IN SOIL WITHIN A PLANTING AREA, REMOVE THE SOIL AND CONTAMINATION AS DIRECTED BY DISTRICT CONSTRUCTION MANAGER AND REPLACE WITH NEW PLANTING SOIL.	c. BURLAP: NON-SYNTHETIC, BIODEGRADABLE.	c. APPLY BY SPRAY A NON-SELECTIVE HERBICIDE TO ERADICATE ALL EXISTING WEEDS. DO NOT IRRIGATE FOR SEVEN (7) DAYS AFTER APPLICATION.	e) MAINTAIN ALL PLANTS IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. STRAIGHTEN ALL TREES THAT MOVE OUT OF PLUMB INCLUDING THOSE NOT STAKED. PLANTS TO BE STRAIGHTENED SHALL BE EXCAVATED AND THE ROOT BALL MOVED TO A PLUMB POSITION, AND THEN RE-BACKFILLED. DO NOT STRAIGHTEN PLANTS BY PULLING THE TRUNK WITH GUYS.	2. PLANT MAINTENANCE PERIOD: THE CONTRACTUAL MAINTENANCE PERIOD SHALL BE NO LESS THAN NINETY (90) CONTINUOUS CALENDAR DAYS AND, SHALL BEGIN AT THE ACCEPTANCE OF THE PLANT ESTABLISHMENT PERIOD.
	4. PLANTER DRAINAGE GRAVEL: WASHED, SOUND CRUSHED STONE OR GRAVEL COMPLYING WITH (ASTM D 448 FOR SIZE NO. 8) (INSERT REQUIREMENTS).	d. REMOVE WEEDS AFTER HERBICIDE HAS HAD TIME TO SUFFICIENTLY KILL. REMOVE ALL DEAD WEEDS BY RAKE OR HOE TO A DEPTH OF ONE TO TWO INCHES (1" TO 2") BELOW THE SURFACE OF THE SOIL. REMOVE ALL WEED RESIDUE AND TOP GROWTH AND DISPOSE OF IN A LEGAL MANNER.	f) AFTER THE WATER SETTLING OF THE PLANT HAS COMPLETELY DRAINED, NUTI-PAK FERTILIZER PACKETS SHALL BE PLACED AS INDICATED BELOW. SET THE PACKETS TO BE USED WITH EACH PLANT ON THE TOP OF THE ROOT BALL WHILE THE PLANTS ARE STILL IN THEIR CONTAINERS SO THE REQUIRED NUMBER OF TABLETS TO BE USED IN EACH HOLE CAN BE EASILY VERIFIED:	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDDED AT INTERVALS
3. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.	a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY TENGATE GEOSYNTHETICS AMERICA, US FABRICS, PROPEX, OR EQUAL.	1) USING A ROCK SAW, CHAIN TRENCHER OR SIMILAR TRENCHING DEVICE, MAKE A VERTICAL CUT WITHIN 2 FEET OF THE LIMIT OF GRADING.	3 PACKETS PER FIVE GALLON CONTAINER. 12 PACKETS PER 48" BOX CONTAINER. 16 PACKETS PER 60" BOX CONTAINER. THE REMAINDER OF THE HOLE SHALL THEN BE BACKFILLED.	3. ALL TREES WILL BE GUARANTEED FOR 1 YEAR.
	2. IF CONTAMINATION BY FOREIGN OR DELETERIOUS MATERIAL OR LIQUID IS PRESENT IN SOIL WITHIN A PLANTING AREA, REMOVE THE SOIL AND CONTAMINATION AS DIRECTED BY DISTRICT CONSTRUCTION MANAGER AND REPLACE WITH NEW PLANTING SOIL.	2) AFTER COMPLETION OF THE CUT, MAKE CLEAN CUTS WITH A LOPPER, SAW OR PRUNER TO REMOVE ALL TOP ROOT ENDS ON THE TREE SIDE OF THE EXCAVATION, AND BACKFILL THE TRENCH IMMEDIATELY WITH EXISTING SOIL, FILLING ALL VOIDS.	g) AFTER BACKFILLING, AN EARTHEN BASIN SHALL BE CONSTRUCTED AROUND EACH PLANT. EACH BASIN SHALL BE OF A DEPTH SUFFICIENT TO HOLD AT LEAST TWO INCHES (2") OF WATER. BASINS SHALL BE OF A SIZE SUITABLE FOR THE INDIVIDUAL PLANT. IN NO CASE, SHALL THE BASIN FOR A FIFTEEN (15) GALLON PLANT BE LESS THAN FOUR FEET (4") IN DIAMETER, A FIVE (5) GALLON PLANT LESS THAN THREE FEET (3") IN DIAMETER; AND A ONE (1) GALLON PLANT LESS THAN TWO FEET (2") IN DIAMETER. THE BASINS SHALL BE CONSTRUCTED OF AMENDED BACKFILL MATERIAL. RAKE OUT BASINS PRIOR TO PLANTING LAWN AREAS OR GROUNDCOVER AREAS.	a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS, AND ALL PLANTED AREAS SHALL BE WEEDDED AT INTERVALS OF NOT MORE THAN TEN (10) DAYS. WATERING, TRIMMING, FERTILIZATION, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED, SHALL BE INCLUDED IN THE MAINTENANCE PERIOD. MAINTENANCE SHALL INCLUDE GOPHER CONTROL.
4. LOCATE ALL EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS PRIOR TO EXCAVATING. BRING TO THE ATTENTION OF THE DISTRICT CONSTRUCTION MANAGER ANY INTERFERENCES FOUND.	a. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY TENGATE GEOSYNTHETICS AMERICA, US FABRICS, PROPEX, OR EQUAL.	b. TREE GROWTH REGULATOR - AT THE START OF THE CONSTRUCTION CONTRACT PERIOD, TREAT ALL TREES, INDICATED ON THE PLAN, WITH TREE GROWTH REGULATOR AT RECOMMENDED RATES, TIME OF YEAR AND METHODS INDICATED BY THE PRODUCT DISTRIBUTOR	h) PRUNING: PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE INJURED TWIGS AND BRANCHES, AND TO COMPENSATE FOR LOSS OF ROOTS DURING TRANSPLANTING, BUT NEVER TO EXCEED ONE-THIRD (1/3) OF THE BRANCHING STRUCTURE. UPON RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, PRUNING MAY BE DONE BEFORE DELIVERY OF PLANTS, BUT NOT BEFORE PLANTS HAVE BEEN REVIEWED AND RECOMMENDED FOR APPROVAL. CUTS OVER THREE QUARTERS OF AN INCH (3/4") IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE WOUND PAINT.	b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS (OF MAINTENANCE) AT THE RATE OF FIVE POUNDS (5 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.) USING AMMONIUM SULFATE, EVENLY APPLIED AND THOROUGHLY WATERED IN. POST FERTILIZE ALL GROUNDCOVER AREAS AT THE END OF EVERY THIRTY (30) DAYS (OF MAINTENANCE) AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.), USING 5-3-1 GRO-POWER. FOR THE FINAL FEEDING OF ALL AREAS, USE 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN AT THE RATE OF THIRTY POUNDS (30 LBS.) PER ONE THOUSAND SQUARE FEET (1,000 S.F.).
	2. IF CONTAMINATION BY FOREIGN OR DELETERIOUS MATERIAL OR LIQUID IS PRESENT IN SOIL WITHIN A PLANTING AREA, REMOVE THE SOIL AND CONTAMINATION AS DIRECTED BY DISTRICT CONSTRUCTION MANAGER AND REPLACE WITH NEW PLANTING SOIL.	c. ANY TREES OR PLANTS DESIGNATED TO REMAIN AND WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT THEIR OWN EXPENSE. TREES SHALL BE REPLACED WITH A TREE OF SIMILAR SPECIES AND OF EQUAL SIZE OR 6 INCH CALIPER WHICHEVER IS LESS. SHRUBS SHALL BE REPLACED WITH A PLANT OF SIMILAR SPECIES AND EQUAL SIZE OR THE LARGEST SIZE PLANTS REASONABLY AVAILABLE WHICHEVER IS LESS. WHERE REPLACEMENT PLANTS ARE TO BE LESS THAN THE SIZE OF THE PLANT THAT IS DAMAGED, THE OWNER'S REPRESENTATIVE SHALL APPROVE THE SIZE AND QUALITY OF THE REPLACEMENT PLANT.	i) STAKING AND TYING:	c. MOWING OF TURF WILL COMMENCE WHEN TURF GRASS HAS REACHED A HEIGHT OF TWO INCHES (2"). THE HEIGHT OF CUT WILL BE ONE AND ONE-HALF INCHES TO TWO INCHES (1 1/2" TO 2"). MOWING WILL BE AT LEAST WEEKLY AFTER THE FIRST CUT. TURF MUST BE WELL ESTABLISHED AND FREE OF BARE SPOTS AND WEEDS TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT PRIOR TO FINAL ACCEPTANCE BY THE CITY. EXCESS GRASS CLIPPINGS, AS DETERMINED BY THE LANDSCAPE ARCHITECT, SHALL BE PICKED UP AND REMOVED FROM THE SITE AND PREMISES.
B. PREPARATION	1. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES AND TURF AREAS AND EXISTING PLANTS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.	1) ALL TREES AND PLANTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THIS SPECIFICATION SECTION.	a. SUPPORT STAKES TALL ENOUGH TO SUPPORT THE PARTICULAR TREE SHALL BE DRIVEN THIRTY-SIX INCHES (36") INTO THE SOIL. STAKE SHALL BE PLACED ON THE LEeward SIDE OF THE TREE FROM THE MOST TROUBLESOME DIRECTION, REFER TO DETAILS ON DRAWINGS.	d. THE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEMS IN A LIKE NEW OPERATING CONDITION; ADJUSTING HEAD HEIGHTS AND SPRAY ARCS AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROPER WATERING OF ALL PLANTING AREAS, FOR PROVIDING ANY NECESSARY SUPPLEMENTAL WATER AS MAY BE REQUIRED, AND SHALL REPLACE ANY MATERIAL DAMAGED DUE TO IMPROPER MOISTURE.
	a. EXISTING TREES AND SHRUBS TO REMAIN ARE TO BE PROTECTED IN PLACE. EXISTING DRIPLINE IS CONSIDERED A PROTECTION ZONE AND THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN THAT ZONE:	d. PLANTS THAT ARE DAMAGED SHALL BE CONSIDERED AS REQUIRING REPLACEMENT OR APPRAISAL IN THE EVENT THAT THE DAMAGE AFFECTS MORE THAN 25% OF THE CROWN, 25% OF THE TRUNK CIRCUMFERENCE, OR ROOT PROTECTION AREA, OR THE TREE IS DAMAGED IN SUCH A MANNER THAT THE TREE COULD DEVELOP INTO A POTENTIAL HAZARD. TREES AND SHRUBS TO BE REPLACED SHALL BE REMOVED BY THE CONTRACTOR AT HIS OWN EXPENSE.	b. TIES SHALL BE PLACED AS LOW ON THE TRUNK AS POSSIBLE BUT HIGH ENOUGH SO THE TREE WILL RETURN TO UPRIGHT AFTER DEFLECTION.	e. DURING THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE PROTECTION FOR ALL PLANTING AREAS. ANY DAMAGED AREAS SHALL BE REPAIRED AND ANY PLANT MATERIALS REPLACED AT THE CONTRACTOR'S EXPENSE.
2. STORAGE OR USE OF EQUIPMENT AND NON-RELATED CONSTRUCTION ACTIVITIES, INCLUDING PIPE-CUTTING MACHINES, TILE-CUTTING MACHINES, AND LUMBER SAWS.	1) STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL.	e. ANY TREE THAT IS DETERMINED TO BE DEAD, DAMAGED OR POTENTIALLY HAZARDOUS BY THE OWNER'S ARBORIST AND UPON THE REQUEST OF THE OWNER'S REPRESENTATIVE SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. TREE REMOVAL SHALL INCLUDE ALL CLEAN-UP OF ALL WOOD PARTS AND GRINDING OF THE STUMP TO A DEPTH SUFFICIENT TO PLANT THE REPLACEMENT TREE OR PLANT, REMOVAL OF ALL CHIPS FROM THE STUMP SITE AND FILLING THE RESULTING HOLE WITH TOPSOIL.	c. TO FIND THE PROPER HEIGHT FOR TIE LOCATIONS, HOLD THE TRUNK IN ONE HAND, PULL THE TOP TO ONE SIDE AND RELEASE. THE HEIGHT AT WHICH THE TRUNK WILL JUST RETURN TO THE UPRIGHT WHEN THE TOP IS RELEASED IS THE HEIGHT AT WHICH TO ATTACH THE TIES.	f. THE CONTRACTOR'S MAINTENANCE PERIOD WILL BE EXTENDED PAST NINETY (90) DAYS IF THESE PROVISIONS ARE NOT FILLED.
	2) STORAGE OR USE OF EQUIPMENT AND NON-RELATED CONSTRUCTION ACTIVITIES, INCLUDING PIPE-CUTTING MACHINES, TILE-CUTTING MACHINES, AND LUMBER SAWS.	f. ANY REMEDIAL WORK ON DAMAGED EXISTING PLANTS RECOMMENDED BY THE CONSULTING ARBORIST SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE OWNER. REMEDIAL WORK SHALL INCLUDE BUT IS NOT LIMITED TO: SOIL COMPACTION REMEDIATION AND VERTICAL MULCHING, PRUNING AND OR CABLING, INSECT AND DISEASE CONTROL INCLUDING INJECTIONS, COMPENSATORY WATERING, ADDITIONAL MULCHING, AND COULD INCLUDE APPLICATION TREE GROWTH REGULATORS (TGR).	d. TIES ARE TO FORM A LOOSE LOOP AROUND THE TREE TRUNK SO THAT THE TRUNK CANNOT WORK TOWARDS THE SUPPORT STAKES.	K. GUARANTEE AND REPLACEMENT
3. STORAGE OR DUMPING OF DELETERIOUS MATERIALS HARMFUL TO PLANT GROWTH. DELETERIOUS MATERIALS MIGHT INCLUDE FUELS, OILS, OTHER PETROLEUM PRODUCTS, ACIDS, LIQUIDS, CONCRETE MIX OR CONCRETE WASHOUT, STUCCO MIX OR STUCCO WASHOUT, PAINT OR PAINT WASHOUT, AND ZINC GRINDINGS FROM WORKING WITH GALVANIZED PRODUCTS IN THE FIELD.	1) STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL.	g. REMEDIAL WORK MAY EXTEND UP TO TWO YEARS FOLLOWING THE COMPLETION OF CONSTRUCTION TO ALLOW FOR ANY REQUIREMENTS OF MULTIPLE APPLICATIONS OR THE NEED TO UNDERTAKE APPLICATIONS AT REQUIRED SEASONS OF THE YEAR.	7. ROOT-BARRIER INSTALLATION	1. GENERAL: REPAIR OR REPLACE EXISTING OR NEW TREES AND OTHER PLANTS THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER APPROVED BY DISTRICT CONSTRUCTION MANAGER.
	2) STORAGE OR USE OF EQUIPMENT AND NON-RELATED CONSTRUCTION ACTIVITIES, INCLUDING PIPE-CUTTING MACHINES, TILE-CUTTING MACHINES, AND LUMBER SAWS.	2. ALL IRRIGATION WORK SHALL HAVE BEEN REVIEWED BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY PLANTING.	a. INSTALL ROOT BARRIER WHERE TREES ARE PLANTED WITHIN 120 INCHES (10 FEET) OF PAVING OR OTHER HARDSCAPE ELEMENTS, SUCH AS WALLS, CURBS, AND WALKWAYS, UNLESS OTHERWISE INDICATED ON DRAWINGS.	a. SUBMIT DETAILS OF PROPOSED PRUNING AND REPAIRS.
4. SOIL DISTURBANCE OR GRADE CHANGE.	3) STORAGE OR DUMPING OF DELETERIOUS MATERIALS HARMFUL TO PLANT GROWTH. DELETERIOUS MATERIALS MIGHT INCLUDE FUELS, OILS, OTHER PETROLEUM PRODUCTS, ACIDS, LIQUIDS, CONCRETE MIX OR CONCRETE WASHOUT, STUCCO MIX OR STUCCO WASHOUT, PAINT OR PAINT WASHOUT, AND ZINC GRINDINGS FROM WORKING WITH GALVANIZED PRODUCTS IN THE FIELD.	3. INSTALLATION OF ALL PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE DETAILS ON THE PLANTING PLANS.	b. ALIGN ROOT BARRIER VERTICALLY WITH BOTTOM EDGE ANGLED AT 20 DEGREES AWAY FROM THE PAVING OR OTHER HARDSCAPE ELEMENT, AND RUN IT LINEARLY ALONG AND ADJACENT TO THE PAVING OR OTHER HARDSCAPE ELEMENTS TO BE PROTECTED FROM INVASIVE ROOTS.	b. PERFORM REPAIRS OF DAMAGED TRUNKS, BRANCHES, AND ROOTS WITHIN 24 HOURS, IF APPROVED.
	4) SOIL DISTURBANCE OR GRADE CHANGE.	4. LOCATIONS FOR PLANTS AND OUTLINES OF AREAS TO BE PLANTED SHALL BE MARKED ON THE GROUND BY THE CONTRACTOR BEFORE ANY PLANT PITS ARE DUG. ALL SUCH LOCATIONS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AND OWNER/AGENT. IF AN UNDERGROUND CONSTRUCTION OR UTILITY LINE IS ENCOUNTERED IN THE EXCAVATION OF PLANTING AREAS, NOTIFY LANDSCAPE ARCHITECT SO THAT OTHER LOCATIONS FOR PLANTING MAY BE SELECTED.	c. INSTALL ROOT BARRIER CONTINUOUSLY FOR A DISTANCE OF 10 FEET IN EACH DIRECTION FROM THE TREE TRUNK, FOR A TOTAL DISTANCE OF 20 FEET PER TREE, IF TREES ARE SPACED CLOSER, USE A SINGLE CONTINUOUS PIECE OF ROOT BARRIER.	c. REPLACE PLANT MATERIALS THAT CANNOT BE REPAIRED AND RESTORED TO HEALTHY, LONG TERM FULL-GROWTH STATUS, AS DETERMINED BY DISTRICT CONSTRUCTION MANAGER, WITHIN 14 DAYS AFTER NOTIFICATION, AT NO ADDITIONAL COST TO THE DISTRICT.
5. MOVING OR PARKING VEHICLES OR EQUIPMENT, EVEN TEMPORARILY.	5) MOVING OR PARKING VEHICLES OR EQUIPMENT, EVEN TEMPORARILY.	5. EXCAVATION FOR PLANTING:	d. POSITION TOP OF ROOT BARRIER 1/2-INCH ABOVE ADJACENT SOFT FINISH GRADE BUT BELOW HARDSCAPE.	2. REMOVE AND REPLACE PLANT MATERIALS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION BEFORE THE END OF THE MAINTENANCE PERIOD OR ARE DAMAGED DURING CONSTRUCTION OPERATIONS THAT DISTRICT CONSTRUCTION MANAGER DETERMINES ARE INCAPABLE OF RESTORING TO NORMAL GROWTH PATTERN, AT NO ADDITIONAL COST TO THE DISTRICT.
	5) MOVING OR PARKING VEHICLES OR EQUIPMENT, EVEN TEMPORARILY.	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.	8. GPS MAPPING:	a. PROVIDE NEW PLANT MATERIALS OF SAME SIZE AS THOSE BEING REPLACED.
5. EXCAVATION FOR PLANTING:	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.	a. ALL NEW TREES ARE TO BE GPS MAPPED, LATITUDE AND LONGITUDE, A MAP CREATED FOR ALL NEW TREES WITHIN THIS SCOPE OF WORK, AND TURNED OVER TO THE DISTRICT FOR SUBMITTAL TO CAL FIRE. CAL FIRE, AS TREE GRANT PROVIDER, HAS THE ULTIMATE APPROVAL OF GPS MAPPING.	b. SPECIES OF REPLACEMENT PLANT MATERIALS: SAME SPECIES, VARIETY, AND/OR CULTIVAR BEING REPLACED.
	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.	c. ALL EXCAVATED HOLES SHALL HAVE VERTICAL SIDES WITH ROUGHENED SURFACES AND SHALL BE OF A	G. SODDED COOL SEASON TURF	L. REVIEWS
5. EXCAVATION FOR PLANTING:	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.		TURF GRASS SHALL BE PLANTED BY SOD LAYING, AS INDICATED PER PLAN. TURF SOD SHALL BE SPECIFIED ON PLANTING PLAN AND LEGEND.	1. NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE LANDSCAPE ARCHITECT AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF AN ANTICIPATED INSPECTION. A REVIEW WILL BE MADE BY THE LANDSCAPE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN RECOMMENDATION OF APPROVAL TO PROCEED BY THE LANDSCAPE ARCHITECT.
	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.		SODDING - IRRIGATE AREAS TO BE SODDED PRIOR TO INSTALLATION. MOISTURE SHALL BE UNIFORMLY PRESENT TO A DEPTH OF 2". SOD SHALL BE INSTALLED WITHIN ONE DAY OF DELIVERY. ROLLS SHALL BE PLACED IN SHADED AREAS PRIOR TO INSTALLATION. SOD SHALL CONFORM TO ALL LAWN SPACES AS DESIGNATED PER PLAN AND SHALL BE INSTALLED IN SUCH A MANNER AS TO VISUALLY ELIMINATE ALL JOINTS AND EDGES OF SOD STRIPS. FOLLOWING INSTALLATION, IRRIGATE TURF AREAS THOROUGHLY TO PROVIDE EVEN MOISTURE PENETRATION. ROLL ALL SOD PRIOR TO BEGINNING INSTALLATION WITHIN TWO (2) HOURS - PRIOR TO BEGINNING IRRIGATION. SOD SHALL BE UNIFORMLY SMOOTH IN APPEARANCE AND SHALL BE FLUSH WITH THE FINISHED GRADE OF ALL WALKS, CURBS, ETC.	a. SPOTTING OF ALL TREES AND PALMS, AND MINOR ADJUSTMENTS PRIOR TO PLANTING.
5. EXCAVATION FOR PLANTING:	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.		0) OVERLAP ROOT BARRIER A MINIMUM OF 12 INCHES AT JOINTS.	b. ALL PLANT MATERIAL PRIOR TO INSTALLATION FOR PLANT AND ROOT STRUCTURE.
	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.			c. REVIEW AND START OF ESTABLISHMENT PERIOD.
5. EXCAVATION FOR PLANTING:	a. EXCAVATION FOR PLANTING SHALL INCLUDE THE STRIPPING AND STACKING OF ALL ACCEPTABLE TOPSOIL ENCOUNTERED WITHIN THE AREAS TO BE EXCAVATED FOR TRENCHES, TREE HOLES, PLANT PITS AND PLANTING BEDS.			d. FINAL ACCEPTANCE OF PROJECT/NINETY (90) DAY MAINTENANCE.
	b. PROTECT ALL AREAS FROM EXCESSIVE COMPACTION WHEN TRUCKING PLANTS OR OTHER MATERIAL TO THE PLANTING SITE.			

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REGISTERED LANDSCAPE ARCHITECT
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Signature
5/31/27
Revised: Date

STATE OF CALIFORNIA

SHEET TITLE

PLANTING NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.2

OF 9 SHEETS

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M. LONG TERM MAINTENANCE

1. GENERAL

- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.
- b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.

2. TREES

- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.
- b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.
- c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.
- d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.

3. SHRUBS / VINES

- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.
- c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.

4. GROUND COVERS

- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.
- b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.
- c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.

5. TURF

- a. AERATION OF BERMUDA GRASSES
- b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.
- c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM
- d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.

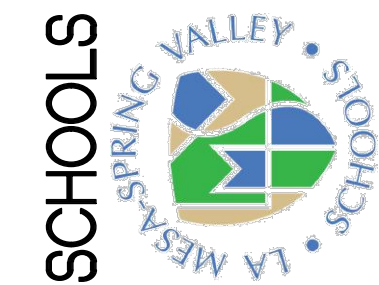
6. DETHATCHING OF TURF GRASS

- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.
- b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.
- c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.
- d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.

END OF SECTION



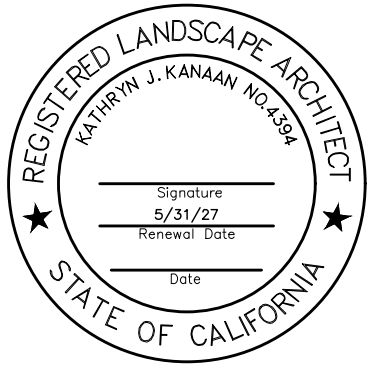
325 7th Avenue, Unit 214
San Diego, CA 92101-7176
1 (619) 840-5174
website www.kda-landscapearchitects.com



CLIENT:
LA MESA - SPRING VALLEY SCHOOLS
3888 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT:
RANCHO ELEMENTARY
8845 NOELINE AVENUE
SPRING VALLEY, CA 91977
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.3

OF 9 SHEETS

STEAM ACADEMY
1001 LELAND STREET
SPRING VALLEY, CA 91977

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

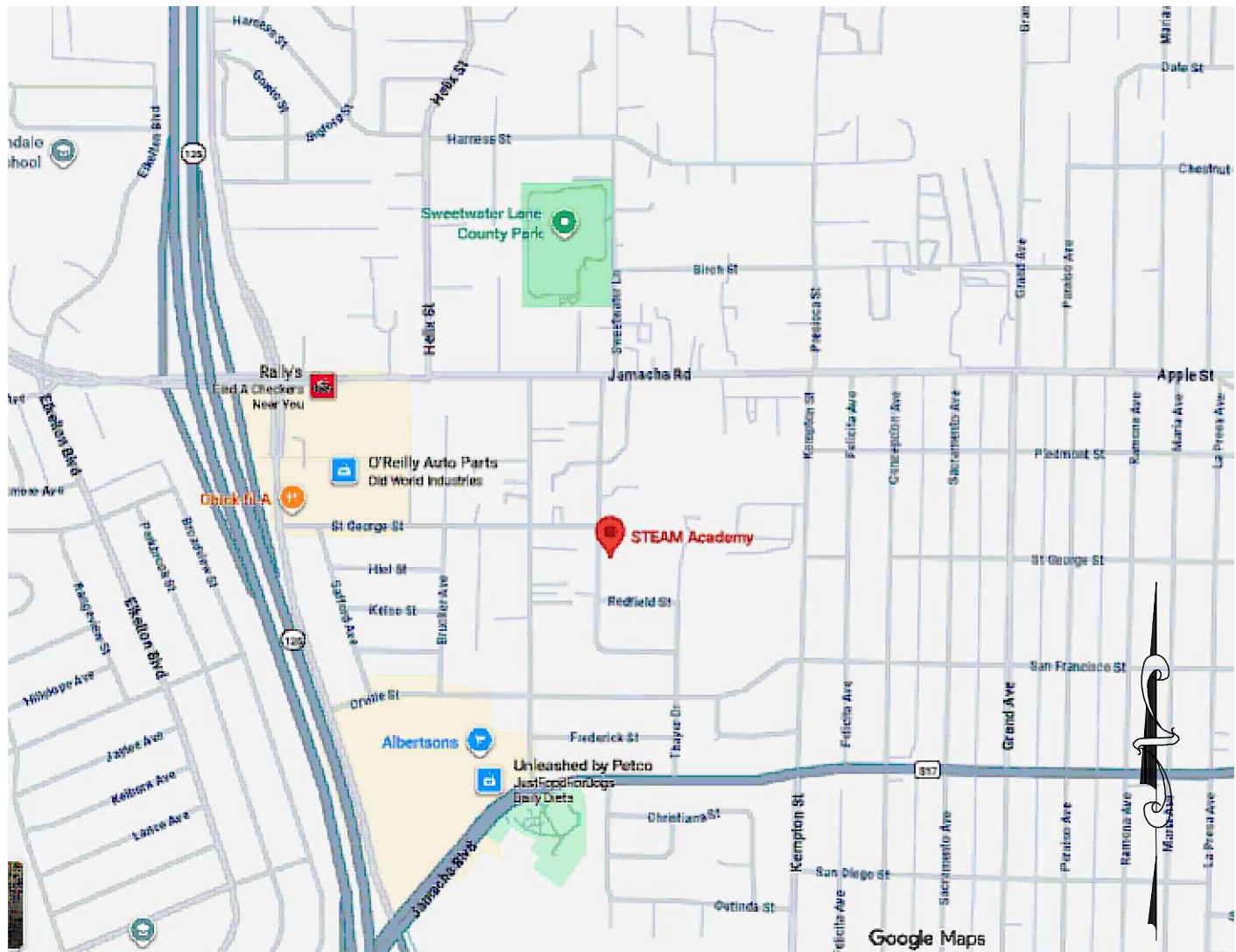
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

REVISIONS

NO.	REVISION	FOR	BY	DATE	APPROVED BY
△					

SHEET INDEX

SHEET	DESCRIPTION
L1.0	TITLE SHEET
L1.1	IRRIGATION PLAN
L1.2	IRRIGATION PLAN
L1.3	IRRIGATION/PLANTING DETAILS
L1.4	IRRIGATION NOTES
L1.5	IRRIGATION NOTES
L2.0	PLANTING PLAN
L2.1	PLANTING PLAN
L2.2	PLANTING NOTES
L2.3	PLANTING NOTES
L2.4	PLANTING NOTES



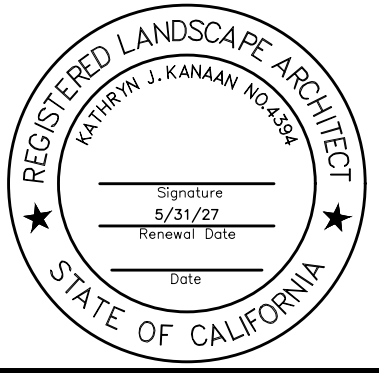
Know what's below.
Call before you dig.



