

IRRIGATION NOTES:

- Provide a complete, functioning automatic irrigation system including labor, materials, fees, taxes, equipment and other costs incidental to accomplishing work.
- Acquire written approval from Landscape Architect for material substitutes prior to commencing the installation.
- Locate existing underground utilities or obstacles prior to commencing installation. Repair damage to utilities or finishes resulting from work at no additional expense to Owner. Piping is diagrammatic. Adjust as required for existing utilities, obstructions, tree root balls, etc.
- Install work in accordance with applicable local codes and ordinances.
- Coordinate installation with landscape contractor and other trades.
- Locate each end of irrigation sleeves dimensionally on the Record "As-Built" Drawings.
- Contractor shall be responsible for damage to plant material due to system failure from inferior workmanship, during the installation and maintenance period.
- Extend one extra control wire to farthest valve, routed parallel to common ground wire with installation of lead and common wires.
- Control wire shall be direct burial, 600 volt, single conductor, solid copper, plastic insulated cable, rated for direct burial applications, UF, UL approved, 14 gauge minimum lead and common ground return wire unless noted otherwise. Color of insulation as follows:
 - Lead Wire: any color (same color), except white or orange
 - Common Ground Wire: white (color)
 - Extra Control Wire: Orange (color)
- All P.V.C. pressure main line and lateral lines shall receive as follows:
 - 1 1/2" minimum cover for main lines
 - 12" minimum cover for lateral lines
- Make final electrical connection of controller per local electrical code. Provide all necessary fuse boxes, conduit, fittings, connectors or other electrical devices to make connection. Owner shall provide electrical service within 20 linear feet of controller location unless noted otherwise on drawings.
- Coordinate sleeve and conduit requirements with General Contractor.
- Connect remote sensors to controller with ground wire in series prior to connecting to remote control valves.
- Owner or Landscape Architect shall determine final controller location.

NOTE: "SMARTLINE CERTIFIED DESIGN"

This irrigation design utilizes Smartline water management technology which features controller(s) and on-site weather based monitoring. Combined as specified these items provide automatic and zone specific adjustment of the watering schedule based upon real time and site specific ET calculations. The Irrigation Contractor shall program the controller by selecting the proper sprinkler type, plant type, soil type, and slope for each zone. The Irrigation Contractor shall then adjust the programming of each zone for exposure (i.e. sun-shade, wind, etc.) and efficiency of system.

EQUIPMENT SHALL BE INSTALLED AS SPECIFIED. EQUIPMENT SUBSTITUTIONS WILL NOT BE ALLOWED.

HYDRAULIC CALCULATION NOTES:

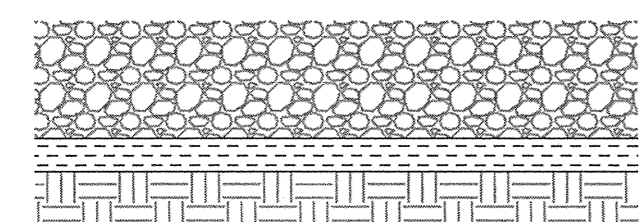
Ten days prior to commencing work, verify static pressure. If static pressure is less than 60 PSI, do not start work until notified in writing to proceed by Owner. If Contractor proceeds with work without authorization from Owner, the Contractor shall be financially responsible to correct, modify or repair any items or materials that may be required to provide a fully functioning and operational irrigation system in compliance with the plans and specifications. Hydraulic calculations for this system are based on the static pressure as stated above. The static pressure shown is an assumed pressure, a pressure measured at the site, or an estimated pressure provided by the county or city.

