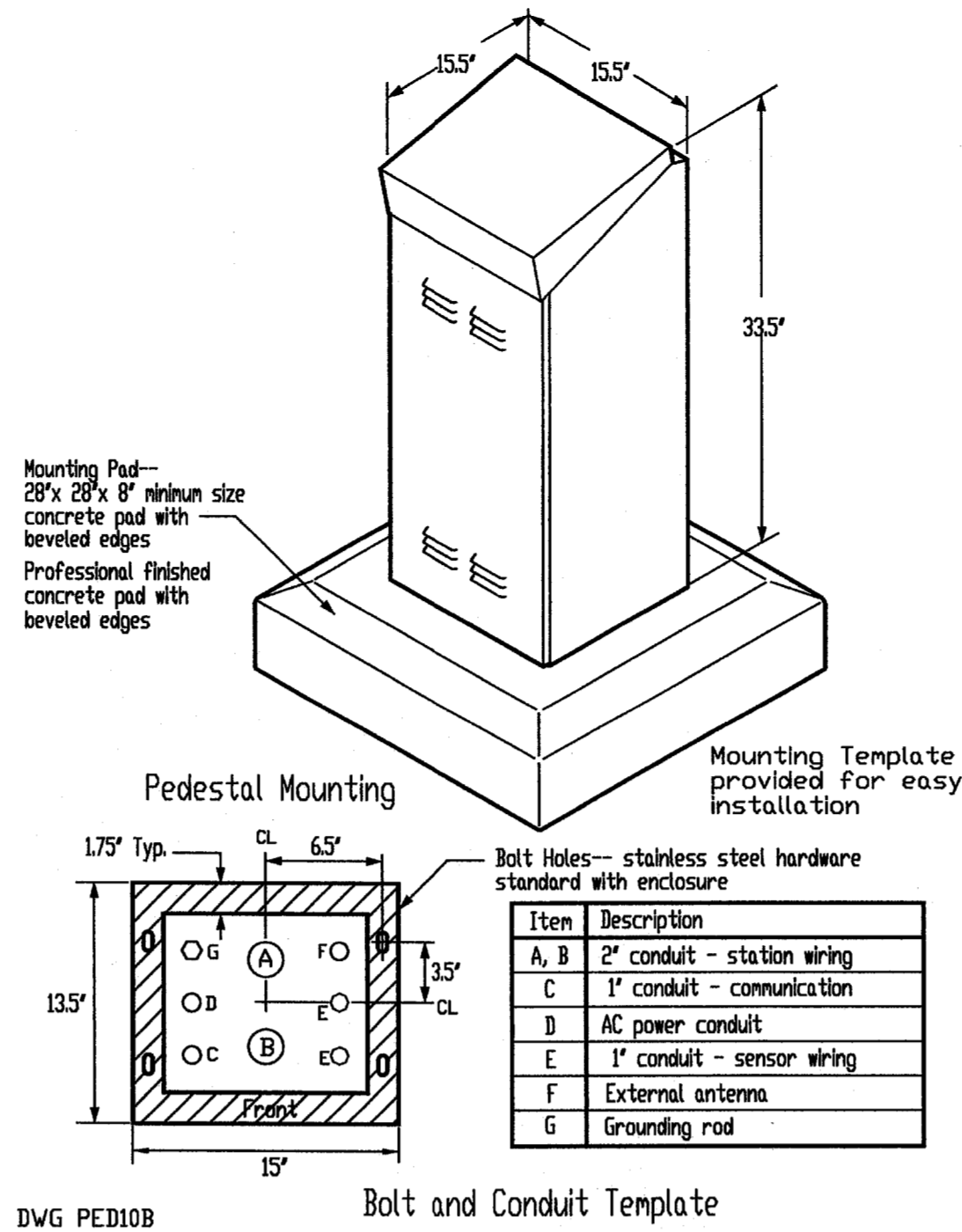


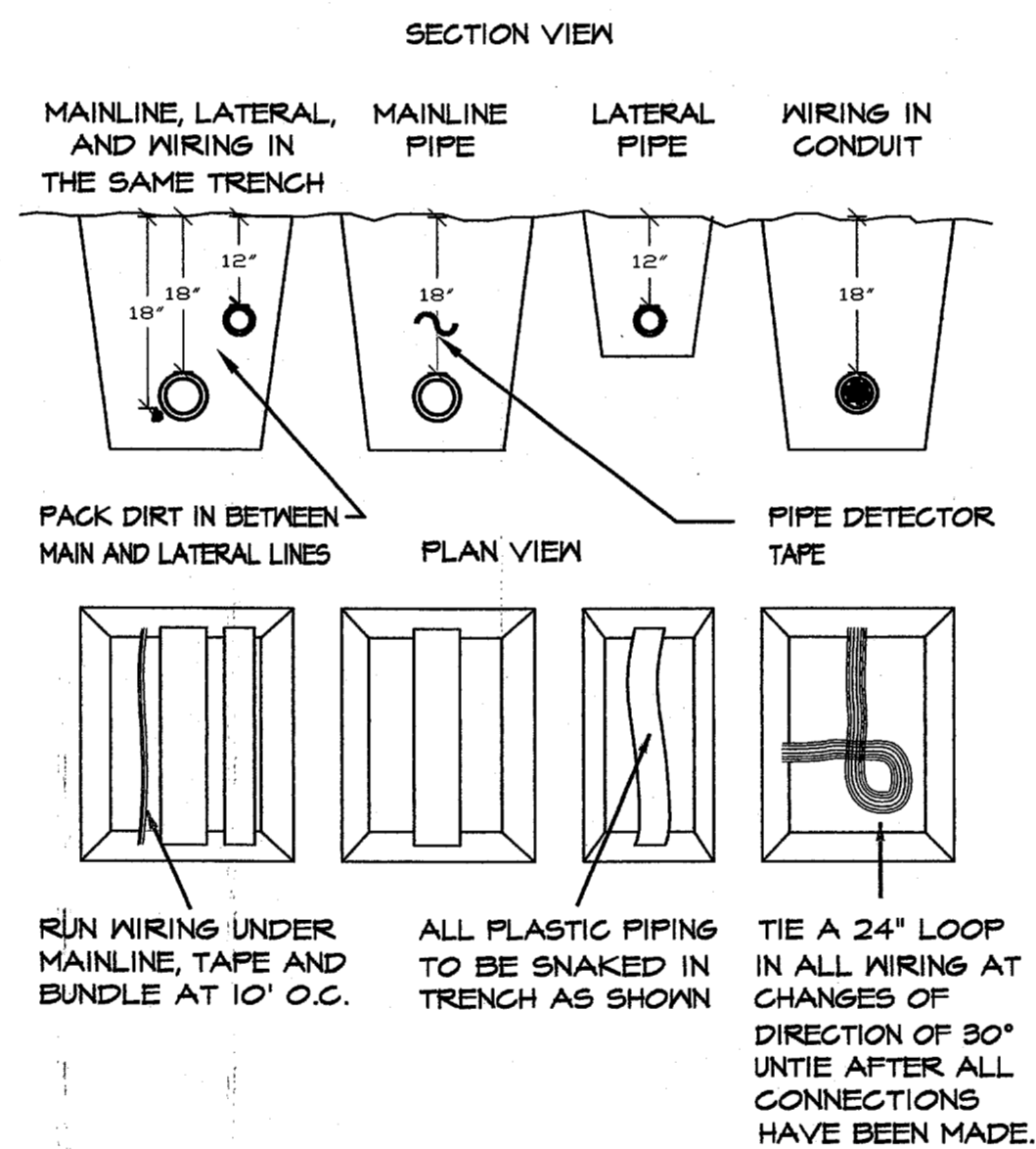
# IRRIGATION NOTES

- This design is based on head to head coverage with no single head coverage. Nozzles shall be adjusted to prevent spraying onto or over paved surfaces or structures. Do not exceed manufacturer's specifications.
- All mainline pipe 2" and smaller is to be SCH 40 PVC; larger sizes are to be Class 200 PVC. Put no more than two (2) pipes in any one trench. All lateral piping to be Class 200 PVC.
- 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 reducers' bushings will not be accepted. Only Spears and Lasco are permitted. Allow 18" out side sleeve bore before first fitting. No 45-degree elbows on 1" and larger pipe are allowed.
- Wiring: 14 gauge UF, Red - Control wires, White - Ground wires. Anytime wiring changes direction, such as at an elbow or tee, allow a loop at least one hand width (10 inches) alongside the fitting at that location. Only continuous wire runs are permissible unless otherwise approved. Wire should follow mainline where possible and lay along single side not crossing a lateral line. Master valve wiring to be blue colored. Run (2) two extra wires, one on each side of the loop with both of them terminating in same valve box across the street from the controller.