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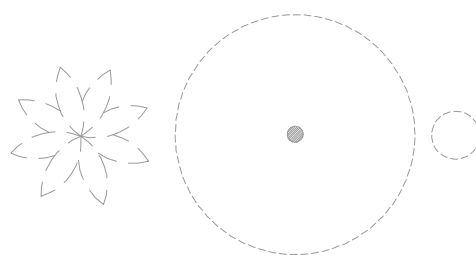
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SHEET TITLE
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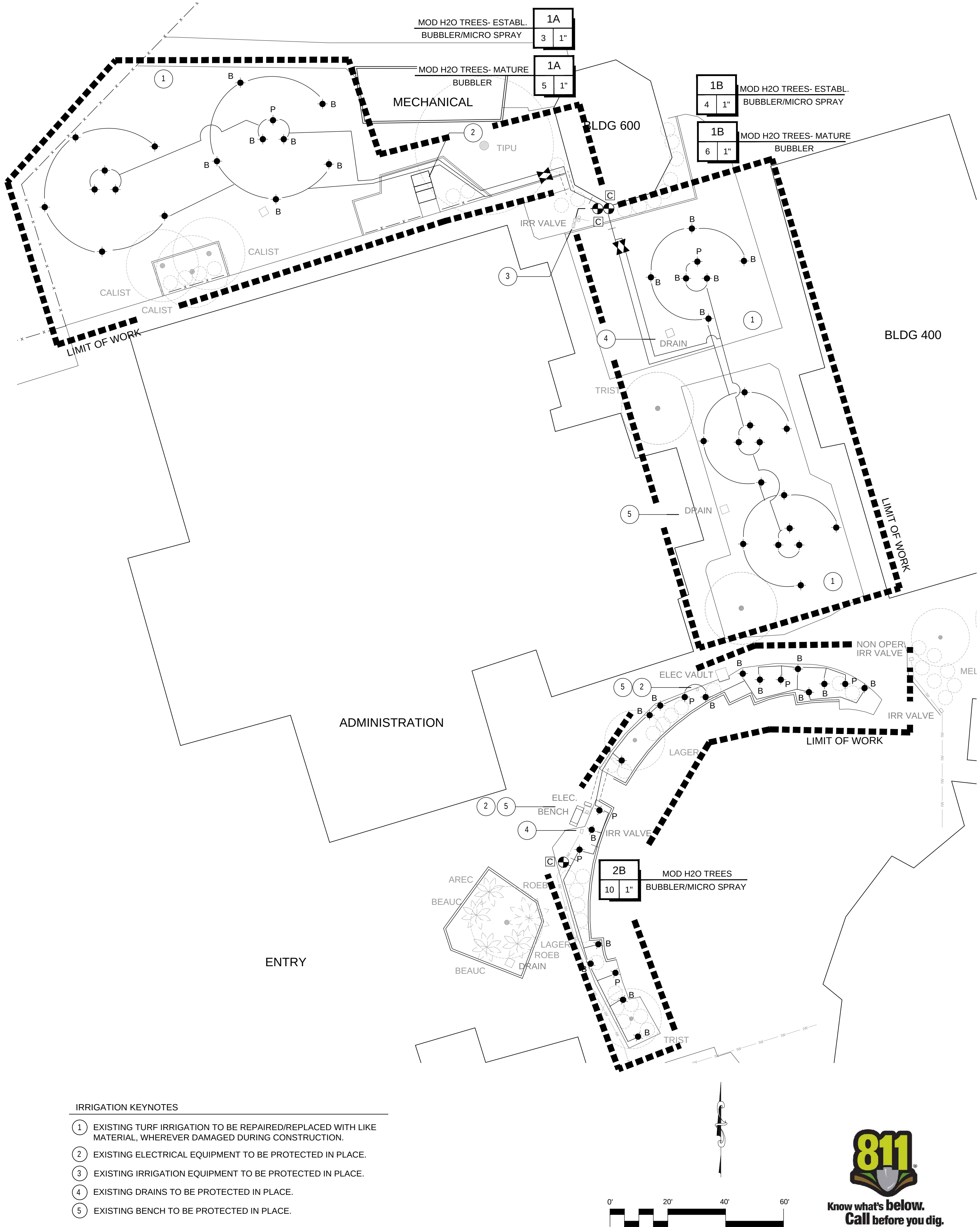
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EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PESB SERIES ELECTRIC CONTROL VALVE	PER PLAN	'C'/L1.3	(2, 3)
	HUNTER NODE-BT-100 BATTERY OPERATED CONTROLLER	1, 2, 4 ST.	'C'/L1.3	(3)
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	NEW PVC CL 315 MAINLINE - 18" MIN. COVER	TO MATCH TIE IN PIPE SIZE	'A, B'/L1.3	(1, 2)
	NIBCO T-585 BALL VALVE	LINE SIZE	'G'/L1.3	(1, 2)
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER	PLAN SIZE	'A, B'/L1.3	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER	SEE CHART	'A, B'/L1.3	(1, 2)
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IRRIGATION LEGEND				
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)	DETAIL
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REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION				
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.				

SCH 40 PVC SLEEVING CHART			PIPE SIZING CHART		STATION NUMBER	
1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE		3/4" PIPE	FLOW (GPM)	VALVE SIZE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE		1" PIPE		
2" SLEEVE	11-20 WIRES	1" PIPE		1 1/4" PIPE		
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE		1 1/2" PIPE		
3" SLEEVE	31-40 WIRES	1 1/2" PIPE		2" PIPE		

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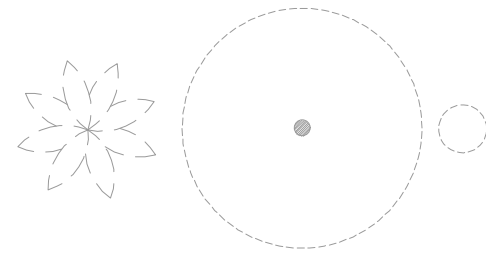
PROJECT: STEAM ACADEMY
1001 LELAND STREET
SPRING VALLEY, CA 91977
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE	
IRRIGATION PLAN	
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET	
L1.1	
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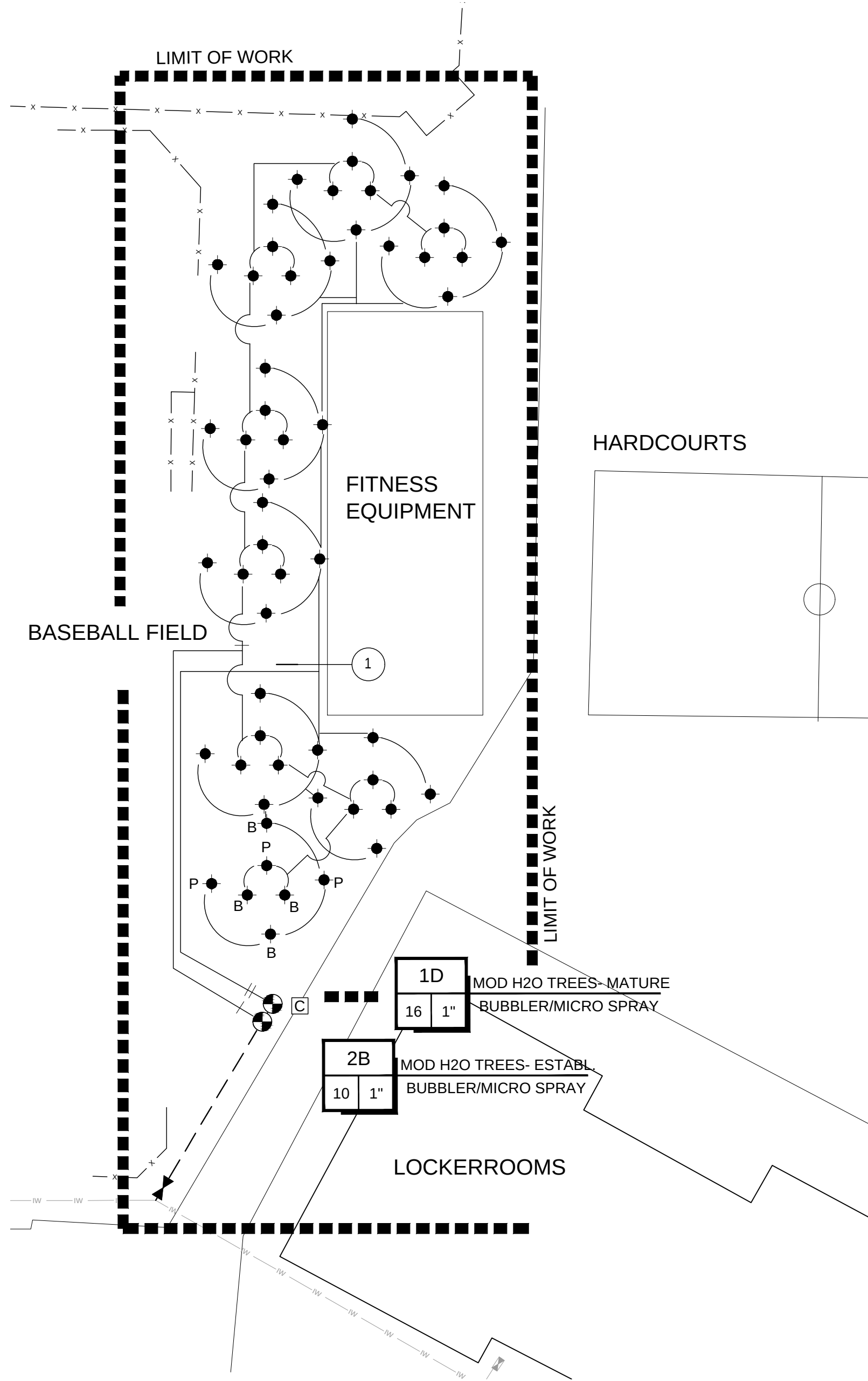
PIPE SIZING CHART

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	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER	
FLOW (GPM)	VALVE SIZE

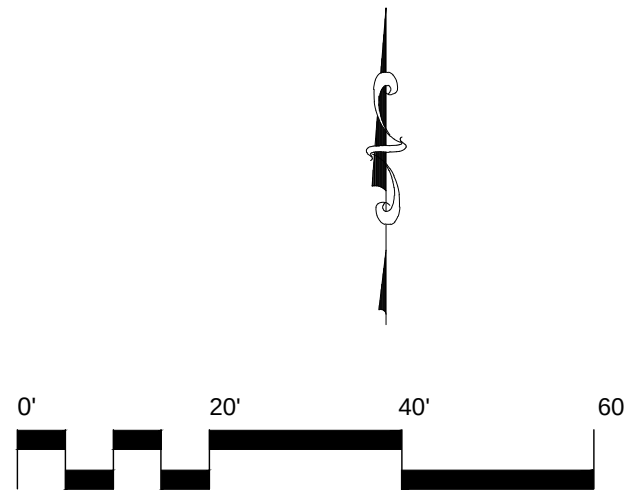
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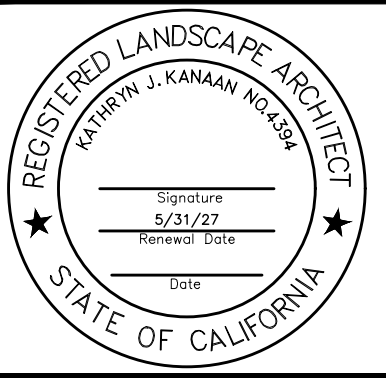
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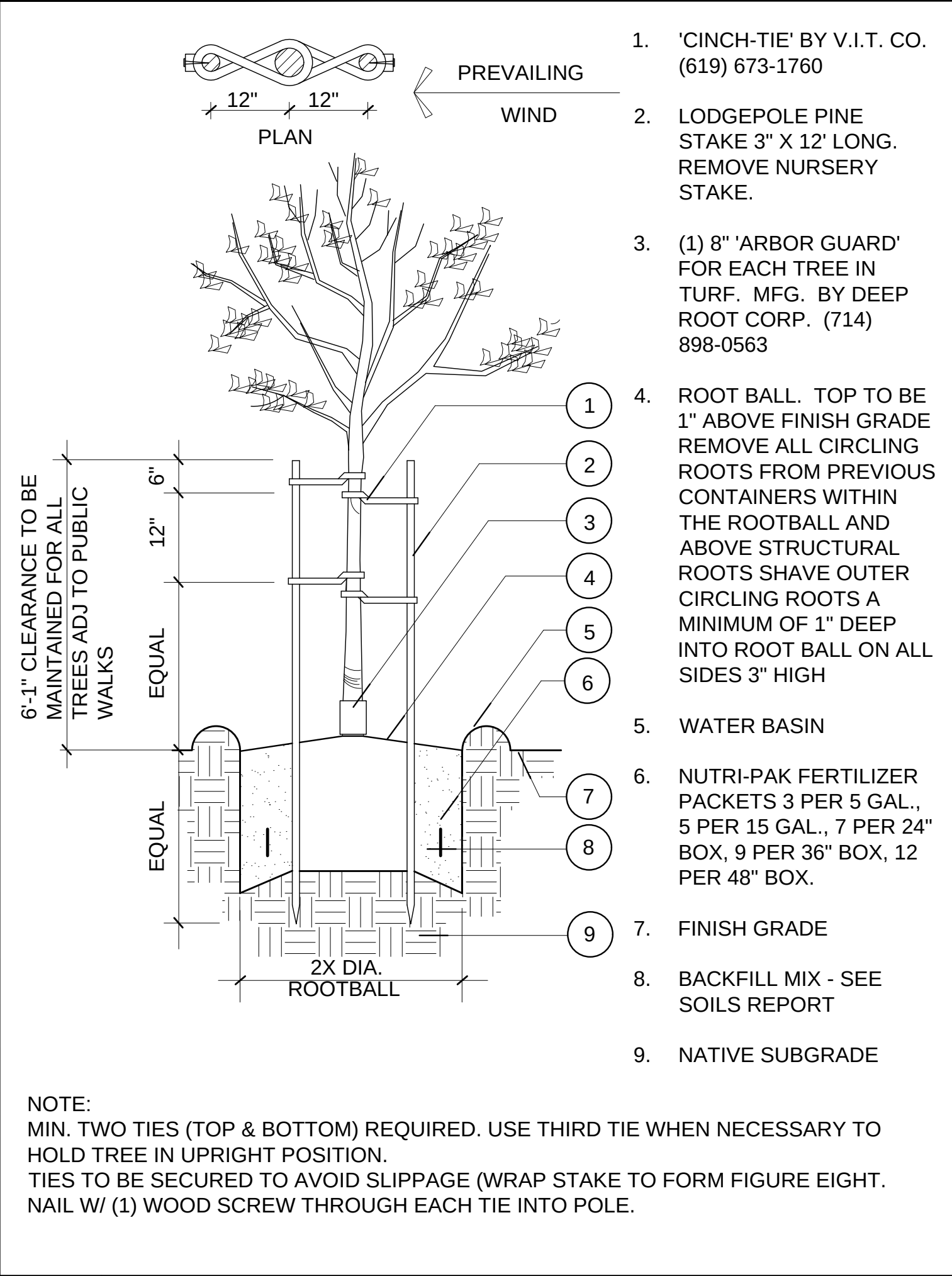
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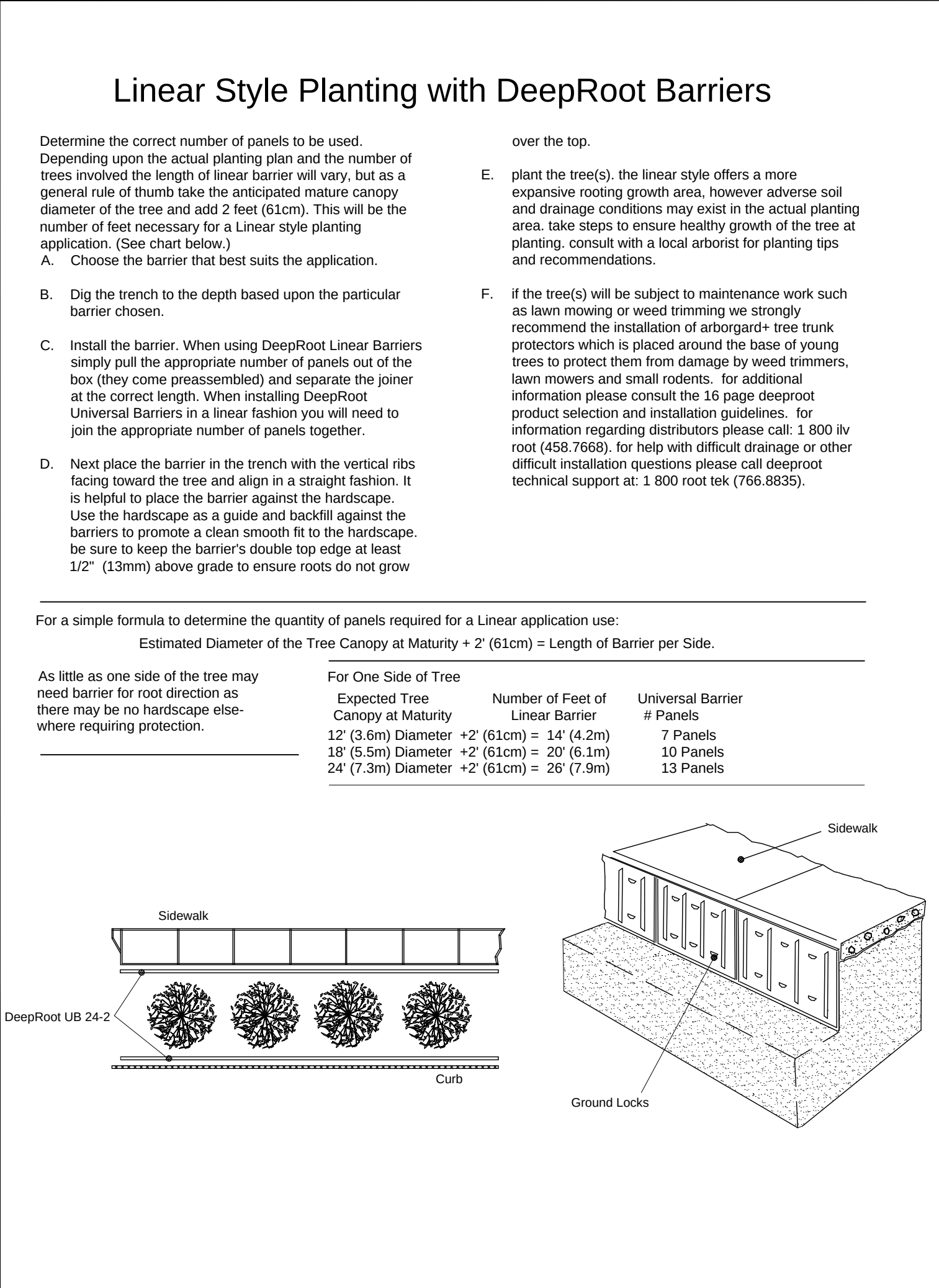
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IRRIGATION
PLAN

DESIGNED	KJK
DRAWN	KJK
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SHEET
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OF 11 SHEETS

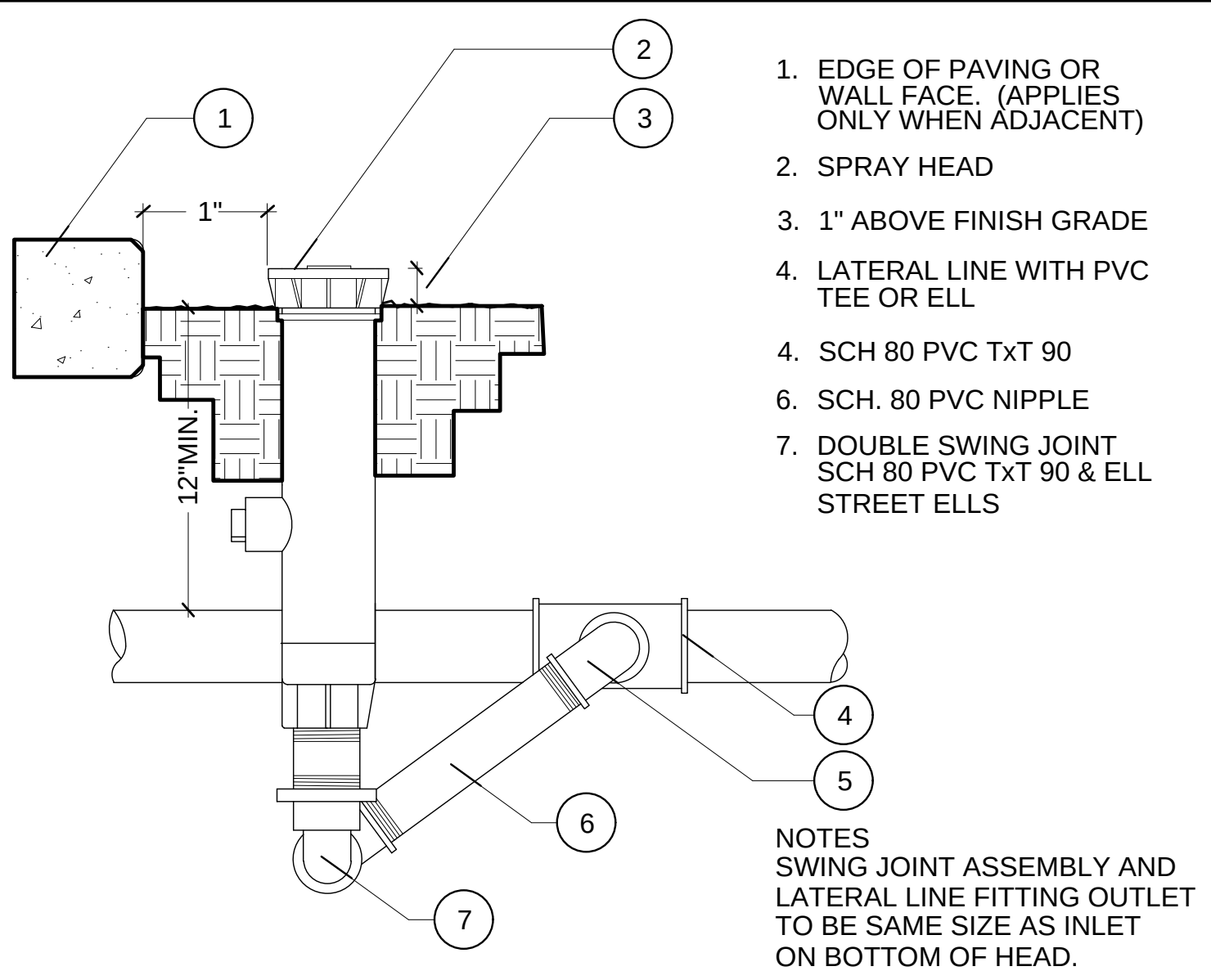


I DOUBLE STAKED TREE

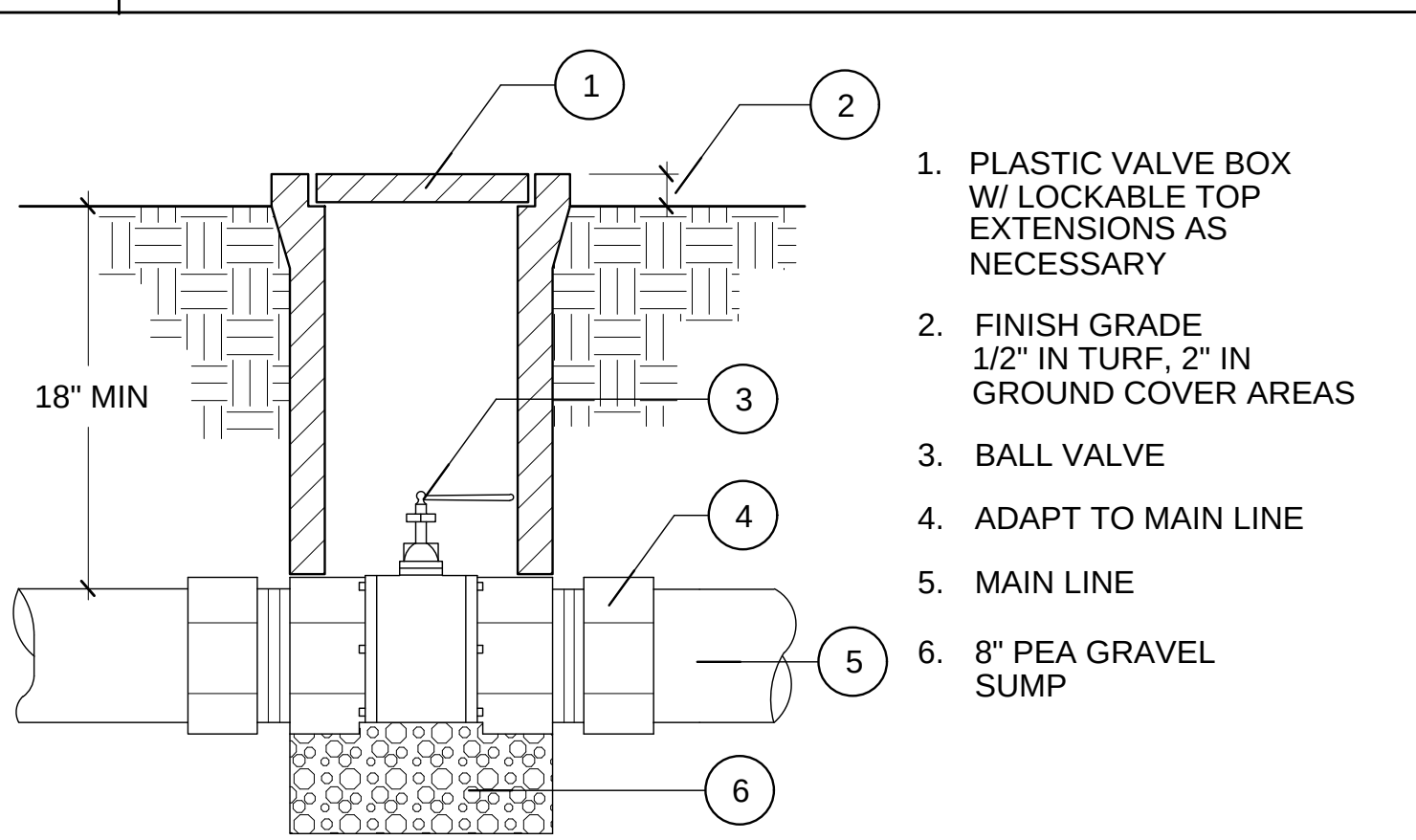


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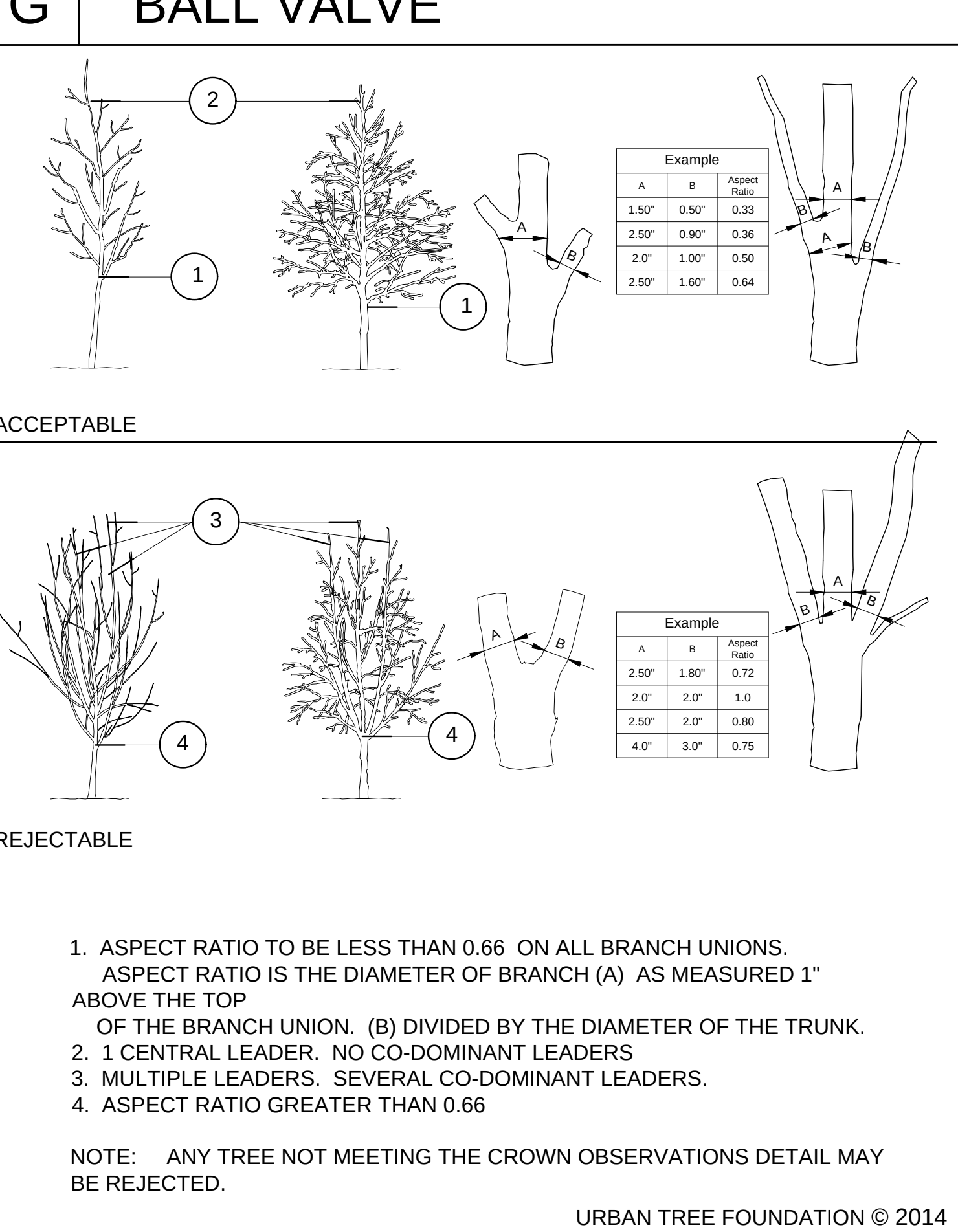
TO BE 24" DEEP ON ALL SIDES