HYDRAULIC CALCULATIONS

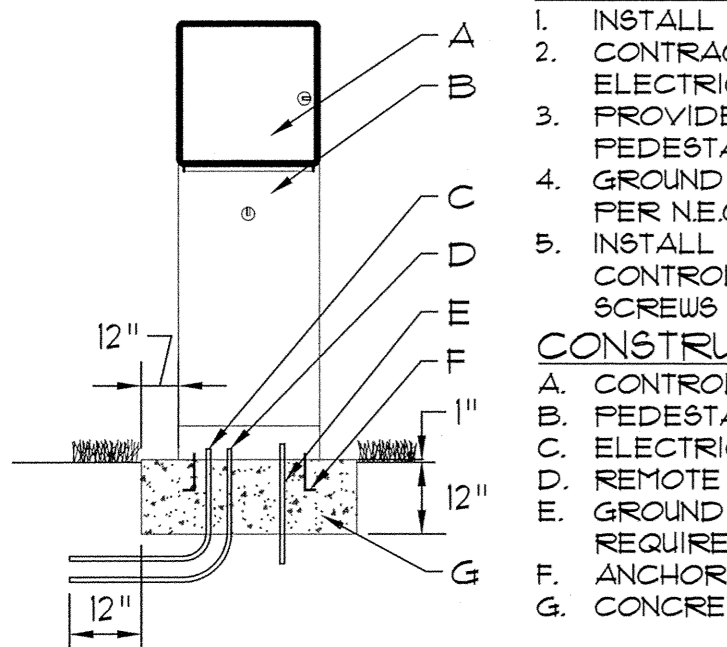
ITEM	SIZE	PSI	NOTES
Maximum GPM			Fitting Loss Accounted By Adding 10% To Flow Shown in Manuf. Nozzle Chart.
Estimated - 16 GPM			TYPE 'K' COPPER 25 LN. FT.
Services	1"	2.20	
Ball Valve	1"	1.00	
Water Meter	1"	1.40	
Backflow Preventer	1"	6.00	
Master Valve	1"	1.30	
Main Line	1 1/4"	3.20	200 LN. FT.
Station Valve	1"	1.30	
Zone		5.00	
Head		20.00	
Total Loss		44.10	
Assumed Static Pressure		60.00	
Pressure Differential		15.90	

GENERAL NOTES:
 CONTRACTOR SHALL PLACE DRIFLINE TO ASSURE ADEQUATE WATERING FOR PLANT GROWTH AND VIABILITY. DO NOT EXCEED DRIP LINE RUNS GREATER THAN 110 LN. FT.

CONSTRUCTION NOTES:
 A. MULCH (REF. LANDSCAPE DRAWINGS)
 B. DRIP LINE
 C. BED PREP (REF. LANDSCAPE PLAN)