- Use King connectors for all station wire splices. Allow at least 36" of pigtail wire splice. All valve splices are to be housed in standard (large) Ametek rectangular valve boxes. All fitted splices are to be in 10" round Ametek plastic valve boxes.
- Valves 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. Use appropriate sized ball valves before remote station valves. No valves smaller than 1" shall be permitted.
- Only Buckner QB3SBL07 single lug 3/4" QCV's are permitted. They are 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 QVC in a 10" round plastic Ametek valve box.
- All head to be attached to threaded fittings via 6" Lasco polyethylene nipples cut to appropriate length.
- Only Hersey MVR meters and three (3) brass flanges are acceptable. Meter lay lengths must be in accordance with the 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, 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 utility department and all tap materials are to be purchased at the expense of the contractor and must comply with the Town's specifications. Contractor is also to obtain a permit prior to installation.
- Only Watts 007 M series inline check valve assemblies are to be used. Connect meter flange using Teflon paste and Gray Schedule 80 nipple of sufficient length to center the DCA within its housing. House in appropriate size, rectangular Ametek plastic valve box, use bricks or pavers for DCA support. If DCA is located in pavers or concrete, use appropriate sized box. See note above regarding meter installation. Contractor to follow same instructions with the exception of using plastic valve box extensions for increased height. Connect irrigation mainline to DCA using Teflon paste and PVC male adapter. Installer is responsible for DCA testing per State and local laws.
- Female threaded plastic Spears ball valves with positive T-handle cut off must be installed every 200' of mainline for isolation purposes (ref. Plans for locations). House in standard (large) rectangular Ametek plastic valve box and follow meter box installation instructions for DCA assembly.
- RainMaster Evolution DX-2 stainless steel controller with heavy-duty transient protection along with stainless steel freestanding pedestal is permitted. Controller must include all necessary hardware to ensure reliable communication and operation with the Town's central control located at 16801 Westgrove. Installation must include the following RainMaster hardware, purchased only from a RainMaster supplier; DX-03 sensor board, DX-PH phone communication option, 3" flow meter, and shielded EV-cab-Sen flow meter cable. An approved size Weathermatic 11000 series master valve flow meter and master valve must be housed in a large Ametek rectangular plastic valve box. 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 degrees of fittings are installed; only sweeps are permitted. It is the contractor's responsibility to entail the cost and work in conjunction with Southwestern Bell Telephone to establish a dedicated phone service and install an interface with the pedestal at each controller location via a direct burial cable. Controllers are to be affixed to a Town approved permanent concrete pad via four (4) 7/16" or large 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 top of the pad and 2" from the side of 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. 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 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, 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 by an approved method. Consult RainMaster for specifics of freeze sensor installation and other specs on the whole installation.

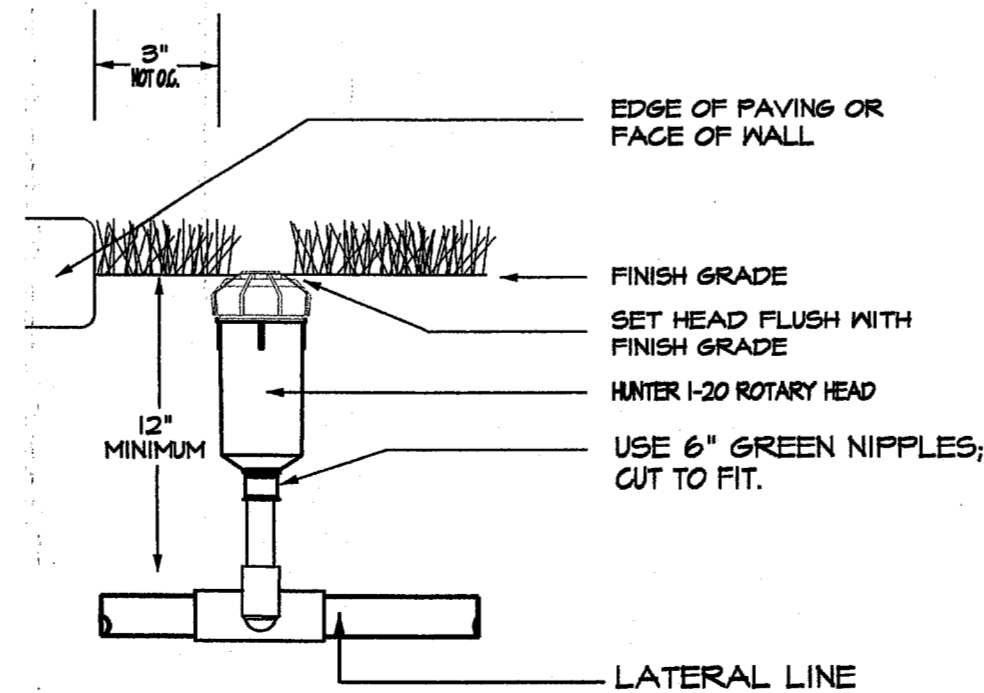
- Use clean and approved topsoil to back fill all pipe to a depth. All heads and boxes are to be back filled to grade with clean topsoil. No rocks greater than 1" are allowed. Compact trenches to alleviate settling. Minimal depth of coverage is 12".