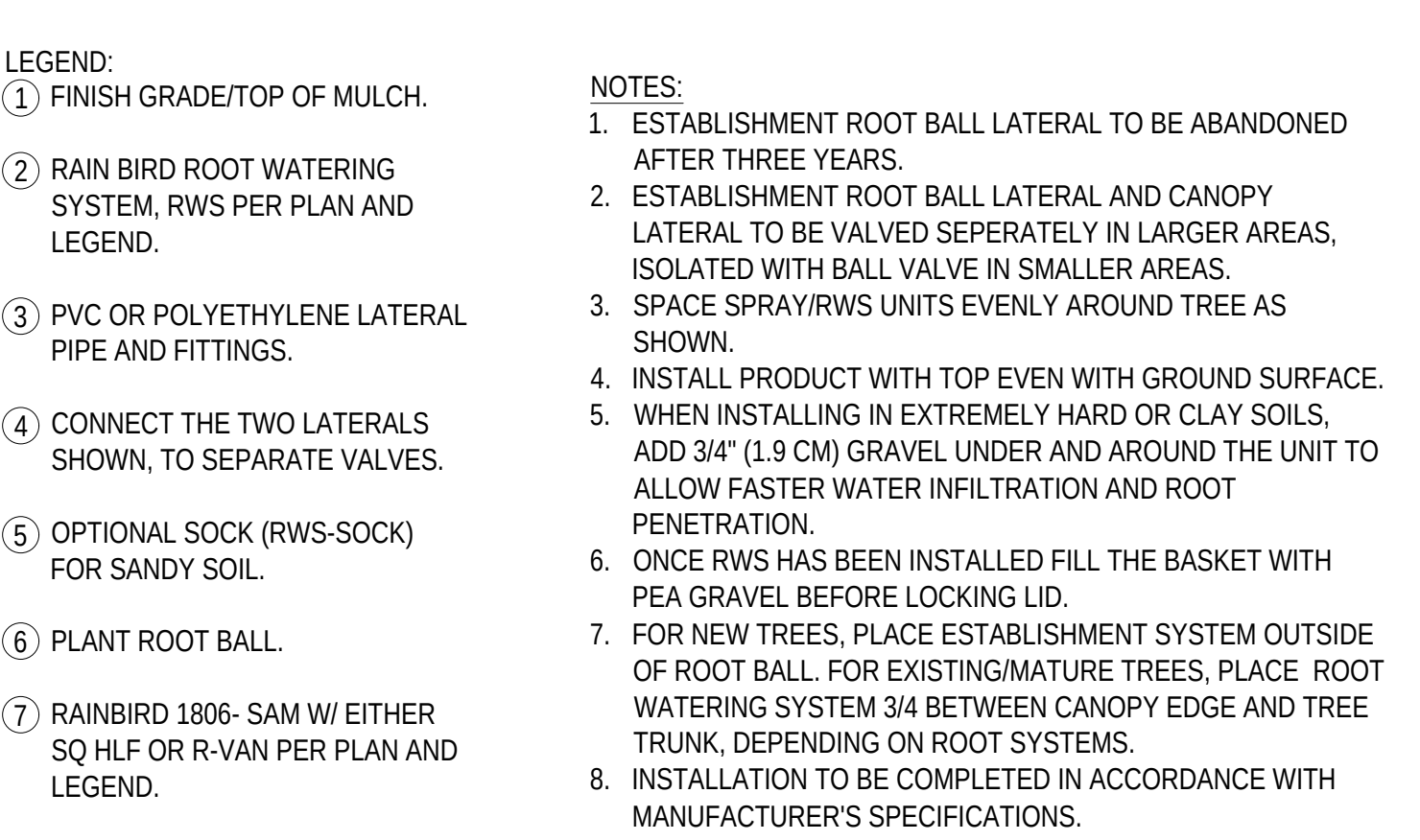
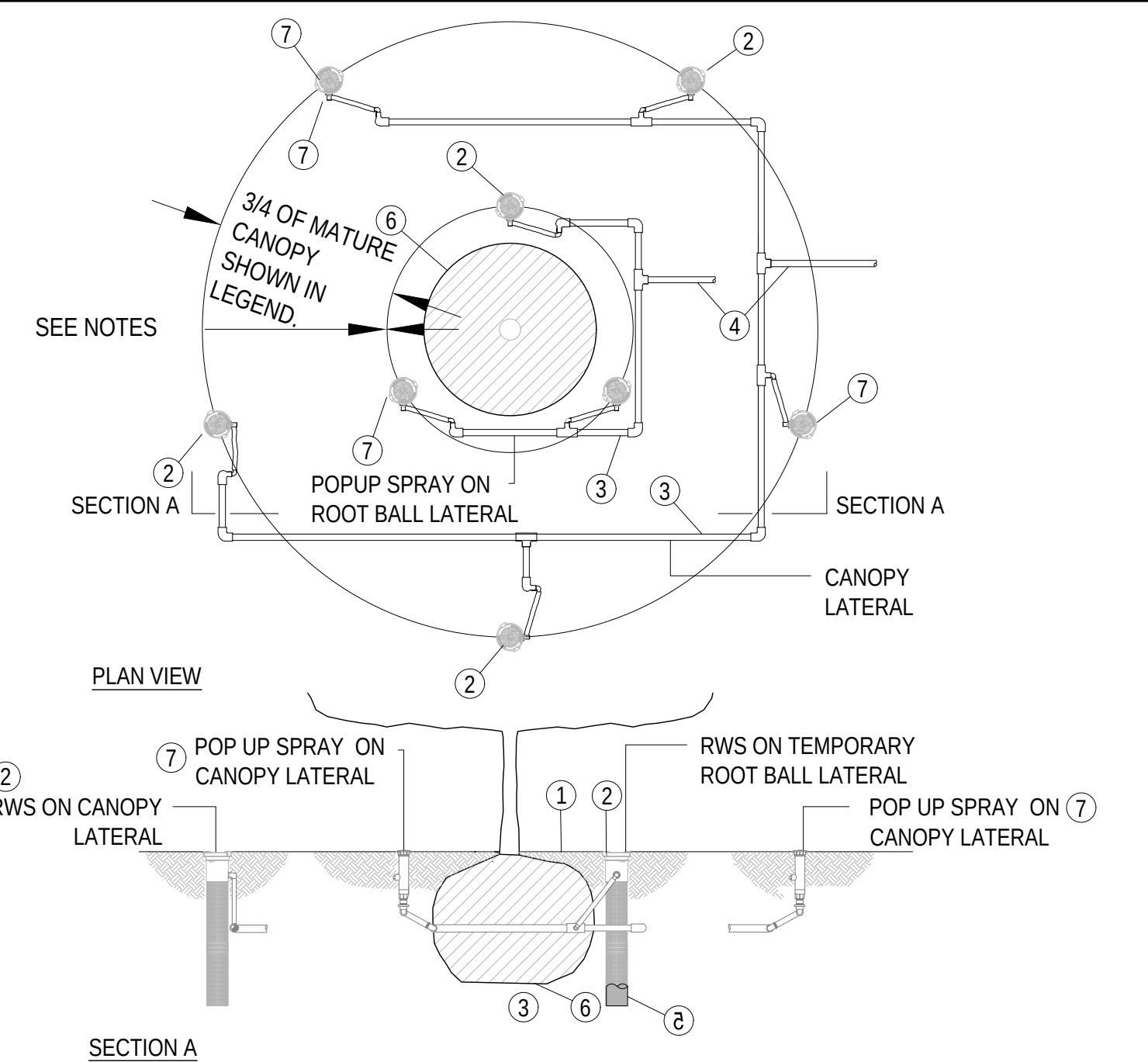
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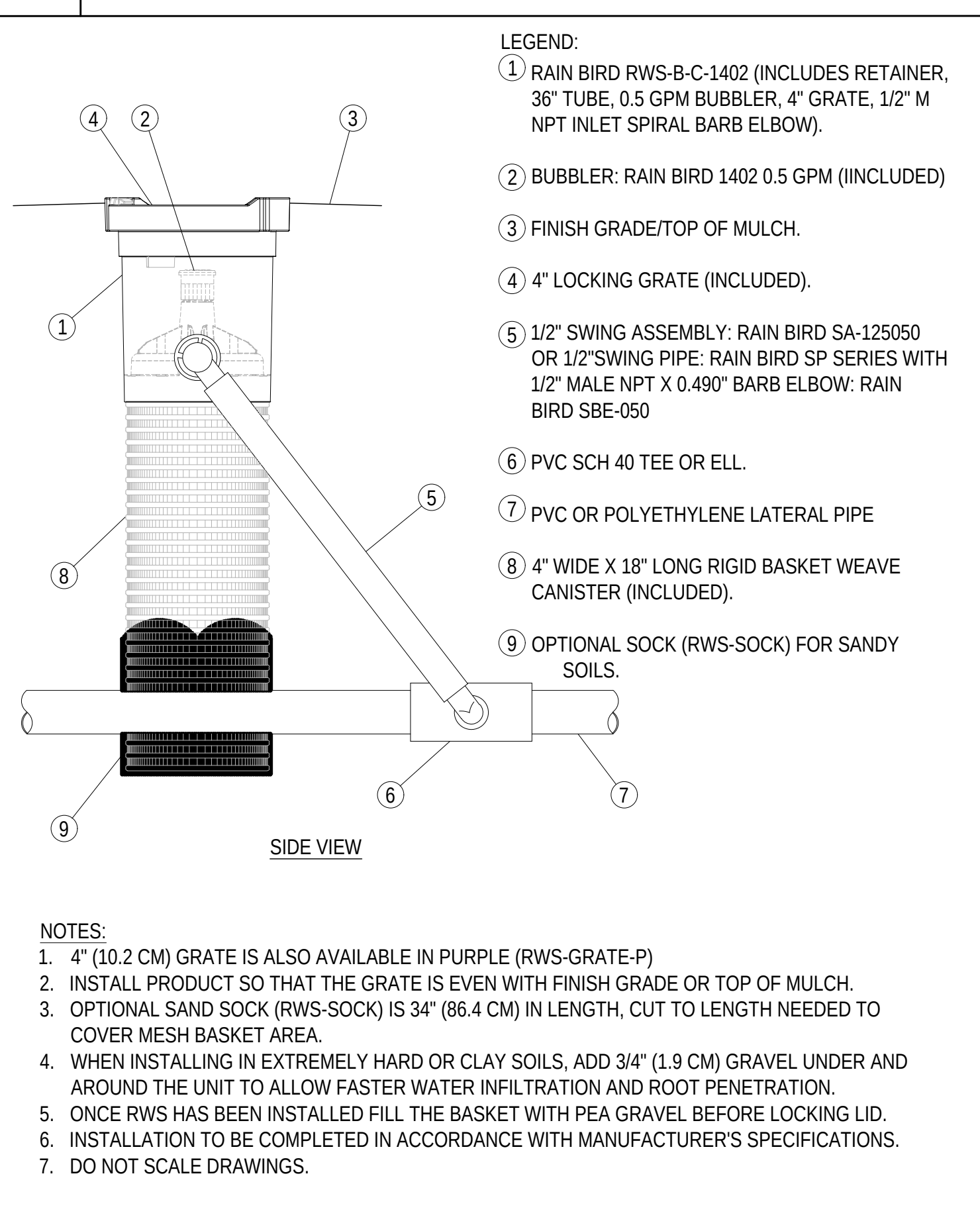
G BALL VALVE



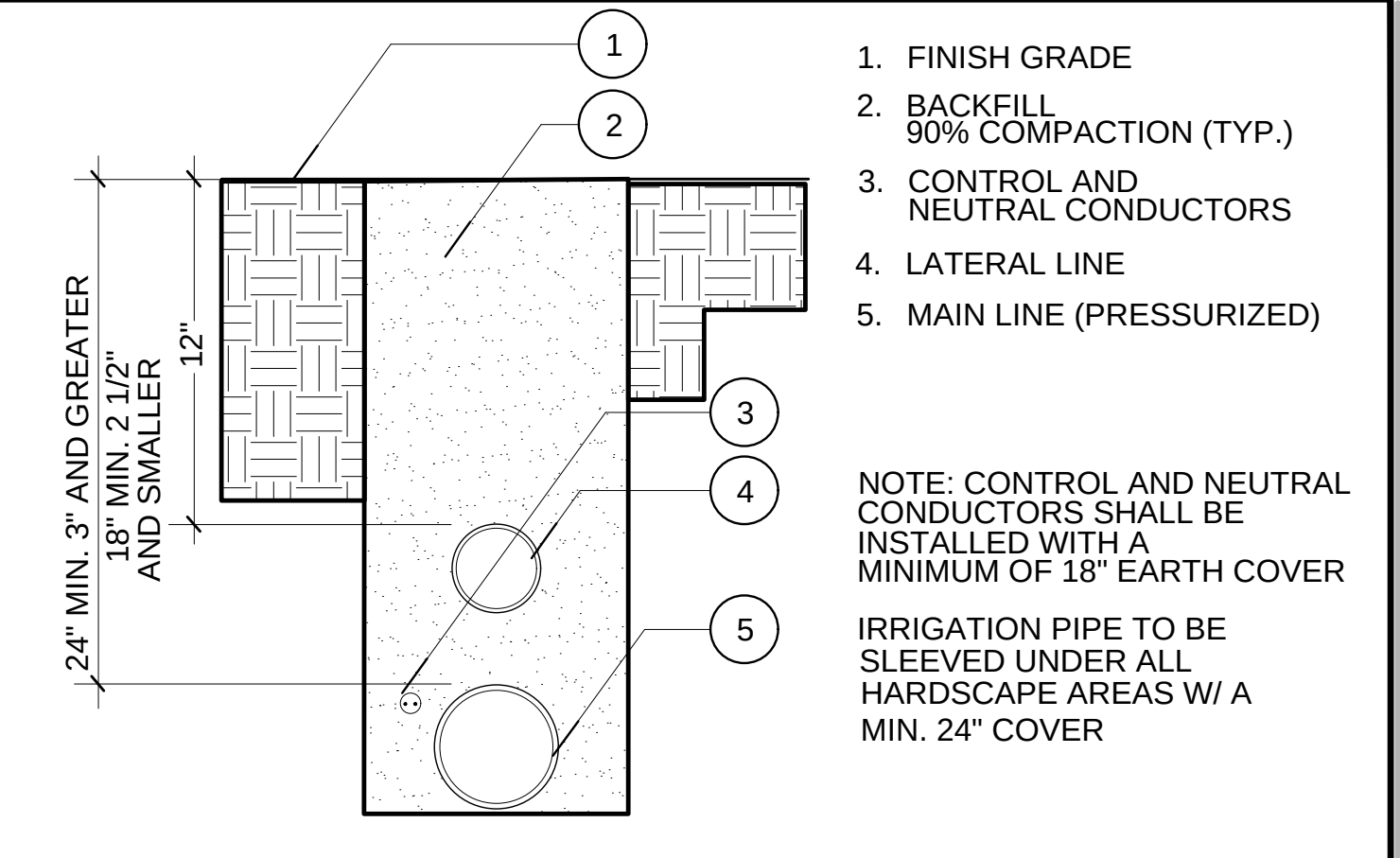
H HIGH BRANCHED CROWN OBSERV.



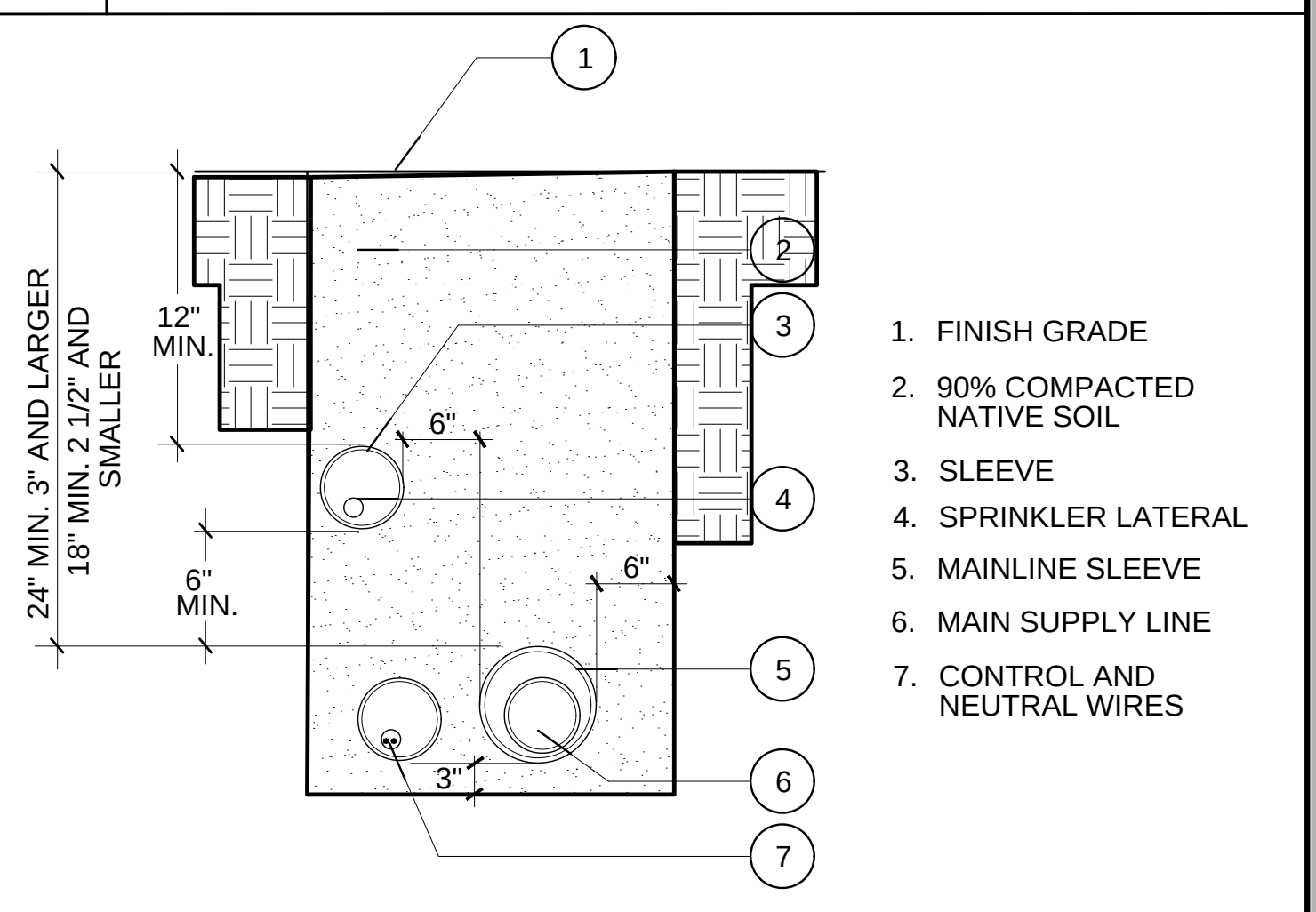
D TREE WATERING LAYOUT



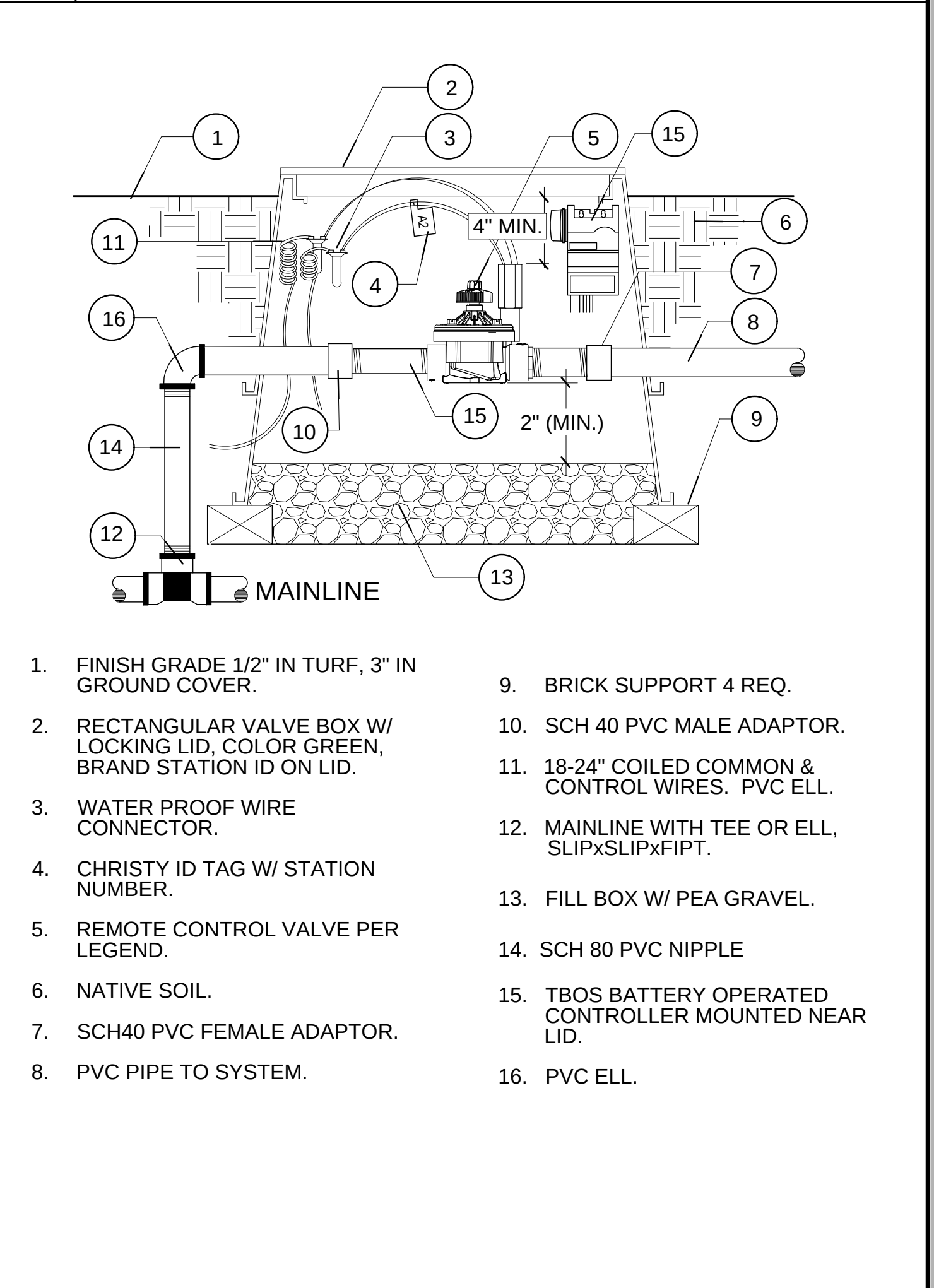
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



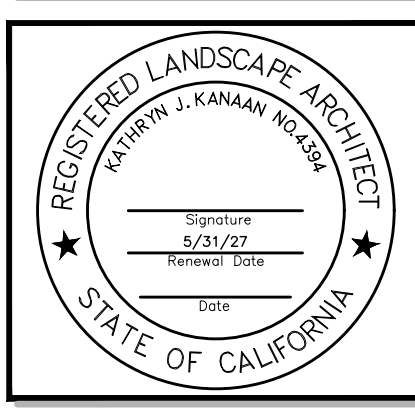
C VALVE W/ BATTERY OPER. CONTROLLER



CLIENT: LA MESA - SPRING VALLEY SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: STEAM ACADEMY
1001 LELAND STREET
SPRING VALLEY, CA 91977
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE
IRRIGATION/
PLANTING
DETAILS

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L1.3
OF 11 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.

- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND PROPOSALS TO USE. SAMPLES SHALL BE SUBMITTED TO THE ARCHITECT A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- § THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
 - § CONNECTIONS TO THE EXISTING WATER LINES
 - § CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
 - § ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
 - § ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
 - § CONTROLLER LOCATIONS WITH GROUNDING RODS
 - § WIRE RUNS, SPLICE LOCATIONS
 - § ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.

- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).

5. TESTING DATA FROM REQUIRED PRESSURE TESTING.

G. PRODUCT HANDLING

1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

J. TEMPORARY UTILITIES

1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.

K. CUTTING, PATCHING, TRENCHING AND DIGGING

1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- a. TYPE I, GRADE 1, SCHEDULE 80, HIGH IMPACT MOLDED, MANUFACTURED FROM VIRGIN COMPOUNDS AS SPECIFIED FOR PIPING AND CONFORMING TO ASTM D-2464.

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.

C. SOLVENT CEMENTS AND THREAD LUBRICANT

6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.

D. VALVES

1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.

E. AUTOMATIC CONTROLLERS (ELECTRIC)

5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPARATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPARATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.

F. CONTROL WIRE:

1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE UF (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B-3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB. NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, #12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.

2. DISCREPANCIES:

- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.

- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.

- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|--|--|---|
| b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER. | c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS. | d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS. |
| e. BACKFILL SHALL BE TAMPED OR PUDDLED TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING. | 4. LOCATION WIRE: | a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN. |

C. PIPE INSTALLATION

1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.
4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. SOLVENT WELD OR THREADED PLASTIC PIPE:
- a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING.
- c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.
- d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH.
- e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
- f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE.
- g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED.
- h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT.
- i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE.

D. FLUSHING

6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.

E. HYDROSTATIC PRESSURE TESTING

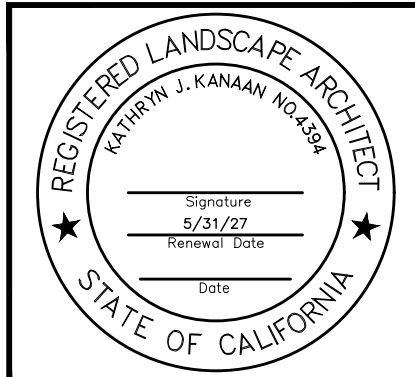
1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- F. BACKFILLING AND COMPACTING
1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
- a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.



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REVISIONS	DATE	BY



- | | | | | |
|----|--|----------------|---|--|
| a. | BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR. | e. | THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE. | |
| | | | | |
| b. | BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL". | f. | CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION. | |
| | | | | |
| 1. | FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE. | g. | WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK. | |
| | | | | |
| 2. | ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE. | 3. | TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS. | |
| | | | | |
| I. | INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?) | O. | TESTS | |
| | | | | |
| 1. | UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. | 1. | PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL. | |
| | | | | |
| 2. | UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14. | Q. | REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY LA.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY LA.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY LA.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS. | |
| | | | | |
| 3. | SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED. | R. | MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

· CLEANING OF PLUGGED IRRIGATION HEADS.
· IRRIGATION HEADS ADJUSTMENTS.
· VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)
· PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)
· REPAIRING LEAKING VALVES, ETC.
· ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.
· REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.
· LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER. | |
| | | | | |
| 4. | TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM, PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING. | END OF SECTION | | |
| | | | | |
| 5. | ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION. | | | |
| | | | | |
| 6. | ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER CABLE LETTERS IN A BOXES AS AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 20 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE. | | | |
| | | | | |
| 7. | THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS. | | | |
| | | | | |
| 8. | TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED. | | | |
| | | | | |
| 9. | PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED. | | | |
| | | | | |
| J. | INSTALLATION OF VALVES | | | |
| | | | | |
| 1. | GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURES REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

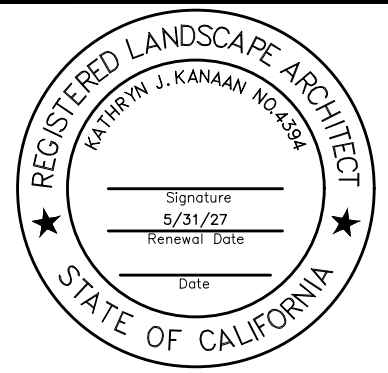
d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODE | | | |



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REVISIONS	DATE	BY



SHEET TITLE

IRRIGATION
NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L1.5

OF 11 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\5D CAL FIRE GRANT LANDSCAPE\AUTOCAD\CD\SYSTEM ACADEMY\26004 SA PP.DWG

PLANT LEGEND

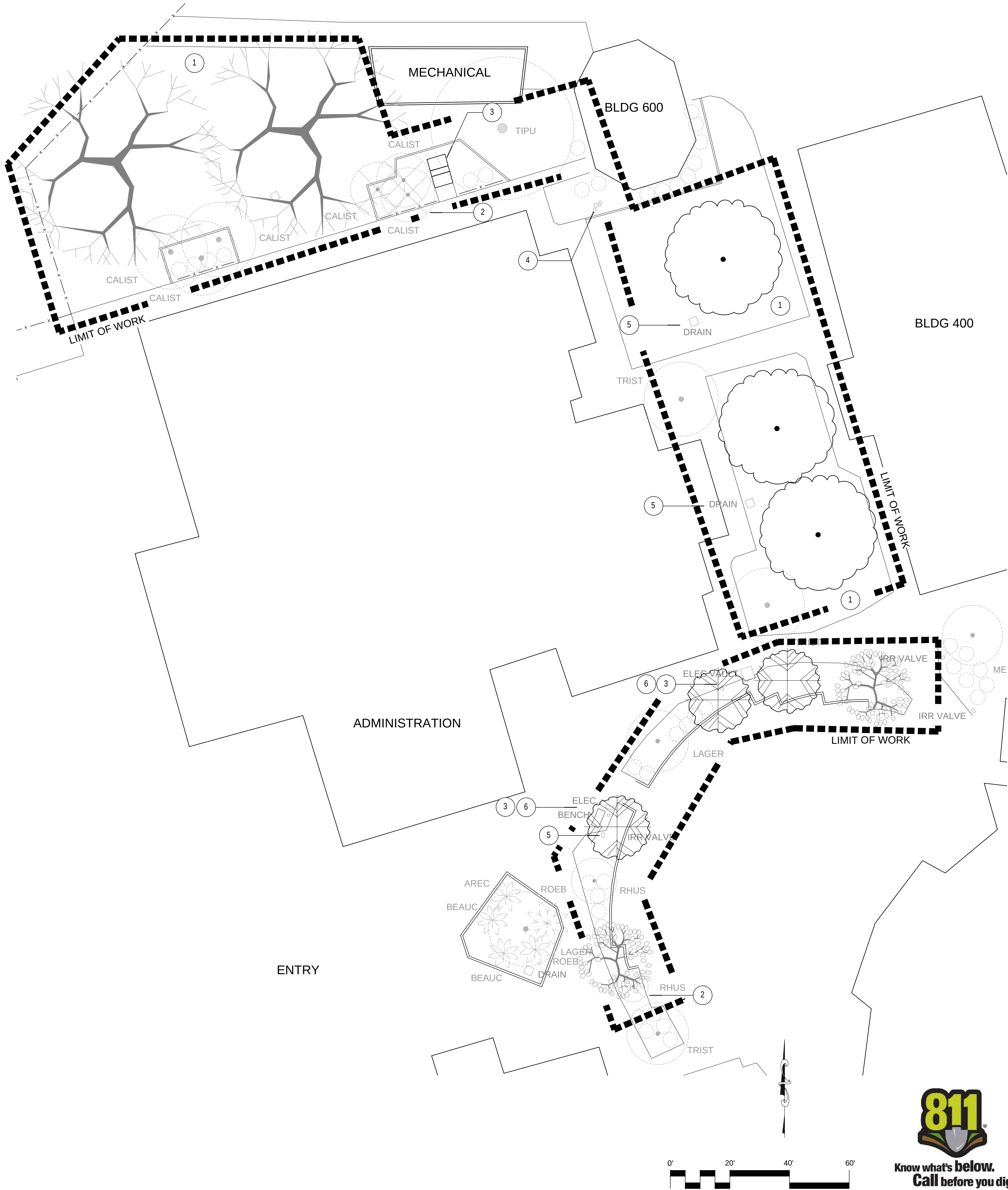
SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
		EXISTING TREE TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
		EXISTING TREES TO BE REMOVED. GRIND STUMP DOWN BELOW GROUND 2' AND ALL ROOTS WITHIN 3' OF THE STUMP.				
	10	ARBUTUS UNEDO 'MARINA' MARINA STRAWBERRY TREE	48" BOX	25' O.C.	STANDARD	'H, I/ L1.3
	3	CERCIS CANADENSIS 'FOREST PANSY' FOREST PANSY REDBUD	48" BOX	20' O.C.	STANDARD	'H, I/ L1.3
	2	TIPUANA TIPU TIPU TREE	48" BOX	70' O.C.	STANDARD	'H, I/ L1.3
	3	ULMUS PARV. 'TRUE GREEN' TRUE GREEN CHINESE ELM	48" BOX	40' O.C.	STANDARD	'H, I/ L1.3
		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				
SHRUBS						
		EXISTING SHRUB TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE. NO ROOTS OVER 1" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
MISCELLANEOUS						
		ALL PLANTER AREAS TO RECEIVE A 3" THICK LAYER OF FOREST FINES MULCH TO BE PLACED 2' AWAY FROM TREE TRUNKS AND 1' AWAY FROM ALL PLANT BASES.				

NOTE:

- REFER TO PLANTING DETAILS AND NOTES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
- THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
- PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
- BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
- NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- EXISTING TURF TO BE REPAIRED/REPLACED WITH LIKE MATERIAL SOD, WHEREVER DAMAGED DURING CONSTRUCTION.
- REMOVE EXISTING TREES PER LEGEND AND SPECS.
- EXISTING ELECTRICAL EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.
- EXISTING DRAINS TO BE PROTECTED IN PLACE.
- EXISTING BENCH TO BE PROTECTED IN PLACE.