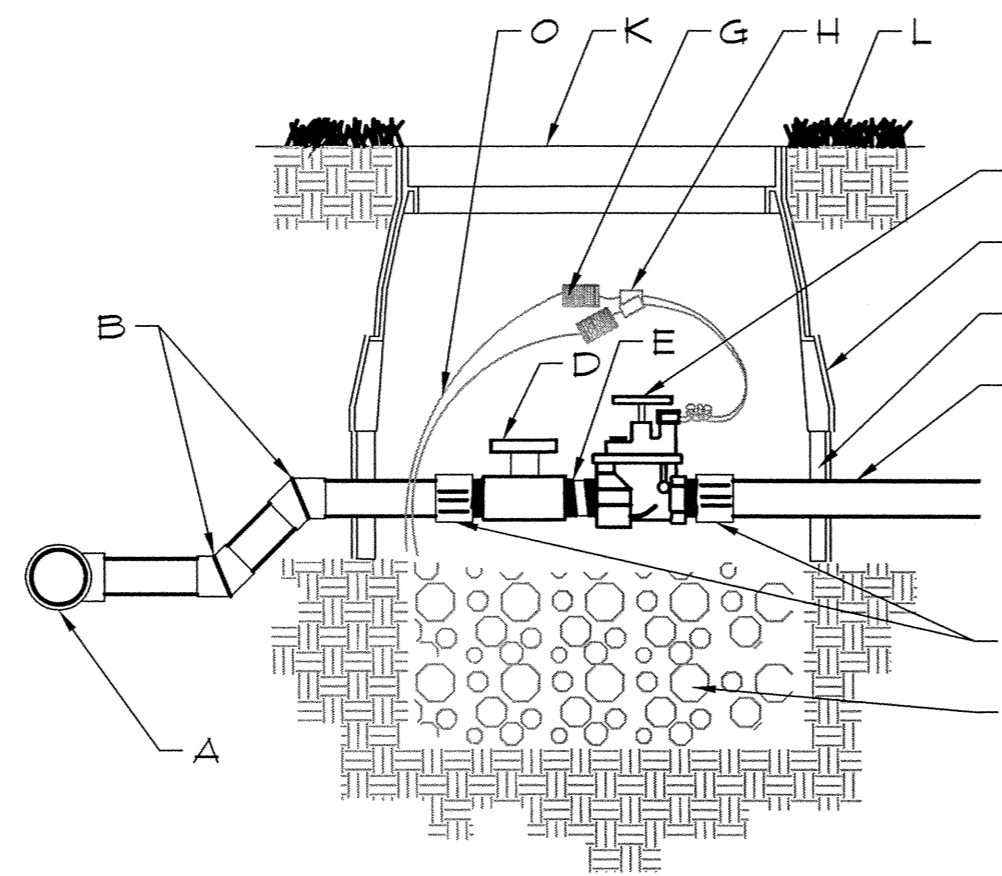
DRIP LINE / CRUSHER FINES
NOT TO SCALE



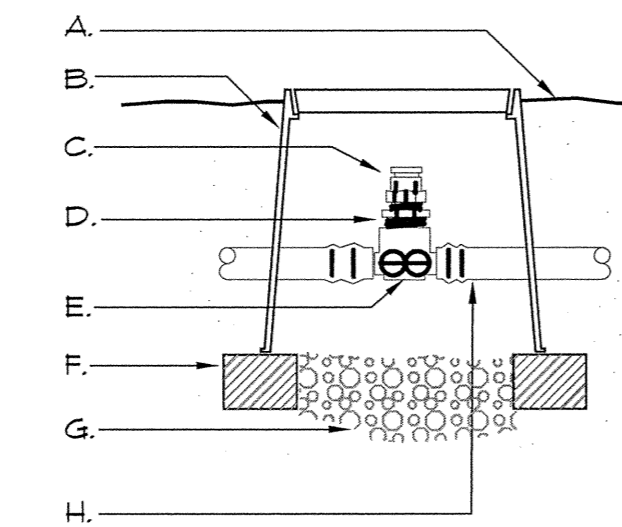
PEDESTAL MOUNTED CONTROLLER
NOT TO SCALE

- GENERAL NOTES:**
- INSTALL ELECTRICAL WIRING PER LOCAL CODES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK.
 - PROVIDE DRAINAGE AWAY FROM BASE OF PEDESTAL.
 - GROUND IRRIGATION BOXES WITH GROUNDING ROD PER N.E.C.
 - INSTALL TEMPERATURE SENSOR TO NORTH SIDE OF CONTROLLER PEDESTAL W/ STAINLESS STEEL SCREWS

- CONSTRUCTION NOTES:**
- CONTROLLER
 - PEDESTAL
 - ELECTRICAL SERVICE CONDUIT
 - REMOTE CONTROL VALVE WIRING CONDUIT
 - GROUNDING ROD(S) PER MANUFACTURER'S REQUIREMENTS
 - ANCHOR BOLTS
 - CONCRETE BASE, 3,000 PSI

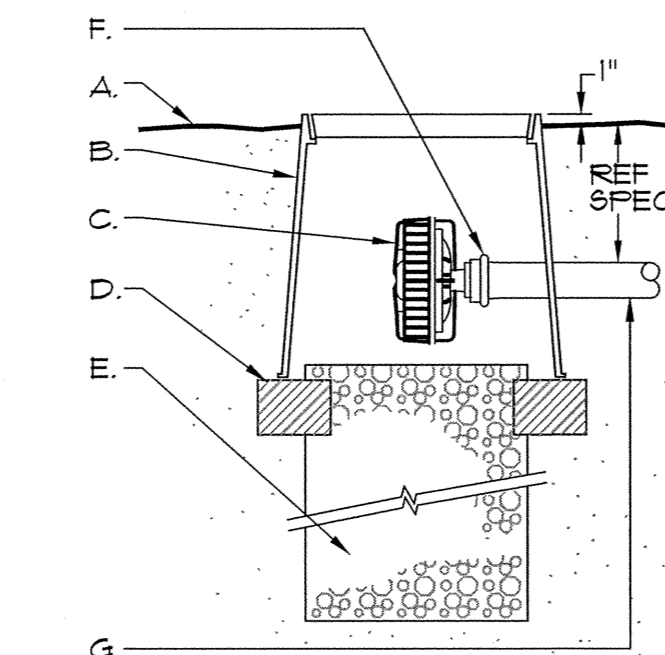


ELECTRIC VALVE
NOT TO SCALE



- CONSTRUCTION NOTES:**
- FINISH GRADE
 - 6" ROUND VALVE BOX
 - AIR / VACUUM RELIEF VALVE
 - 3/4" X 1/2" REDUCTION BUSHING
 - TECHLINE 1/2" 2-WAY ADAPTER TEE
 - BRICK SUPPORTS (THREE)
 - WASHED AGGREGATE SUMP (1 CUBIC FOOT)
 - TECHLINE TUBING

