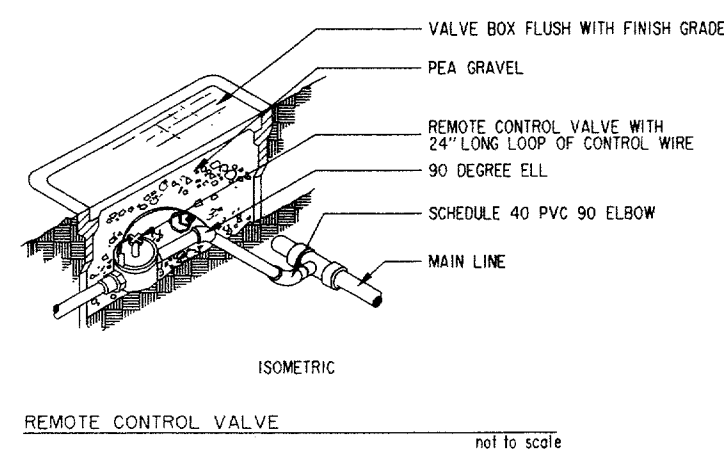
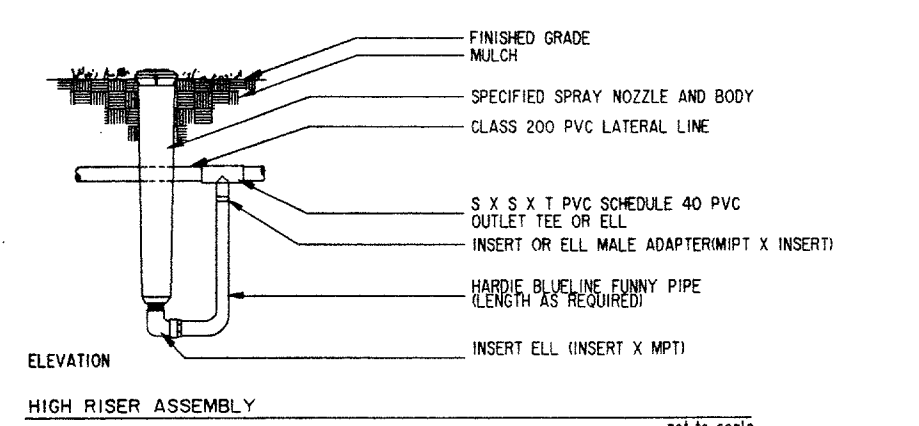
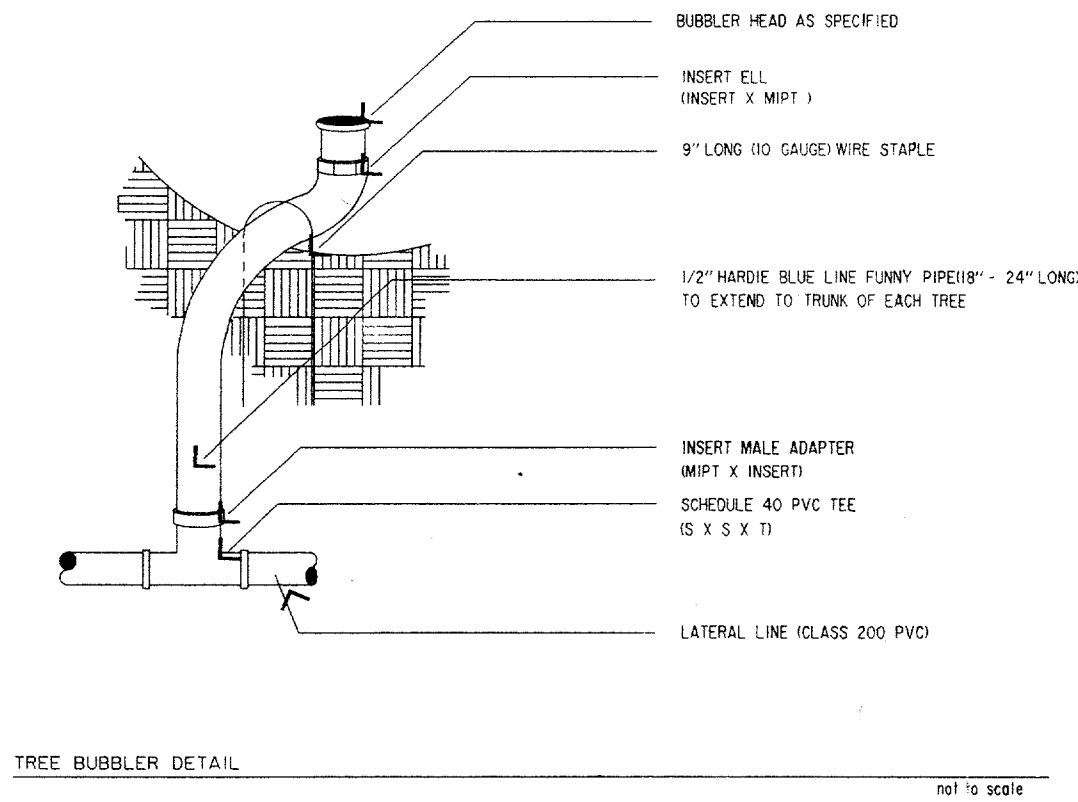