LANDSCAPE ARCHITECTS

325 7th Avenue, Unit 214
San Diego, CA 92101-7176
1 619 840 5174
website www.kda-landscapearchitects.com

CLIENT:

PROJECT:

LA MESA - SPRING VALLEY SCHOOLS

3838 CONRAD DRIVE
SPRING VALLEY, CA 91977

619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT:

STEAM ACADEMY

1001 LELAND STREET
SPRING VALLEY, CA 91977

CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT

MATTHEW J. KANAAN NGLOM

Signature

8/31/27

Review Date

Date

STATE OF CALIFORNIA

SHEET TITLE

PLANTING PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L2.0

OF 11 SHEETS

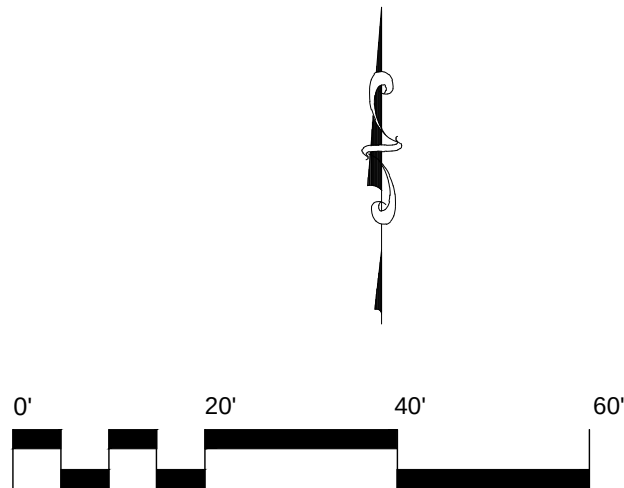
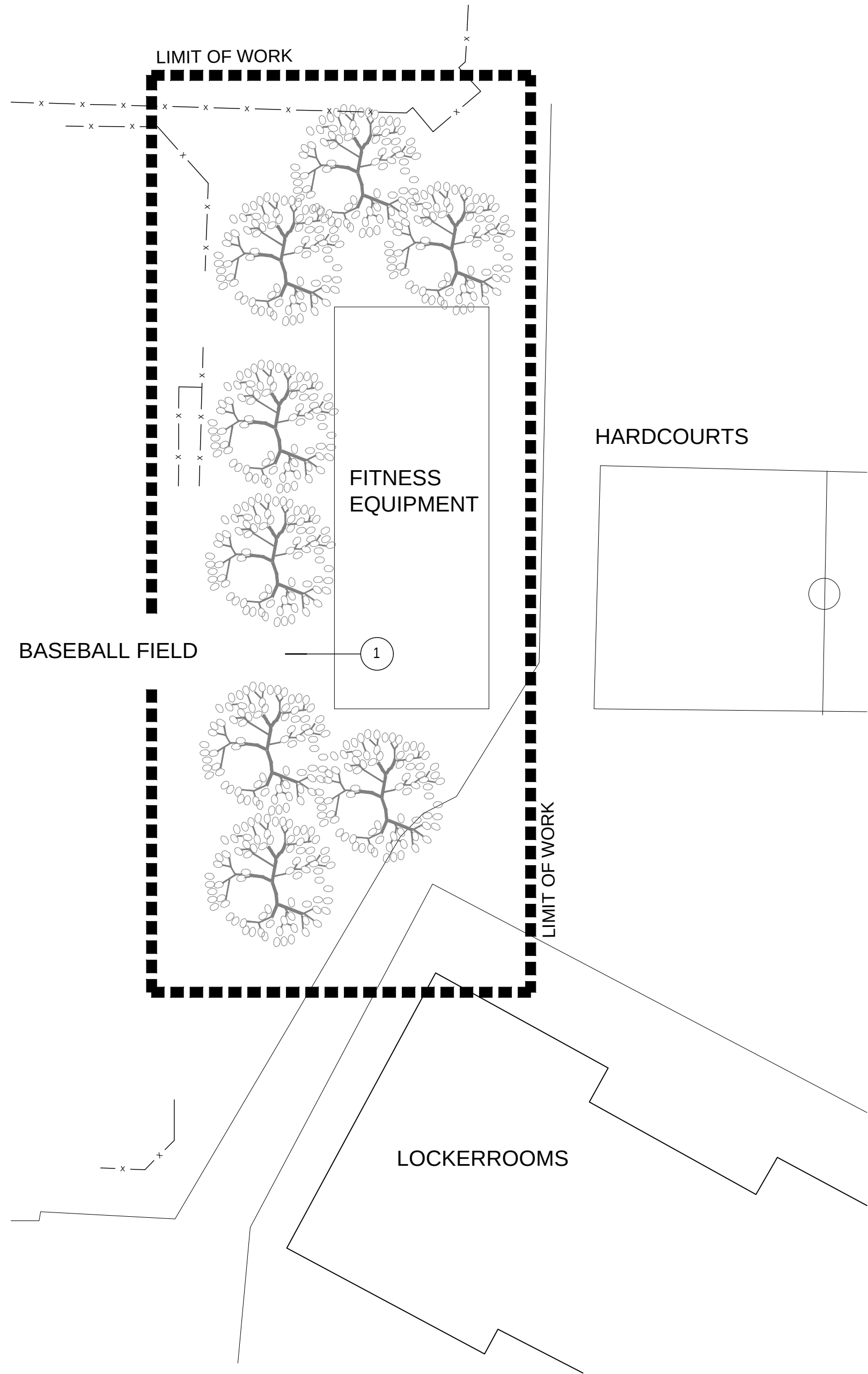
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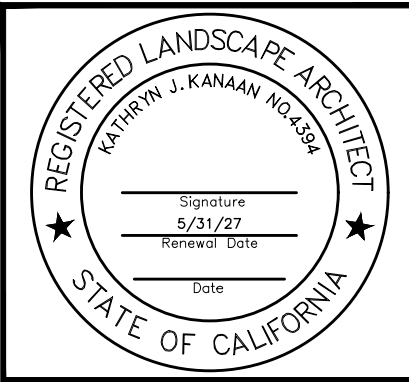
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CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



REGISTERED LANDSCAPE ARCHITECT
MATTHEW J. KANAAN 12544
Signature
5/31/27
Reviewed Date
Date

SHEET TITLE

PLANTING PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L2.1

OF 11 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI\26000\PROJECTS\26004\LSNVSD CALIFRE GRANT LANDSCAPE\AUTOCAD\CD\SISTEAM ACADEMY\26004 SA PLN.DWG

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.

4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR LATER REUSE AFTER ROUGH GRADING HAS OCCURRED. TOPSOILS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL CARRY. THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION. OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATION SHALL BE CONDUCTED IN THE PRESENCE OF THE GROWER TO VERIFY THAT THE PLANTS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CONFORM TO REQUIREMENTS.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.
- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.
- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
- b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
- c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
- d. BULK MATERIALS:

- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, PREVENTING WATER RUNOFF OR EXCESSIVE DUST REACHING ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.

- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FOLD TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.
- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

- 2) REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.
2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.
2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.
3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.
5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMOHOSECENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZERS WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).
2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.
3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL REQUIRE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.
 - 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) OF THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE THE STRUCTURAL ROOTS ACROSS THE TOP OF THE ROOT BALL.

- (6) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF STEM GIRDLING ROOTS OVER THE ROOT COLLAR OR KINKED ROOTS FROM NURSERY PRODUCTION PRACTICES.

- 6) PLANT GROWER CERTIFICATION: THE FINAL PLANT GROWER SHALL BE RESPONSIBLE TO HAVE DETERMINED THAT THE PLANTS HAVE BEEN ROOT PRUNED AT EACH STEP IN THE PLANT PRODUCTION PROCESS TO REMOVE STEM GIRDLING ROOTS AND KINKED ROOTS, OR THAT THE PREVIOUS PRODUCTION SYSTEM USED PRACTICES THAT PRODUCE A ROOT SYSTEM THROUGHOUT THE ROOT BALL THAT MEETS THESE SPECIFICATIONS. REGARDLESS OF THE WORK OF PREVIOUS GROWERS, THE PLANTS' ROOT SYSTEM SHALL BE MODIFIED AT THE FINAL PRODUCTION STAGE, IF NEEDED, TO PRODUCE THE REQUIRED PLANT ROOT QUALITY. THE FINAL GROWER SHALL CERTIFY IN WRITING THAT ALL PLANTS ARE REASONABLY FREE OF STEM GIRDLING AND KINKED ROOTS AS DEFINED IN THIS SPECIFICATION, AND THAT THE TREE HAS BEEN GROWN AND HARVESTED TO PRODUCE A PLANT THAT MEETS THESE SPECIFICATIONS.

- 7) AT TIME OF OBSERVATIONS AND DELIVERY, THE ROOT BALL SHALL BE MOIST THROUGHOUT. ROOTS SHALL NOT SHOW SIGNS OF EXCESS

- M. LONG TERM MAINTENANCE
1. GENERAL
- a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.

b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.
2. TREES
- a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.

b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.

c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.

d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.
3. SHRUBS / VINES
- a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.

c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.
4. GROUND COVERS
- a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.

c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.
5. TURF
- a. AERATION OF BERMUDA GRASSES

b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.

c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM

d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.
6. DETHATCHING OF TURF GRASS
- a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.

b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.

c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.

d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.
- END OF SECTION



CLIENT:

PROJECT:

LA MESA - SPRING VALLEY SCHOOLS

3388 CONRAD DRIVE

SPRING VALLEY, CA 91977

619.668.5760 X 4701

CONTACT: SHAUN GABRIELS

PROJECT:

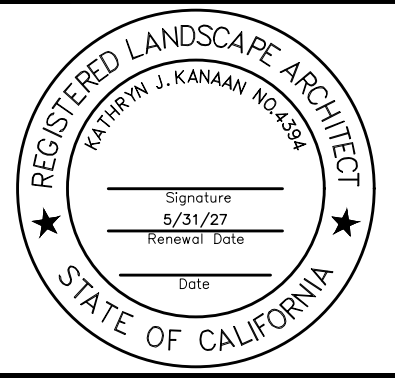
STEAM ACADEMY

1001 LELAND STREET

SPRING VALLEY, CA 91977

CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



SHEET TITLE

PLANTING

NOTES

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L2.4

OF 11 SHEETS

SPRING VALLEY ACADEMY
3900 CONRAD DRIVE
SPRING VALLEY, CA 91977

CALFIRE GRANT LANDSCAPE PLANS

LM-SV SCHOOLS
3838 CONRAD DRIVE
SPRING VALLEY, CA 91977
CONTACT: SHAUN GABRIELS

GENERAL NOTES

ALL EXISTING EQUIPMENT LOCATIONS ARE BASED ON INFORMATION PROVIDED BY MAINTENANCE PERSONNEL AND A ROUGH WATERLINE LAYOUT PLAN.

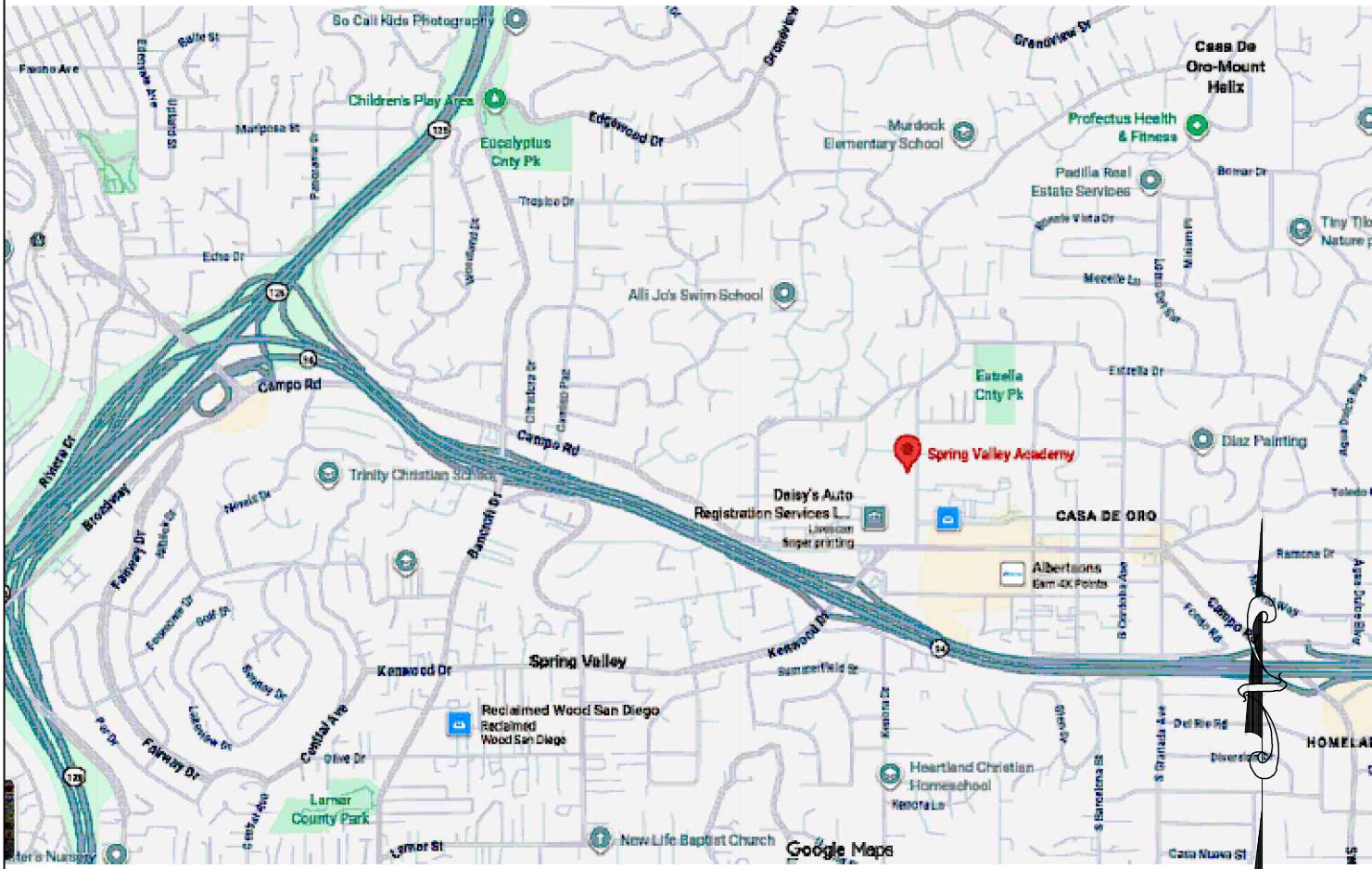
THERE HAS BEEN NO FIELD VERIFICATION OTHER THAN WHAT WE COULD SEE ON THE SURFACE. THE IRRIGATION CONTRACTOR SHALL ASSUME UNKNOWN CONDITIONS WILL BE DISCOVERED ONCE CONSTRUCTION BEGINS AND SHALL MAKE ANY ADJUSTMENTS IN THE FIELD AS NECESSARY, FOLLOWING THE BASIC DESIGN INTENT OF THESE PLANS.

A DETAILED SITE ANALYSIS AND POTENTIALLY POTHOLLING FOR ALL UTILITIES SHALL PER PERFORMED WITH KNOWLEDGEABLE DISTRICT MAINTENANCE PERSONNEL TO PRE-DETERMINE EXISTING CONDITIONS AS MUCH AS POSSIBLE.

LANDSCAPE CONTRACTOR IS TO PROVIDE THE DISTRICT WITH A DETAILED, LINE ITEM BID.

BREAK OUT DEMO, IRRIGATION EQUIPMENT, EACH TREE TYPE AND SIZE, EXISTING TREE PROTECTION, SITE PREP, LABOR, ...

VICINITY MAP



N.T.S.

REVISIONS

NO.	REVISION	FOR	BY	DATE	APPROVED BY
△					

SHEET INDEX

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L1.0	TITLE SHEET
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L2.3	PLANTING NOTES



Know what's below.
Call before you dig.

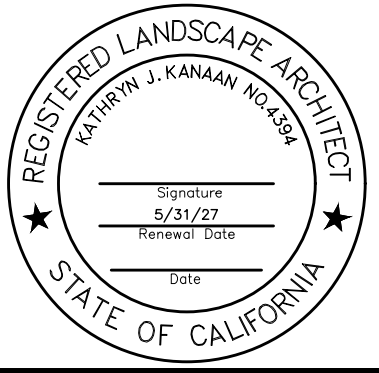
CONSULTANTS



CLIENT: LA MESA - SPRING VALLEY SCHOOLS
3838 CONRAD DRIVE
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CONTACT: SHAUN GABRIELS

PROJECT: SPRING VALLEY ACADEMY
3900 CONRAD DRIVE
SPRING VALLEY, CA 91977
CALFIRE GRANT LANDSCAPE PLAN

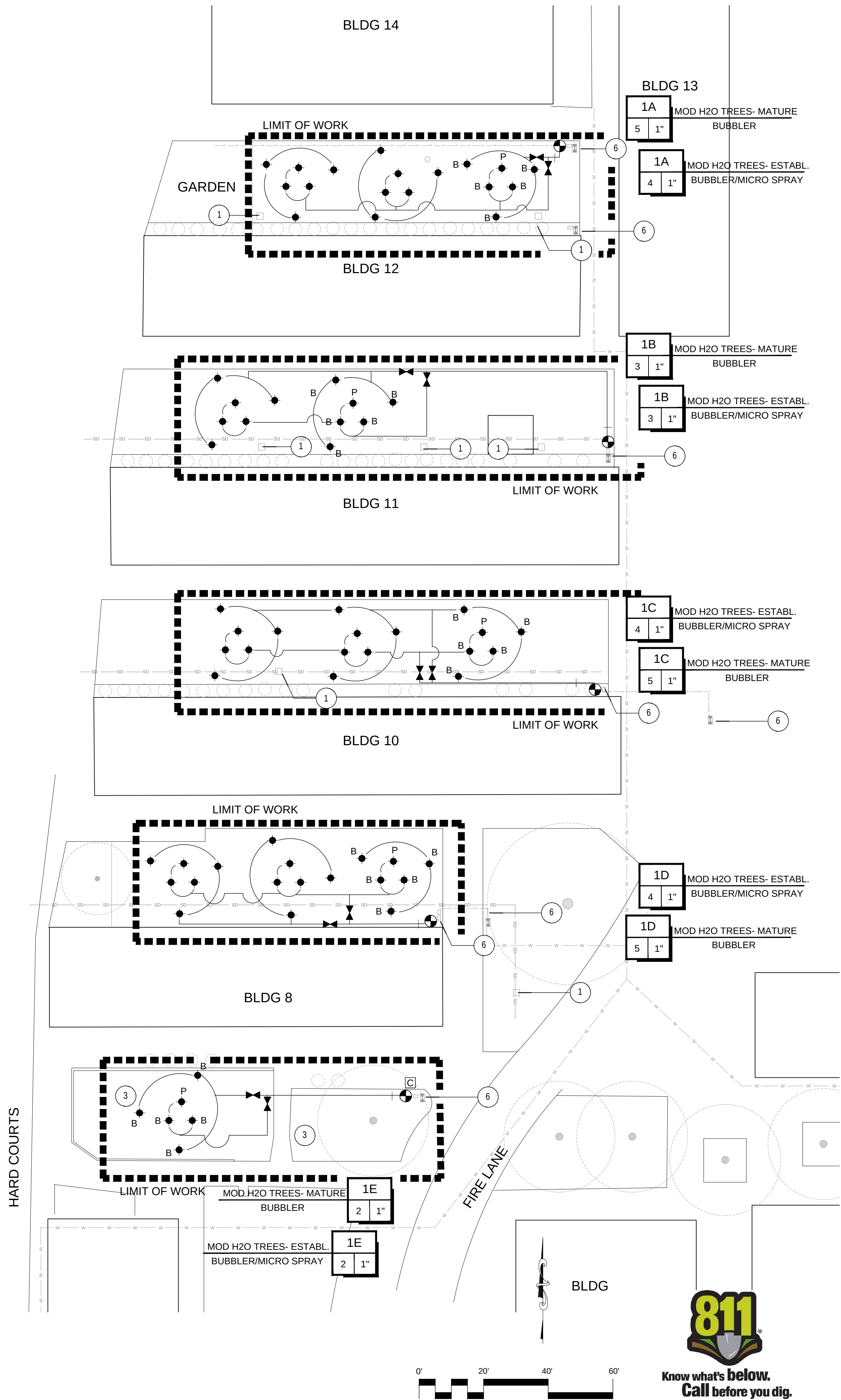
REVISIONS	DATE	BY



SHEET TITLE
TITLE SHEET

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET
L1.0
OF 09 SHEETS



IRRIGATION NOTES:

1. REFER TO IRRIGATION DETAILS AND NOTES.
2. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
3. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
4. LANDSCAPE CONTRACTOR IS TO FIELD VERIFY ENTIRE EXISTING SYSTEM FOR FUNCTIONALITY AND TO COORDINATE WITH LANDSCAPE MAINTENANCE COMPANY ON ISSUES OR CONSTRAINTS OF BURIED COMPONENTS.
5. MAKE IRRIGATION POINTS OF CONNECTION INTO EXISTING MAINLINES AS NOTED ON THE PLANS. VERIFY CONDITIONS AND LOCATIONS IN THE FIELD AND ADJUST AS NECESSARY.
6. MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.
7. ALL POP UP SPRINKLER HEADS IN SHRUB/ GROUND COVER AREAS TO BE INSTALLED SO THAT THE TOP OF THE SPRINKLER IS 1" ABOVE FINISH GRADE.
8. ALL SPRINKLER HEADS TO BE INSTALLED PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATION UNLESS OTHERWISE NOTED.
9. LOW HEAD DRAINAGE WILL NOT BE ALLOWED AND ALL HEADS SHALL RECEIVE CHECK VALVES EVEN IF NOT SHOWN ON THE PLANS.
10. ALL POINT SOURCE EMITTERS ARE TO BE LOCATED AWAY FROM SEAT WALLS AND WALKWAYS TO MINIMIZE CONFLICT WITH PEDESTRIANS.
11. THE IRRIGATION SYSTEM SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM PERFORMANCE. ELIMINATE OVER SPRAY ONTO HARDSCAPE IN ALL SHRUB AREAS AND IN TURF AREAS PRIOR TO END OF MAINTENANCE PERIOD. IF LOW TRAJECTORY HEADS NEED TO BE USES THEY SHALL BE SUBSTITUTED.
12. INSTALL ALL PIPE MATERIALS AND EQUIPMENT PER DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON SWING JOINTS AND VALVE ASSEMBLIES.
13. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR SITE DIMENSION DIFFERENCES EXIST. IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF SUCH CONDITIONS.

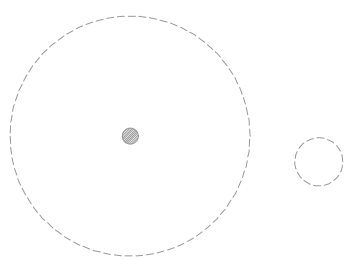
IRRIGATION KEYNOTES

- ① EXISTING DRAIN TO BE PROTECTED IN PLACE.
- ② EXISTING STAGE TO BE PROTECTED IN PLACE.
- ③ REPAIR AND REPLACE ANY IRRIGATION EQUIPMENT DAMAGED DURING DEMO OR CONSTRUCTION.
- ④ EXISTING CONCRETE BENCH TO BE PROTECTED IN PLACE.
- ⑤ EXISTING STADIUM STEPS TO BE PROTECTED IN PLACE.
- ⑥ EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.

SCH 40 PVC SLEEVING CHART		
1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE

PIPE SIZING CHART	
	3/4" PIPE
	1" PIPE
	1 1/4" PIPE
	1 1/2" PIPE
	2" PIPE

STATION NUMBER	
FLOW (GPM)	VALVE SIZE



EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.

EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
	RAINBIRD PPSB SERIES ELECTRIC CONTROL VALVE. EXTEND EXISTING MAINLINE. SAME SIZE TO NEW VALVE WHERE NEW MAINLINE IS NOT CLEARLY SHOWN.	PER PLAN	'C'/L1.2	(2, 3)
	RAINBIRD BTBS-BTLT BATTERY OPERATED CONTROLLER. 1 STATION FOR SMALLER SYSTEMS AS SHOWN. 3 TREES AND 2 STATION FOR 4+ TREES.	A=4 ST. B=1 ST.	'C'/L1.2	(3)
	EXISTING POTABLE WATER LINE - TO BE PROTECTED IN PLACE.	PER PLAN		
	EXISTING MAINLINE - TO BE PROTECTED IN PLACE.	-		
	NEW PVC CL 315 MAINLINE - 18" MIN. COVER	2"	'A, B'/ L1.2	(1, 2)
	NEW FEBCO 825YA BACKFLOW PREVENTER	1 1/2"	'A, B'/ L1.2	(1, 2)
	NIBCO T-585 BALL VALVE	1" ON LATERAL 2" ON MAINLINE	'G'/ L1.2	(1, 2)
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MIN. COVER. 3/4" UNTIL LATERAL CONNECTING TO VALVE WHERE IT IS UPSIZED TO 1".	PLAN SIZE	'A, B'/ L1.2	(1, 2)
	SCH 40 PVC IRRIGATION PIPE SLEEVE - 24" MIN. COVER. WATER BORE WHENEVER POSSIBLE WITHOUT DAMAGING EXISTING PLANT MATERIAL.	3"	'A, B'/ L1.2	
(1) PIPES AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY.				
(2) ALL MAINLINE TEES AND 90'S ARE TO BE SCH 80 PVC AND SHALL BE THE SAME SIZE AS THE MAINLINE, REDUCING WHEN NECESSARY JUST BEFORE THE VALVES.				
(3) ALL VALVE BOX COVERS TO BE CARSON/BROOKS GREEN VALVE BOXES OR EQUAL.				

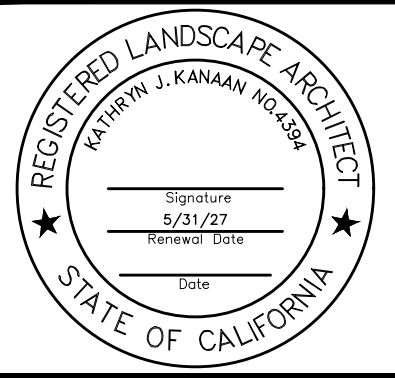
IRRIGATION LEGEND			
SYMBOL	MANUFACTURER/MODEL #	PSI	FLOW (GPM)
SHRUB HI-POP SPRAY HEADS			
	RAINBIRD 1806-SAM W/ HUNTER 4Q FOR ESTABLISHMENT 'P', RAINBIRD RWS-B-C-1402 BUBBLER 'B'. COMBO EXAMPLE SHOWN FOR EACH TREE TYPE AND TO BE MATCHED ALL SIMILAR TREES.	30	.18+.5 .5 ESTABLISH MATURITY
MISCELLANEOUS			
REPAIR AND REPLACE WITH LIKE MATERIAL, ANY EXISTING IRRIGATION EQUIPMENT, WITHIN SCOPE OF WORK, DAMAGED DURING INSTALLATION			
(1) MINOR ADJUSTMENTS IN THE FIELD MAY BE NECESSARY TO AVOID VERTICAL OBJECTS OR MEMORIAL STONES.			



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8845 NOELINE AVENUE
SPRING VALLEY, CA 91977
CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

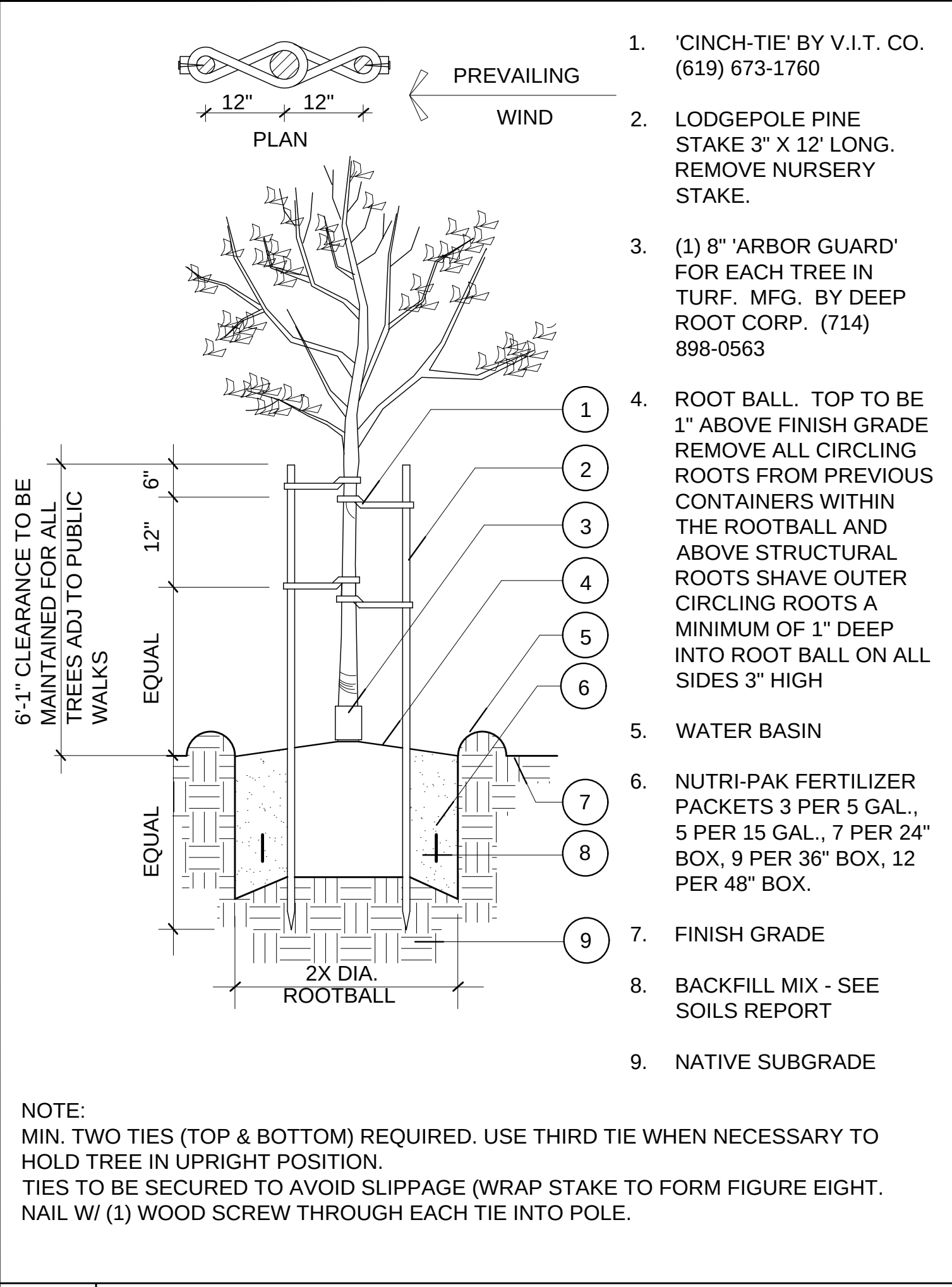


SHEET TITLE
IRRIGATION PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET
L1.1
OF 9 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LANSVSD CALIFIRE GRANT LANDSCAPE\AUTOCAD\CD\SSPRING VALLEY ACADEMY\26004 SV IPD.DWG



I DOUBLE STAKED TREE

Linear Style Planting with DeepRoot Barriers

Determine the correct number of panels to be used. Depending upon the actual planting plan and the number of trees involved the length of linear barrier will vary, but as a general rule of thumb take the anticipated mature canopy diameter of the tree and add 2 feet (61cm). This will be the number of feet necessary for a Linear style planting application. (See chart below.)

A. Choose the barrier that best suits the application.

B. Dig the trench to the depth based upon the particular barrier chosen.

C. Install the barrier. When using DeepRoot Linear Barriers simply pull the appropriate number of panels out of the box (they come preassembled) and separate the joiner at the correct length. When installing DeepRoot Universal Barriers in a linear fashion you will need to join the appropriate number of panels together.

D. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide and backfill against the barriers to promote a clean smooth fit to the hardscape. be sure to keep the barrier's double top edge at least 1/2" (13mm) above grade to ensure roots do not grow over the top.

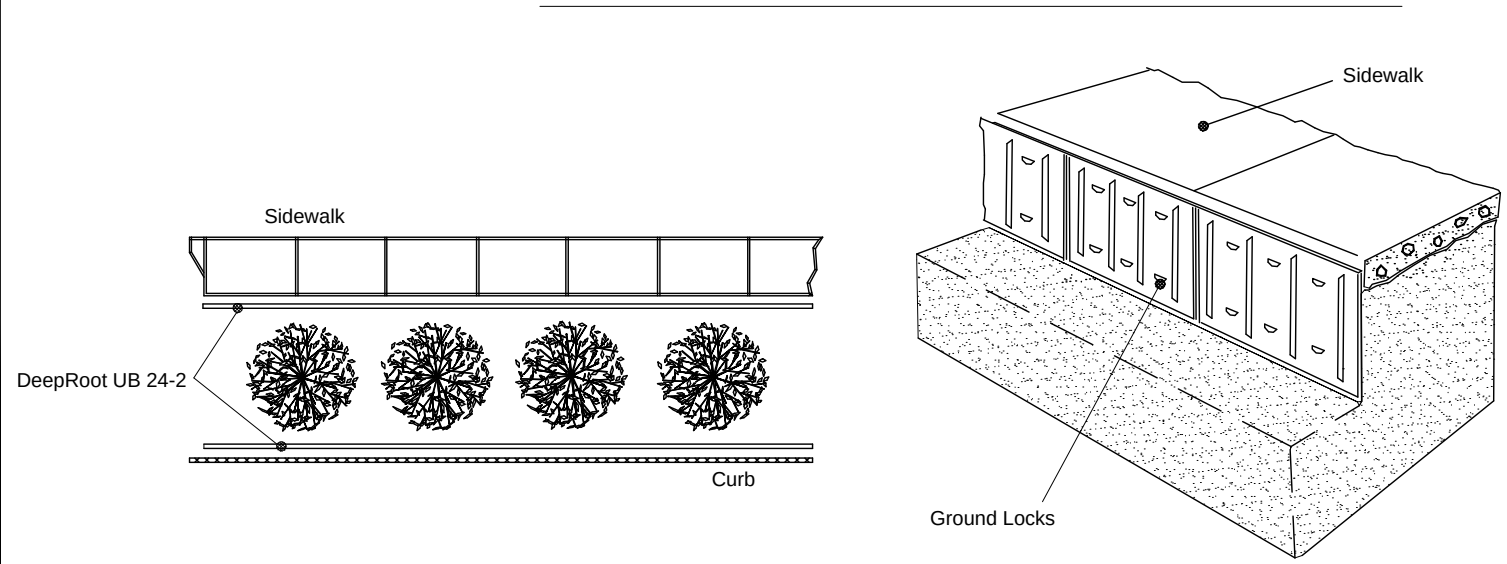
E. plant the tree(s), the linear style offers a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area, take steps to ensure healthy growth of the tree at planting, consult with a local arborist for planting tips and recommendations.

F. if the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of arbogard® tree trunk protectors which is placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and small rodents. for additional information please consult the 16 page deeproot product selection and installation guidelines. for information regarding distributors please call: 1 800 liv root (458.7668), for help with difficult drainage or other difficult installation questions please call deeproot technical support at: 1 800 root tek (766.9835).

