



**REQUEST FOR QUOTE  
LANDSCAPING AND DRIP IRRIGATION INSTALLATION  
ADDENDUM #1**

Quote No. S16-002 Addendum # 1 Date of Addendum: December 2, 2016

Please note the clarification and/or additional information for the solicitation referenced above.

- 1. **Attachment E, PLANS, for referenced quote request is attached.**

Approved by \_\_\_\_\_

Joy Simonton, Purchasing Agent

By the signatures affixed below, Addendum No. 1 is hereby incorporated into and made a part of the above referenced solicitation.

ACKNOWLEDGED

\_\_\_\_\_  
Vendor

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

**RETURN ONE COPY SIGNED COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE WITH YOUR SEALED PROPOSAL. FAILURE TO DO SO MAY AUTOMATICALLY DISQUALIFY YOUR RESPONSE FROM CONSIDERATION FOR AWARD.**

# LANDSCAPE AND IRRIGATION PLANS FOR LEANDER PUBLIC WORKS

607 MUNICIPAL DRIVE  
LEANDER, TEXAS

OWNER:

CITY OF LEANDER PUBLIC WORKS  
607 MUNICIPAL DRIVE  
LEANDER, TEXAS 78641  
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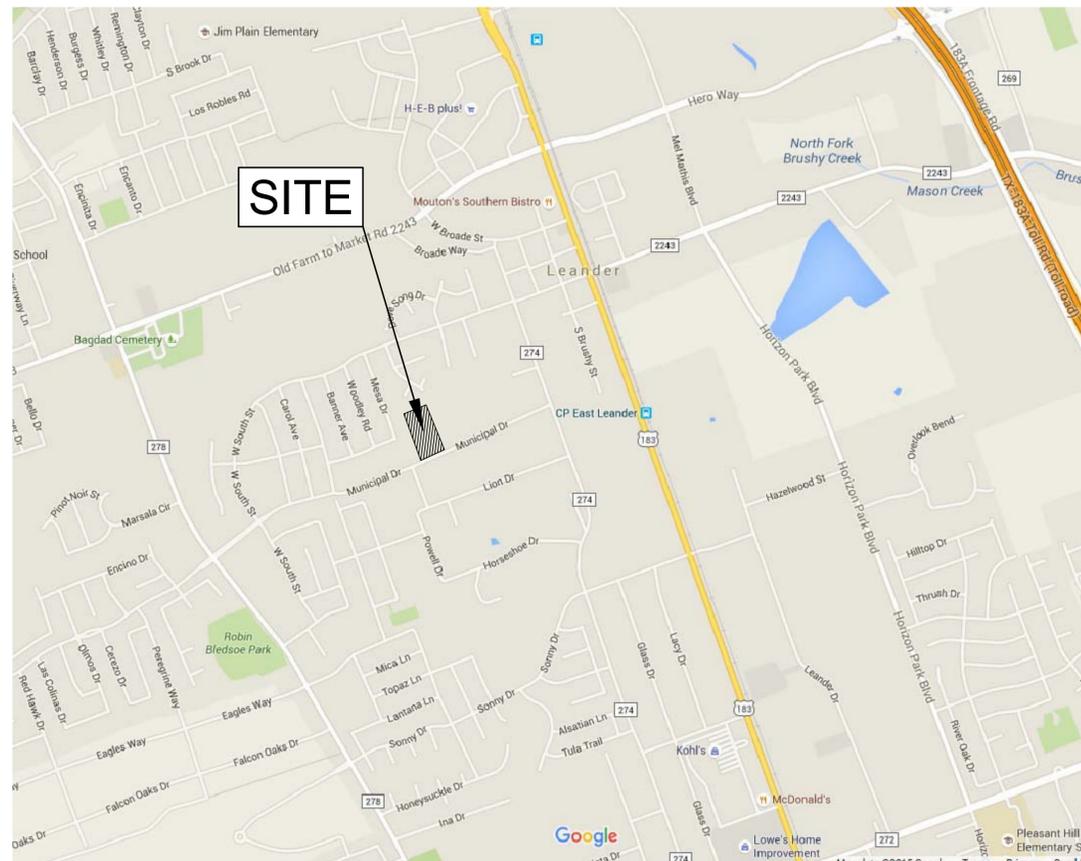
LANDSCAPE ARCHITECT:

 **HALFF**  
4030 WEST BRAKER LANE, SUITE 450  
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TEL (512) 777-4600  
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TBPE FIRM #F-312

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DIRECT (512) 777-4592

SHEETS:

- COVER
- L1 - LANDSCAPE NOTES AND DETAILS
- L2 - PLANTING PLAN
- L3 - PLANTING PLAN
- L4 - IRRIGATION NOTES AND DETAILS



LOCATION MAP  
NOT TO SCALE



Know what's below.  
Call before you dig.

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THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE HARKER HEIGHTS AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