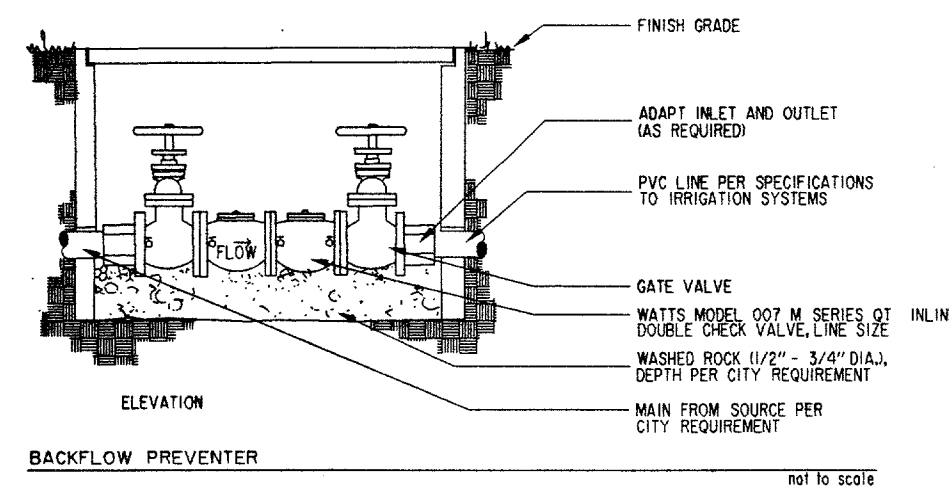
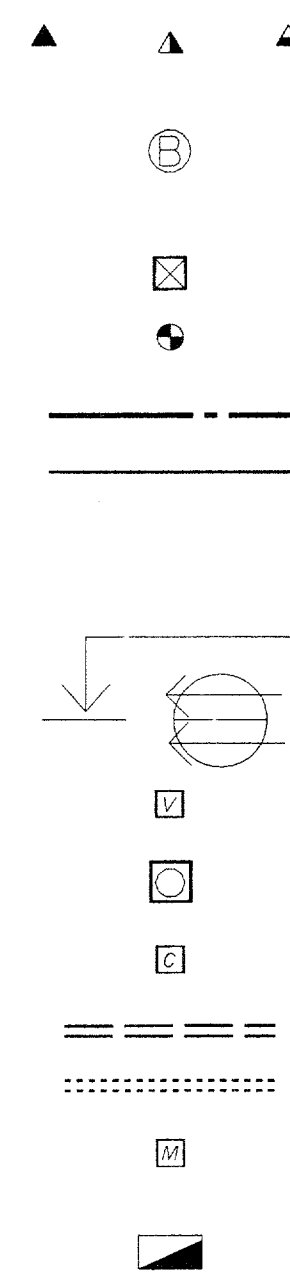