For a simple formula to determine the quantity of panels required for a Linear application use:

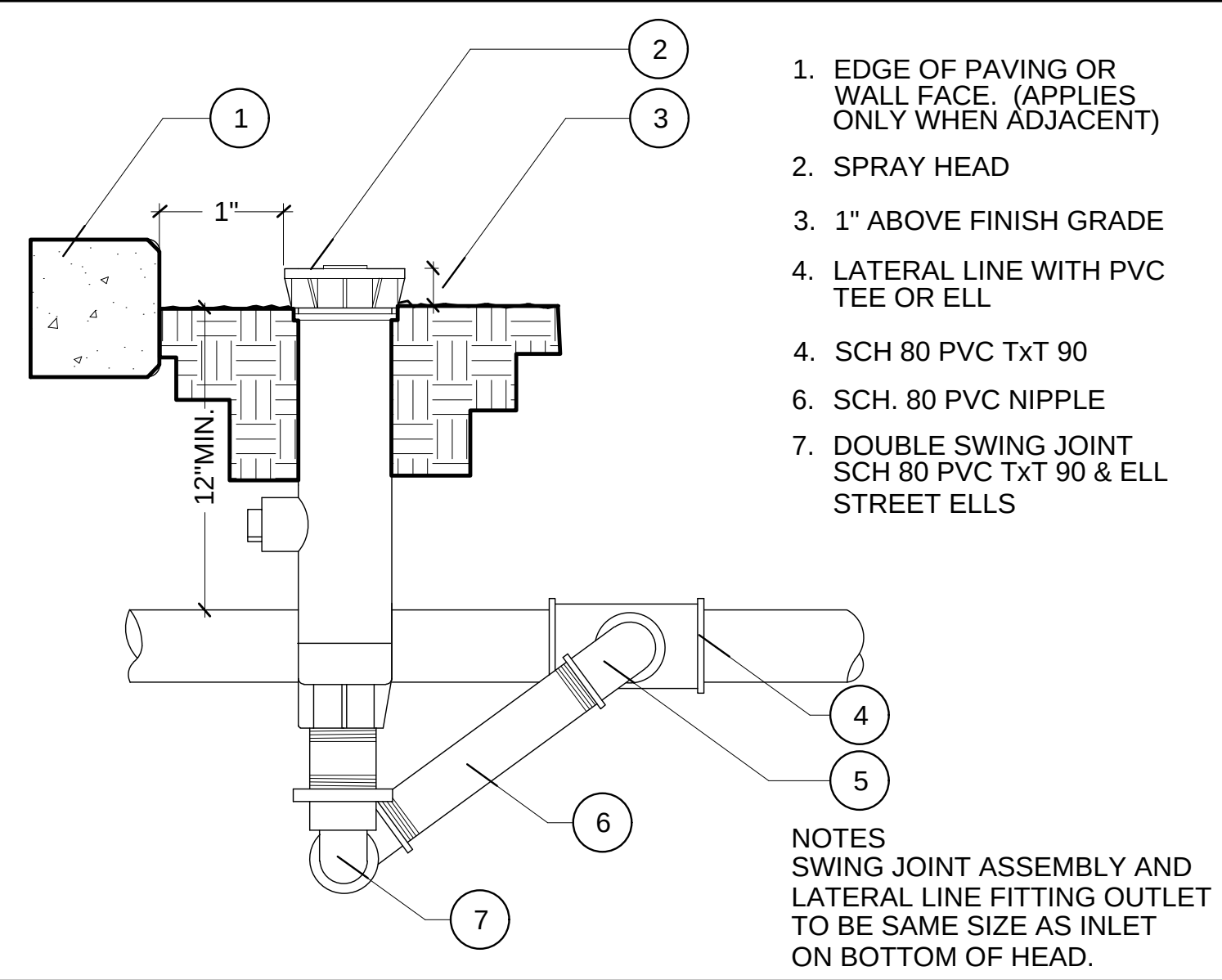
Estimated Diameter of the Tree Canopy at Maturity + 2' (61cm) = Length of Barrier per Side.

For One Side of Tree	Expected Tree Canopy at Maturity	Number of Feet of Linear Barrier	Universal Barrier # Panels
12" (3.6m) Diameter	+2' (61cm) = 14' (4.2m)		7 Panels
18" (6.5m) Diameter	+2' (61cm) = 20' (6.1m)		10 Panels
24" (7.3m) Diameter	+2' (61cm) = 26' (7.9m)		13 Panels

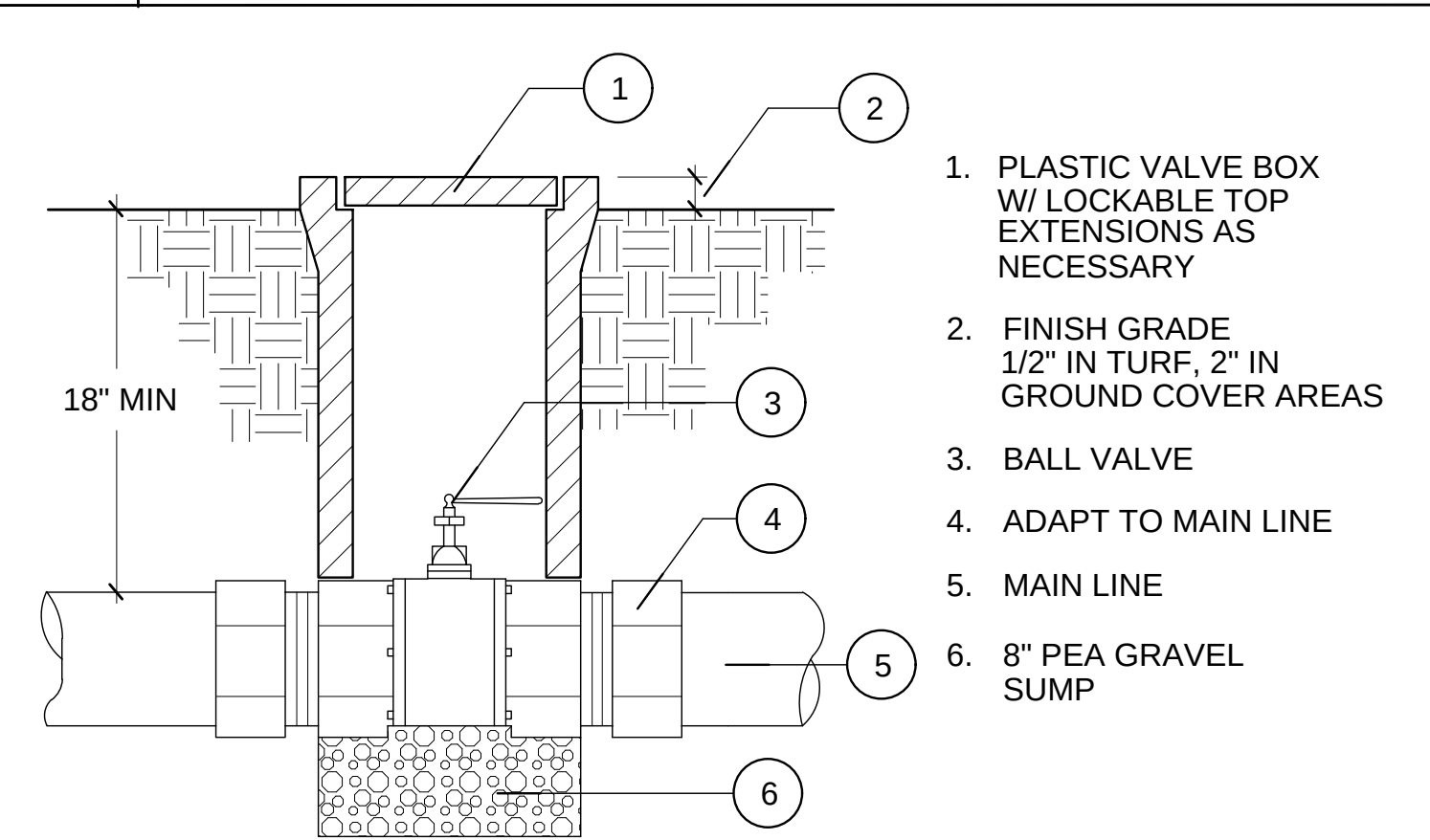


J DEEPROOT BARRIER

TO BE 24" DEEP ON ALL SIDES



F SHRUB SPRAY HEAD



G BALL VALVE

ACCEPTABLE

REJECTABLE

Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

1. ASPECT RATIO TO BE LESS THAN 0.66 ON ALL BRANCH UNIONS. ASPECT RATIO IS THE DIAMETER OF BRANCH (A) AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION. (B) DIVIDED BY THE DIAMETER OF THE TRUNK.

2. 1 CENTRAL LEADER. NO CO-DOMINANT LEADERS

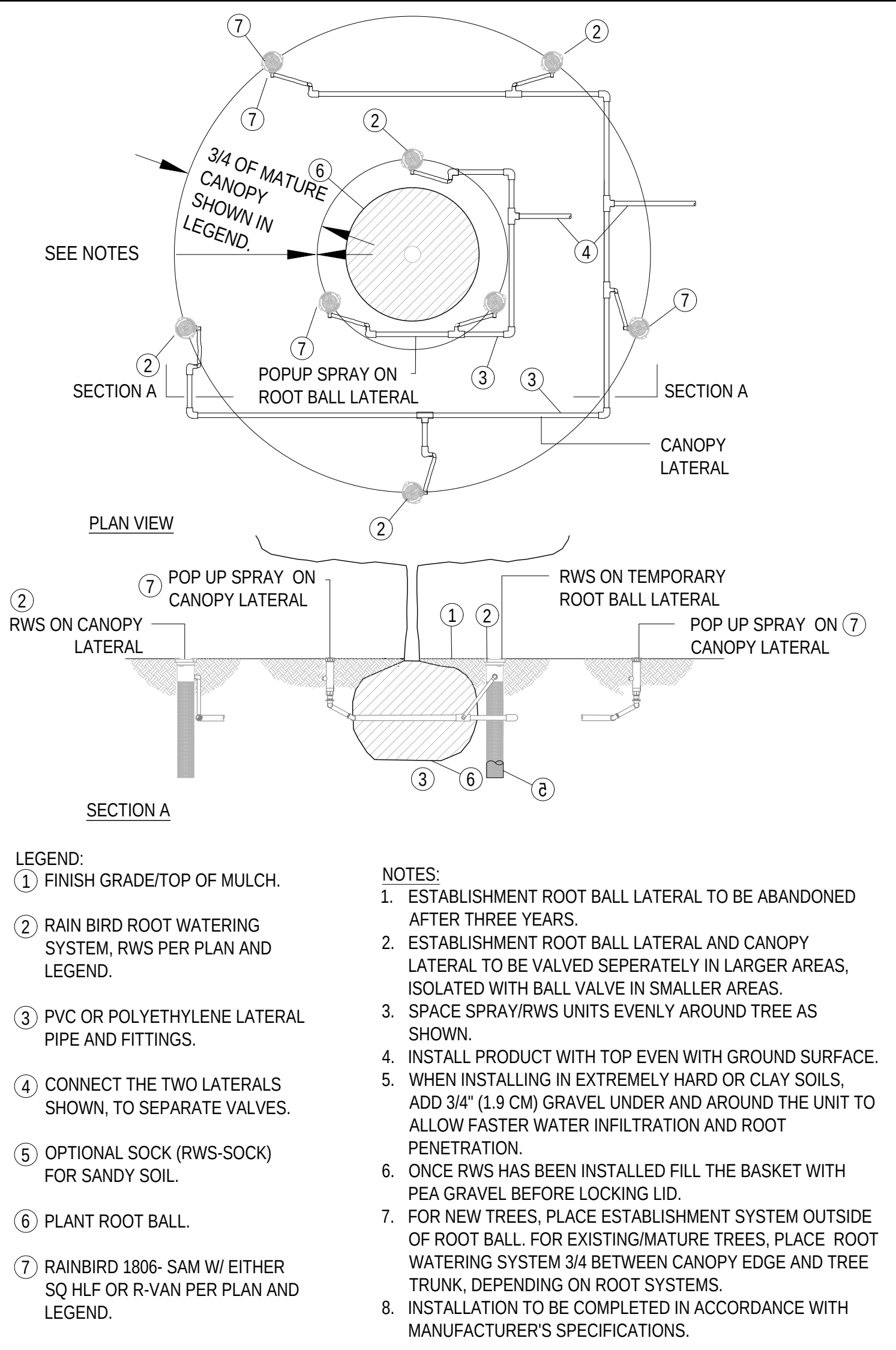
3. MULTIPLE LEADERS. SEVERAL CO-DOMINANT LEADERS.

4. ASPECT RATIO GREATER THAN 0.66

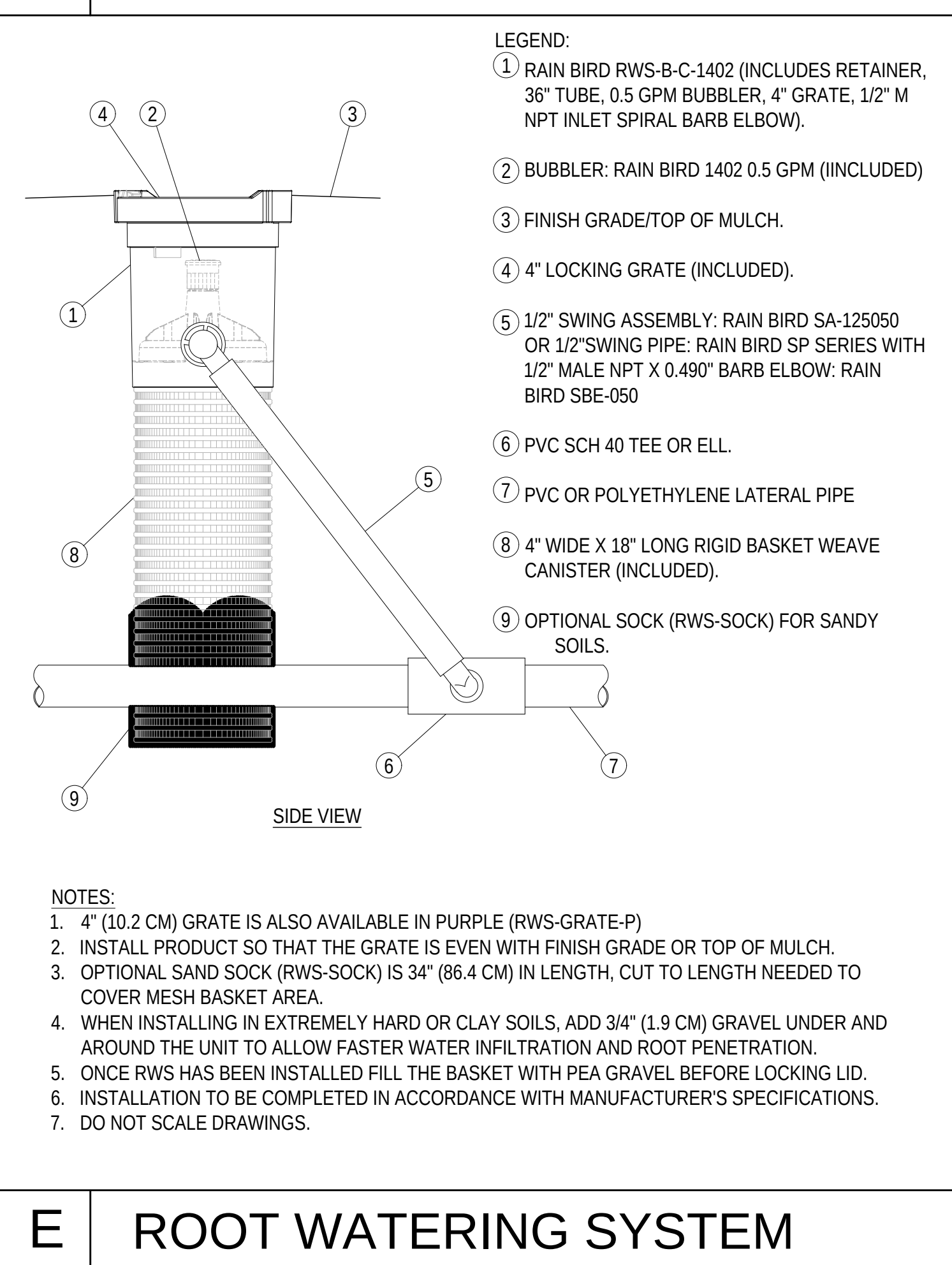
NOTE: ANY TREE NOT MEETING THE CROWN OBSERVATIONS DETAIL MAY BE REJECTED.

URBAN TREE FOUNDATION © 2014

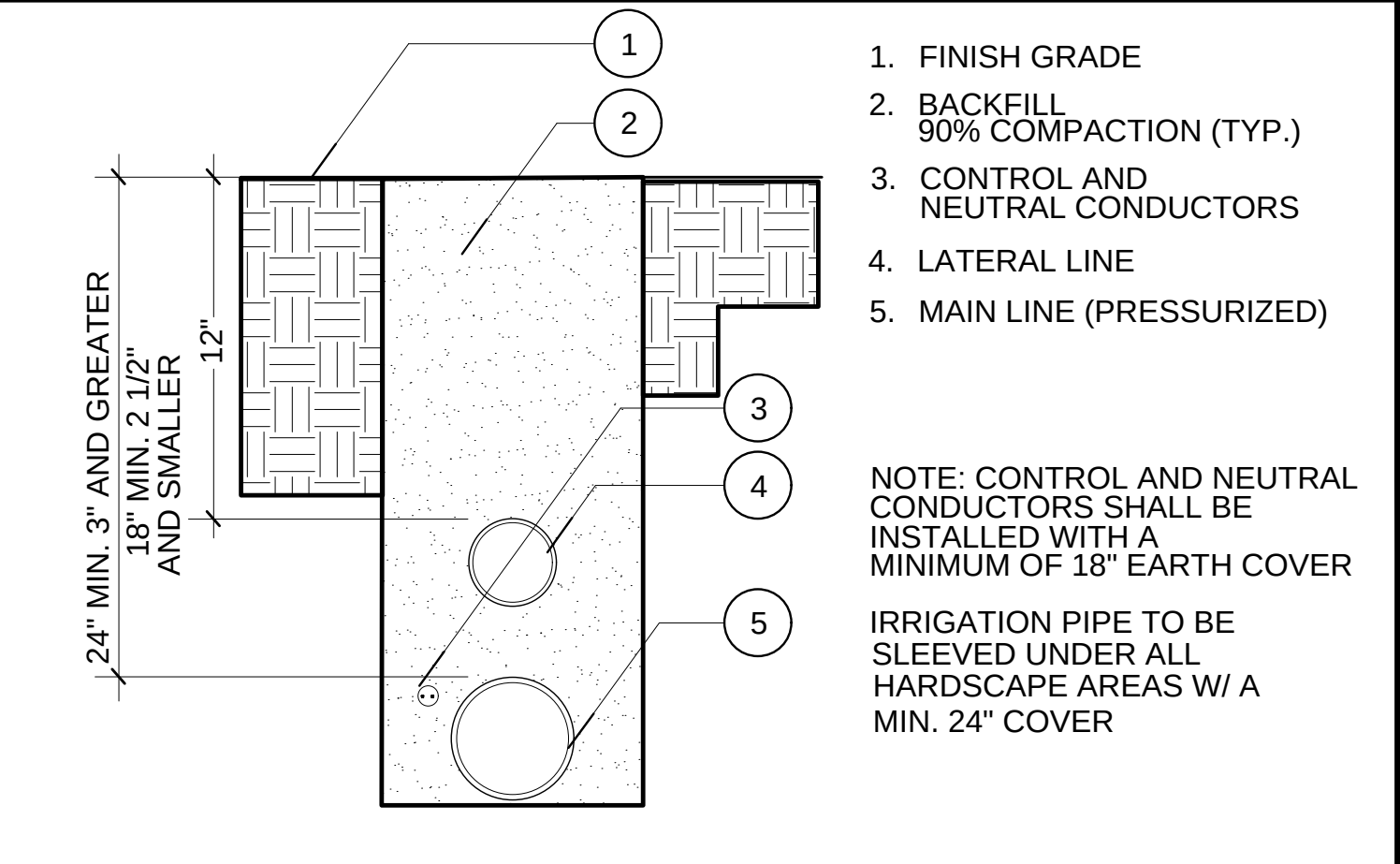
H HIGH BRANCHED CROWN OBSERV.



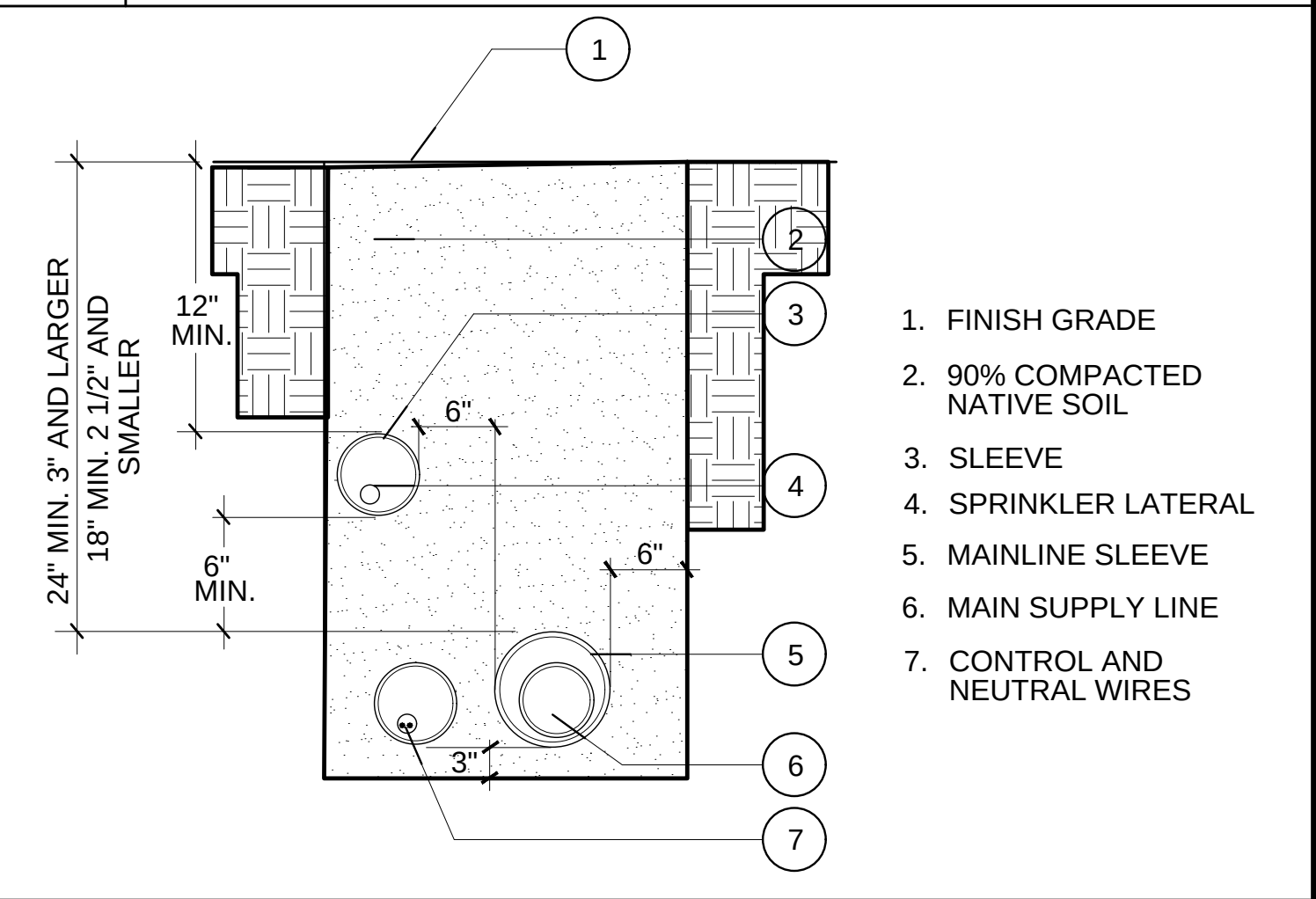
D TREE WATERING LAYOUT



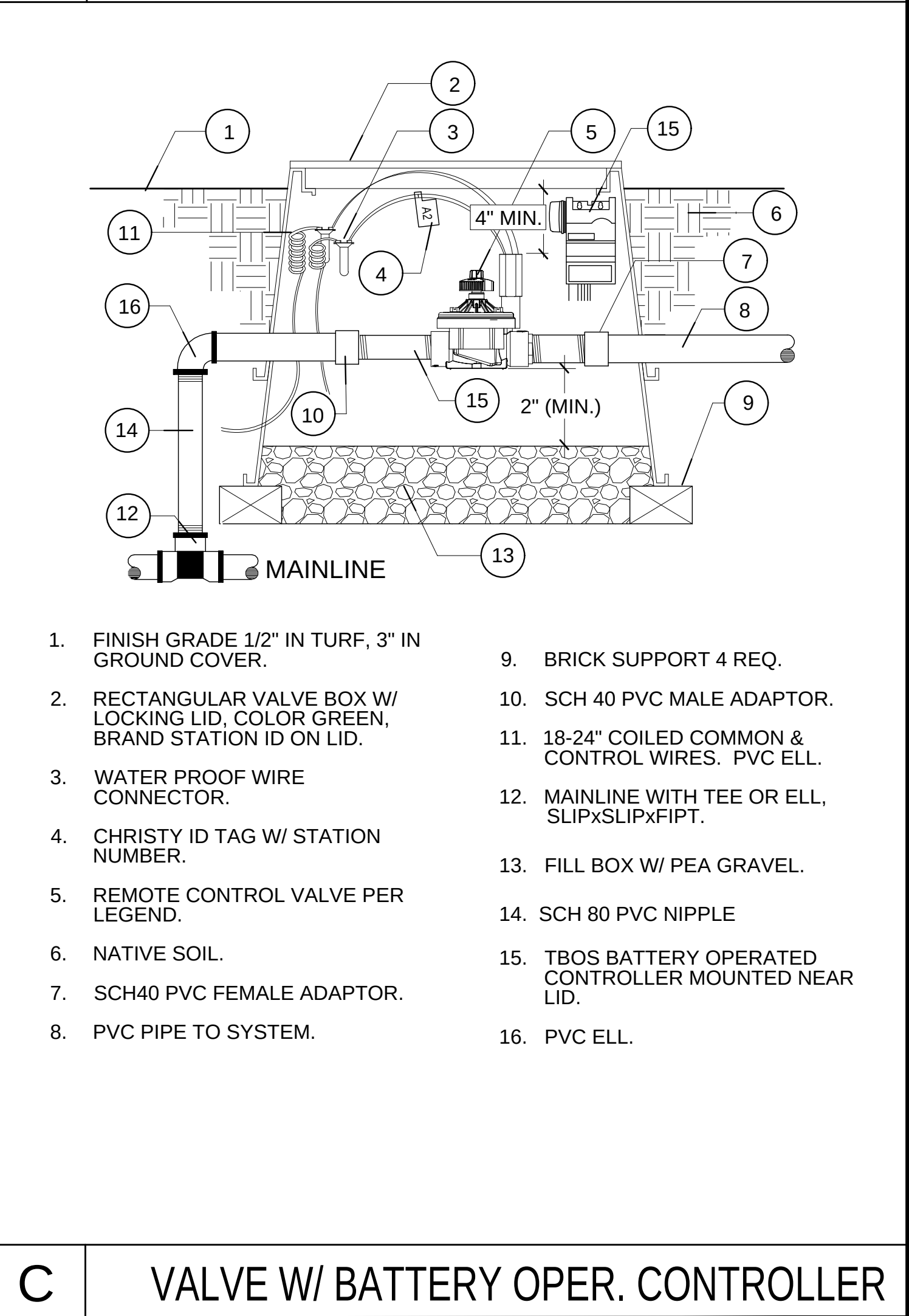
E ROOT WATERING SYSTEM



A TRENCHING



B SLEEVING



C VALVE W/ BATTERY OPER. CONTROLLER

KDA
LANDSCAPE ARCHITECTS

325 7th Avenue, Unit 214
San Diego, CA 92101-7176
1 619 840 5174
website www.kda-landscapearchitects.com

CLIENT: **LA MESA - SPRING VALLEY SCHOOLS**

3888 CONRAD DRIVE
SPRING VALLEY, CA 91977

619.668.5760 X 4701
CONTACT: SHAUN GABRIELS

PROJECT: **SPRING VALLEY ACADEMY**

3900 CONRAD DRIVE
SPRING VALLEY, CA 91977
CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT

KATHARIN J. KANAAN NGUYEN

Signature: 8/31/27
Registration Date:

STATE OF CALIFORNIA

SHEET TITLE

**IRRIGATION/
PLANTING
DETAILS**

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L1.2

OF 09 SHEETS

PART I - GENERAL REQUIREMENTS

A. DESCRIPTION

1. WORK INCLUDED: UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF MAINS, LATERALS, RISERS AND FITTINGS, QUICK COUPLERS, BALL VALVES, BACKFLOW PREVENTERS, FURNISHING AND INSTALLATION OF IRRIGATION CONTROLLERS, BOOSTER PUMPS, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR A COMPLETE OPERATING SYSTEM.
- a. THE INTENT OF THE DRAWINGS AND SPECIFICATION IS TO INDICATE AND SPECIFY A COMPLETE AND EFFICIENT IRRIGATION SYSTEM READY FOR USE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MEETING THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND COUNTY CODES, AND THESE PLANS/SPECIFICATIONS.
- b. IRRIGATION SYSTEMS SHALL BE CONSTRUCTED TO THE SIZES AND GRADES AND AT THE LOCATION SHOWN ON THE DRAWINGS. LINES SHOWN ON THE PLANS ARE ESSENTIALLY DIAGRAMMATIC. LOCATIONS OF ALL HEADS, VALVES, ETC., SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AT THE TIME OF CONSTRUCTION. DO NOT EXCEED SPACING OF THE HEADS AS SHOWN ON PLANS.
- c. THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS AND THE SPECIAL CONDITIONS OF THESE SPECIFICATIONS SHALL GOVERN THE WORK OF THIS SECTION AS IF HEREIN WRITTEN IN FULL.
- d. THE CONTRACTOR SHALL MAINTAIN, CONTINUOUSLY, A COMPETENT SUPERINTENDENT OR FOREMAN, SATISFACTORY TO THE OWNER, DURING THE PROGRESS OF WORK, WITH AUTHORITY TO ACT FOR HIM IN ALL MATTERS PERTAINING TO THE WORK.
- e. WORK NOTED AS "N.I.C.," "EXISTING" OR "TO BE SUPPLIED AND/OR INSTALLED BY OTHERS" IS NOT A PART OF THIS SECTION.
- f. THE WORK IN THIS SECTION SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES AND TRADES RESPONSIBLE FOR THEIR INSTALLATION. ANY DISCREPANCIES IN LOCATION FROM WHAT IS SHOWN ON THE PLANS ARE TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
2. FIELD CONDITIONS: VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS. INSPECT RELATED WORK AND ADJACENT SURFACES. REPORT TO THE LANDSCAPE ARCHITECT ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
- THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.
3. PERMITS AND FEES: THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY FEES AND PERMITS REQUIRED IN THE PURSUIT OF HIS WORK AS REQUIRED BY GOVERNING CODES. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WITH A DESCRIPTION OF THE NECESSARY CHANGES TO THE DOCUMENTS AND THE CONTRACT PRICE DIFFERENCE.
4. ALL ASSEMBLIES SPECIFIED HEREIN SHALL BE INSTALLED IN ACCORDANCE WITH THE RESPECTIVE DETAILS. IN THE ABSENCE OF DETAIL DRAWINGS OR SPECIFICATIONS PERTAINING TO THE SPECIFIC ITEMS REQUIRED TO COMPLETE THE WORK, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY ACTS OF THEFT OR VANDALISM DURING CONSTRUCTION, ESTABLISHMENT, AND MAINTENANCE PERIODS.
6. PERMISSION TO SHUT OFF ANY WATER LINES MUST BE OBTAINED FROM THE OWNER. DISRUPTION OF EXISTING SYSTEMS SHALL BE KEPT TO A MINIMUM.
7. CONTRACTOR SHALL MAINTAIN IRRIGATION SYSTEM THROUGHOUT PLANT ESTABLISHMENT AND MAINTENANCE PERIOD.
8. CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE.