- All sleeves 2" and smaller will be Schedule 40 PVC with size and location noted on the plan. Larger sizes will be Class 200. All piping underneath paving, including sidewalks must be sleeved.
- Use appropriate and approved PVC solvent. Use Turf-tite blue primer on all glue joints. Avoid excess use and wipe all joints and fittings clean.
- The installer is responsible for resetting head and/or box height due to settling. Contractor must simply 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. All work performed must adhere to all requirement with Section 34 of the Texas Water Code governed by TNRCC.
- 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 order approved by the Town's representative. At least 10' 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 note 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 used 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 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 Longhorn, Inc. at (972) 406-0222. For technical questions, contact John Terosian of RainMaster at (800) 777-1477.
- Communication is the key. If you are unsure - Call Ron Lee, Addison Parks Department, (972) 450-2851.
- THIS SYSTEM IS BASED ON A MINIMUM OPERATING PRESSURE ON 60 PSI AND TOTAL DEMAND OF 60 GPM. NOTIFY TOWN'S REPRESENTATIVE IF ANY DISCREPANCY ARISES.
- No QCV or station valves adjacent to curb.
- Run mainline away from the curb where it will not interfere with the trees in the middle of the Right-of-way. Hand trench around all dripline canopies of existing trees.
- Power to irrigation controller shall be fed from pedestrian light power source. Irrigation feeder wires should be connected directly to a circuit breaker in the pedestrian lighting controller and not to a lighting contactor.



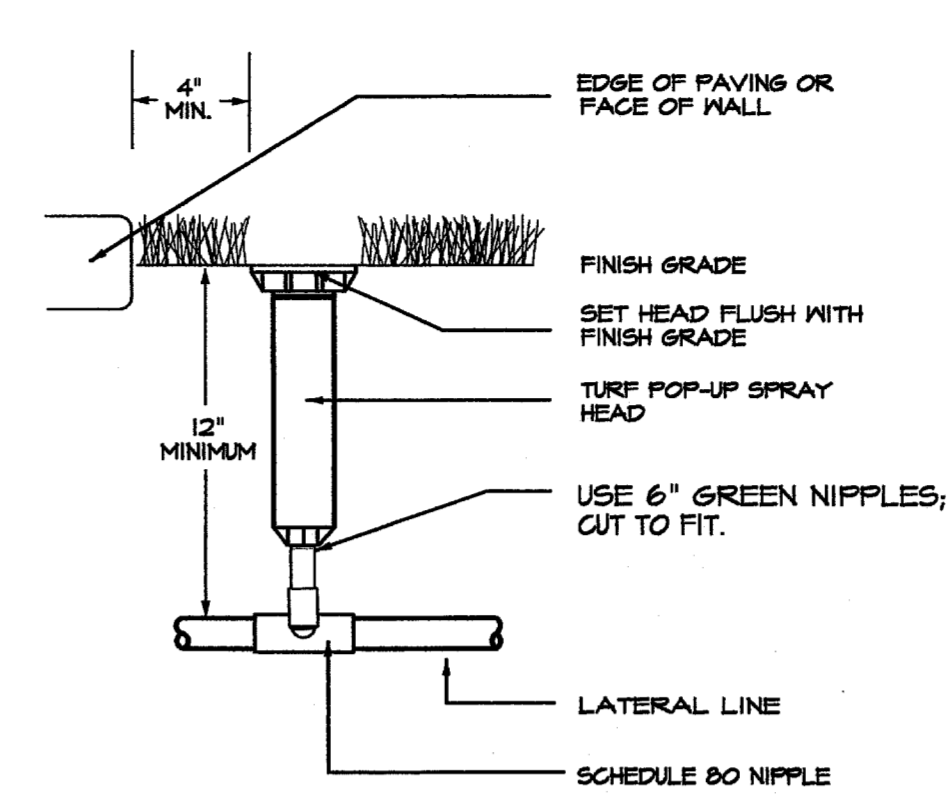
## 08 STAINLESS STEEL PEDESTAL



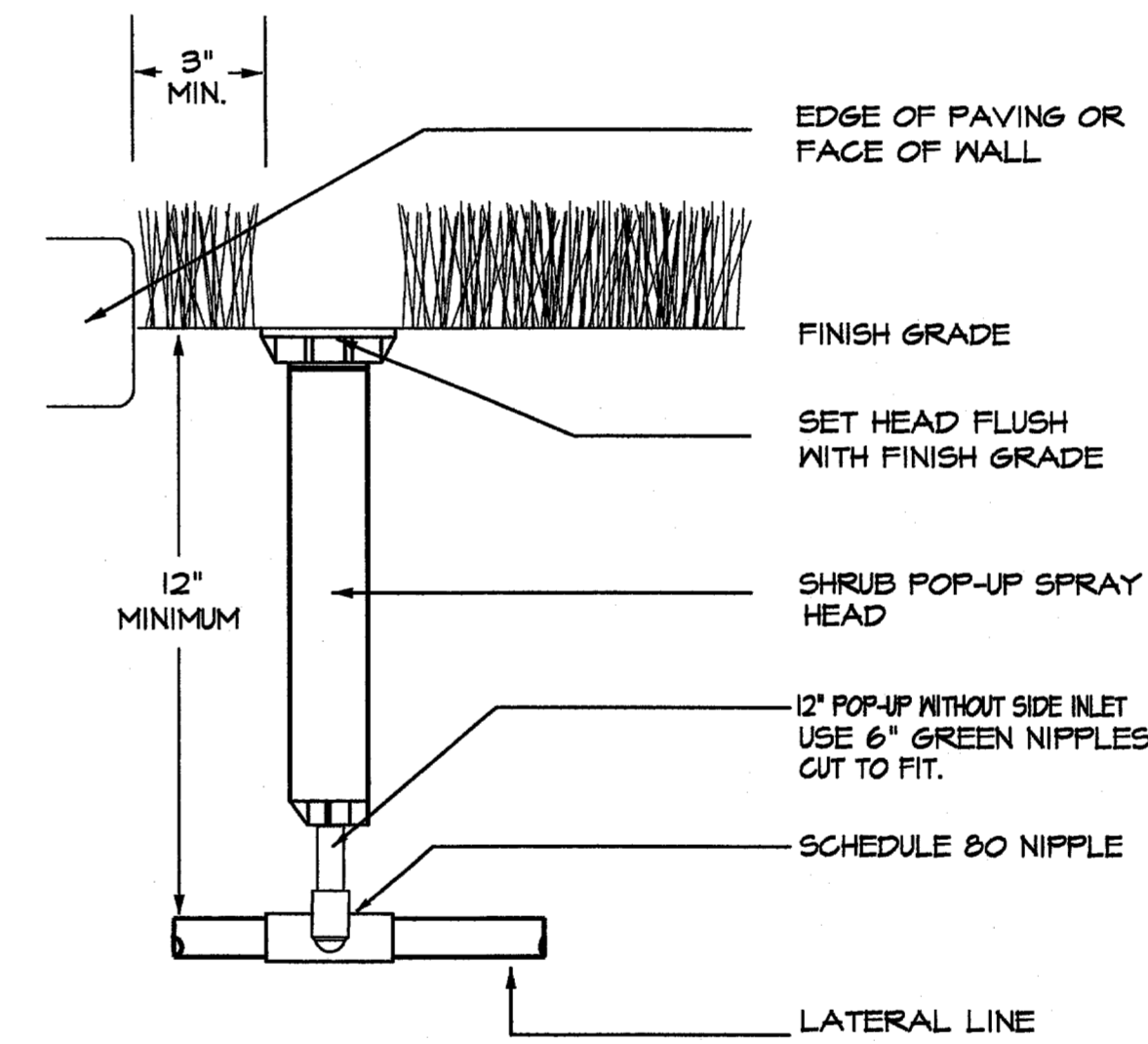
## 07 TRENCHING



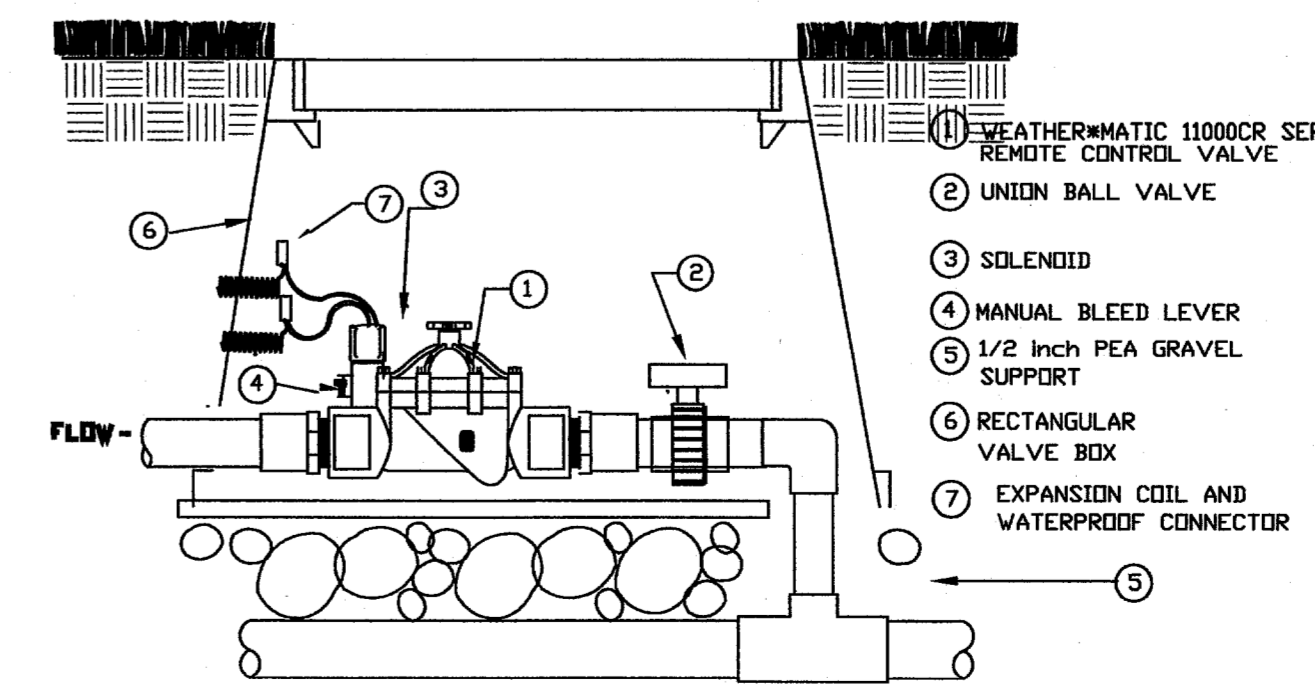
## 06 ROTOR HEAD



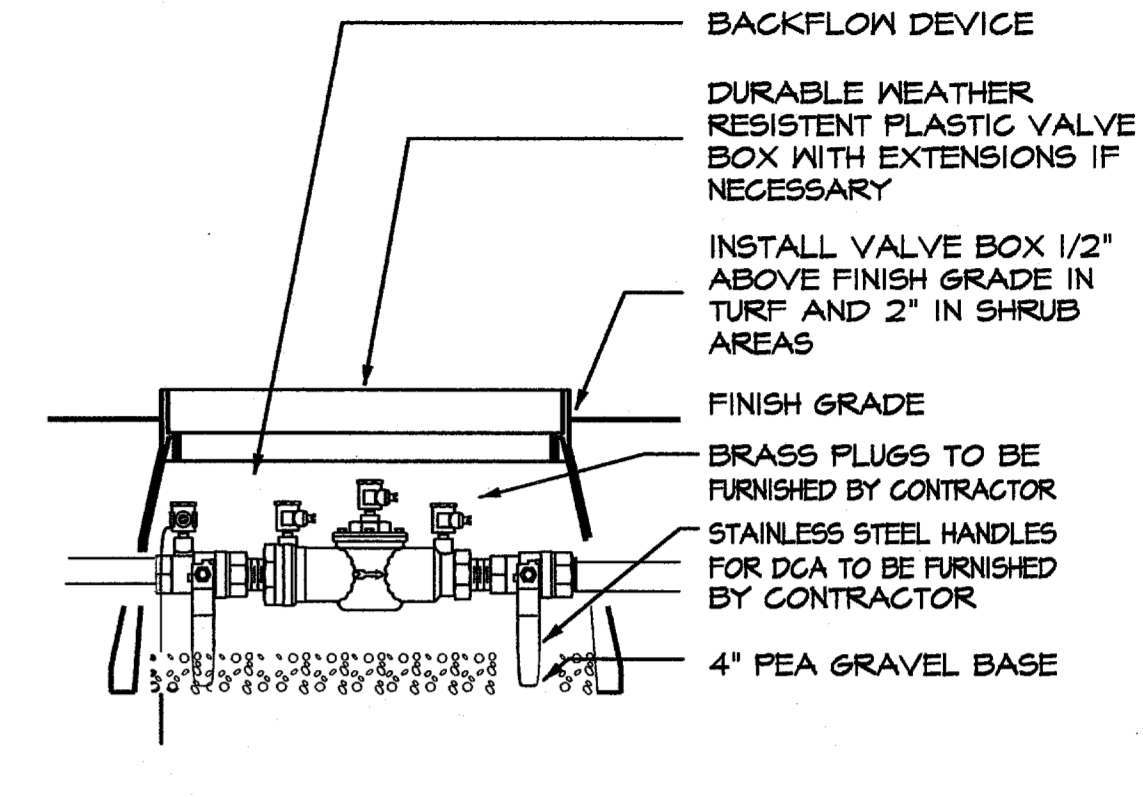
## 05 TURF HEAD POP-UP



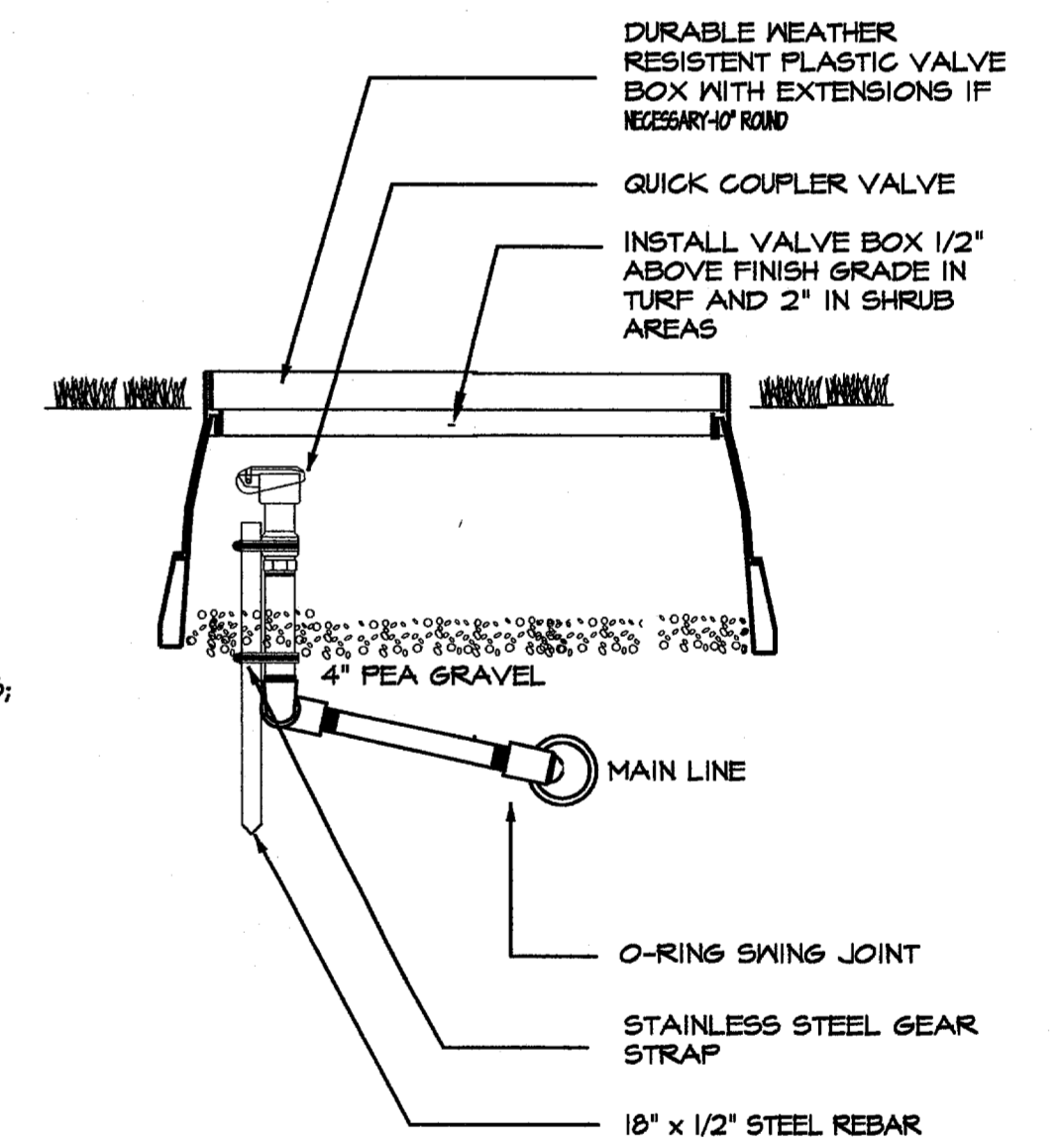