Sheet Title	COVER SHEET
Sheet Number	L0

**GENERAL LANDSCAPE NOTES:**

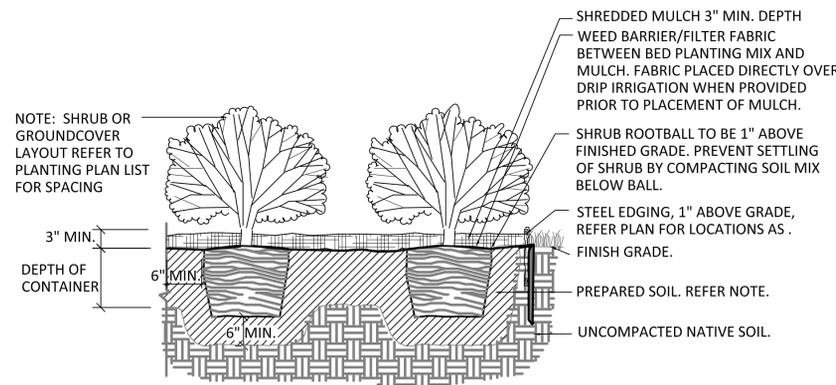
- LANDSCAPE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL LANDSCAPE MATERIAL WITH RELATED IRRIGATION, SITE WORK, AND FINAL GRADING.
- BY BIDDING, THE CONTRACTOR ACKNOWLEDGES THAT HE/SHE HAS SATISFIED HIMSELF/HERSELF AS TO THE NATURE AND LOCATION OF THE WORK AND TO THE QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES INsofar AS THE DATA IS REASONABLY ASCERTAINABLE FROM INSPECTION OF THE SITE. ANY FAILURE BY THE CONTRACTOR TO ACQUAINT HIMSELF/HERSELF WITH THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM/HER FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK AS DESCRIBED.
- THE LANDSCAPE CONTRACTOR SHALL IDENTIFY AND REVIEW ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO COMMENCING WORK AND SHALL EXERCISE EXTREME CAUTION WHEN WORKING CLOSE TO UTILITIES, AND SHALL NOTIFY THE OWNER OF APPARENT CONFLICTS WITH CONSTRUCTION AND UTILITIES SO THAT ADJUSTMENTS CAN BE PLANNED PRIOR TO INSTALLATION. CONTRACTOR MUST PROTECT ALL EXISTING LANDSCAPING AND HARDSCAPE ADJACENT TO PROPOSED LANDSCAPING IN THIS CONTRACT. LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DAMAGE AND SHALL REPLACE DAMAGED PLANT MATERIAL WITH PLANTS OF EQUAL SIZE AND QUALITY AND SHALL REPAIR ANY DAMAGE TO SIDEWALKS OR ADJACENT STRUCTURES.
- ALL PLANTING BEDS SHALL BE IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. IRRIGATION CONTRACTOR SHALL BE A STATE OF TEXAS LICENSED IRRIGATOR AND IS TO FOLLOW ALL TCEQ CODES AND REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS AND SPECIFICATIONS FOR IRRIGATION SYSTEM INCLUDING PIPE SIZES AND LOCATIONS. REF. IRRIGATION NOTES AND DETAILS.

**LANDSCAPE PLANTING NOTES:**

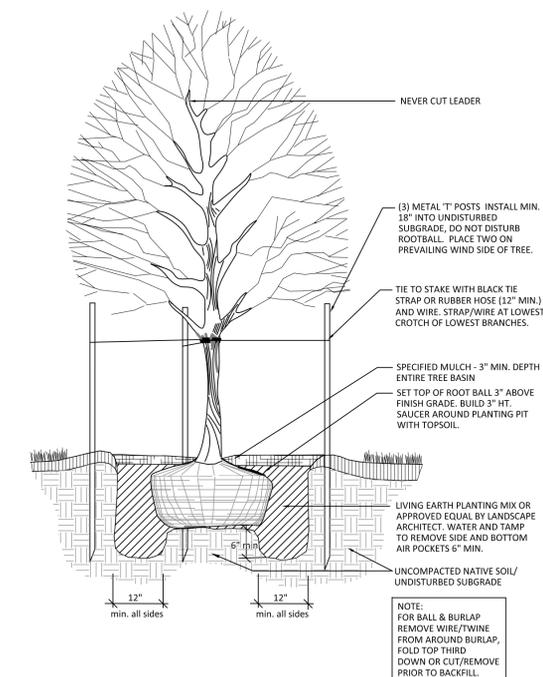
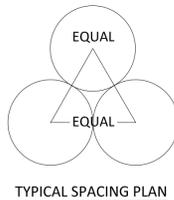
- LAYOUT, GRADING, AND TOPSOIL:** LANDSCAPE CONTRACTOR SHALL EXCAVATE FULLY PREPARED PLANT BEDS AS REQUIRED TO ACCOMMODATE A FULL 6" OF PREPARED SOIL AND 3" ORGANIC MULCH LAYER. CLEAN, NATIVE TOPSOIL. STONES LARGER THAN 1" DIAMETER SHALL BE REMOVED AND DISPOSED OF OFF SITE. FOLLOWING EXCAVATION, PLACE PREPARED SOIL IN THESE PLANT BEDS. PREPARED SOIL SHALL CONSIST OF 2 PARTS IMPORTED "CHOCOLATE" LOAM SOIL AND 1 PART ORGANIC COMPOST SOIL CONDITIONER, THOROUGHLY BLENDED TOGETHER. THIS MIX SHALL ALSO BE USED TO BACKFILL PLANTING PITS OF ALL PIT-PLANTED SHRUBS AND GROUNDCOVERS.
- PLANTS:** ALL PLANTS SHALL BE NURSERY GROWN, GRADE 1 PLANTS MEETING AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, TYPICAL IN SHAPE AND SIZE FOR SPECIES. PLANTS SHALL NOT BE ROOT-BOUND NOR LOOSE IN THEIR CONTAINERS. HANDLE ALL PLANTS WITH CARE IN TRANSPORTING, PLANTING AND MAINTENANCE UNTIL INSPECTION AND FINAL ACCEPTANCE. PLANTING PITS FOR 1 AND 5 GALLONS SHRUBS SHALL BE AT LEAST 8" LARGER IN DIAMETER THAN THE CONTAINER SIZE. LARGER CONTAINER SIZES AND B&B PLANTS SHALL BE PLANTED IN PITS AT LEAST 18" LARGER IN DIAMETER THAN THE BALL SIZE. PLANTS SHALL BE INSTALLED TO PRESENT THEIR BEST SIDE FACING THE VIEWER. USE TOTAL QUANTITIES OF PLANTS INDICATED; ADJUST SPACING AS NEEDED TO EVENLY FILL BEDS. OWNER'S REPRESENTATIVE SHALL HAVE FINAL APPROVAL OF PLANT MATERIAL LAYOUT.
- MULCH:** FOLLOWING PLANTING, MULCH "FULLY-PREPARED" BEDS AND MULCHED AREAS WITH 3" LAYER OF SHREDDED HARDWOOD MULCH AND FILL BASINS OF PIT-PLANTED SHRUBS WITH MULCH.
- MAINTENANCE & WARRANTY:** REGULAR MAINTENANCE IS REQUIRED OF ALL LANDSCAPE AREAS AND PLANT MATERIALS IN A VIGOROUS AND HEALTHY CONDITION, FREE FROM DISEASES, PEST WEEDS, LITTER AND CONSTRUCTION DEBRIS. THIS MAINTENANCE SHALL INCLUDE WEEDING, WATERING, FERTILIZATION, PRUNING, MOWING, EDGING, MULCHING OR OTHER NEEDED MAINTENANCE, IN ACCORDANCE WITH GENERALLY ACCEPTED HORTICULTURAL PRACTICES UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE PROJECT LANDSCAPE ARCHITECT.