B. RELATED WORK DESCRIBED ELSEWHERE

PLANTING: NOTES

C. QUALITY ASSURANCE

1. CODES AND STANDARDS: IN ADDITION TO COMPLYING WITH ALL PERTINENT CODES AND REGULATIONS, COMPLY WITH THE LATEST RULES OF THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SAFETY ORDERS OF THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, FOR ALL ELECTRICAL WORK AND MATERIALS.
2. IT IS THE INTENTION OF THIS SPECIFICATION TO ACCOMPLISH THE WORK OF INSTALLING AN AUTOMATIC IRRIGATION SYSTEM, WHICH WILL OPERATE IN AN EFFICIENT AND SATISFACTORY MANNER. THE IRRIGATION SYSTEM SHALL BE INSTALLED AND MADE OPERATIONAL ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE INSTALLATION AND SPRINKLER IRRIGATION OPERATION AS SET FORTH BY THE MOST RECENT BEST MANAGEMENT PRACTICES (BMP) OF THE IRRIGATION ASSOCIATION.
3. THE SPECIFICATION CAN ONLY INDICATE THE INTENT OF THE WORK TO BE PERFORMED RATHER THAN A DETAILED DESCRIPTION OF THE PERFORMANCE OF THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAID MATERIALS AND EQUIPMENT IN SUCH A MANNER THAT THEY SHALL OPERATE EFFICIENTLY AND EVENLY AND SUPPORT OPTIMUM PLANT GROWTH AND HEALTH.
4. THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND OF THE QUALITY OF ALL MATERIALS FURNISHED IN PERFORMANCE OF THE CONTRACT.
5. THE CONTRACTOR SHALL KEEP ONE COPY OF ALL DRAWINGS AND SPECIFICATIONS ON THE WORK SITE. IN GOOD ORDER. THE CONTRACTOR SHALL MAKE THESE DOCUMENTS AVAILABLE TO THE OWNER'S REPRESENTATIVE WHEN REQUESTED.
6. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE SPECIFICATION, THE FINAL DECISION AS TO WHICH SHALL BE FOLLOWED, SHALL BE MADE BY THE OWNER'S REPRESENTATIVE.
7. IN THE EVENT THE INSTALLATION IS CONTRADICTORY TO THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE INSTALLATION SHALL BE RECTIFIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY SUCH DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. IT SHALL BE DISTINCTLY UNDERSTOOD THAT NO ORAL STATEMENT OF ANY PERSON SHALL BE ALLOWED IN ANY MANNER TO MODIFY ANY OF THE CONTRACT PROVISIONS. CHANGES SHALL BE MADE ONLY ON WRITTEN AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
9. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF SUCCESSFUL EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK.

- a. INSTALLER FIELD SUPERVISION: THE INSTALLER SHALL MAINTAIN ON SITE AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.
- b. SUBMIT THE INSTALLER'S QUALIFICATIONS FOR APPROVAL.

D. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

E. CORRECTION OF WORK

1. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE. AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK, AND SEASONAL WEATHER DEMANDS, BUT NOT MORE THAN 90 (NINETY) DAYS AFTER NOTIFICATION.

F. SUBMITTALS

1. GENERAL: COMPLY WITH THE PROVISIONS OF THE GENERAL CONDITIONS FOR POLICY PROCEDURES RELATED TO SUBMITTALS.
2. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.
- a. MATERIALS LIST SHALL INCLUDE VALVES, PIPING, GLUE, HEADS, NOZZLES, ETC.
3. MATERIALS AND SAMPLES: IF MATERIALS ARE TO BE EMPLOYED, OTHER THAN DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY IRRIGATION WORK, SUBMIT FOR RECOMMENDED APPROVAL BY THE LANDSCAPE ARCHITECT MATERIALS AND EQUIPMENT HE PROPOSES TO USE. SAMPLES SHALL BE SUBMITTED A SUFFICIENT TIME IN ADVANCE OF THE START OF CONSTRUCTION TO ALLOW A PERIOD OF NOT LESS THAN SEVEN (7) DAYS FOR TESTING AND RECOMMENDED APPROVAL. THE MATERIAL AND EQUIPMENT LIST SHALL INCLUDE, BUT NOT BE LIMITED TO, POLYVINYL CHLORIDE PIPE, AUTOMATIC CONTROLLERS, CONTROL VALVES, QUICK COUPLING VALVES AND IRRIGATION HEADS/NOZZLES.
- a. RECOMMENDED APPROVAL OF IRRIGATION EQUIPMENT AND MATERIALS SHALL DEPEND ON THE FOLLOWING:
- b. CONFORMANCE TO SPECIFICATION REQUIREMENTS.
- c. ACCEPTABLE TEST RESULTS AND/OR FIELD PERFORMANCE.
- d. DURABILITY AND LOW MAINTENANCE.
- e. AVAILABILITY OF PARTS AND SERVICE.
- f. COMPATIBILITY WITH OWNER'S MATERIALS INVENTORIES.
4. AS BUILT RECORD SET OF DRAWINGS:
- a. THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE, A COMPLETE RECORD SET OF BLACK LINE PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND THE EXACT LOCATIONS, SIZES AND KINDS OF EQUIPMENT. PRINTS FOR THIS PURPOSE MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT.
- b. THE DRAWINGS SHALL ALSO SERVE AS WORK PROGRESS SHEETS, AND THE CONTRACTOR SHALL MAKE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING THE WORK AS ACTUALLY INSTALLED. THESE DRAWINGS SHALL BE AVAILABLE AT ALL TIMES FOR INSPECTIONS AND SHALL BE KEPT IN A LOCATION DESIGNATED BY THE OWNER'S REP.

- c. IN ORDER TO COMPLETE THE RECORD DRAWINGS IN A NEAT, LEGIBLE MANNER, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTSMAN, SATISFACTORY TO THE OWNER'S REP., TO INDICATE THE NECESSARY CHANGES ON BLACK LINE PRINTS PROCURED FROM THE OWNER. THE DRAWINGS SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE IN PAPER FORMAT AND AS A PDF FILE OF EACH DOCUMENT ON COMPACT DISK OR FLASH DRIVE TWO WEEKS PRIOR TO FINAL ACCEPTANCE.
- d. THE CONTRACTOR SHALL DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF:
- THE ROUTING OF THE SPRINKLER MAIN LINES, SLEEVING,
 - CONNECTIONS TO THE EXISTING WATER LINES
 - CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLING VALVES
 - ANY OTHER PERTINENT UNDERGROUND ITEM, IF SO DEEMED BY THE LANDSCAPE ARCHITECT.
 - ALL VALVES SHALL BE NUMBERED BY STATION AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE AS BUILT RECORD SET OF DRAWINGS.
 - CONTROLLER LOCATIONS WITH GROUNDING RODS
 - WIRE RUNS, SPLICE LOCATIONS
 - ALL CHANGES IN DIRECTION AND DEPTH OF MAIN LINE PIPE SHALL BE NOTED EXACTLY AS INSTALLED. DIMENSIONS FOR PIPES SHALL BE SHOWN AT NO GREATER THAN A 50 FT. MAXIMUM INTERVAL.

- e. AS BUILT RECORD SET OF DRAWINGS SHALL BE SIGNED AND DATED BY THE CONTRACTOR ATTESTING TO AND CERTIFYING THE ACCURACY OF THE AS BUILT RECORD SET OF DRAWINGS. IT SHALL HAVE "AS BUILT RECORD SET OF DRAWINGS," COMPANY NAME, ADDRESS, PHONE NUMBER AND THE NAME OF THE PERSON WHO CREATED THE DRAWING AND THE CONTACT NAME. (IF DIFFERENT).

5. TESTING DATA FROM REQUIRED PRESSURE TESTING.

G. PRODUCT HANDLING

1. PROTECTION: USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
2. DELIVERY: POLYVINYL CHLORIDE PIPE SHALL BE DELIVERED TO THE WORK SITE IN UNBROKEN BUNDLES OR ROLLS PACKAGED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, THREADED OR PLAIN.
3. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE RECOMMENDED APPROVAL OF THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- H. PROTECTION
1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL THEIR WORK FROM DAMAGE, DESTRUCTION, OR LOSS, AND SHALL PROTECT THE OWNER'S PROPERTY FROM DAMAGE ARISING IN CONNECTION WITH THIS CONTRACT. CONTRACTOR SHALL MAKE GOOD ANY SUCH DAMAGE, DESTRUCTION, LOSS OR INJURY. CONTRACTOR SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT SAFEGUARDS, SUCH AS RAILINGS, TEMPORARY WALLS, LIGHTS, ETC., AGAINST THE OCCURRENCE OF ACCIDENTS, INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY RESULTING FROM THEIR WORK, AND SHALL ALONE BE RESPONSIBLE FOR THE SAME IF SUCH OCCURS.
3. ALL EXISTING PAVING, STRUCTURES, EQUIPMENT OR PLANT MATERIAL SHALL BE PROTECTED AT ALL TIMES, INCLUDING THE IRRIGATION SYSTEM RELATED TO PLANTS, FROM DAMAGE BY WORKERS AND EQUIPMENT. THE CONTRACTOR SHALL FOLLOW ALL PROTECTION REQUIREMENTS INCLUDING PLANT PROTECTION PROVISION OF THE GENERAL CONTRACT DOCUMENTS. ALL DAMAGES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. REPAIRS AND OR REPLACEMENT SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. INCLUDING THE SELECTION OF A CONTRACTOR TO UNDERTAKE THE REPAIR OR MAINTENANCE. REPAIRS SHALL BE AT NO COST TO THE OWNER.
4. FOR TREES DAMAGED TO THE POINT WHERE THEY WILL NOT BE EXPECTED TO SURVIVE OR WHICH ARE SEVERELY DISFIGURED AND THAT ARE TOO LARGE TO REPLACE, THE COST OF DAMAGES SHALL BE AS DETERMINED BY THE OWNER'S ARBORIST USING ACCEPTED TREE VALUE EVALUATION METHODS.
5. THE CONTRACTOR SHALL REFRAIN FROM TRENCHING WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN. THE OWNER'S REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO RELOCATE PROPOSED IRRIGATION WORK, BORE LINES BENEATH ROOTS OR USE AIR-SPADE TECHNOLOGY TO DIG TRENCHES THROUGH AND UNDER THE ROOT SYSTEM TO AVOID DAMAGE TO EXISTING TREE ROOT AREAS.

I. EXCAVATING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
- a. DO NOT BEGIN ANY EXCAVATION UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED.
- b. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, MAINTAIN STAKES AND OR MARKINGS SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE TO THEIR REMOVAL.
2. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG-ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG-ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

J. TEMPORARY UTILITIES

1. ALL TEMPORARY PIPING, WIRING, METERS, PANELS AND OTHER RELATED APPURTENANCES REQUIRED BETWEEN SOURCE OF SUPPLY AND POINT OF USE SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. EXISTING UTILITIES MAY BE USED WITH THE WRITTEN PERMISSION OF THE OWNER.

K. CUTTING, PATCHING, TRENCHING AND DIGGING

1. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, TRENCHING OR PATCHING OF THEIR WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS COME TOGETHER AS SHOWN UPON, OR IMPLIED BY, THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETED PROJECT.
2. DIGGING AND TRENCHING OPERATIONS SHALL BE SUSPENDED WHEN THE SOIL MOISTURE IS ABOVE FIELD CAPACITY.

PART II - PRODUCTS

A. RECLAIMED WATER SYSTEM DESIGNATION

1. WHERE IRRIGATION SYSTEMS USE RECLAIMED WATER, ALL PRODUCTS INCLUDING VALVE BOXES, LATERAL AND MAIN LINE PIPE, ETC. WHERE APPLICABLE AND/OR REQUIRED BY LOCAL CODE SHALL HAVE THE RECLAIMED WATER PURPLE COLOR DESIGNATION.

B. PIPE

1. PLASTIC PIPE:
- a. UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF LATERAL LINES AND MAIN LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF PIPE, TUBE AND FITTINGS, THE FURNISHING AND INSTALLING OF ANCHORS, THRUST BLOCKS AND LOCATION WIRE, THE IMPROVEMENTS, LINE FLUSHING AND TESTING, AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- b. MAIN SUPPLY PRESSURE LINES SHALL BE PVC, 4" AND LARGER CLASS 200, 2" - 3" CLASS 315, 1 1/2" AND SMALLER SCHEDULE 40, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- 1) SAND SHALL CONSIST OF NATURAL OR MANUFACTURED GRANULAR MATERIAL, FREE OF ORGANIC MATERIAL, MICA, LOAM, CLAY OR OTHER SUBSTANCES NOT SUITABLE FOR THE INTENDED PURPOSE.
- 2) SAND SHALL BE MASONRY SAND ASTM C 144 OR COARSE CONCRETE SAND, ASTM C 33.
- c. LATERAL NON-PRESSURE LINES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- d. IRRIGATION LINE SLEEVES SHALL BE PVC, SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL.
- e. LOW VOLTAGE CONTROL WIRE SLEEVES (VALVE WIRES) SHALL BE PVC SCHEDULE 40 POLYVINYL CHLORIDE, AS MANUFACTURED BY LASCO INDUSTRIES, OR APPROVED EQUAL. ALL EXPOSED WIRES SHALL BE SLEEVED IN PVC SCHEDULE 40 ULV ELECTRICAL CONDUIT WITH ULV SCHEDULE 40 FITTINGS.
2. IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OR CLASS OF MATERIAL, THE WORKING PRESSURE OR PRESSURE RATING AT 73.4 DEGREES F., THE MANUFACTURER'S NAME OR TRADE MARK, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
3. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS:
- a. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS APPROVED FOR IRRIGATION SYSTEMS SHALL BE POLYVINYL CHLORIDE, TYPE II, GRADE I, SCHEDULE 40, HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS.
- b. THE SCHEDULE 40 FITTINGS SHALL BE TAPERED SOCKET TYPE, OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS.
- c. MACHINE THREADED FITTINGS WILL BE ACCEPTABLE ONLY IF THREAD_STRIPPING RESISTANCE TEST RESULTS ARE SUBMITTED AND APPROVED.
- d. IN LINE FITTINGS, SUCH AS COUPLINGS, UNIONS AND BUSHINGS MAY BE MACHINED FROM EXTRUDED STOCK.
- e. PLASTIC SADDLE AND FLANGE FITTINGS WILL NOT BE ACCEPTABLE.
- f. ALL FITTINGS SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: THE NORMAL PIPE SIZE, THE TYPE AND SCHEDULE OF MATERIAL, AND THE NATIONAL SANITATION FOUNDATION (N.S.F.) SEAL OF APPROVAL.
4. PVC SCHEDULE 80 THREADED RISERS AND NIPPLES:

- a. TYPE I, GRADE I, SCHEDULE 80, HIGH IMPACT MOLDED, MANUFACTURED FROM VIRGIN COMPOUNDS AS SPECIFIED FOR PIPING AND CONFORMING TO ASTM D-2464.

- b. THREADED ENDS SHALL BE MOLDED THREADS ONLY. MACHINED THREADS ARE NOT ACCEPTABLE.

C. SOLVENT CEMENTS AND THREAD LUBRICANT

6. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT AND PRIMER BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.
7. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPE JOINT COMPOUND (PIPE DOPE) SHALL BE USED ON ALL GALVANIZED THREADED CONNECTIONS. PIPE JOINT COMPOUND IS A WHITE, COLORED, NON-SEPARATING THREAD SEALANT COMPOUND DESIGNED TO SEAL THREADED CONNECTIONS AGAINST LEAKAGE DUE TO INTERNAL PRESSURE. IT SHALL CONTAIN PTFE (POLYTETRAFLUOROETHYLENE) TO PERMIT A TIGHTER ASSEMBLY WITH LOWER TORQUE, SECURE PERMANENT SEALING OF ALL THREADED CONNECTIONS AND ALLOW FOR EASY DISASSEMBLY WITHOUT STRIPPING OR DAMAGING THREADS.

D. VALVES

1. BALL VALVES:
- a. ALL BALL VALVES SHALL BE ALL BRONZE CONSTRUCTION FULL PORT; 1/2" THRU 2", NIBCO TS85.
- b. WORKING PRESSURE RATED: 150 PSI STEM, 400 PSI W.O.G.
- c. BALL VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
2. BUTTERFLY VALVES:
- a. ALL BUTTERFLY VALVES SHALL BE 2 1/2" AND LARGER, NIBCO WD2000.
- b. BUTTERFLY VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSON/BROOKS PLASTIC TURF BOX.
3. REMOTE CONTROL VALVES
- a. REMOTE CONTROL VALVES SHALL BE ELECTRICALLY OPERATED, SINGLE SEAT, NORMALLY CLOSED CONFIGURATION, EQUIPPED WITH FLOW CONTROL ADJUSTMENT AND CAPABILITY FOR MANUAL OPERATION.
- b. VALVES SHALL BE ACTUATED BY A NORMALLY CLOSED LOW VOLTAGE SOLENOID USING 24 VOLTS, 50/60 CYCLE SOLENOID POWER REQUIREMENT. SOLENOID SHALL BE EPOXY ENCASED. A UNION SHALL BE INSTALLED ON THE DISCHARGE END.
- c. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SAME NUMERICAL SEQUENCE AS INDICATED ON DRAWINGS.
- d. REMOTE CONTROL VALVES SHALL BE AS INDICATED ON THE DRAWINGS.
- e. ALL VALVES SHALL HAVE A T.C. CHRISTY VALVE MARKING PLASTIC TAG.
4. VALVE BOXES:
- a. VALVE BOXES SHALL BE CONSTRUCTED OF ABS (ACRYLONITRILE BUTADIENE STYRENE) PLASTIC, GREEN IN COLOR, WITH RIGID BASE AND SIDES AND SHALL BE SUPPLIED WITH BOLT LOCK COVER SECURED WITH STAINLESS STEEL BOLTS. COVER SHALL BE IDENTIFIED AS SHOWN ON DRAWINGS. PROVIDE BOX EXTENSIONS AS REQUIRED.
- b. MASTER VALVES, FLOW SENSORS, REMOTE CONTROL IRRIGATION VALVES, GATE VALVES, AND BALL VALVES 3 INCH OR LESS IN SIZE SHALL USE A 14 INCH X 19 INCH X 12 INCH RECTANGULAR BOX.
- c. QUICK COUPLER VALVES, WIRE SPLICES, AND GROUNDING RODS SHALL USE A 10 INCH CIRCULAR BOX.

E. AUTOMATIC CONTROLLERS (ELECTRIC)

5. CONTROLLER SHALL BE HOUSED IN A STURDY, LOCKING, WEATHER-RESISTANT CASE, FURNISHED FOR MAXIMUM EXTERIOR PROTECTION.
6. CONTROLLER SHALL BE EQUIPPED WITH EVAPO-TRANSPARATION (ET) SENSOR, WHICH ADJUSTS THE CONTROLLER PROGRAMMING BASED ON LOCAL CLIMATIC CONDITIONS. THE SENSOR SHALL ALSO HAVE A RAIN SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH.
- a. IF A MOISTURE SENSOR IS USED IN LIEU OF AN EVAPO-TRANSPARATION SENSOR AN ADDITIONAL SENSOR, WHICH HAS A RAIN-SENSING SHUT-OFF SWITCH, WIND SENSING SHUT-OFF SWITCH, AND FREEZE SENSING SHUT-OFF SWITCH SHALL BE PROVIDED.
3. AUTOMATIC CONTROLLER SHALL BE AS INDICATED ON THE DRAWINGS.

F. CONTROL WIRE:

1. ALL CONTROL WIRE SHALL BE OF THE UNDERWRITER'S LABORATORY TYPE UL (UNDERGROUND FEEDER), SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED, 600 VOLT I RATED, FOR DIRECT BURIAL APPLICATIONS. MAXIMUM CONDUCTOR OPERATING TEMPERATURE, 90 DEGREES C, FOR BOTH WET AND DRY LOCATIONS. WIRE COMPOSITION IS AS FOLLOWS:
- a. CONDUCTOR: THE CONDUCTORS SHALL BE SOLID ANNEALED UNCOATED COPPER MEETING THE APPLICABLE REQUIREMENTS OF THE LATEST REVISIONS OF A.S.T.M. B_3.
- b. INSULATION: THE INSULATION SHALL BE COLORED PLASTIC WHICH MEETS THE TEST REQUIREMENTS OF I.P.C.E.A. (THE INSULATED POWER CABLE ENGINEERS ASSOCIATION) PLB NO. 5, 61, 402, DATED JULY 1983, SECTION 3.1 FOR 60 DEGREES C. POLYVINYL CHLORIDE INSULATION. THE INSULATION SHALL BE FLAME RETARDANT, RESISTANT TO FUNGUS, RESISTANT TO CORROSIVE FUMES, SUITABLE FOR WET LOCATIONS AND FURNISH SOME DEGREE OF INHERENT PROTECTIONS AGAINST MECHANICAL ABUSE. INSULATION THICKNESS SHALL BE 47 MILS FOR AWG #14, 12 & 10, AND 62 MILS FOR AWG #8.
- c. COLOR CODING: THE CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
- 1) ALL COMMON GROUND WIRE SHALL BE WHITE.
- 2) ALL PILOT (VALVE CONTROL) WIRE SHALL BE COLOR CODED PER VALVE, (SPARE WIRING TO BE DIFFERENT COLOR PATTERN FROM ORIGINAL WIRING)

G. SPRINKLER HEADS:

1. ALL SPRINKLER HEADS SHALL HAVE CHECK VALVES INSTALLED.
2. ALL SPRINKLER HEADS SHALL BE AS INDICATED ON THE DRAWINGS.
3. RISER NIPPLES FOR ALL SPRINKLER HEADS SHALL BE THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY AND FABRICATED AS SHOWN ON THE DRAWINGS.

PART III- EXECUTION

A. SURFACE CONDITIONS

8. INSPECTION:
- a. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
- b. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCE STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.

2. DISCREPANCIES:

- a. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
- b. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

B. TRENCHING/SLEEVING MEASUREMENTS

1. GENERAL:
- a. TRENCHES AND OTHER EXCAVATIONS FOR IRRIGATION PIPE AND APPURTENANCES SHALL BE EXCAVATED TRUE TO ALIGNMENT AND GRADE, AND SHALL BE OF AMPLE SIZE FOR THE PROPER PERFORMANCE OF INSTALLATION WORK, REVIEW, TESTING AND BACKFILL.
- b. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS.
- c. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS BY HAND DIGGING WITHIN THE DRIP LINE.
- d. GENERALLY, PIPING UNDER CONCRETE SHALL BE INSTALLED BY JACKING, BORING OR HYDRAULIC DRIVING. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS AND/OR CONCRETE WORK IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS AND/OR CONCRETE SHALL BE OBTAINED FROM THE ARCHITECT. NO HYDRAULIC DRIVING WILL BE PERMITTED UNDER ASPHALTIC CONCRETE PAVING.
- e. COORDINATE WITH PLANTING OPERATIONS, AS 10" DEEP CROSS-RIPPING IS REQUIRED PRIOR TO IRRIGATION SYSTEMS INSTALLATION. (CROSS-RIPPING IS PART OF THE PLANTING WORK).
2. PLASTIC PIPE TRENCHES:
- a. MINIMUM TRENCH WIDTH SHALL BE SIX (6) INCHES.

- b. MINIMUM TRENCH DEPTH BELOW BOTTOM OF PIPE SHALL BE TWO (2) INCHES.
- c. MINIMUM COVER SHALL BE BASED ON FINISHED GRADES, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 1) LATERAL LINE MINIMUM COVER SHALL BE TWELVE (12) INCHES.
- 2) MAIN LINE MINIMUM COVER SHALL BE EIGHTEEN (18) INCHES FOR PIPE 2 1/2" AND SMALLER, TWENTY-FOUR (24) INCHES FOR PIPE 3" AND LARGER.
- 3) PIPE AND WIRE SLEEVES MINIMUM COVER SHALL BE TWENTY-FOUR (24) INCHES.
- 4) RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
- a) IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
- d. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
3. BACKFILL MATERIAL:
- a. ALL PLASTIC PIPE SHALL BE BEDDED AND ENCASED WITH APPROVED BACKFILL MATERIAL FREE OF ROCKS AND CLODS AS INDICATED IN THE FOLLOWING TABLE AND/OR SHOWN ON THE PLANS.
- | THICKNESS UNDER PIPE MINIMUM TWO (2) INCHES | THICKNESS ABOVE PIPE MINIMUM OF PIPE FOUR (4) INCHES | THICKNESS AT SIDE MINIMUM TWO (2) INCHES |
|--|--|---|
| b. THE BALANCE OF BACKFILL MATERIAL SHALL BE APPROVED SOIL. UNSUITABLE MATERIAL, INCLUDING CLODS AND ROCKS OVER 2 TO 2 1/2 INCHES IN SIZE, SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF LEGALLY AT NO COST TO THE OWNER. | c. BACKFILL MATERIAL SHALL BE SUFFICIENTLY COMPACTED UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE OF VOIDS. ON SLOPE AREAS OVER 2:1 GRADIENT COMPACTION SHALL BE 85% (MIN) OR EQUAL TO THE REQUIREMENTS OF THE GRADING PLANS, WHICH EVER IS GREATER. PIPE JOINTS SHALL REMAIN EXPOSED UNTIL THE COMPLETION OF PRESSURE AND LEAKAGE TEST, UNLESS AUTHORIZED BY THE ARCHITECT. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER ONE (1) INCH, SUBSOIL, RUBBISH AND DEBRIS. | d. THE REMAINDER OF THE BACKFILL MATERIAL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN TWO AND ONE-HALF (2 1/2) INCHES, NOR CONTAIN RUBBISH AND DEBRIS. |
| e. BACKFILL SHALL BE TAMPED OR PUDDLED TO THE DRY DENSITY OF ADJACENT SOIL. BACKFILL WITHIN AREAS OF STRUCTURALLY COMPACTED SOILS SHALL BE RETURNED TO THE ORIGINAL RELATIVE DENSITY AS BEFORE TRENCHING. | 4. LOCATION WIRE: | a. LOCATION WIRE SHALL BE PLACED ON TOP OF THE FOUR-INCH SELECT BACKFILL OVER ALL MAINLINE (PRESSURE BEARING) PIPES, EXCEPT COPPER PIPE. WIRE SHALL BE NO. 12 GAUGE COPPER, NEW OR USED OR AN APPROVED SUBSTITUTE, AND SHALL PROVIDE A CONTINUOUS ELECTRICAL CONDUCTOR BETWEEN GATE VALVES AND CONTROL VALVES. EACH END SHALL BE BROUGHT TO THE VALVE SLEEVE AND TWO FEET OF WIRE LOOPED FREE IN THE TRENCH BESIDE THE VALVE BODY. THIS LOCATION WIRE MAY BE OMITTED WHERE COPPER HYDRAULIC CONTROL TUBING OR ELECTRIC CONTROL WIRE FOLLOWS THE WATER MAIN. |
| C. PIPE INSTALLATION | 1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS. | 2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING. |
| 3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK. | 4. GASKETED PLASTIC PIPE: PIPE-TO-PIPE JOINTS OR PIPE TO FITTINGS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. | 5. SOLVENT WELD OR THREADED PLASTIC PIPE: |
| a. INSTALLATION OF ALL PIPE AND FITTINGS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. | b. PIPE SHALL BE CUT USING APPROVED PVC PIPE CUTTERS ONLY. SAWED JOINTS ARE DISALLOWED. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS BEFORE GLUING. | c. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. EXCESS SOLVENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY. |
| d. PLASTIC TO METAL CONNECTIONS SHALL BE MADE WITH PLASTIC ADAPTERS AND IF NECESSARY, SHORT (NOT CLOSE) BRASS THREADED, NIPPLES. CONNECTION SHALL BE MADE WITH TWO (2) WRAPS OF TEFLON TAPE AND HAND TIGHTENED PLUS ONE TURN WITH A STRAP WRENCH. | e. SNAKE PIPE HORIZONTALLY IN TRENCH TO ALLOW ONE (1) FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN. | f. THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PIPE SHALL BE PROTECTED FROM TOOL DAMAGE DURING ASSEMBLY. ALL DAMAGED PIPE SHALL BE REMOVED AND REPLACED. TAKE UP THREADED JOINTS WITH LIGHT WRENCH PRESSURE. |
| g. NO CLOSE NIPPLES OR RISERS ARE ALLOWED. CROSS CONNECTIONS IN PIPING IS DISALLOWED. | h. CENTER LOAD PIPE AT 10 FEET ON CENTER INTERVALS WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. OTHER THAN THIS PRELIMINARY BACKFILL ALL PIPE JOINTS, FITTINGS AND CONNECTIONS ARE TO REMAIN UNCOVERED UNTIL SUCCESSFUL COMPLETION OF HYDROSTATIC TESTING AND WRITTEN APPROVAL OF THE TESTING REPORT. | i. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED BEHIND ALL PIPE FITTINGS 1-1/2 INCH DIAMETER AND LARGER AT ALL CHANGES OF DIRECTION OF 45 DEGREES OR MORE. |
| D. FLUSHING | 6. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM. | 7. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL. |
| E. HYDROSTATIC PRESSURE TESTING | 1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. | 2. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED. |
| 3. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET. | 4. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED. | 5. RETEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE. |
| 6. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS. | 7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. | F. BACKFILLING AND COMPACTING |
| 1. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS OVER (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH. | 2. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES | a. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR. |

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CALIFIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT

MATTHEW J. KANAAN NO. 60404

Signature

- a. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL. BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.

b. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".

1. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.

2. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

L. INSTALLATION OF CONTROL WIRE (TIE INTO EXISTING SYSTEM? NEW MV/F5?)

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF CONTROL WIRE SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF THE WIRES, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. UNLESS OTHERWISE SPECIFIED ALL NEUTRAL (COMMON GROUND) WIRE SHALL BE AWG #12 AND ALL PILOT (VALVE CONTROL) WIRE SHALL BE AWG #14.

3. SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVES AS NOTED ON PLANS. WHEN WIRE RUNS GO IN DIFFERENT DIRECTIONS FROM THE CONTROLLER CLOCK, SEPARATE SPARE WIRES SHALL BE INSTALLED FROM THE CONTROLLER CLOCK TO THE MOST DISTANT VALVE IN EACH DIFFERENT WIRE RUN DIRECTION. THEIR COLORS SHALL DIFFER FROM VALVE WIRES USED.

4. TAPE AND BUNDLE ALL CONTROL WIRES AT 10' O/C MAXIMUM. PLACE WIRING WITH 18" MINIMUM COVER. WHEN WIRING IS PLACED IN COMMON TRENCHES WITH PIPING, SET WIRING 2" FROM ANY PIPING.

5. ALL WIRE SPLICING SHALL TAKE PLACE IN THE VALVE BOXES AND/OR PULL BOXES. ALL SPLICES SHALL BE MADE WITH A MECHANICAL CONNECTOR ENCASED IN A SELF-CURING EPOXY RESIN WHICH PROVIDES A PERMANENT WATERTIGHT CONNECTION.

6. ALL DIRECT BURIAL CONTROL WIRES SHALL BE IDENTIFIED AS TO THEIR RESPECTIVE VALVE NUMBER AND CONTROLLER LETTERS IN ALL PULL BOXES AS AT ALL WIRE TERMINATION. SPARE WIRES AND "FUTURE VALVE" WIRES, IF ANY, SHALL ALSO BE IDENTIFIED. LABELS AND TAGS SHALL BE USED FOR IDENTIFICATION WHICH ARE NOT AFFECTED BY MOISTURE OR TEMPERATURES BETWEEN MINUS 30 DEGREES F. AND PLUS 20 DEGREES F. THE LABELS AND TAGS SHALL BE RESISTANT TO ABRASION, DIRT, GREASE, AND CHEMICALS USED IN LAWN FERTILIZERS AND CONDITIONERS. THE LABELS AND TAGS SHALL BE FIRMLY ATTACHED TO THE WIRE IN EVERY CASE.

7. THE FINAL OPERATING SEQUENCE OF THE REMOTE CONTROL VALVES, WITHIN EACH INDIVIDUAL CONTROLLER CLOCK, SHALL BE AS CALLED OUT ON DRAWINGS.