## 04 SHRUB POP-UP SPRAY



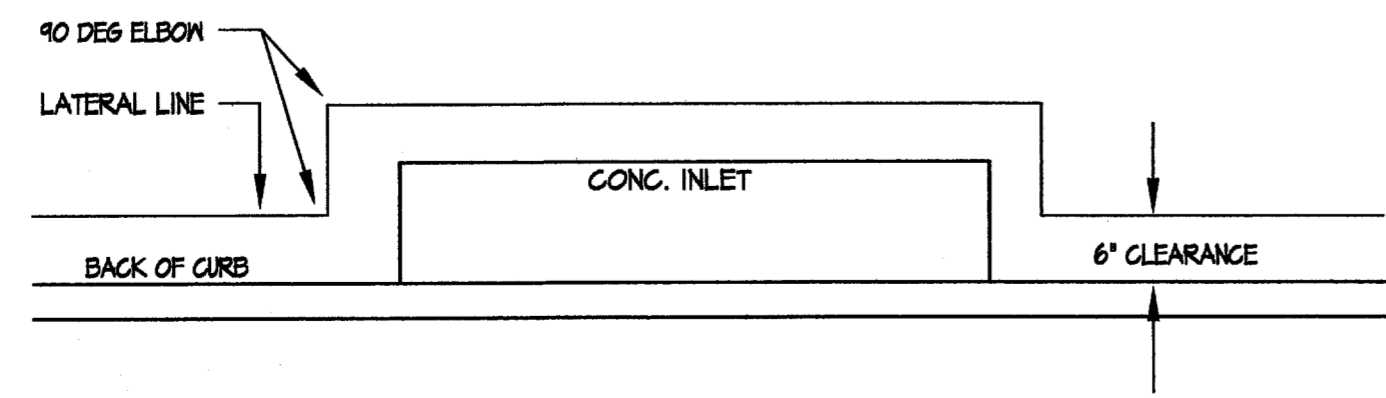
## 03 CONTROL VALVE



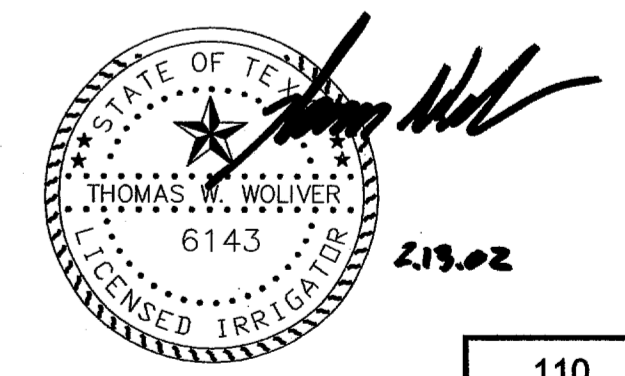
## 02 DOUBLE CHECK ASSEMBLY



## 01 QUICK COUPLER VALVE



## 09 PIPING AROUND INLET



NO.	DATE	REVISION	APPROV.
<b>HNTB</b> ARCHITECTS ENGINEERS PLANNERS The HNTB Companies			110
ARAPAHO ROAD - PHASE II			
MARSH LANE TO SURVEYOR BOULEVARD			
IRRIGATION NOTES & DETAILS			
TOWN OF ADDISON, TEXAS			
Design TWW	Drawn TWW	DATE	SCALE
Check TWW	Check TWW	FEB 13	1" = 20'
		PROJECT NO.	SHEET NO.
		25768	1-6