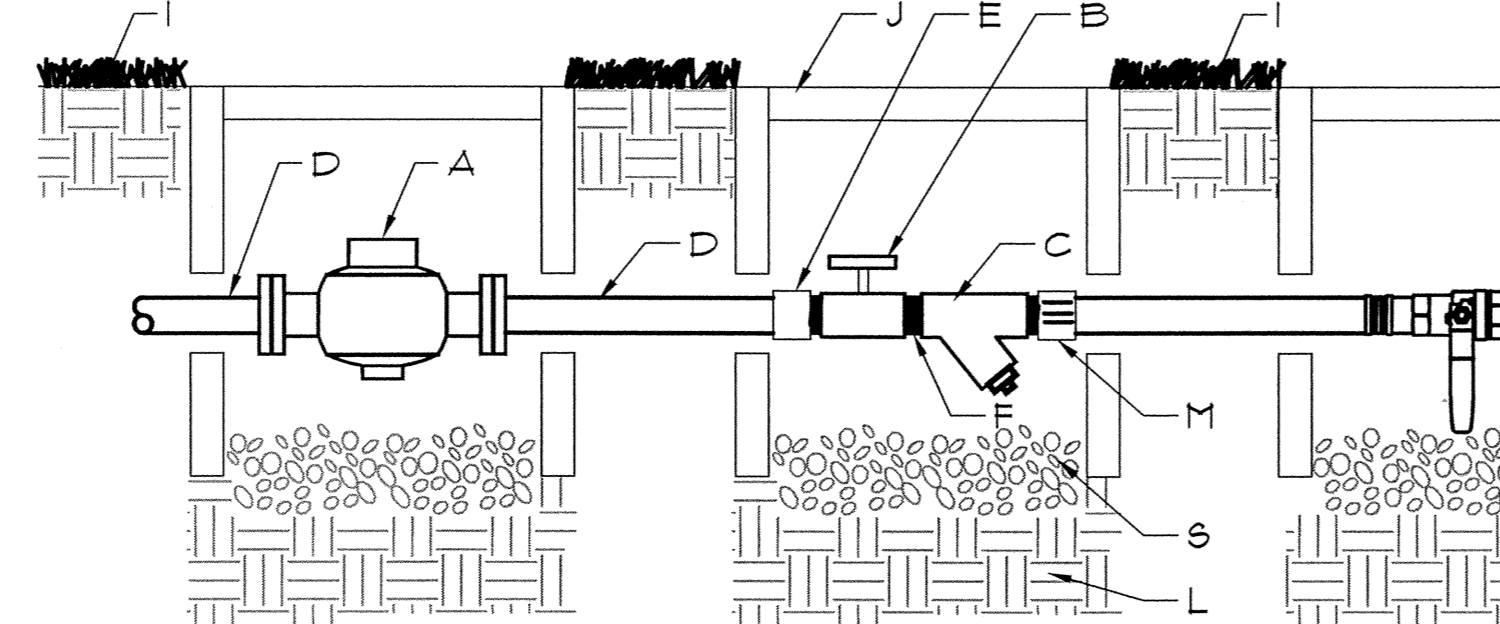
TECHLINE AIR/VACUUM RELIEF
NOT TO SCALE



TECHLINE LINE FLUSHING VALVE
NOT TO SCALE

- CONSTRUCTION NOTES:**
- 12" X 17" PLASTIC VALVE BOX WITH LOCKING LID.
 - FINISHED GRADE.
 - 24" WIRE LOOP
 - AUTOMATIC VALVE, SEE IRRIGATION PART LIST.
 - WATER PROOF WIRE CONNECTOR
 - SCH 80 NIPPLE
 - PRESSURE REGULATOR
 - WYE STRAINER, INSTALL TO PROVIDE ACCESS FOR MAINTENANCE AND REPLACEMENT OF FILTER.
 - LOCKING VALVE BOX COVER
 - VALVE BOX EXTENSIONS IF NEEDED.
 - LATERAL LINE
 - 4" LAYER OF 3/4" GRAVEL
 - TRUE UNION BALL VALVE
 - 6MM BLACK POLYETHYLENE PLASTIC TAPE TO ALL INLET AND OUTLET PIPE AND INSTALL FULL LENGTH OF VALVE BOX BOTTOM.
 - CMU BLOCK