8. TESTING:

a. ALL DIRECT BURIAL CONTROL WIRE INSTALLED SHALL BE TESTED IN THE FOLLOWING MANNER.

-BEFORE ANY BACKFILL MATERIAL IS PLACED OVER THE CONTROL WIRES IN THE TRENCH, THE WIRES SHALL BE TESTED WITH A METER FOR INSULATION RESISTANCE. MINIMUM INSULATION RESISTANCE TO GROUND SHALL BE FIFTY (50) MEGOHMS. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

-AFTER BACKFILL ENCASEMENT, THE WIRES SHALL AGAIN BE TESTED WITH A METER. THE MINIMUM ACCEPTABLE INSULATION RESISTANCE TO GROUND ON THIS TEST SHALL BE ONE (1) MEGOHM. ANY CONDUCTOR NOT MEETING THIS REQUIREMENT SHALL BE REPLACED.

9. PROVIDE SEPARATE COMMON WIRE FOR EACH CONTROLLER INSTALLED.

J. INSTALLATION OF VALVES

1. GENERAL:

a. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURER'S REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.

b. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.

c. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.

d. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

2. BALL / BUTTERFLY VALVES: VALVES INSTALLED UNDERGROUND SHALL BE HOUSED IN A CARSONBROOKS PLASTIC TURF BOX. THE CONTRACTOR SHALL BRAND, BV ON THE OUTSIDE COVER OF THE BOX.

3. AUTOMATIC CONTROL VALVES: AUTOMATIC CONTROL VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, THE IDENTIFICATION NUMBER OF THE VALVE AND CLOCK ON THE INSIDE AND OUTSIDE COVER OF THE BOX.

4. QUICK COUPLERS: QUICK COUPLERS SHALL BE INSTALLED ON GALVANIZED RISERS AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A LOCKABLE TOP. THE CONTRACTOR SHALL BRAND, QC ON THE OUTSIDE COVER OF THE BOX.

5. PRESSURE REDUCING VALVES: PRESSURE REDUCING VALVES SHALL BE SET UPRIGHT AND HOUSED IN PLASTIC CARSONBROOKS TURF BOX, WITH A HINGED, LOCKABLE, TOP. THE CONTRACTOR SHALL BRAND, PR ON THE OUTSIDE COVER OF THE BOX.

K. INSTALLATION OF AUTOMATIC CONTROLLERS NEW MV/F5?

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF AUTOMATIC CONTROLLERS SHALL INCLUDE THE FURNISHING, THE INSTALLING, MAKING NECESSARY ELECTRICAL CONNECTIONS, THE TESTING OF CONTROLLERS AND CONNECTION, AND ALL OTHER WORK AS CALLED FOR ON THE PLANS AND/OR IN THE SPECIFICATIONS.

2. ALL ELECTRICAL CONDUIT SHALL BE P.V.C. SUNSTOP ULV SCHEDULE 40 PIPE & FITTINGS.

3. INSTALL CONTROLLERS AT 5' MIN. AWAY FROM 3 PHASE POWER.

4. UNLESS OTHERWISE SPECIFIED THE INSTALLATION OF CONTROLLERS SHALL BE AS DETAILED ON PLAN.

5. CONTROLLERS SHALL BE TESTED FOR FOURTEEN (14) CALENDAR DAYS AFTER COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. SYSTEM SHALL OPERATE AUTOMATICALLY IN THE MANNER SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

L. INSTALLATION OF SPRINKLER HEADS

1. UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF SPRINKLER HEADS SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS AND HEADS, THE FURNISHING AND INSTALLING OF ANCHORS AND THRUST BLOCKS, THE FURNISHING AND INSTALLING OF CONE SHAPED SCREENS AT BASE OF EACH HEAD, THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

2. FLUSHING: ALL WATER LINES SHALL BE THOROUGHLY OUT BEFORE HEADS ARE INSTALLED.

3. LOCATION AND ARC OF HEADS SHALL BE ADJUSTED, IF REQUIRED TO ELIMINATE ANY DRY SPOTS, OVER WATER OR SPILLAGE ON ADJACENT AREAS.

4. ALL SEEDED AREA SPRINKLER HEADS SHALL BE INSTALLED ADJACENT TO EXISTING WALKS, CURBS, OR OTHER PAVED AREAS. SHALL BE SET TO THE GRADE OF THE IMPROVEMENTS. SPRINKLER HEADS WHICH ARE TO BE INSTALLED IN AREAS WHERE THE TURF HAS NOT YET BEEN ESTABLISHED SHALL BE SET TWO (2) INCHES ABOVE THE PROPOSED FINISHED GRADE. HEADS INSTALLED IN THIS MANNER SHALL BE LOWERED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. IN ESTABLISHED LAWN AREAS THE SPRINKLER HEADS SHALL BE SET TO EXISTING GRADE.

5. ALL SHRUBBERY HEADS TO BE INSTALLED WITHIN THREE (3) FEET OF CURBS SHALL BE SET TO A MAXIMUM HEIGHT OF SIX (6) INCHES ABOVE THE GRADE OF THE CURB. SHRUBBERY HEADS INSTALLED IN ALL OTHER AREAS SHALL BE TWELVE (12) INCHES ABOVE FINISHED GRADES UNLESS OTHERWISE INDICATED ON THE PLANS. POP-UP SHRUB HEADS SHALL BE INSTALLED AS DETAILED.

M. TURNOVER ITEMS

1. OPERATION AND MAINTENANCE MANUALS

a. PREPARE AND DELIVER TO THE OWNER'S REPRESENTATIVE WITHIN TEN CALENDAR DAYS PRIOR TO COMPLETION OF CONSTRUCTION TWO 3-RING HARD COVER BINDERS CONTAINING THE FOLLOWING INFORMATION:

 - 1. INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, LIST OF EQUIPMENT WITH NAME AND ADDRESSES OF LOCAL MANUFACTURERS' REPRESENTATIVES.
 - 2. CATALOG AND PART'S SHEETS ON ALL MATERIAL AND EQUIPMENT.
 - 3. COMPLETE OPERATING AND MAINTENANCE INSTRUCTION FOR ALL MAJOR EQUIPMENT.
 - 4. IRRIGATION PRODUCT MANUFACTURERS WARRANTIES.

IN ADDITION TO THE ABOVE-MENTIONED MAINTENANCE MANUALS, PROVIDE THE OWNER'S MAINTENANCE PERSONNEL WITH INSTRUCTIONS FOR MAINTAINING MAJOR EQUIPMENT AND SHOW EVIDENCE IN WRITING TO THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF THE PROJECT THAT THIS HAS BEEN RENDERED.

2. CONTROLLER CHART UPDATES IF TIED INTO EXISTING SYSTEM.

a. PROVIDE ONE CONTROLLER CHART FOR EACH CAMPUS.

b. RECORD DRAWINGS SHALL BE RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE CHARTS ARE PREPARED.

c. THESE CHARTS SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM, AND PRIOR TO FINAL PAYMENT.

d. THE CHART SHALL SHOW THE AREA CONTROLLED BY AUTOMATIC CONTROLLER AND SHALL BE NO LARGER THAN THE 11" X 17" ORIGINAL.

THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL SYSTEM. HOWEVER, THE CHART SHALL ONLY BE REDUCED TO A SIZE WHICH IS COMPLETELY LEGIBLE.

f. CHART SHALL BE BLACK LINE PRINT AND SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION.

g. WHEN COMPLETED AND RECOMMENDED FOR APPROVAL, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS THICK.

3. TURNOVER ITEMS: SUPPLY AS PART OF THIS CONTRACT THE FOLLOWING ITEMS:

a. FOUR (4) ADDITIONAL SPRINKLER HEADS/NOZZLES OF EACH TYPE AND PATTERN SHOWN ON PLANS.

b. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD SHOWN ON PLANS.

O. TESTS

1. PRESSURE TESTS:

2. ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 POUNDS PER SQUARE INCH, AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH BE PROVED WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS AT NO COST TO THE OWNER.

3. PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN TWO (2) HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVED WATERTIGHT.

4. TESTS SHALL BE OBSERVED AND RECOMMENDED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BACKFILL.

Q. REVIEWS

1. NORMAL PROGRESS REVIEWS: NORMAL PROGRESS REVIEWS SHALL BE REQUESTED FROM THE ARCHITECT AT LEAST 48 HOURS IN ADVANCE OF ANY ANTICIPATED REVIEW. A REVIEW WILL BE MADE BY THE ARCHITECT ON EACH OF THE STEPS LISTED BELOW. THE CONTRACTOR WILL NOT BE PERMITTED TO INITIATE THE SUCCEEDING STEPS OF WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL TO PROCEED BY THE INSPECTOR.

a. IRRIGATION MATERIALS AND EQUIPMENT TO BE USED, BY L.A.

b. AFTER TRENCHING AND BEFORE BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TRENCH DEPTHS

c. COMPLETION OF LINE TESTING, TEST TO BE MADE PRIOR TO BACKFILL BY SITE IOR. EMAIL OR LETTER TO BE SENT TO LA CONFIRMING TEST RESULTS.

d. AFTER PLACEMENT OF ALL HEADS, VALVES AND CONTROLLERS FOR COVERAGE BY L.A.

e. FINAL REVIEW AND RECEIPT OF "RECORD DRAWINGS"/"CONTROLLER CHARTS" BY DISTRICT REP.

f. FINAL ACCEPTANCE OF PROJECT BY L.A.

g. IN NO EVENT SHALL THE CONTRACTOR COVER UP OR OTHERWISE REMOVE FROM VIEW ANY WORK UNDER THIS CONTRACT WITHOUT PRIOR APPROVAL. ANY WORK COVERED PRIOR TO REVIEW SHALL BE OPENED TO VIEW BY THE CONTRACTOR, AT HIS EXPENSE.

2. UNPREPARED REVIEW REQUESTS: IN THE EVENT THE CONTRACTOR REQUESTS REVIEW OF WORK AND SAID WORK IS INCOMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW COST.

3. COMPLETION: THE WORK WILL BE ACCEPTED, IN WRITING, WHEN THE WHOLE SHALL HAVE BEEN COMPLETED SATISFACTORILY TO THE OWNER AND THE ARCHITECT. IN JUDGING THE WORK, NO ALLOWANCE FOR DEVIATION FROM THE ORIGINAL PLANS AND SPECIFICATIONS WILL BE MADE UNLESS ALREADY APPROVED BY OWNER, IN WRITING, AT THE PROPER TIMES.

a. LEAVE THE ENTIRE INSTALLATION IN COMPLETE OPERATING ORDER, FREE FROM ANY AND ALL DEFECTS IN MATERIAL, WORKMANSHIP OR FINISH, REGARDLESS OF ANY DISCREPANCIES AND/OR OMISSIONS IN PLANS OR SPECIFICATIONS.

R. MAINTENANCE PERIOD

1. MAINTENANCE OF IRRIGATION SYSTEM PRIOR TO JOB COMPLETION, AND DURING THE LANDSCAPE MAINTENANCE PERIOD, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

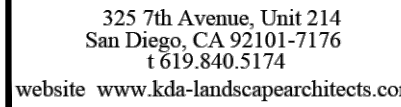
 - CLEANING OF PLUGGED IRRIGATION HEADS.
 - IRRIGATION HEADS ADJUSTMENTS.
 - VOLUME OF WATER BEING APPLIED (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - PROGRAMMING OF THE CONTROLLER (COORDINATE WITH LANDSCAPE MAINTENANCE.)
 - REPAIRING LEAKING VALVES, ETC.
 - ANY OTHER PROBLEM AREAS WHICH OCCUR AFTER INSTALLATION ATTRIBUTED TO THE IRRIGATION SYSTEM.
 - REPAIR OR REPLACE EQUIPMENT DUE TO ACTS OF VANDALISM, THEFT OR PEST DAMAGE.
 - LOWER ALL SEEDED AREA HEADS TO FINAL GRADES PRIOR TO FINAL ACCEPTANCE BY OWNER.

S. LONG TERM MAINTENANCE

1. ALL AREAS SHALL BE KEPT FREE OF DEBRIS.

2. THE IRRIGATION SYSTEM IS TO BE MAINTAINED IN SUCH A MANNER AS TO ENSURE THE INTENDED WATER EFFICIENCY DESIGNED. MAINTENANCE CONTRACTOR IS TO CHECK, ADJUST, AND REPAIR IRRIGATION EQUIPMENT WITH LIKE MATERIALS AND NOZZLES ON A MONTHLY BASIS TO AVOID OVERSPRAY, RUNOFF, AND/OR BROKEN COMPONENTS.

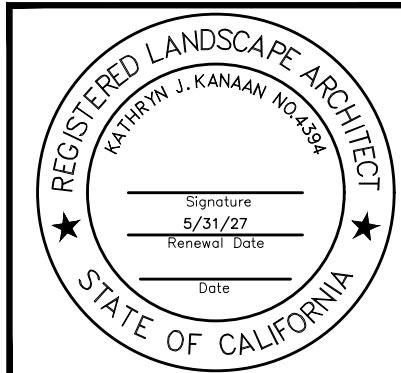
3. A COPY OF THE WATER SCHEDULES ARE TO BE GIVEN TO ALL NEW AND EXISTING MAINTENANCE CREWS AND THE CONTROLLER MANUFACTURER IS TO BE CONTACTED FOR INSTRUCTION ON THE OPERATION AND MAINTENANCE OF THE SMART CONTROLLER.



CLIENT: LAI 3838 SPRING 619.6 CON

PROJECT
SPF
3900
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CALF

REVISIONS	DATE	BY



SHEET TITLE

IRRIGATION
NOTES

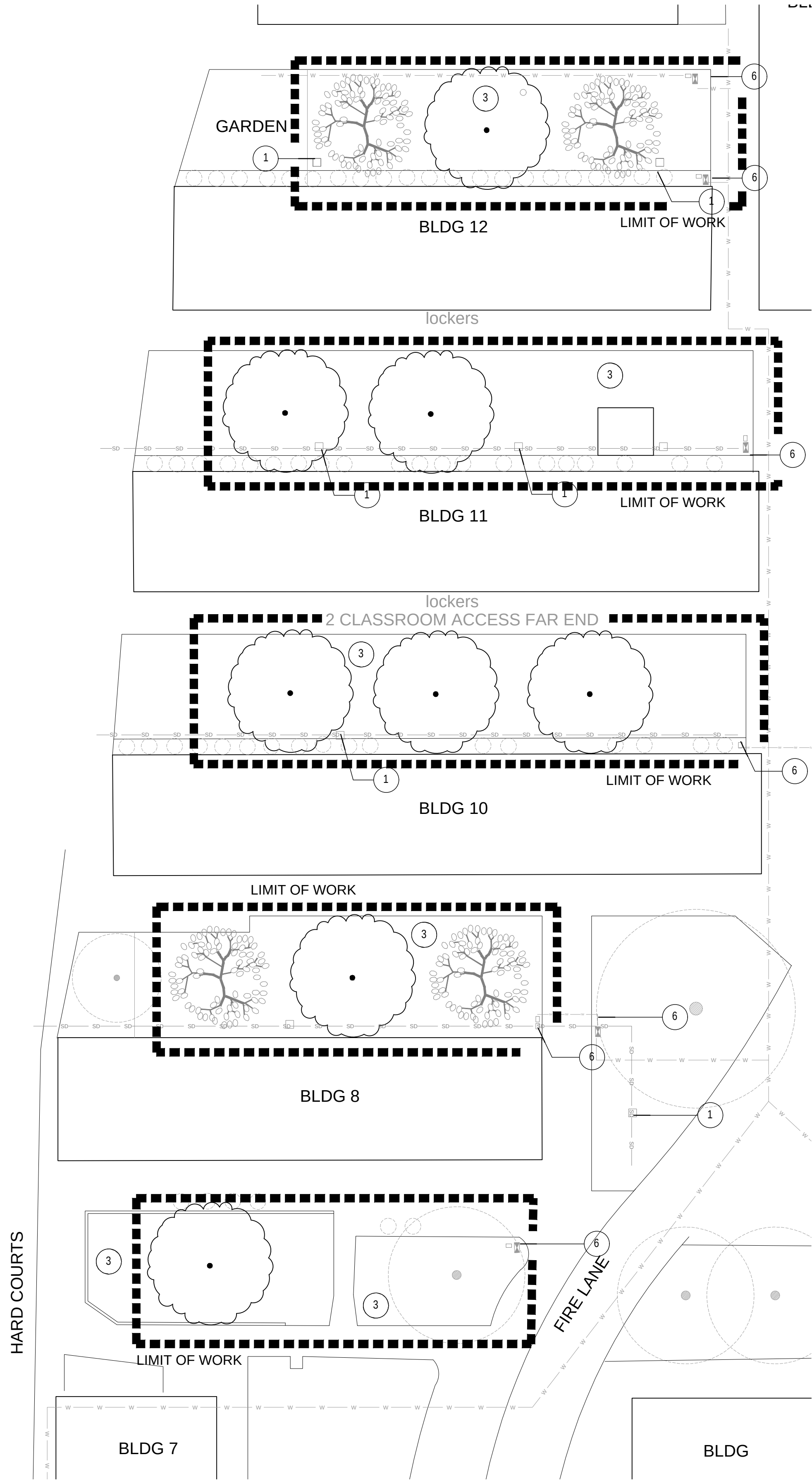
DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	04/15/26
SCALE	N.T.S.
JOB NO.	26004

SHEET

L1.4

OF 09 SHEETS

5/15/2026 C:\KDA PROJECTS\MINI\26000 PROJECTS\26004 LMS\5D CAL FIRE GRANT LANDSCAPE\AUTOCAD\CD\SS\SPRING VALLEY ACADEMY\26004 SV PP.DWG



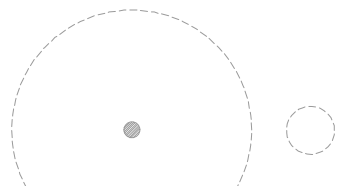
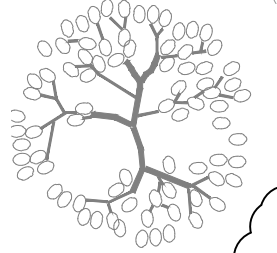
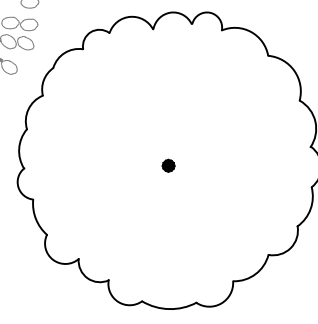
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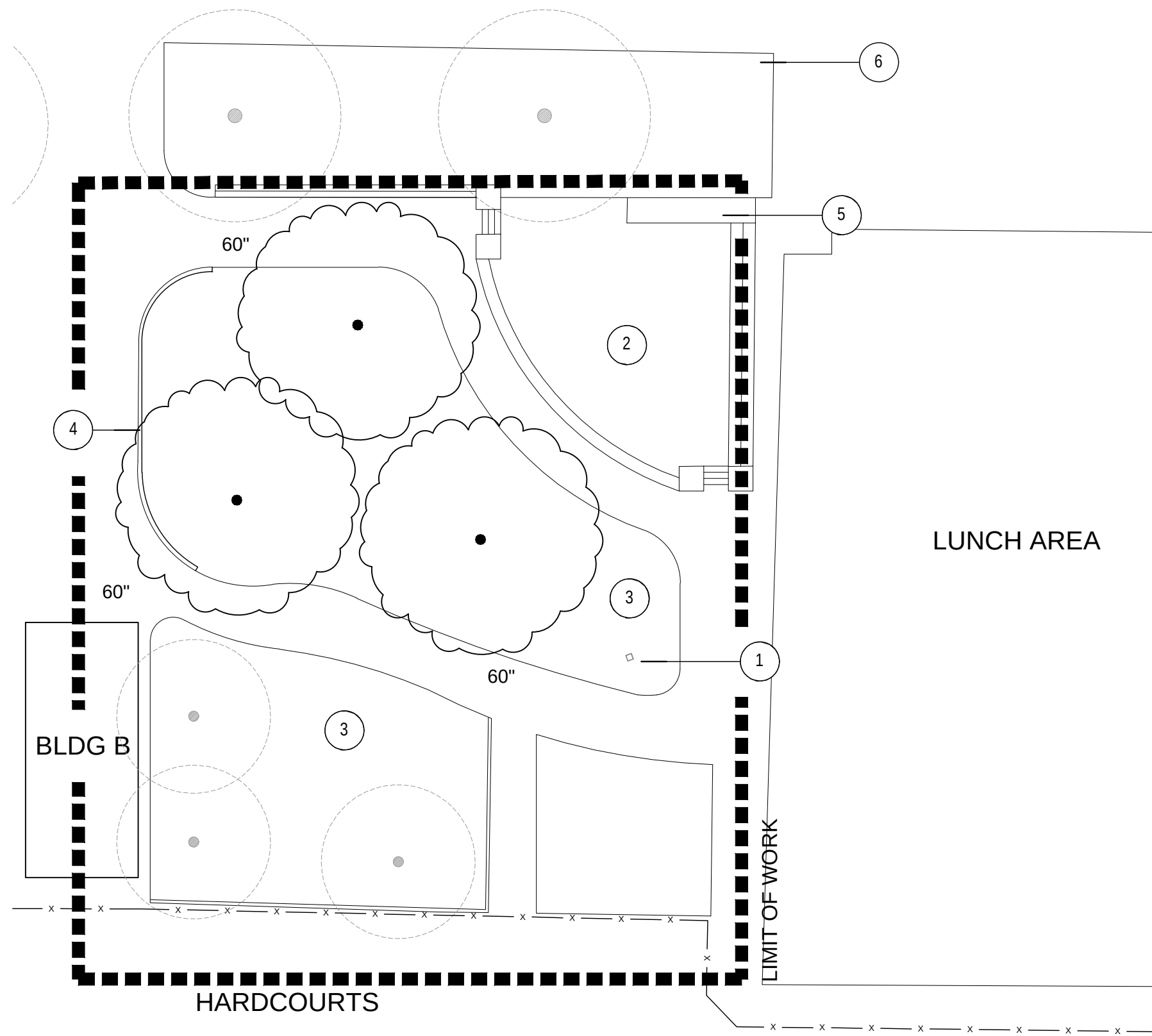
1. REFER TO PLANTING DETAILS AND NOTES.
2. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY FIELD CONDITIONS THAT VARY FROM THE PLANS.
3. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DAMAGE AND ASSUME FULL RESPONSIBILITY FOR REPAIRS/ REPLACEMENT/ COSTS INCURRED DUE TO DAMAGED UTILITIES.
4. THE LANDSCAPE ARCHITECT SHALL RETAIN THE OPTION TO TAG BOXED TREE MATERIAL AT A WHOLESALE NURSERY OF THEIR CHOICE AFTER THE BID HAS BEEN AWARDED.
5. PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL/REJECTION BY THE LANDSCAPE ARCHITECT BOTH PRIOR TO DELIVERY AND UPON DELIVERY TO THE SITE.
6. BUDS, BLOOMS AND LARGE SURFACE LEAVES ON ALL PLANT MATERIAL MUST BE PROTECTED AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND INSTALLATION.
7. NO TRIMMING OR SHAPING OF PLANT MATERIAL MAY OCCUR UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
8. THE CONTRACTOR SHALL GUARANTEE THE PLANT MATERIAL FOR THE PERIOD OF ONE (1) YEAR.
9. THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN AGRONOMIC SOILS TEST AFTER GRADING HAS OCCURRED AND SUBSEQUENT AMENDING PER SUCH TEST. REFER TO NOTES.

PLANTING KEYNOTES

- 1 EXISTING DRAIN TO BE PROTECTED IN PLACE.
- 2 EXISTING STAGE TO BE PROTECTED IN PLACE.
- 3 REPAIR AND REPLACE ANY TURF DAMAGED DURING DEMO OR CONSTRUCTION.
- 4 EXISTING CONCRETE BENCH TO BE PROTECTED IN PLACE.
- 5 EXISTING STADIUM STEPS TO BE PROTECTED IN PLACE.
- 6 EXISTING IRRIGATION EQUIPMENT TO BE PROTECTED IN PLACE.

PLANT LEGEND

SYMBOL	QTY	BOTANICAL NAME/ COMMON NAME	SIZE	SPACING	REMARKS/ CALIPERS	DETAIL
TREES						
		EXISTING TREES AND SHRUBS TO BE PROTECTED IN PLACE. HAND DIGGING ONLY WITHIN THE DRIPLINE OF THE TREE CANOPY. NO ROOTS OVER 1 1/2" IN DIAMETER ARE TO BE REMOVED. IF NOT POSSIBLE TO SAVE ALL ROOTS, MANUALLY CUT ROOT WITH A SHARP PRUNING INSTRUMENT ONLY. REDIRECT MAIN OR TAP ROOTS ONLY AND GIVE TEMPORARY SUPPORT AND MOISTURE UNTIL REROUTED.				
	4	ARBUTUS UNEDO 'MARINA' STRAWBERRY TREE	48" BOX	40' O.C.	MULTI	'H, I/ L1.2
	3 8	ULMUS PARV. 'TRUE GREEN' TRUE GREEN CHINESE ELM	60" BOX 36" BOX ALT BID FOR 48" BOX	20' O.C.	STANDARD	'H, I/ L1.2
		ALL TREES LOCATED WITHIN 10' OF ANY UTILITY, LIGHT STANDARD, OR HARDSCAPE TO RECEIVE A LINEAR ROOT BARRIER TO EXTEND OUT TO MATURE CANOPY, 24" DEEP.				'J/L1.2



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PROJECT:

PROJECT:

SPRING VALLEY ACADEMY

3900 CONRAD DRIVE
SPRING VALLEY, CA 91977
CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY

REGISTERED LANDSCAPE ARCHITECT

MATTHEW J. KANAAN REG.#20404

Signature
5/31/27
Removal Date
Date

STATE OF CALIFORNIA

SHEET TITLE

PLANTING PLAN

DESIGNED	KJK
DRAWN	KJK
CHECKED	
DATE	05/15/26
SCALE	1"=20'-0"
JOB NO.	26004

SHEET

L2.0

OF 09 SHEETS

4/15/2026 C:\KDA PROJECTS\MINI26000\PROJECTS\26004\LANDSCAPE\AUTOCAD\CD\SPRING VALLEY ACADEMY\26004 SV PN.DWG

PART I - GENERAL REQUIREMENTS
A. SCOPE

1. WORK OF THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TOOLS, FACILITIES, TRANSPORTATION AND LABOR NECESSARY FOR AND INCIDENTAL TO COMPLETING ALL LANDSCAPE PLANTING WORK AS INDICATED ON THE DRAWINGS, OR AS REASONABLY IMPLIED OR AS DESIGNATED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- a. PROTECTION OF ALL EXISTING PLANT MATERIAL TO REMAIN.
 - b. SOIL TESTING / APPROVALS
 - c. WEED ABATEMENT
 - d. SOIL PREPARATION
 - e. FINISH GRADING
 - f. PREPARATION OF ALL PLATING HOLES
 - g. FURNISHING AND INSTALLATION OF ALL PLANT MATERIAL
 - h. FURNISHING AND INSTALLATION OF ALL REQUIRED FERTILIZERS, PLANT BACKFILL TOP DRESSING AND MISCELLANEOUS MATERIALS
 - i. WATERING OF ALL LANDSCAPE AREAS
 - j. PROVIDING PLANT ESTABLISHMENT (30 DAYS)
 - k. PROVIDING LANDSCAPE MAINTENANCE (90 DAYS)
 - l. CLEAN UP AND WEEDING OF ALL LANDSCAPE AREAS

B. CONTRACT DOCUMENTS

1. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS AND THE CONSTRUCTION DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

C. RELATED WORK SPECIFIED ELSEWHERE

2. IRRIGATION SYSTEM NOTES

D. QUALITY ASSURANCE

1. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE PERSON WHO SHALL PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK, WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE PROPER MATERIALS AND METHODS FOR THE INSTALLATION, AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION. THE INSTALLING CREW SHALL HAVE A MINIMUM OF 3 YEARS OF EXPERIENCE, FIELD SUPERVISORS A MINIMUM OF FIVE YEARS.
2. ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECS. OF FEDERAL STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
3. QUALITY AND SIZE SHALL CONFORM WITH THE CURRENT EDITION OF "HORTICULTURAL STANDARDS" FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AND CALIFORNIA DEPARTMENT OF AGRICULTURE REGULATIONS
4. THE APPLICATOR OF ALL WEED CONTROL MATERIALS SHALL BE LICENSED BY THE STATE OF CALIFORNIA AS A PEST CONTROL OPERATOR AND A PEST CONTROL ADVISOR IN ADDITION TO ANY SUBCONTRACTOR LICENSES THAT ARE REQUIRED.
5. ALL MATERIALS AND METHODS USED FOR WEED ABATEMENT MUST CONFORM TO FEDERAL, STATE, AND LOCAL REGULATIONS.

E. VERIFICATION OF FIELD CONDITIONS

1. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ACTUAL GRADE ELEVATIONS, SERVICE AND UTILITY LOCATIONS, IRRIGATION SYSTEM COMPONENTS, AND DIMENSIONS OF PLANTINGS AND CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK AND SHALL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE LANDSCAPE ARCHITECT.
2. INTERRUPTION OF EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY DISTRICT OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- a. NOTIFY DISTRICT CONSTRUCTION MANAGER NO FEWER THAN SEVEN BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF WATER SERVICE.
 - b. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT DISTRICT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
 - c. OBTAIN DISTRICT CONSTRUCTION MANAGER'S WRITTEN APPROVAL OF EXACT LENGTH OF TIME FOR EACH SHUT-OFF OR WORK SESSION.
3. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS. COORDINATION WITH TURF AREAS (LAWNS), PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
4. WHEN IT IS NECESSARY TO PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.

F. PERMITS AND REGULATION

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED, IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
2. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
3. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR CODES OR BETWEEN ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

G. COORDINATION

1. COORDINATION WITH TURF AREAS (LAWNS): PLANT TREES, SHRUBS, AND OTHER PLANTS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING TURF AREAS UNLESS OTHERWISE INDICATED.
- a. WHEN PLANTING TREES, SHRUBS, AND OTHER PLANTS AFTER PLANTING TURF AREAS, PROTECT TURF AREAS, AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
2. COORDINATE WITH GC OF THE PROJECT TO HAVE THE TOP 6" OF EXISTING PLANTING AREA TOPSOILS TO BE STOCKPILED FOR USE AS TOPSOIL AFTER ROUGH GRADING HAS OCCURRED. TOPSOIL IS TO BE REMOVED AFTER ALL EXISTING PLANT MATERIAL HAS BEEN REMOVED AND 2 ROUNDS OF WEED ABATEMENT HAS OCCURRED PER SPECS.

H. PROTECTION OF WORK, PROPERTY AND PERSON

1. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO HIS/HER ACTIONS.

I. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY-FIVE (45) DAYS AFTER AWARD OF THE CONTRACT, SUBMIT VIA ELECTRONIC DELIVERY A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

PLANT MATERIAL:

- 1) THE OWNER'S REPRESENTATIVE MAY REVIEW ALL PLANTS SUBJECT TO APPROVAL OF SIZE, HEALTH, QUALITY, CHARACTER, ETC. REVIEW OR APPROVAL OF ANY PLANT DURING THE PROCESS OF SELECTION, DELIVERY, INSTALLATION AND ESTABLISHMENT PERIOD SHALL NOT PREVENT THAT PLANT FROM LATER REJECTION IN THE EVENT THAT THE PLANT QUALITY CHANGES OR PREVIOUSLY EXISTING DEFECTS BECOME APPARENT THAT WERE NOT OBSERVED.
- 2) PLANT SELECTION: THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT AND OBSERVE ALL PLANTS AT THE NURSERY PRIOR TO DELIVERY AND TO REJECT PLANTS THAT DO NOT MEET SPECIFICATIONS AS SET FORTH IN THIS SPECIFICATION. IF A PARTICULAR DEFECT OR SUBSTANDARD ELEMENT CAN BE CORRECTED AT THE NURSERY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, THE AGREED UPON REMEDY MAY BE APPLIED BY THE NURSERY OR THE CONTRACTOR PROVIDED THAT THE CORRECTION ALLOWS THE PLANT TO MEET THE REQUIREMENTS SET FORTH IN THIS SPECIFICATION. ANY WORK TO CORRECT PLANT DEFECTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 3) THE OWNER'S REPRESENTATIVE MAY MAKE INVASIVE OBSERVATION OF THE PLANTS' ROOT SYSTEM IN THE AREA OF THE ROOT COLLAR AND THE TOP OF THE ROOT BALL. IN GENERAL, IN ORDER TO DETERMINE THAT THE PLANT MEETS THE QUALITY REQUIREMENTS FOR DEPTH OF THE ROOT COLLAR AND PRESENCE OF ROOTS ABOVE THE ROOT COLLAR, SUCH OBSERVATIONS WILL NOT HARM THE PLANT.