PROVIDE A ONE-YEAR REPLACEMENT WARRANTY FOR ALL PLANT MATERIALS. WARRANTY SHALL COVER PLANTS WHICH HAVE DIED OR PARTIALLY DIED (THEREBY RUINING THEIR NATURAL SHAPE), BUT SHALL NOT INCLUDE DAMAGE BY VANDALISM, BROWSING, HAIL, ABNORMAL FREEZES, DROUGHT OR NEGLIGENCE BY THE OWNER. THE WARRANTY IS INTENDED TO COVER CONTRACTOR NEGLIGENCE, INFESTATIONS, DISEASE AND DAMAGE OR SHOCK TO PLANTS. PLANTS REPLACED UNDER WARRANTY WILL BE WARRANTED FOR ONE YEAR FOLLOWING REPLACEMENT.

PLANT LEGEND						
Qty.	KEY	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING	DESCRIPTION
SHADE / CANOPY TREES						
4	⊙	Texas Red Oak	<i>Quercus shumardii</i>		As Shown	2 1/2" - 4" trunk
10	⊙	Cedar Elm	<i>Ulmus crassifolia</i>		As Shown	2 1/2" - 4" trunk
11	⊙	Escarpment Live Oak	<i>Quercus fusiforma</i>		As Shown	2 1/2" - 4" trunk
12	⊗	Varies - see plan for species and location			As Shown	Provided by Owner and installed by contractor
ORNAMENTAL GRASSES						
39	⊕	Bamboo Muhly	<i>Muhlenbergia dumosa</i>	5 gal.	42" O.C.	APPLY PER NURSERY STDS.
48	⊕	Gulf Muhly	<i>Muhlenbergia capillaris</i>	1 gal.	36" O.C.	HT. & SPREAD PER NURSERY STDS.
116	⊕	Big Muhly	<i>Muhlenbergia lindheimeri</i>	5 gal.	42" O.C.	HT. & SPREAD PER NURSERY STDS.
SHRUBS AND PERENNIALS						
11	☆	Sweet Almond Verbena	<i>Aloysia virgata</i>	5 gal.	As Shown	HT. & SPREAD PER NURSERY STDS.
22	⊙	Texas Lantana	<i>Lantana urticoides</i>	1 gal.	36" O.C.	HT. & SPREAD PER NURSERY STDS.
23	⊙	Dwarf Wax Myrtle	<i>Myrica Cerifera</i>	5 gal.	42" O.C.	HT. & SPREAD PER NURSERY STDS.
37	⊙	Autumn Sage	<i>Salvia greggii</i>	1 gal.	24" O.C.	HT. & SPREAD PER NURSERY STDS.
VINES						
7	⊙	Crossvine	<i>Bignonia capreolata</i>	1 gal.	As Shown	HT. & SPREAD PER NURSERY STDS.
7	⊙	Evergreen Wisteria	<i>Millettia reticulata</i>	1 gal.	As Shown	HT. & SPREAD PER NURSERY STDS.
13	⊙	Passionflower	<i>Passiflora incarnata</i>	1 gal.	As Shown	HT. & SPREAD PER NURSERY STDS.
TURF GRASS / MISCELLANEOUS						
913 lf.	—	Steel Edging				1/8" x 4" dark green or black steel edging, staked, top of edging 1" above adjacent finished grade.



**1 PLANTING BED**  
NOT TO SCALE



**2 SHADE TREE PLANTING**  
NOT TO SCALE



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PUBLIC WORKS LANDSCAPING AND IRRIGATION

607 MUNICIPAL DRIVE  
LEANDER, TEXAS  
WILLIAMSON COUNTY 78641



Revision No.	Date	Description



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Project No.:	31217
Issued:	2015-10-12
Drawn By:	CM
Checked By:	BB
Sheet Title:	LANDSCAPE NOTES and DETAILS
Sheet Number:	L1

MATCHLINE B  
MATCHLINE A

- 2 - CEDAR ELM;  
PROVIDED BY OWNER
- 7 - BIG MUHLY
- 7 - BAMBOO MUHLY
- 2 - PASSIONVINE
  
- 3 - BIG MUHLY
- 1 - CEDAR ELM;  
PROVIDED BY OWNER
- 5 - GULF MUHLY
- 7 - BIG MUHLY
- 1 - CEDAR ELM;  
PROVIDED BY OWNER
- 5 - GULF MUHLY
- 1 - EVERGREEN WISTERIA
- 5 - BIG MUHLY
- 1 - CEDAR ELM;  
PROVIDED BY OWNER
- 5 - BAMBOO MUHLY
- 2 - CROSSVINE
- 3 - BIG MUHLY
  
- 3 - GULF MUHLY
- 4 - BIG MUHLY
- 1 - CEDAR ELM;  
PROVIDED BY OWNER
- 3 - GULF MUHLY
- 3 - BIG MUHLY
- 3 - PASSIONFLOWER

**NOTES:**

1. SEE LANDSCAPE AND IRRIGATION NOTES ON SHEETS L1 AND L4.
2. ENTIRE PLANTING BED SHALL BE MULCHED WITH 3" DEEP HARDWOOD MULCH TO DETER WEEDS AND PROTECT ROOTS OF PLANT MATERIAL INCLUDING TREES.
3. TYPICAL PLANT BED WIDTH SHOWN ON PLAN 8.5' FROM FENCE.
4. PLANT BEDS IN FRONT OF BUILDINGS ARE WIDER THAN PLANT MATERIAL TO ALLOW FOR ACCESS AROUND UTILITY EQUIPMENT AND KEEP PLANTS FROM BEING DAMAGED BY ROOF RUNOFF.
5. TREES TO BE PLANTED A MINIMUM OF 3' FROM FENCE. ALL TREES SHOWN ON THIS PLAN ARE 3' AND 5' FROM FENCE.
6. DO NOT DISTURB ROOTS OF EXISTING TREES WHEN INSTALLING PLANT BEDS.