IRRIGATION DETAILS



IRRIGATION LEGEND



TORO POP-UP LOW ANGLE SHRUB SPRAY 570 MPP SERIES NO. 15' ON A NO. 570Z 12P BODY.

HARDIE ADJUSTABLE FLOAT BUBBLER ON 1/2" FUNNY PIPE (REF. DETAIL)

QUICK COUPLER VALVE -BUCKNER MODEL 30A AND BALL VALVE. WEATHERMATIC 11000 CR SERIES WITH FLOW CONTROL, ELECTRIC REMOTE CONTROL VALVE AND BALL VALVE.

SCHEDULE 40 PVC MAINLINE

CLASS 200 PVC LATERAL LINE, EXCEPT 1/2 INCH DIAMETER SHALL BE CLASS 315. NOTE: (ALL DIRECTLY BURIED LINE BENEATH PAVING SHALL BE SCHEDULE 40 PVC. ALL LINES UNDER PAVING SHALL BE SLEEVED; NO DIRECT BURIAL ALLOWED.)

6PM THROUGH VALVE

VALVE SEQUENCING NUMBER

SIZE OF VALVE

MANUAL BALL VALVE-LINE SIZE

FLOW METER AND MASTER VALVE AND WIRING

PEDESTAL MOUNTED RAINMASTER WITH PHONE CONNECTION

4" CLASS 200 PVC SLEEVE

6" CLASS 200 PVC SLEEVE

IRRIGATION WATER METER & TAPING SLEEVE (PROVIDE 1-1/2" IRRIGATION METER WITH 2" TAP)

WATTS DOUBLE CHECK VALVE: 1-1/2" \*007 M SERIES QT IN FLUSH VALVE BOX WITH 2" TAP.

DESIGNER NOTES

- LINE LAYOUT IS DIAGRAMMATIC-ADJUST HEAD AND LINE LOCATIONS ON SITE TO ACCOMMODATE EXISTING JOB CONDITIONS, SLEEVE LOCATIONS AND TO ACHIEVE COMPLETE COVERAGE.
- ALL MAIN LINE PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 18". ALL LATERAL PIPING DOWNSTREAM OF THE MAIN LINE SHALL BURIED TO HAVE A MINIMUM COVER OF 12".
- ALL VALVE BOXES SHALL BE TEN(10)" INCHES BY FOURTEEN(14)" INCHES (RECTANGULAR) FOR REMOTE CONTROL VALVES AND BALL VALVES, NINE(9)" INCHES(ROUND) FOR QUICK COUPLER VALVES.
- CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO SYSTEM LAYOUT IN FIELD TO INSURE POSITIVE DRAINAGE OF LATERAL LINES AND MAIN LINES.
- CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IF THE STATIC PRESSURE IS LESS THAN THE DESIGN STATIC PRESSURE OF 55 PSI.
- ALL WIRING FROM THE IRRIGATION CONTROLLER TO THE REMOTE CONTROL VALVES SHALL BE UF-14(1) DIRECT BURIAL CABLE.
- CONTRACTOR SHALL NOT TRENCH IN CRITICAL ROOT ZONE AREA FOR EXISTING TREES.
- CONTRACTOR SHALL PROVIDE FOR RAINMASTER REMOTE CONTROL SYSTEM.
- CONTRACTOR SHALL PROVIDE PHONE SERVICE AND ELECTRICAL SERVICE TO THE CONTROLLER.
- NO FITTINGS WILL BE ALLOWED UNDER PAVED SURFACES.

TOWN OF ADDISON IRRIGATION SPECIFICATIONS

Revised 11/5/98

These revised Town of Addison Irrigation Specifications dated 11/5/98 supersede any and all others. However, any discrepancies between those of the approved construction plans and those of the Town shall be brought to the attention of the Town's designated representative for a final determination.

- Design head to head with no single head coverage. Use appropriate size nozzle for a given landscape area so as not to spray onto or over paved surfaces or structures. Do not exceed manufacturer's recommendations.
- All main line pipe 2" and smaller is to be Schedule 40 belled PVC; larger sizes are to be Class 200. Put not more than two (2) pipes in any one trench. Class 200 belled PVC lateral piping is to be used.
- Fittings: No crosses are permitted. Separate tees and/or elbows by at least 12". Reduction tees are preferred over use of single reducer bushings. Multiple reducer bushings will not be accepted. Only Spears and/or Lasco are permitted. Allow 18" outside of sleeve before first fitting. No 45 degree elbows on 1" and larger pipe are allowed without prior approval.
- Wiring: 14 ga. UF, Red - Control wires, White - Ground. Anytime wiring changes direction, such as at an elbow or tee, allow a loop of at least 3 inches alongside the fitting of that location. Only continuous wire runs are permissible unless otherwise approved. Wire should follow mainline where possible and lay along a single side not crossing over lateral lines.
- Use King connectors for all station wire splices. Allow at least 36" of pigtailed wire at each splice. All valve splices are to be housed in standard (large) Ametek rectangular plastic valve boxes. All field splices are to be in 10" round Ametek plastic valve boxes.
- Only Weathermatic 11000 Series plastic valves are permitted. They are to be located within standard (large) Ametek rectangular plastic valve boxes with 4"-6" of pea gravel placed underneath the valve in such a manner as to prevent soil infiltration into the box. The pea gravel should only contact the bottom of the valve body.
- Only Buckner Model 30A single lug 3/4" QCV's are permitted. They are to be connected to a threaded fitting. Teflon paste and appropriate length gray Schedule 80 nipples and Schedule 40 fittings are to be used. Secure to 18"x1/2" steel rebar with stainless steel screw clamp. House QCV in a 10" round plastic Ametek valve box.
- All heads are to be attached to threaded fittings using 6" Lasco polyethylene nipples cut to the appropriate length. All nozzle sizes will be designated on the plans.