DRIP VALVE/FILTER ASSEMBLY
NOT TO SCALE



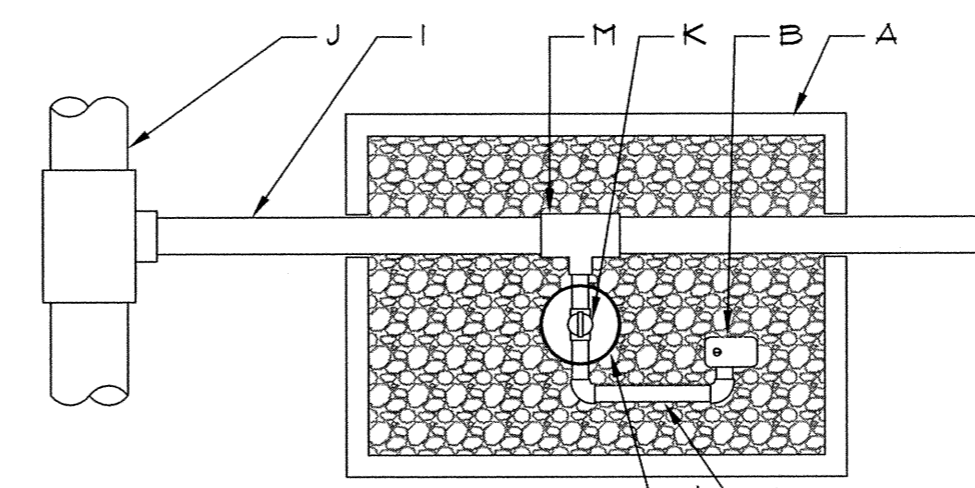
BACKFLOW PREVENTER CONNECTION
NOT TO SCALE

GENERAL NOTES:

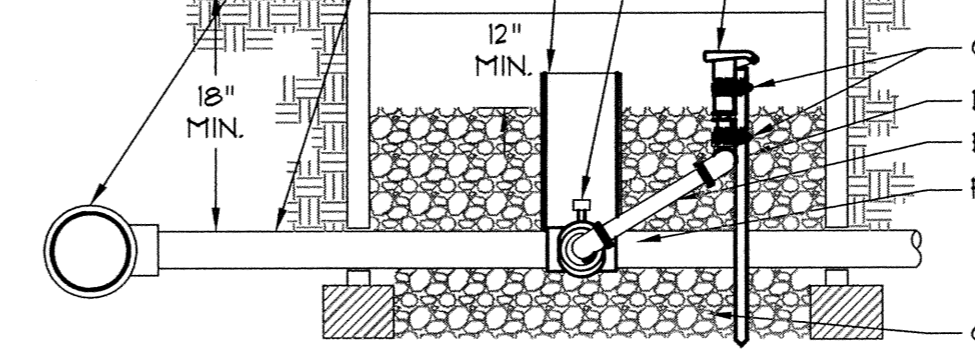
- INSTALL FEA GRAVEL FLUSH WITH BOTTOM OF PIPE AND VALVE.
- MAINLINE SHALL HAVE A MINIMUM OF 18" COVER AND LATERAL LINE SHALL HAVE A MINIMUM OF 12" COVER.
- PROVIDE A 24" WIRE EXPANSION COIL AT EACH DRY SPLICE WIRE CONNECTION.
- CENTER VALVE ASSEMBLY IN VALVE BOX.