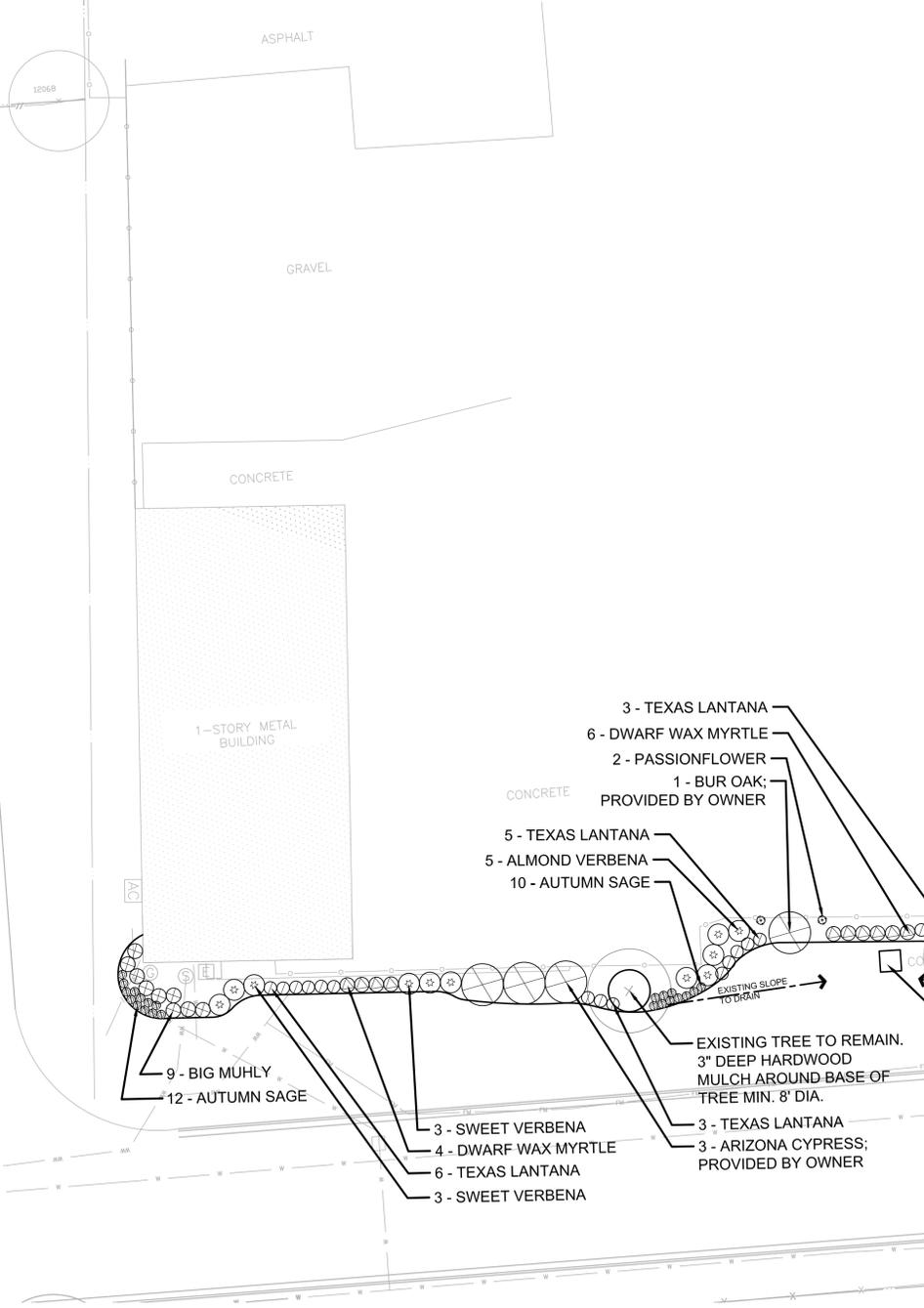
STEEL EDGING (TYP.)

EXISTING SWALE  
NOTE: INSTALL STEEL EDGING AWAY FROM SWALE TO PROTECT ROOTS AND PLANT MATERIAL.

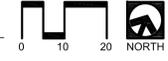
- 8 - BIG MUHLY
- 5 - BAMBOO MUHLY
- 2 - CROSSVINE
  
- 5 - BIG MUHLY
- 5 - BAMBOO MUHLY
- 2 - EVERGREEN WISTERIA
  
- EXISTING 1" WATER LINE. IRRIGATION POINT OF CONNECTION.
- 7 - BIG MUHLY
- 2 - EVERGREEN WISTERIA

- 3 - TEXAS LANTANA
- 6 - DWARF WAX MYRTLE
- 2 - PASSIONFLOWER
- 1 - BUR OAK;  
PROVIDED BY OWNER
- 5 - TEXAS LANTANA
- 5 - ALMOND VERBENA
- 10 - AUTUMN SAGE
  