Pop-ups: Only Toro 570C Series are permitted, unless otherwise approved. Install 3/4" above finished grade. Turf - 4" (includes tree bubblers within turf areas, use Toro 55-PC nozzles). Very low ground cover (6" mature height) - 6" HP. Ground cover and low growing shrubs - 12" HP; use Hardie Blue Line funny pipe and Toro barb fittings utilizing side inlet.

Bubblers: Red areas only. Use Hardie adjustable flood bubblers.

Rotaries: Only Hunter PGP Series are permitted, unless otherwise noted. Install 3/4" above finished grade.

Risers: Use Type-M copper with soldered male ends for Toro 570-S shrub adapters and female ends to attach to short polyethylene nipples screwed into threaded fittings. Owner reserves the right to determine placement of risers versus pop-ups.

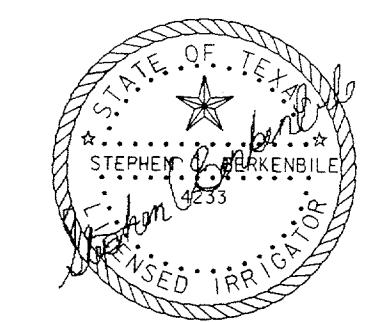
9. Only Hersey MVR meters and three (3) brass flanges are acceptable. Meter lay lengths must be in accordance with Town of Addison's Public Works Department specifications. Stainless steel bolts and nuts must be used in the installation along with neoprene gaskets. House in appropriate size, (to be determined by Owner), concrete box with lid. To bring box to ground level use bricks or pavers, and backfill inside below meter base with at least 6" of pea gravel. Connection to main must be approved and inspected by the Town's Utilities Department and all tap materials are to be purchased at the expense of the contractor and must comply with the Town's specifications. A permit is also required.

10. Only Watts 007 M Series inline check valve assemblies are to be used. Connect to meter flange using Teflon paste and gray Schedule 80 nipple of sufficient length to center the DCA within its housing. House in appropriate size, (to be determined by Owner), rectangular Ametek plastic valve box. See above meter installation instructions and follow same with the exception of using plastic valve box extensions for increased height. Connect irrigation mainline to DCA using Teflon paste and PVC male adapter.

11. Female threaded plastic Spears ball valves with positive T-handle cut off must be installed every 200' of mainline for isolation purposes. House in standard (large) rectangular Ametek plastic valve box and follow meter box installation instructions for DCA assembly.