CONSTRUCTION NOTES:

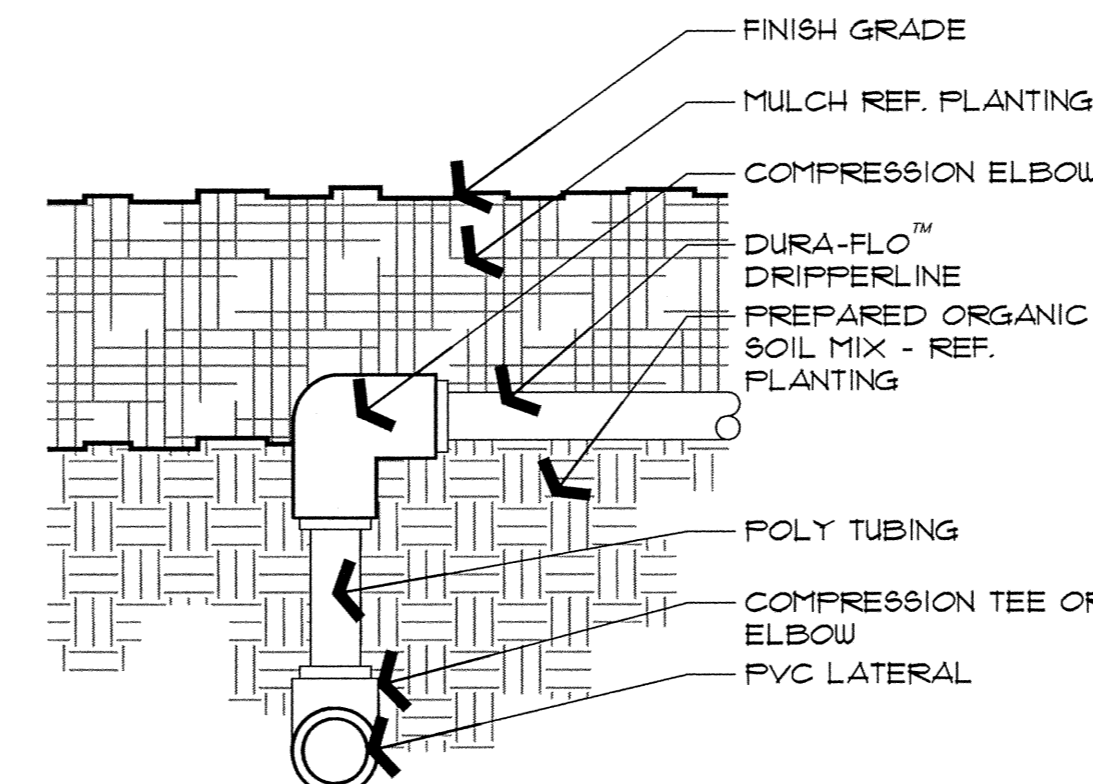
- PVC SERVICE TEE
- SCH 40 45° BEND
- SCH 40 MALE ADAPTER
- SCH 40 BALL VALVE
- GRAY SCH 80 SHORT NIPPLE (TBE)
- AUTOMATIC VALVE
- WIRE COIL
- WATERPROOF WIRE CONNECTORS
- LATERAL PIPE
- 10 ML BLACK PLASTIC
- BROOKS #36 CONCRETE VALVE BOX W/ #36-1PC CONCRETE LID. SET 1/4" ABOVE GRADE FINISH GRADE.
- WASHED FEA GRAVEL - 6" DEPTH MIN
- 6" VALVE BOX EXTENSIONS AS REQUIRED
- VALVE WIRING



QUICK COUPLER VALVE
NOT TO SCALE



END FEED DRIPPERLINE
NOT TO SCALE



CENTER FEED DRIPPERLINE
NOT TO SCALE

- CONSTRUCTION NOTES:**
- 12" X 17" PLASTIC VALVE BOX WITH LOCKING LID.
 - FINISHED GRADE.
 - 24" WIRE LOOP
 - AUTOMATIC VALVE, SEE IRRIGATION PART LIST.
 - WATER PROOF WIRE CONNECTOR
 - SCH 80 NIPPLE
 - PRESSURE REGULATOR
 - WYE STRAINER, INSTALL TO PROVIDE ACCESS FOR MAINTENANCE AND REPLACEMENT OF FILTER.
 - LOCKING VALVE BOX COVER
 - VALVE BOX EXTENSIONS IF NEEDED.
 - LATERAL LINE
 - 4" LAYER OF 3/4" GRAVEL
 - TRUE UNION BALL VALVE
 - 6MM BLACK POLYETHYLENE PLASTIC TAPE TO ALL INLET AND OUTLET PIPE AND INSTALL FULL LENGTH OF VALVE BOX BOTTOM.
 - CMU BLOCK

CONSTRUCTION NOTES:

- WATER METER (SIZE PER PLAN)
- BALL VALVE (SIZE PER LINE)
- WYE STRAINER (SIZE PER LINE)
- TYPE 'K' COPPER PIPE
- COPPER 6XT COUPLING
- TBE NIPPLE
- PIPE PER CITY CODE
- COUPLING
- FINISH GRADE
- 12"X17" VALVE BOX. SET FLUSH WITH FINISH GRADE
- DOUBLE CHECK VALVE ASSEMBLY
- COMPACTED SUBGRADE
- MALE ADAPTER
- MASTER ELECTRIC VALVE
- WIRE COIL
- WATERPROOF WIRE CONNECTORS
- 10 ML BLACK PLASTIC
- 10" RD VALVE BOX. SET 1/4" ABOVE FINISH GRADE.
- WASHED FEA GRAVEL - 6" DEPTH MIN
- VALVE WIRING

GENERAL NOTE:

- INSTALL 8" X 8" X 16" CMU AROUND THE BASE OF EACH VALVE BOX.
- INSTALL 1" DIA. WASHED AGGREGATE FLUSH WITH BOTTOM OF QUICK COUPLING VALVE

CONSTRUCTION NOTES:

- ARMOR 11X17 VALVE BOX WITH OVERLAPPING COVER. ROUT AND PAINT "QCV" ON TOP OF LID. INSTALL FLUSH W/ FINISHED GRADE.
- QUICK COUPLING VALVE W/ LOCKING NP (PURPLE) COVER
- TWO (2) STAINLESS STEEL WORM GEAR CLAMPS
- 1" DIA. GALVANIZED STEEL PIPE, EXTEND 12" IN. MIN. INTO UNDISTURBED SOIL
- PRESSEMBLED UNITIZED 'O'-RING SWING JOINT ASSEMBLY
- MAINLINE PIPING
- WASHED AGGREGATE 12" DEEP MIN.
- FINISH GRADE
- MAIN-OFF SET LINE, SIZE PER QUICK COUPLER VALVE.
- MAINLINE, SIZE PER TOTAL SITE.
- BALL VALVE, SIZE PER QUICK COUPLER 4 IN DIA. SLEEVE
- TEE, SIZE PER LINE REQUIREMENTS

RECORD DRAWINGS September 30, 2009
 NOTE: THE INTENT OF THE OWNER AND ENGINEER WAS TO CONSTRUCT THE IMPROVEMENTS ACCORDING TO THESE PLANS AS APPROVED BY THE TOWN OF ADDISON. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. WE ARE NOT AWARE ON ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION EXCEPT AS NOTED ON THE PLANS.

GENERAL NOTES:

- INSTALL WASHED FEA GRAVEL BELOW DCA TO ALLOW ACCESS TO TEST COCKS AND OPERATION OF BALL VALVES
- INSTALL FEA GRAVEL FLUSH WITH ELECTRIC VALVE
- PROVIDE A 24" WIRE EXPANSION COIL AT EACH DRY SPLICE WIRE CONNECTION.
- CENTER VALVE ASSEMBLY IN VALVE BOX.

CONSTRUCTION NOTES:

- WATER METER (SIZE PER PLAN)
- BALL VALVE (SIZE PER LINE)
- WYE STRAINER (SIZE PER LINE)
- TYPE 'K' COPPER PIPE
- COPPER 6XT COUPLING
- TBE NIPPLE
- PIPE PER CITY CODE
- COUPLING
- FINISH GRADE
- 12"X17" VALVE BOX. SET FLUSH WITH FINISH GRADE
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- MASTER ELECTRIC VALVE
- WIRE COIL
- WATERPROOF WIRE CONNECTORS
- 10 ML BLACK PLASTIC
- 10" RD VALVE BOX. SET 1/4" ABOVE FINISH GRADE.
- WASHED FEA GRAVEL - 6" DEPTH MIN
- VALVE WIRING

#	Revisions:	Date:

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Meridian Square
 R.O.W. Improvements
 Addison, Texas

Issued For:
CONSTRUCTION
 Job No.
08132.00
 Scale
1" = 20'-0"
 Drawn By:
RDP
 Date
1-19-2009

Irrigation Details

Sheet Title:
L4
 of **L4** Sheets

Sheet Number:
L4
 of **L4** Sheets