- 3 - SWEET VERBENA
- 4 - DWARF WAX MYRTLE
- 6 - TEXAS LANTANA
- 3 - SWEET VERBENA

- 3 - DWARF WAX MYRTLE
- 5 - TEXAS LANTANA
- 3 - BIG MUHLY
- 15 - AUTUMN SAGE
- EXISTING TREE TO REMAIN. 3" DEEP HARDWOOD MULCH AROUND BASE OF TREE MIN. 8" DIA.
- EXISTING TREE TO REMAIN. 3" DEEP HARDWOOD MULCH AROUND BASE OF TREE MIN. 8" DIA.
- EXISTING CONCRETE INLET
- EXISTING WATER METER



**1 PLANTING PLAN**  
1" = 20' - 0"



**PUBLIC WORKS LANDSCAPING AND IRRIGATION**

607 MUNICIPAL DRIVE  
LEANDER, TEXAS  
WILLIAMSON COUNTY 78641

**HALFF**

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Revision No.	Date	Description

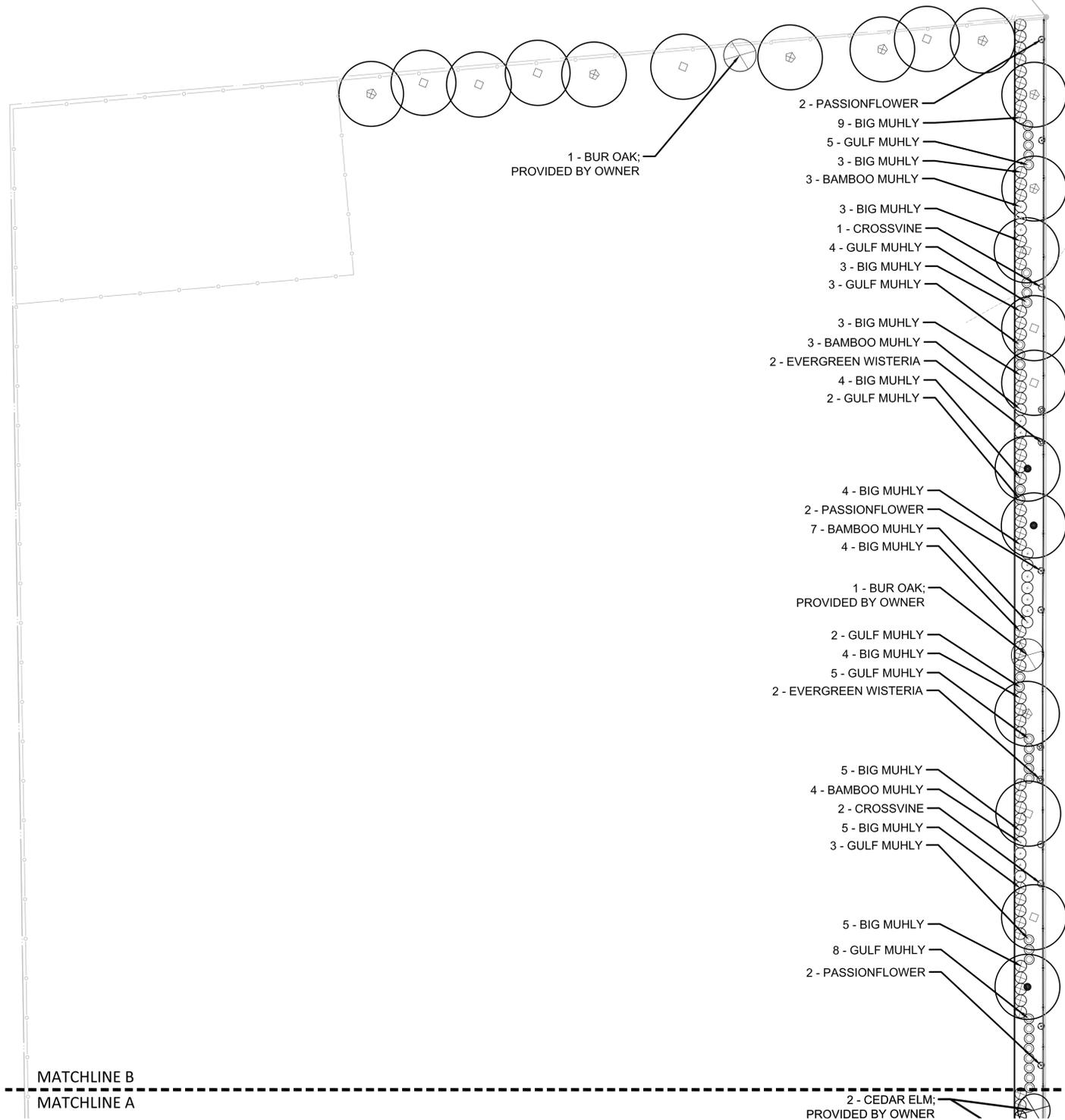


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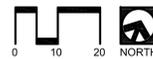
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Project No.:	31217
Issued:	2015-10-12
Drawn By:	CM
Checked By:	BB
Sheet Title	LANDSCAPE PLAN
Sheet Number	L2



MATCHLINE B  
MATCHLINE A

**1 PLANTING PLAN**  
1" = 20' - 0"



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**PUBLIC WORKS LANDSCAPING  
AND IRRIGATION**

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Revision No.	Date	Description