- Only an approved size RainMaster Evolution DX-2 stainless steel controller with heavy duty transient protection along with a stainless steel free-standing pedestal is permitted. Controller must include all necessary hardware to ensure reliable communication and operation with the Town's central control located at 16001 Westgrove. Installation must include the following RainMaster hardware, purchased only from a RainMaster supplier: DX-O3 sensor board, DX-PH phone communication option, flow meter (size to be approved by owner), and shielded EV-cab-Sen flowmeter cable. An approved size Weathermatic 11000 series master valve must also be installed with wiring being of a solid color distinctively different than that of the station wiring. Both flow meter and master valve must be housed in Ametek large rectangular plastic valve boxes. Flow meter cable must be sized appropriately and be of a continuous run. No splices will be allowed except at the point of connection to the flow meter. Connections will be soldered and water proofed using a 3-M DBY connector. Cab-Sen cable will be installed within continuous 3/4" or larger gray PVC conduit with 6" or larger J-boxes placed every 200' or where 360' of fittings are installed; only sweeps are permitted. It is the contractor's responsibility to entail the cost of and work in conjunction with Southwestern Bell Telephone to establish a dedicated phone service and install an interface within the pedestal of each controller location via direct burial cable. Controllers are to be affixed to a Town-approved permanent concrete pad via four (4) 7/16" or larger stainless steel bolts, nuts and washers. All wiring is to enter the pedestal via approved size gray PVC sweep elbows extending at least 1" through the pad. Control wiring, 120-volt service, flow meter cable, and phone cables are to be separated with each having its own access elbow. All local and national codes must conform to any and all aspects of the installation. All controllers are to be wired for remote operation with Irristol PVC units; to achieve this utilize appropriate size universal pigtail adapters. The entire installation must conform to RainMaster specifications and be approved by the Town prior to, and be inspected during installation. Such specifications will include grounding and pad configurations and distances of separation from water meter to master valve to flow meter and first fitting. Additional hardware, if applicable, will be needed to control remote devices such as lighting, fountains, or booster pumps; these will also be the responsibility of the contractor to supply, install and ensure proper operation. The Town of Addison may also specify the installation of a RainMaster ET Tracker and any related equipment to make it a functional component of the computer-controlled system. A functional mini-click freeze sensor must be installed at every controller in an approved location and by an approved method. Consult RainMaster for specifics of freeze sensor installation.
- Use clean and approved topsoil to backfill all pipe to a depth. All heads and boxes are to be backfilled to grade with clean top soil. No rocks greater than 1" are allowed. Compact trenches to alleviate settling. Minimal depth of coverage is 12".
- All sleeves 2" and smaller will be Schedule 40 PVC with size and location noted on the plan. Larger sizes will be Class 200. All piping underneath paving, including sidewalks, must be sleeved. All sleeves are to be belled PVC pipe.
- Use appropriate and approved PVC solvent. Avoid excessive use and wipe all joints and fittings clean.
- The installer is responsible for resetting head and/or box height due to settling. Contractor must supply a workmanship warranty for (1) year from date of completion.
- All work is to be accomplished by or directly supervised at all times by an on-site irrigator licensed by the State of Texas.
- Prior to any backfilling of trenches, an inspection by the Town's representative must take place and any necessary changes implemented; otherwise, manual excavation to enable proper inspection will be necessary.
- Valve sequencing must be performed by the contractor and in an order approved by the Town's representative. At least 6" of extra station wiring within the bottom of the pedestal is necessary for each zone and must be of neat and orderly appearance.
- Plans are diagrammatic and field adjustments are often necessary. For this reason, prior to trenching, head layout with flags needs to be done and locations approved by Town's representative. Not doing so may result in the relocation of heads at the contractor's expense.
- Any deficiencies in coverage noted by the Town's inspector will be rectified at the cost of the contractor.
- Water taps will be 2" in size. All parts must conform to Town of Addison Water Department specifications and are the responsibility of the contractor to provide. Inspection of taps by Water Department representative must occur. Excavation and tap permits are required. Meters are to be 1 1/2" in size and again conform to Water Department specifications for type and installation along with meter boxes and backfilling procedures. Contact: Addison Utilities Department at (972) 450-2871.
- All paving must have Town-approved sleeve sizes and quantities present. It is the responsibility of the contractor to notify the Town of any area where sleeving should be present but is not and provide such materials at his cost. Any paving installed without sleeving will necessitate a bore and subsequent sleeving at the contractor's expense.
- RainMaster controllers and associated hardware will be utilized on the job. Reference Town's Irrigation Specifications for this aspect of the job. Note: separate stations may be necessary for operation of lights, fountains, etc.; additional hardware is also needed and is to be purchased and installed by the contractor. For part numbers and pricing of any RainMaster equipment, contact Matt Swor of Langhorn, Inc. at (972) 406-0222. For technical questions, contact John Teroston of RainMaster at (800) 777-1477.
- Communication is the key. If you are unsure - CALL Ron Lee, Addison Parks Department, (972) 450-2851.

RECORD DRAWING



STEPHEN C BERKENBILE & ASSOCIATES  
IRRIGATION DESIGN CONSULTANTS

411 HYDE PARK PLACE  
DUNCANVILLE, TX 75137

(972) 296-2724  
FAX (972) 780-0048

DATE	DESCRIPTION	REF NO.
6/23/99	ISSUED FOR CONSTRUCTION	N/A
5/17/99	ISSUED FOR BID	N/A

IRRIGATION DETAILS						
ADDISON CIRCLE						
PHASE II-B PUBLIC INFRASTRUCTURE						
TOWN OF ADDISON, TEXAS						
HUTH - Zoltars, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757						
DESIGN	DRAWN	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	SCB	N.T.S.	MAR. 99	01-1822-50	IR3

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