- 4) CORRECTIONS ARE TO BE UNDERTAKEN AT THE NURSERY PRIOR TO SHIPPING.

- 5) THE CONTRACTOR SHALL BEAR ALL COST RELATED TO PLANT CORRECTIONS.

- 6) ALL PLANTS THAT ARE REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND ACCEPTABLE REPLACEMENT PLANTS PROVIDED AT NO COST TO THE OWNER.

- 7) SUBMIT TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL, PLANT SOURCES INCLUDING THE NAMES AND LOCATIONS OF NURSERIES PROPOSED AS SOURCES OF ACCEPTABLE PLANTS, AND A LIST OF THE PLANTS THEY WILL LIST SHALL INCLUDE THE PLANT LIST SHALL INCLUDE THE BOTANICAL AND COMMON NAME AND THE SIZE AT THE TIME OF SELECTION, OBSERVE ALL NURSERY MATERIALS TO DETERMINE THAT THE MATERIALS MEET THE REQUIREMENTS OF THIS SECTION.

- 8) TREES SHALL BE PURCHASED FROM THE GROWING NURSERY. RE-WHOLESALE PLANT SUPPLIERS SHALL NOT BE USED AS SOURCES UNLESS THE CONTRACTOR CAN CERTIFY THAT THE REQUIRED TREES ARE NOT DIRECTLY AVAILABLE FROM A GROWING NURSERY. WHEN RE-WHOLESALE SUPPLIERS ARE UTILIZED, THE CONTRACTOR SHALL SUBMIT THE NAME AND LOCATION OF THE GROWING NURSERY FROM WHERE THE TREES WERE OBTAINED BY THE RE-WHOLESALE SELLER. THE RE-WHOLESALE NURSERY SHALL BE RESPONSIBLE FOR ANY REQUIRED PLANT QUALITY CERTIFICATIONS.

- 9) PLANT PHOTOGRAPHS: INCLUDE CLEAR COLOR PHOTOGRAPHS IN DIGITAL FORMAT OF EACH REQUIRED SPECIES AND SIZE OF PLANT MATERIAL AS IT WILL BE FURNISHED TO PROJECT. STOCK PHOTOS OF PLANT MATERIALS WILL NOT BE ACCEPTABLE FOR SUBMITTALS. PHOTOS MUST BE OF ACTUAL PLANT MATERIALS AT THE NURSERY. TAKE PHOTOGRAPHS FROM AN ANGLE DEPICTING TRUE SIZE AND CONDITION OF THE TYPICAL PLANT TO BE FURNISHED. INCLUDE A SCALE ROD OR OTHER MEASURING DEVICE IN EACH PHOTOGRAPH. FOR SPECIES WHERE MORE THAN 20 PLANTS ARE REQUIRED, INCLUDE A MINIMUM OF THREE PHOTOGRAPHS SHOWING THE AVERAGE PLANT, THE BEST QUALITY PLANT, AND THE WORST QUALITY PLANT TO BE FURNISHED. IDENTIFY EACH PHOTOGRAPH WITH THE FULL SCIENTIFIC NAME OF THE PLANT, PLANT SIZE, AND NAME OF THE GROWING NURSERY

- 10) THE CONTRACTOR SHALL REQUIRE THE GROWER OR RE-WHOLESALE SUPPLIER TO PERMIT THE OWNER'S REPRESENTATIVE TO OBSERVE THE ROOT SYSTEM OF ALL PLANTS AT THE NURSERY OR JOB SITE PRIOR TO PLANTING INCLUDING RANDOM REMOVAL OF SOIL OR SUBSTRATE AROUND THE BASE OF THE PLANT. OBSERVATION OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN ATTEMPTED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. PLANT SUBSTITUTIONS FOR PLANTS NOT AVAILABLE:

SUBMIT ALL REQUESTS FOR SUBSTITUTIONS OF PLANT SPECIES, OR SIZE TO THE LANDSCAPE ARCHITECT, FOR APPROVAL. PRIOR TO PURCHASING THE PROPOSED SUBSTITUTION, REQUEST FOR SUBSTITUTION SHALL BE ACCOMPANIED WITH A LIST OF NURSERIES CONTACTED IN THE SEARCH FOR THE REQUIRED PLANT AND A RECORD OF OTHER ATTEMPTS TO LOCATE THE REQUIRED MATERIAL. REQUESTS SHALL ALSO INCLUDE SOURCES OF PLANTS FOUND THAT MAY BE OF A SMALLER OR LARGER SIZE, OR A DIFFERENT SHAPE OR HABIT THAN SPECIFIED, OR PLANTS OF THE SAME GENUS AND SPECIES BUT DIFFERENT CULTIVAR ORIGIN, OR WHICH MAY OTHERWISE NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, BUT WHICH MAY BE AVAILABLE FOR SUBSTITUTION.

- a. SAMPLES OF EACH PRODUCT AND/OR MATERIAL WHERE REQUIRED BY THE SPECIFICATION OR LEGEND FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL.

2. CERTIFICATES: DELIVER ALL CERTIFICATES VIA EMAIL TO THE LANDSCAPE ARCHITECT UPON DELIVERY TO JOB SITE. INCLUDE:

- a. ORGANIC MULCH: 1-QUART VOLUME OF EACH ORGANIC MULCH REQUIRED; IN SEALED PLASTIC BAGS LABELED WITH COMPOSITION OF MATERIALS BY PERCENTAGE OF WEIGHT AND SOURCE OF MULCH. EACH SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE FURNISHED; PROVIDE AN ACCURATE REPRESENTATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP.

- b. MINERAL MULCH: 2 LB OF EACH MINERAL MULCH REQUIRED, IN SEALED PLASTIC BAGS LABELED WITH SOURCE OF MULCH. SAMPLE SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED AND INSTALLED ON-SITE; PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND MAKEUP OF THE MATERIAL.

- c. QUANTITY OF PLANT MATERIAL.

SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DISTRICT AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

J. CHANGES IN THE WORK

1. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM SHOULD BE ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
2. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

L. CORRECTION OF WORK

THE CONTRACTOR, AT THEIR OWN COST, SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST AS POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS.

M. APPROVALS

ALL IRRIGATION SYSTEM WORK SHALL BE INSPECTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR CITY PRIOR TO START OF ANY WORK IN THIS SECTION.

N. TESTING

1. AN AGRICULTURAL SOIL SUITABILITY REPORT FOR ALL PLANTING AREAS SHALL BE OBTAINED BY THE CONTRACTOR, AFTER COMPLETION OF ROUGH GRADING, REPLACEMENT OF STOCKPILED SITE TOPSOIL BACK TO TOP 6" OF ALL PLANTING AREAS, AND PRIOR TO START OF SOIL PREPARATION WORK. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL SUBMIT AT LEAST FOUR (4) SITE SOIL SAMPLES TO A SOIL LABORATORY RECOMMENDED BY THE LANDSCAPE ARCHITECT. SAMPLES ARE TO BE TAKEN FROM THE TOP SIX (6) INCHES OF SOIL IN AREAS WITH MINIMAL GRADING, TOP TWO (2) FEET FOR AREAS OF OVER EXCAVATION.
2. ALL TEST RESULTS AND RECOMMENDATIONS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT. THE REQUIREMENTS FOR FERTILIZATION AND AMENDMENTS AS SPECIFIED HEREIN SHALL BE MODIFIED AS NECESSARY PER SOILS RECOMMENDATION REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

O. SUBMITTALS

1. MATERIALS LISTS: WITHIN FORTY FIVE (45) DAYS AFTER AWARD OF CONTRACT, SUBMIT A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION, DEMONSTRATING COMPLETE CONFORMANCE WITH THE REQUIREMENTS SPECIFIED.

- a. CERTIFICATED: DELIVER ALL CERTIFICATES TO THE DISTRICT UPON DELIVERY TO THE JOB SITE. INCLUDE: (1) QUANTITY OF COMMERCIAL FERTILIZERS USED (2) QUANTITY OF SOIL AMENDMENTS (3) QUANTITY OF PLANT MATERIAL.

P. PRODUCT HANDLING

1. DELIVERY AND STORAGE:

- a. DELIVER ALL ITEMS TO THE JOB SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF REVIEW.
- b. IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME, AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE SPEC. REQUIREMENTS.
- c. USE ALL MEANS NECESSARY TO PROTECT PLANT MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.
- d. BULK MATERIALS:

- 1) DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
- 2) PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF BULK MATERIALS, INCLUDING WATER RUNOFF, AND PREVENT ADJACENT PROPERTIES, WATER CONVEYANCE SYSTEMS, OR WALKWAYS.
- 3) DO NOT MOVE OR HANDLE MATERIALS IF THEY ARE WET.
- 4) ACCOMPANY EACH DELIVERY OF BULK MATERIALS WITH APPROPRIATE CERTIFICATES.
- 5) DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR FOLD TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.

- 6) HANDLE PLANTING STOCK BY ROOTBALL.

- 7) STORE BULBS, CORMS AND TUBERS IN A DRY PLACE AT 60 TO 65 DEG F UNTIL PLANTING.

- 8) APPLY ANTIDESISICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE AN ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING DIGGING, HANDLING, AND TRANSPORTATION.

- a) IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY WITH ANTIDESISICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO WEEKS AFTER PLANTING.

- 9) WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.

- 10) DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED, AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN THEIR APPROPRIATE ASPECT (SUN, FILTERED SUN, OR SHADE), PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.

- a. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
- b. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.

- c. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

2. REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

Q. RESPONSIBILITY AND COORDINATION DURING WEED ABATEMENT

1. DURING WEED ABATEMENT PROCEDURES, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF ALL SIGNS AND BARRIERS REQUIRED TO PREVENT INTRUSION INTO THE TREATED AREAS AND TO NOTIFY THE PUBLIC.

2. NO MATERIAL OR METHODS USED FOR WEED ABATEMENT SHALL AFFECT THE LANDSCAPE PLANTING OR HYDROSEED GERMINATION. NO MATERIAL OR METHOD SHALL RENDER THE JOB SITE UNUSABLE FOR MORE THAN TEN (10) DAYS FROM DATE OF APPLICATION.

R. PLANTING AROUND UTILITIES

1. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.
2. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE, HAND EXCAVATE, AS REQUIRED, MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.
3. NOTIFICATION OF DIG-ALERT IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES. FOR DIG-ALERT CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

PART II - MATERIALS

A.1 TREE PROTECTION FENCING / SIGNAGE:

1. PLASTIC MESH FENCE: HEAVY - DUTY ORANGE PLASTIC MESH FENCING FABRIC 48 INCHES FENCING SHALL BE ATTACHED TO METAL "U" OR "T" POST DRIVEN INTO THE GROUND OF SUFFICIENT DEPTH TO HOLD THE FABRIC SOLIDLY IN PLACE WITHOUT SAGGING. THE FABRIC SHALL BE ATTACHED TO THE POST USING ATTACHMENT TIES OF SUFFICIENT NUMBER AND STRENGTH TO HOLD UP THE FABRIC WITHOUT SAGGING. THE OWNER'S REPRESENTATIVE MAY REQUEST, AT ANY TIME, ADDITIONAL POST, DEEPER POST DEPTHS AND OR ADDITIONAL FABRIC ATTACHMENTS IF THE FABRIC BEGINS TO SAG, LEAN OR OTHERWISE NOT PRESENT A SUFFICIENT BARRIER TO ACCESS.

2. CHAIN LINK FENCE: 6 FEET TALL METAL CHAIN LINK FENCE SET IN METAL FRAME PANELS ON MOVABLE CORE DRILLED CONCRETE BLOCKS OF SUFFICIENT SIZE TO HOLD THE FENCE ERECT IN AREAS OF EXISTING PAVING TO REMAIN.

3. GATES: FOR EACH FENCE TYPE AND IN EACH SEPARATE FENCED AREA, PROVIDE A MINIMUM OF ONE 3 FOOT WIDE GATE. GATES SHALL BE LOCKABLE. THE LOCATION OF THE GATES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

4. SUBMIT SUPPLIERS PRODUCT DATA THAT PRODUCT MEETS THE REQUIREMENTS FOR APPROVAL.

5. TREE GROWTH REGULATOR (TGR) CAMBISTAT 25C.

B. NON SELECTIVE HERBICIDES

1. NON SELECTIVE CONTACT HERBICIDE AND/OR NON SELECTIVE SYSTEMIC HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

D. SELECTIVE HERBICIDES

1. SELECTIVE PRE-EMERGENT HERBICIDES (AS RECOMMENDED BY THE PEST CONTROL ADVISOR).

E. SOIL CONDITIONERS AND FERTILIZERS

1. SOIL CONDITIONERS MAY INCLUDE ANY OR ALL OF THE CONDITIONERS HEREIN SPECIFIED AND SHALL BE APPLIED AS DETERMINED BY THE AGRONOMIC SOILS REPORT AT NO ADDITIONAL EXPENSE TO THE OWNER.

- a. SHAVINGS: NITROGEN STABILIZED ORGANIC AMENDMENTS DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK OF FIR OR PINE, CONTAINING THE FOLLOWING PHYSICAL PROPERTIES: PERCENT PASSING SIEVE SIZE 95-100 6.33 MM (1/4 INCH) 80-100 2.36 MM (NO. 8, 8 MESH) 0-30 500 MICRON (NO 35, 32 MESH) NITROGEN CONTENT - DRY WEIGHT .36% .38% IRON CONTENT - MINIMUM .08% DILUTE ACID SOLUBLE Fe, ON DRY WEIGHT BASIS SOLUBLE SALTS - 2.5 MILLIMONOSCENTIMETER AT 25 DEGREES C. AS DETERMINED BY MAXIMUM SATURATION EXTRACT METHOD. ASH - DRY WEIGHT 0-6%

2. FERTILIZER: COMMERCIAL FERTILIZER WITH AN ANALYSIS OF 5-3:1 GRO-POWER PLUS, 16-20-0, AND 12-8-8 GRO-POWER CONTROLLED RELEASE NITROGEN, AS REQUIRED BY THE AGRONOMIC SOILS REPORT.

- a. FERTILIZER SHALL BE DELIVERED TO THE SIRE IN THE ORIGINAL UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY FERTILIZER THAT BECOMES CAKED OR DAMAGED, MAKING IT UNSUITABLE FOR USE WILL NOT BE ACCEPTED.

3. GYPSUM: TO BE AGRICULTURAL GRADE GYPSUM AND SHALL CONFORM TO SECTION 212-1.2 OF STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

4. IRON SULFATE: PELLET OR GRANULAR FORM CONTAINING NOT LESS THAN 18.5% EXPRESSED METALLIC IRON AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

5. AMMONIUM SULFATE: GRANULAR FORM CONTAINING NOT LESS THAN 21% NITROGEN AND 24% SULFUR AND SHALL BE REGISTERED AS AN AGRICULTURAL MINERAL, WITH THE STATE DEPARTMENT OF AGRICULTURE IN COMPLIANCE WITH ARTICLE 2 - "FERTILIZER MATERIALS" SECTION 1030 OF THE AGRICULTURAL CODE.

F. PLANTING PACKETS

1. FERTILIZER PACKETS SHALL BE SLOW RELEASE PLASTIC PACKAGE WITH MICO-PORES THAT ALLOW THE FERTILIZER TO BE RELEASED INTO THE SOIL OVER TIME. AVAILABLE FROM NUTRI PAK. THE PACKETS SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER BEARING THE MANUFACTURER'S GUARANTEE ANALYSIS. ANY DAMAGED PACKETS WILL NOT BE ACCEPTED.

G. PLANT MATERIAL

1. NOMENCLATURE: THE SCIENTIFIC AND COMMON NAMES OF PLANTS HEREIN SPECIFIED CONFORM TO INDUSTRY STANDARDS. (REFER TO LIST OF PLANT MATERIALS ON DRAWINGS).

2. LABELING: EACH GROUP OF PLANT MATERIALS DELIVERED TO THE SITE SHALL BE CLEARLY LABELED AS TO SPECIES AND VARIETY AND NURSERY SOURCE.

3. QUALITY AND SIZE:

- a. PLANTS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE DEPARTMENT OF AGRICULTURE'S REGULATION FOR NURSERY INSPECTIONS, RULES AND GRADING. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE OF INSECT INFESTATIONS, PLANT DISEASES, SUN SCALDS, FRESH ABRASIONS OF THE BARK, EXCESSIVE ABRASIONS, OR OTHER OBJECTIONABLE DISFIGUREMENTS. ALL PLANTS SHALL HAVE NORMALLY WELL-DEVELOPED BRANCH SYSTEM, WITH VIGOROUS AND FIBROUS ROOT SYSTEMS WHICH ARE NOT ROOT, POT BOUND, OR HAVE GIRDLING ROOTS. CONTAINERS

WILL BE INSPECTED BY REMOVAL OF EARTH FROM THE ROOTS OF NOT LESS THAN TWO PLANTS OR MORE THAN 2% OF THE TOTAL NUMBER OF PLANTS OF EACH SPECIES OR VARIETY. WHERE CONTAINER GROWN PLANTS ARE FROM SEVERAL SOURCES, THE ROOTS OF NOT LESS THAN TWO PLANTS OF EACH SPECIES OR VARIETY FROM EACH SOURCE WILL BE INSPECTED. IN CASE THE SAMPLE PLANTS REVIEWED ARE FOUND TO BE DEFECTIVE, THE LANDSCAPE ARCHITECT MAY JUDGE ACCEPTABILITY. ANY PLANTS RENDERED UNSUITABLE FOR PLANTING BECAUSE OF THIS REVIEW WILL BE CONSIDERED AS SAMPLES AND WILL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

- b. THE SIZE OF THE PLANTS WILL CORRESPOND WITH THAT NORMALLY EXPECTED FOR SPECIES AND VARIETY OF COMMERCIALLY AVAILABLE NURSERY STOCK, OR AS SPECIFIED IN THE SPECIAL CONDITIONS OR DRAWINGS. THE MINIMUM ACCEPTABLE SIZE OF ALL PLANTS MEASURED BEFORE PRUNING WITH THE BRANCHES IN NORMAL POSITION, SHALL CONFORM TO THE MEASUREMENTS, IF ANY, SPECIFIED ON THE DRAWINGS IN THE LIST OF PLANTS TO BE FURNISHED. PLANTS LARGER IN SIZE THAN SPECIFIED MAY BE USED WITH THE RECOMMENDED APPROVAL OF THE LANDSCAPE ARCHITECT, BUT THE USE OF LARGER PLANTS WILL REQUIRE NO CHANGE IN CONTRACT PRICE. IF THE USE OF LARGER PLANTS IS RECOMMENDED FOR APPROVAL, THE BALL OF EARTH OR SPREAD OF ROOTS FOR EACH PLANT SHALL BE INCREASED PROPORTIONATELY.

- 1) PLANTS SHALL BE HEALTHY WITH THE COLOR, SHAPE, SIZE AND DISTRIBUTION OF TRUNK, STEMS, BRANCHES, BUDS AND LEAVES NORMAL TO THE PLANT TYPE SPECIFIED. TREE QUALITY ABOVE THE SOIL LINE SHALL COMPLY WITH THE PROJECT CROWN ACCEPTANCE DETAILS AND THE FOLLOWING:

- a) CROWN: THE FORM AND DENSITY OF THE CROWN SHALL BE TYPICAL FOR A YOUNG SPECIMEN OF THE SPECIES OR CULTIVAR PRUNED TO A CENTRAL AND DOMINANT LEADER.

- 1) CROWN SPECIFICATIONS DO NOT APPLY TO PLANTS THAT HAVE BEEN SPECIFICALLY TRAINED IN THE NURSERY AS TOPIARY, ESPALIER, MULTI-STEM, CLUMP, OR UNIQUE SELECTIONS SUCH AS CONTORTED OR WEEPING CULTIVARS.

- 2) LEAVES: THE SIZE, COLOR, AND APPEARANCE OF LEAVES SHALL BE TYPICAL FOR THE TIME OF YEAR AND STAGE OF GROWTH OF THE SPECIES OR CULTIVAR. TREES SHALL NOT SHOW SIGNS OF PROLONGED MOISTURE STRESS OR OVER WATERING AS INDICATED BY WILTED, SHRIVELED, OR DEAD LEAVES.

- 3) BRANCHES: SHOOT GROWTH (LENGTH AND DIAMETER) THROUGHOUT THE CROWN SHOULD BE APPROPRIATE FOR THE AGE AND SIZE OF THE SPECIES OR CULTIVAR. TREES SHALL NOT HAVE DEAD, DISEASED, BROKEN, DISTORTED, OR OTHERWISE INJURED BRANCHES.

- a) MAIN BRANCHES SHALL BE DISTRIBUTED ALONG THE CENTRAL LEADER NOT CLUSTERED TOGETHER. THEY SHALL FORM A BALANCED CROWN APPROPRIATE FOR THE CULTIVAR/SPECIES.

- b) BRANCH DIAMETER SHALL BE NO LARGER THAN TWO-THIRDS (ONE-HALF IS PREFERRED) THE DIAMETER OF THE CENTRAL LEADER MEASURED 1 INCH ABOVE THE BRANCH UNION.

- c) THE ATTACHMENT OF THE LARGEST BRANCHES (SCAFFOLD BRANCHES) SHALL BE FREE OF INCLUDED BARK.

- 4) TRUNK: THE TREE TRUNK SHALL BE RELATIVELY STRAIGHT, VERTICAL, AND FREE OF WOUNDS THAT PENETRATE TO THE WOOD (PROPERLY MADE PRUNING CUTS, CLOSED OR NOT, ARE ACCEPTABLE AND ARE NOT CONSIDERED WOUNDS). SUNBURNED AREAS, CONKS (FUNGAL FRUITING BODIES), WOOD CRACKS, SAP LEAKAGE, SIGNS OF BORING INSECTS, GALLS, CANKERS, GIRDLING TIES, OR LESIONS (MECHANICAL INJURY).

- a) TREES SHALL HAVE ONE CENTRAL LEADER, DEPENDING ON SPECIES. IF THE LEADER WAS HEADED, A NEW LEADER (WITH A LIVE TERMINAL BUD) AT LEAST ONE-HALF THE DIAMETER OF THE PRUNING CUT SHALL BE PRESENT.

- b) ALL TREES ARE ASSUMED TO HAVE ONE CENTRAL LEADER TREES UNLESS A DIFFERENT FORM IS SPECIFIED IN THE PLANT LIST OR DRAWINGS.

- c) ALL GRAFT UNIONS, WHERE APPLICABLE, SHALL BE COMPLETELY CLOSED WITHOUT VISIBLE SIGN OF GRAFT REJECTION. ALL GRAFTS SHALL BE VISIBLE ABOVE THE SOIL LINE.

- d) TRUNK CALIPER AND TAPER SHALL BE SUFFICIENT SO THAT THE LOWER FIVE FEET OF THE TRUNK REMAINS VERTICAL WITHOUT A STAKE. AUXILIARY STAKE MAY BE USED TO MAINTAIN A STRAIGHT LEADER IN THE UPPER HALF OF THE TREE.

- 5) PLANT QUALITY AT OR BELOW THE SOIL LINE:

- a) PLANT ROOTS SHALL BE NORMAL TO THE PLANT TYPE SPECIFIED. ROOT OBSERVATIONS SHALL TAKE PLACE WITHOUT IMPACTING TREE HEALTH. ROOT QUALITY AT OR BELOW THE SOIL LINE SHALL COMPLY WITH THE PROJECT ROOT ACCEPTANCE DETAILS AND THE FOLLOWING:

- (1) THE ROOTS SHALL BE REASONABLY FREE OF SCRAPES, BROKEN OR SPLIT WOOD.

- (2) THE ROOT SYSTEM SHALL BE REASONABLY FREE OF INJURY FROM BIOTIC

- (INSECTS AND PATHOGENS) AND ABIOTIC (HERBICIDE AND SALINITY INJURY) AGENTS. WOUNDS RESULTING FROM ROOT PRUNING USED TO PRODUCE A HIGH QUALITY ROOT SYSTEM ARE NOT CONSIDERED INJURIES.

- (3) A MINIMUM OF THREE STRUCTURAL ROOTS REASONABLY DISTRIBUTED AROUND THE TRUNK (NOT CLUSTERED ON ONE SIDE) SHALL BE FOUND IN EACH PLANT. ROOT DISTRIBUTION SHALL BE UNIFORM THROUGHOUT THE ROOT BALL, AND GROWTH SHALL BE APPROPRIATE FOR THE SPECIES.

- (4) PLANTS WITH STRUCTURAL ROOTS ON ONLY ONE SIDE OF THE TRUNK (J ROOTS) SHALL BE REJECTED.

- (5) THE ROOT COLLAR SHALL BE WITHIN THE UPPER 2 INCHES OF THE SUBSTRATE/SOIL. TWO STRUCTURAL ROOTS SHALL REACH THE SIDE OF THE ROOT BALL NEAR THE TOP SURFACE OF THE ROOT BALL. THE GROWER MAY REQUEST A MODIFICATION TO THIS REQUIREMENT FOR SPECIES WITH ROOTS THAT RAPIDLY DESCEND. PROVIDED THAT THE GROWER REMOVES ALL STEM GIRDLING ROOTS ABOVE

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PROJECT: SPRING VALLEY ACADEMY 3900 CONRAD DRIVE SPRING VALLEY, CA 91977 CALIFIRE GRANT LANDSCAPE PLAN																							
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- M. LONG TERM MAINTENANCE
1. GENERAL

a. ALL AREAS SHALL BE KEPT FREE OF DEBRIS AND WEEDED AT INTERVALS OF NOT MORE THAN 10 DAYS. WATERING, TRIMMING, FERTILIZING, SPRAYING AND PEST CONTROL, AS MAY BE REQUIRED SHALL BE INCLUDED IN THE MAINTENANCE CONTRACT.

b. POST FERTILIZE ALL TURF AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 5 LBS./1,000 SQ. FT. USING AMMONIUM SULFATE. EVENLY AND THOROUGHLY WATER IN. POST FERTILIZE ALL GROUND COVER AREAS AT THE END OF EVERY 30 DAYS AT A RATE OF 30 LBS./1,000 SQ FT USING 5-3-1 GRO-POWER. GREVILLEA PLANTS ARE THE EXCEPTION WHERE THEY SHALL RECEIVE NO PHOSPHORUS.
2. TREES

a. SOIL SURFACE AROUND THE DRIP LINE OF ALL TREES IS TO BE PROTECTED FROM COMPACTION FROM VEHICULAR TRAFFIC AND PEDESTRIAN OVERUSE.

b. INJURY AROUND THE DRIP LINE OF THE TREE CANOPY IS TO BE AVOIDED. NO DIGGING, GRADING, SOIL FILLING, ADDITION OF CONCRETE WILL OCCUR IN THIS AREA. THE FIRST FOUR (4) YEARS AFTER PLANTING, MULCH SHOULD BE MAINTAINED AROUND THE ROOTBALL TO CREATE A HEALTHY ROOT ENVIRONMENT, FERTILIZATION SHOULD BE MAINTAINED TO AID IN THE HEALTHY GROWTH OF THE TREES, AND IF NECESSARY, PRUNING SHOULD OCCUR IN LATER WINTER OR EARLY SPRING (BEFORE TREE BUDS) BY A LICENSED ARBORIST.

c. FROM YEAR FIVE (5) AND BEYOND, MULCHING AT THE TREE BASE SHOULD BE MAINTAINED, HEAVY PRUNING SHOULD BE AVOIDED (EXCEPT TO REMOVE DEAD OR DISEASED BRANCHES), AND PEST MANAGEMENT SHOULD BE CONDUCTED BY A LICENSED ARBORIST.

d. AFTER ONE (1) YEAR OF WATERING, BUBBLERS ON ALL OAKS TRANSPLANTED FROM WILD ARE TO BE TURNED OFF.
3. SHRUBS / VINES

a. ALL SHRUBS ARE TO BE LEFT IN THEIR NATURAL FORM, NO PRUNING OR SHEARING SHALL OCCUR (EXCEPT WHEN PLANTS ARE LABELED AS A HEDGE ON THE ORIGINAL DESIGN PLANS). ALL DEAD LIMBS OR FLOWER HEADS ARE TO BE REMOVED VIA HAND CLIPPERS.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL WITHIN A MONTH, MINIMUM SIZE 5 GALLON.

c. ALL ORNAMENTAL GRASSES AND DIETES THAT BECOME UNSIGHTLY DUE TO BROWN BLADES ARE TO BE TRIMMED IN LATER WINTER OR EARLY SPRING (FEB-MAR) TO A HEIGHT OF ABOUT TWELVE (12) INCHES. LOMANDRA ARE THE EXCEPTION, NO PRUNING OF THIS PLANT IS TO OCCUR.
4. GROUND COVERS

a. ALL GROUND COVER IS TO BE MAINTAINED ONE FOOT (1') FROM ANY HARDSCAPE VIA HAND PRUNING IN A NATURAL PATTERNFORM. NO WEED WACKERS ARE TO BE USED AS A MEANS OF EDGING GROUND COVER.

b. DEAD PLANT MATERIAL IS TO BE REPLACED WITH LIKE MATERIAL VIA ROOTED CUTTINGS ON A QUARTERLY BASIS.

c. MULCH IS TO BE REPLENISHED EVERY TWELVE (12) MONTHS WITH LIKE MATERIAL TO ACHIEVE A THREE-INCH (3") LAYER. NO DEBRIS OR CONSTRUCTION MATERIAL IS TO BE PART OF THE ORGANIC MULCH. IF THE MULCH IS BLOWN IN, ALL MULCH IS TO BE REMOVED FROM EACH PLANT SO THAT THE LEAVES ARE CLEAN AND NO MULCH IS COVERING THE ROOT CROWN.
5. TURF

a. AERATION OF BERMUDA GRASSES

b. BERMUDA TURF AREAS SHOULD BE AERATED EVERY YEAR DEPENDING ON THE SOIL TYPE AND TURF TYPE. CLAY SOILS WILL REQUIRE AERATION 2X PER YEAR, SANDY SOILS 1X PER YEAR.

c. AERATION TIMES SHOULD BE EARLY FALL OR LATE SPRING TO GIVE THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM

d. WATER TURF AREA WELL BEFORE AERATING AND MAKE SURE NO WEED PROBLEMS ARE PRESENT.
6. DETHATCHING OF TURF GRASS

a. DETHATCHING SHOULD BE DONE WHEN THE THATCH HAS REACHED ½" OR GREATER. THATCH IS THE BROWN LAYER BETWEEN THE SOIL AND GRASS BLADES.

b. BERMUDA GRASSES MAY NEED IT YEARLY DEPENDING ON WATERING, FERTILIZING SCHEDULES, AND WEATHER. FESCUES AND BLUES MAY NEED IT EVERY FEW YEARS.

c. MOW THE TURF ONE INCH (1") SHORTER THAN YOU NORMALLY WOULD BEFORE RUNNING A DETHATCHER THROUGH IT.

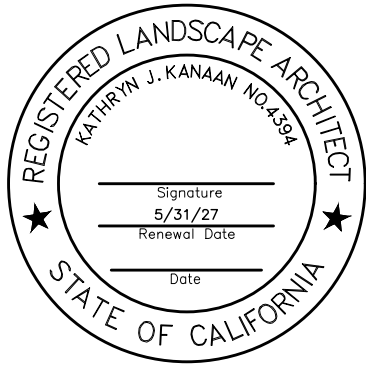
d. DETHATCHING SHOULD BE DONE IN EARLY FALL OR LATER SPRING TO ALL THE TURF TIME TO REGENERATE WHILE THE WEATHER IS STILL WARM.
- END OF SECTION



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CAL FIRE GRANT LANDSCAPE PLAN

REVISIONS	DATE	BY



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