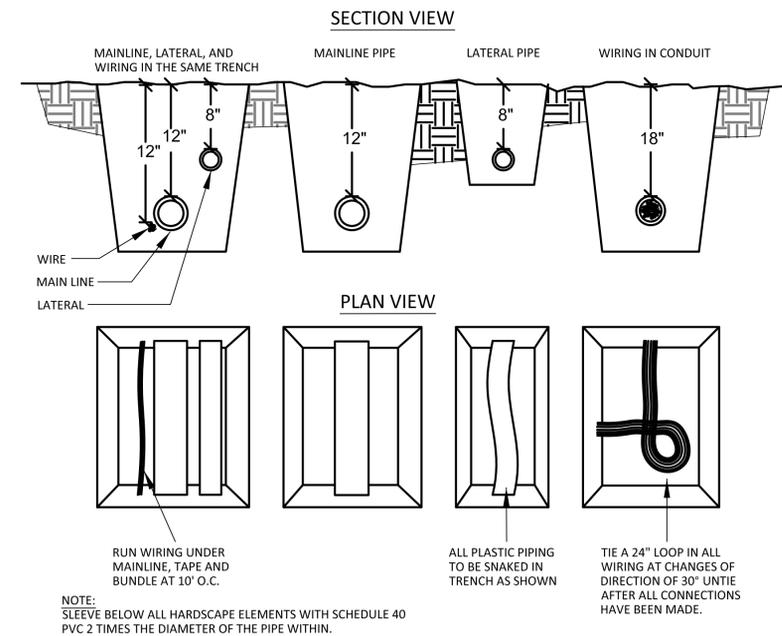


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Issued:	2015-10-12
Drawn By:	CM
Checked By:	BB
Sheet Title	LANDSCAPE PLAN
Sheet Number	L3

**IRRIGATION NOTES:**

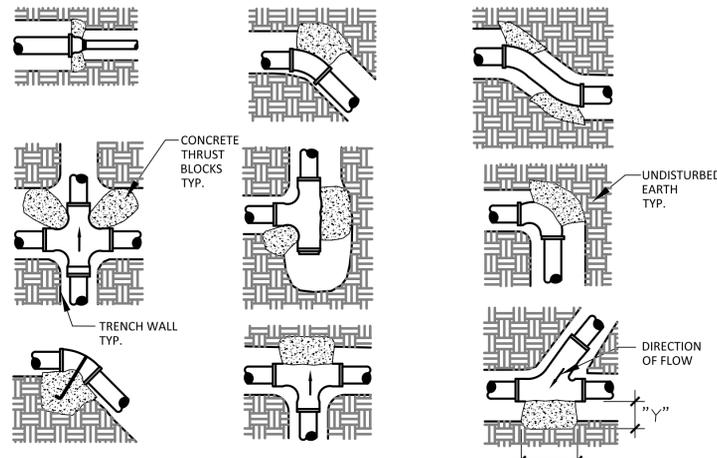
- 1) THE SYSTEM SHALL BE DESIGNED BY A STATE OF TEXAS LICENSED IRRIGATOR AND SHALL FOLLOW ALL TCEQ CODES AND REGULATIONS. CONTRACTOR SHALL PROVIDE DESIGN SHOP DRAWINGS AND SPECIFICATIONS FOR IRRIGATION SYSTEM INCLUDING PIPE SIZES AND LOCATIONS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- 2) ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- 3) THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
- 4) THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
- 5) THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
- 6) ALL IRRIGATION SYSTEM COMPONENTS SHOULD BE DESIGNED AND INSTALLED FOR NON-POTABLE WATER APPLICATION. CONTRACTOR SHALL INSTALL IRRIGATION SYSTEM IN COMPLIANCE WITH ALL CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) STANDARDS AND REGULATIONS FOR NON-POTABLE WATER USE.
- 7) THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
- 8) ALL LANDSCAPE BEDS NOT CONSTRUCTED PRIOR TO IRRIGATION INSTALLATION SHALL BE LAID OUT BY LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION OF IRRIGATION SYSTEM.
- 9) INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
- 10) SPRINKLER HEAD SPACING SHALL BE DESIGNED FOR "HEAD-TO-HEAD" COVERAGE AND ADJUSTED FOR PREVAILING WINDS. THE SYSTEM SHALL PROMOTE MINIMUM RUN-OFF AND MINIMUM OVERSPRAY ONTO NON-IRRIGATED AREAS (I.E. PAVING, WALKWAY, BUILDING), TURF, LANDSCAPE BEDS AND TREES SHALL BE ZONED SEPARATELY.
- 11) ALL VALVES, PIPE, BUBBLERS AND HEADS SHOWN IN THE LEGEND (OR APPROVED EQUALS) SHALL BE USED IN THE DESIGN OF THE IRRIGATION SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SIZE ALL PIPE TO ENSURE THAT THE SYSTEM, HEADS AND BUBBLERS USED IN THE SYSTEM ADHERE TO THE MANUFACTURER'S SPECIFICATIONS WITH REGARDS TO, BUT NOT LIMITED TO, FLOW AND PRESSURE.
- 12) CONTRACTOR SHALL BE RESPONSIBLE FOR ELECTRICAL CONNECTION TO CONTROLLER AND ALL OTHER ASSOCIATED TASKS NEEDED TO MAKE THE CONTROLLERS OPERATIONAL.
- 13) CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS AND SPECIFICATIONS FOR IRRIGATION SYSTEM PRIOR TO PROJECT CLOSE-OUT.
- 14) THIS DESIGN IS DIAGRAMMATIC INCLUDING MAINLINE AND SLEEVING. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS. LOCATE ALL LATERAL AND PRESSURE LINES IN THE LANDSCAPE AREA.
- 15) CONTRACTOR TO BANK VALVES/BOXES, IN NEAT AND ORDERLY MANNER INSIDE THE LANDSCAPE PLANTING AREAS.
- 16) IRRIGATION CONTROLLER TO BE COORDINATE WITH ELECTRICAL CONTRACTOR FOR APPROPRIATE POWER REQUIREMENTS. CONTROLLER TO BE EQUIPPED WITH RAIN AND FREEZE SENSOR SHUT-OFF DEVICE.
- 17) ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER, CONTROLLER AND VALVES IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
- 18) CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF THE MAIN LINE. LABEL SPARE WIRES ON BOTH ENDS.



**3 PIPE & WIRE TRENCHING (TYP.)**  
NOT TO SCALE

**IRRIGATION NOTES CONTINUED:**

- 19) ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
- 20) THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.
- 21) ALL IRRIGATION LINES AND SLEEVES SHALL BE AT A DEPTH OF 18"-24". DO NOT ROUTE PIPE DOWN THE CENTER OF THE TREE AND SHRUB BED AREAS; ALLOW FOR TREE AND SHRUB BED PLANTINGS. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING, UTILITIES, AND ARCHITECTURAL FEATURES.
- 22) ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MIN. DEPTH AS SHOWN ON THE SLEEVING DETAILS.
- 23) ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON PLANS OR DETERMINED IN THE FIELD FOR HEAD-TO-HEAD COVERAGE. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS. HEADS MUST HAVE MATCHED PRECIPITATION RATES WITHIN EACH CONTROL VALVE CIRCUIT.
- 24) ON DRIP IRRIGATION SYSTEMS, ALL WATER LINES SHALL BE THOROUGHLY FLUSHED BEFORE INSTALLING DRIPLINE.
- 25) ALL TREE IRRIGATION LATERAL LINES SHALL BE A MINIMUM OF 1" SCH. 40 PVC PIPE.
- 26) CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING NEAR TREES. NO MECHANICAL TRENCHING SHALL BE PERMITTED BELOW THE DRIPLINE/CANOPY OF EXISTING TREES. CONTRACTOR SHALL ADJUST TRENCH PATH AND/OR EXCAVATE BY HAND TO AVOID DAMAGE TO EXISTING TREE ROOT SYSTEMS.
- 27) COMPACTION OF THE PIPE TRENCHES SHALL BE SUFFICIENT TO LIMIT SHORT TERM SETTLING OF THE BACKFILL TO NO MORE THAN 1-INCH. THE CONTRACTOR SHALL CORRECT SETTLING GREATER THAN THIS WITHOUT ADDITIONAL COMPENSATION.
- 28) WHEN INSTALLING BUBBLERS, A MINIMUM OF FOUR (4) FEET OF FLEXIBLE PIPE SHALL BE USED TO CONNECT THE BUBBLER TO ALLOW FOR THE FUTURE PLANTING OF THE TREES.
- 29) ALL TREE BUBBLERS SHALL BE INSTALLED ON UPHILL SIDE OF ROOTBALL IF TREE IS PLANTED ON A SLOPE.
- 30) ALL TREE BUBBLERS SHALL BE INSTALLED IN A MANNER TO DISTRIBUTE WATER EVENLY TO ROOT BALL.
- 31) ALL TREE BUBBLERS SHALL BE PINNED DOWN ONE (1) FOOT AWAY FROM TRUNK WITH LANDSCAPE/SOD STAPLES.



PIPE O.C.	"X"	"Y"
2" O.C.	"12"	"12"
3" O.C.	"12"	"12"
4" O.C.	"12"	"12"

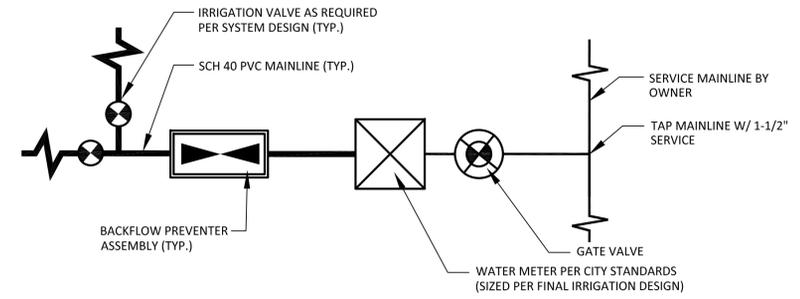
**NOTE:**  
ALL LINES 2" AND LARGER TO BE INSTALLED WITH THRUST BLOCKS AS SHOWN. TEST LINES PER SPECIFICATIONS. REF. TRENCH DETAIL FOR DEPTH AND MARKING.

**4 PIPE THRUST BLOCKING (TYP.)**  
NOT TO SCALE

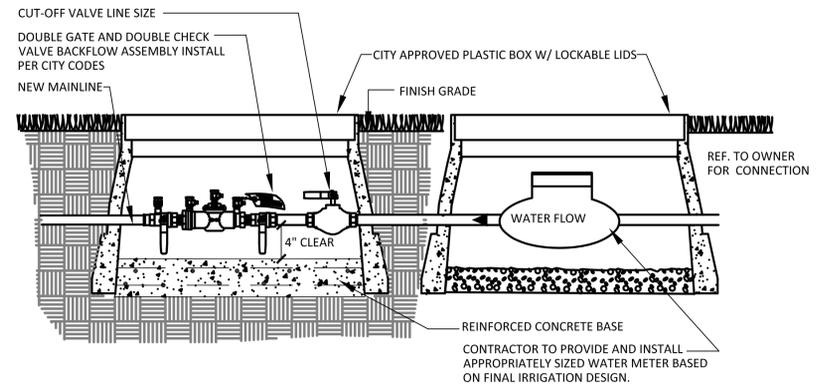
**IRRIGATION LEGEND (FOR IRRIGATION DESIGN REFERENCE ONLY)**

PRODUCT	NOTES
HUNTER BRAND MP2000 ROTATORS, 6"	FULLY ADJUSTABLE RADIUS AND ARC
RAIN BIRD 1404 SERIES BUBBLER, 16PM	PRESSURE COMPENSATING, 2 BUBBLERS PER TREE
RAIN BIRD 1806-SAM-PRS POP-UP SPRAY HEAD W/ NOZZLE	FULLY ADJUSTABLE RADIUS AND ARC
WILKINS 975XLTLS, DCA BACKFLOW PREVENTION DEVICE WITH WYE STRAINER	
HUNTER PGV-151 PLASTIC REMOTE CONTROL VALVE W/ FLOW CONTROL AND HUNTER NODE 100 BATTERY OPERATED CONTROLLER	
RAIN BIRD XCZ-100-PRB-COM DRIP VALVE CONTROL ZONE ASSEMBLY, SIZE AS SHOWN ON PLANS	INSTALL IN 12" RECTANGLE BOX
RAIN BIRD 33 DLRC (3/4") QUICK COUPLER VALVE IN 10" ROUND VALVE BOX	
WATER METER	SIZE PER IRRIGATION DESIGN
RAIN BIRD RAIN SENSOR, RSD-C6X	
RAIN BIRD AIR/VACUUM RELIEF VALVE (ARV) KIT INSTALLED W/ AT-050 COMBINATION TEE AND 3/4" x 1/2" REDUCER BUSHING, MIN. ONE (1) ARV PER 500' OF DRIPLINE, USING AIR RELIEF LATERAL. CONNECT AIR RELIEF VALVE TO ALL DRIPLINE LATERALS WITHIN ELEVATED AREA. VERIFY QUANTITY PRIOR TO STARTING WORK.	INSTALL ARV ASSEMBLY INSIDE A 6" ROUND VALVE BOX AT HIGH POINT OF EACH PLANTER, INSTALL ARV EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
LASCO SCH. 40 PVC BALL FLUSH VALVE, 1/2" SIZE WITH THREADED CONNECTIONS.	INSTALL FLUSH VALVE INSIDE A 10" ROUND VALVE BOX.
SCH. 40 PVC PIPE MAINLINES, 2" MIN. IN SIZE, INSTALL MIN. 18" BELOW GRADE	2" MIN. IN SIZE, ALL MAINLINE FITTINGS SHALL RECEIVE THRUST BLOCKS.
SCH. 40 PVC PIPE LATERAL LINES, 1/2" - 3" IN SIZE, INSTALL MIN. 12" BELOW GRADE	
RAIN BIRD XF-SDI-06-12-XX DRIP TUBING WITH 0.6 GPH EMITTERS @ 12" O.C., INSTALL TUBING ROWS A MAX. OF 16" APART IN LANDSCAPE AREAS. ALL TUBING SHALL BE INSTALLED AT FINISHED SOIL GRADE (3" BELOW MULCH GRADE) W/ 9" WIRE STAKES FIVE (5) FEET O.C.	VERIFY THE LAYOUT AND SPACING IN THE FIELD PRIOR TO STARTING WORK.
RAIN BIRD XF DRIPLINE INSERT FITTINGS WITH PVC TEE OR ELL FITTINGS FOR CONNECTION BETWEEN PVC LATERAL LINES AND DRIP TUBING.	VERIFY THE LAYOUT AND SPACING IN THE FIELD PRIOR TO STARTING WORK.
IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED)	DBY-6 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED)
SOLVENT PRIMER/CEMENT FOR ALL PIPE FITTINGS SHALL BE TYPE RECOMMENDED BY THE PIPE MANUFACTURER.	
RAINBIRD ESP-LXMEF CONTROLLER W/ ETC MANAGER SMART CARTRIDGE, PEDESTAL MOUNT, INSTALL W/ RAIN/FREEZE SENSOR	

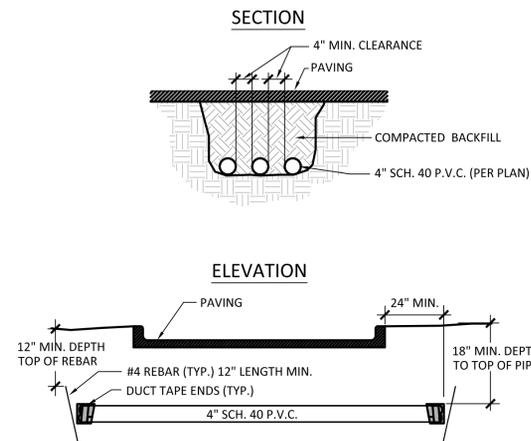
REFERENCE TO MANUFACTURER'S TRADE NAME OR CATALOG NUMBER IS FOR THE PURPOSE OF IDENTIFICATION ONLY. CONTRACTOR SHALL BE PERMITTED TO FURNISH LIKE MATERIALS OF OTHER MANUFACTURERS PROVIDED THEY ARE OF EQUAL QUALITY AND COMPLY WITH THE SPECIFICATIONS FOR THIS PROJECT AND ARE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. "EQUAL PRODUCTS" SUBMITTED AFTER AWARD OF CONTRACT MAY BE DENIED AND THE CONTRACTOR MUST USE THE SPECIFIED PRODUCT/MATERIAL WITHOUT ADDITIONAL COMPENSATION.



**1 WATER CONNECTION (TYP.)**  
NOT TO SCALE



**2 DOUBLE CHECK VALVE ASSEMBLY (TYP.)**  
NOT TO SCALE



- NOTES:**
1. ALL SLEEVES 4" SCH 40 PVC PIPE.
  2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
  3. WHEN MORE THAN ONE SLEEVE, PROVIDED 4" CLEARANCE BETWEEN SLEEVES.
  4. MECHANICALLY TAMP BACKFILL TO 95% PROCTOR.
  5. THE ENDS OF SLEEVES SHALL BE SEALED WITH DUCT TAPE AND HAVE MIN. #4 REBAR PLACED AT THE ENDS OF THE SLEEVES TO ENABLE POSITIVE LOCATION WITH A PIN LOCATOR.
  6. THE CONTRACTOR IS TO PERMANENTLY "MARK" THE LOCATION OF ALL SLEEVES ON THE SIDEWALK, CURB, TRAIL OR ADJACENT PAVEMENT. THE "MARK" SHALL BE A STAMPED "X" THAT IS 2" IN HEIGHT AND WIDTH. THE "MARK" SHALL ALSO BE PLACED DIRECTLY OVER THE CENTER OF OF THE SLEEVE, IF MORE THAN ONE SLEEVE IS PROVIDED "MARK" THE MIDDLE SLEEVE.

**5 IRRIGATION SLEEVING (TYP.)**  
NOT TO SCALE

**PUBLIC WORKS LANDSCAPING AND IRRIGATION**

607 MUNICIPAL DRIVE  
LEANDER, TEXAS  
WILLIAMSON COUNTY 78641



Revision No.	Date	Description



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THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE MARKER HEIGHTS AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

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