

# IRRIGATION SPECIFICATIONS-TOWN OF ADDISON 2-20-97

- DESIGN HEAD TO HEAD WITH NO SINGLE HEAD COVERAGE. USE APPROPRIATE SIZE NOZZLES 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 SCHEDULED 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 1/2" REDUCTION TEES ARE PREFERRED. USE OF REDUCER BUSHINGS, MULTIPLE REDUCER BUSHINGS WILL NOT BE ACCEPTED. ONLY SPEARS AND OR LASCO ARE PERMITTED. ALLOW 18" OUTSIDE SLEEVE BEFORE THE FIRST FITTING. NO 45 DEGREE ELBOWS ON 1" AND LARGER PIPE WITHOUT PRIOR APPROVAL. MULTIPLE REDUCER BUSHINGS WILL NOT BE ACCEPTED.
- WIRING: 14 GA. UF. RED-CONTROL WIRES, WHITE-GROUND, 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. WIRES 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 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 SHALL ONLY CONTACT THE BOTTOM OF VALVE BODY.
- ONLY BUCKNER MODEL 30A SINGLE LUG 3/4" OCV'S ARE PERMITTED. THEY ARE TO BE CONNECTED TO A THREADED FITTING, TEFLOX PASTE AND APPROPRIATE LENGTH GRAY SCHEDULE 40 NIPPLES AND SCHEDULE 40 FITTINGS ARE TO BE USED. HOUSE OVC IN A 10" ROUND PLASTIC AMETEK VALVE BOX. SECURELY FASTEN TO 1/2" STEEL ROD, OR LARGER DRIVEN AT LEAST 12" INTO THE GROUND UTILIZING STAINLESS STEEL SCREW CLAMPS.
- ALL HEADS ARE TO BE ATTACHED TO THREADED FITTINGS VIA 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 NOTED. INSTALL 3/4" ABOVE FINISHED GRADE. TURF - 4" (INCLUDES TREE BUBBLERS WITHIN TURF AREAS. USE TORO 58-PC NOZZLES). VERY LOW GROUND COVER (LESS THAN 6" MATURE HEIGHT) OR 6" HP GROUND COVER AND LOW GROWING SHRUBS - 12CM, FUNNY PIPE UTILIZING SIDE INLET FOR 12" HP INSTALLATION WITH OWNER APPROVAL IS ACCEPTABLE.

BUBBLERS: BED AREAS ONLY. USE TORO 500 SERIES STREAM OR FLOOD BUBBLERS. ROTARIES: ONLY HUNTER POP 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 3" 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 CONTRACTOR'S EXPENSE AND MUST COMPLY TO THE TOWN'S SPECIFICATION. A PERMIT IS ALSO REQUIRED.

10. ONLY FEBCO 805-Y DOUBLE CHECK ASSEMBLIES ARE TO BE USED. CONNECT TO METER FLANGE USING TEFLOX 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 TEFLOX PASTE AND PVC MALE ADAPTER. NOTE: USE DOUBLE BRASS METER FLANGES. STAINLESS STEEL GASKETS ON THE END OF THE DCA FOR INSTALLATIONS IN CONCRETE/PAVERS AREAS. USE AN OWNER APPROVED CONCRETE BOX WITH THIS INSTALLATION.

11. FEMALE THREADED PLASTIC BALL VALVES WITH POSITIVE T-HANDLE CUT OFF MUST BE INSTALLED. HOUSE IN STANDARD AMETEK (LARGE) RECTANGULAR PLASTIC VALVE BOX AND FOLLOW METER BOX INSTALLATION INSTRUCTIONS FOR DCA ASSEMBLY.

12. 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 COMMUNICATION AND OPERATION WITH THE TOWN'S CENTRAL CONTROL LOCATED AT 16801 WESTGROVE. INSTALLATION MUST INCLUDE THE FOLLOWING RAIN MASTER HARDWARE: DX-03 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 MASTERVALVE MUST ALSO BE INSTALLED WITH WIRING BEING OF SOLID COLOR DISTINCTIVELY DIFFERENT THAN THAT OF THE STATION WIRING. BOTH FLOW METER AND MASTER VALVE MUST BE HOUSED IN AMETEK LARGE RECTANGULAR VALVE BOXES. FLOW METER 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 OBY CONNECTOR. CAB-SEN CABLE WILL BE INSTALLED WITHIN CONTINUOUS 2" OR LARGER GRAY PVC CONDUIT WITH 6" OR LARGER J-BOXES PLACED EVERY 200' OR WHERE 360 DEG OF FITTINGS ARE INSTALLED; C/S 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 AT EACH CONTROLLER LOCATION VIA DIRECT BURIAL CABLE. CONTROLLERS ARE TO BE AFFIXED TO A TOWN-APPROVED PERMANENT CONCRETE PAD VIA FOUR (4) 3/4" 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 IRRIGATOR PVC UNITS TO ACHIEVE THIS UTILIZE APPROPRIATE SIZE UNIVERSAL ADAPTERS. THE ENTIRE INSTALLATION MUST CONFORM TO RAIN MASTER 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 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 MAY ALSO SPECIFY THE INSTALLATION OF A RAIN MASTER ET TRACKER AND RELATED EQUIPMENT TO MAKE IT 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.

13. USE CLEAN AND APPROVED LOAM TO BACKFILL ALL PIPE TO A DEPTH OF AT LEAST 6" ABOVE TOP OF PIPE. ALL HEADS AND BOXES ARE TO BE BACKFILLED TO GRADE WITH LOAM. REMAINDER OF TRENCH MAY BE FILLED USING CLEAN AND APPROVED SOIL. NO ROCKS GREATER THAN 1" ARE ALLOWED. COMPACT TRENCHES TO ALLEVIATE SETTLING. MINIMAL DEPTH OF COVERAGE IS 12".

14. ALL SLEEVES 2" AND SMALLER WILL BE SCHEDULE 40 PVC WITH SIZE AND APPROXIMATE 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.

15. USE APPROPRIATE AND APPROVED PVC SOLVENT. AVOID EXCESSIVE USE AND WIPE ALL JOINTS AND FITTINGS CLEAN.

16. THE INSTALLER IS RESPONSIBLE FOR RESETTING HEAD AND OR BOX HEIGHT DUE TO SETTLING. CONTRACTOR MUST SUPPLY A WORKMANSHIP WARRANTY FOR (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE.

17. ALL WORK IS TO BE ACCOMPLISHED BY OR DIRECTLY SUPERVISED BY AN ON-SITE IRRIGATOR LICENSED BY THE STATE OF TEXAS.

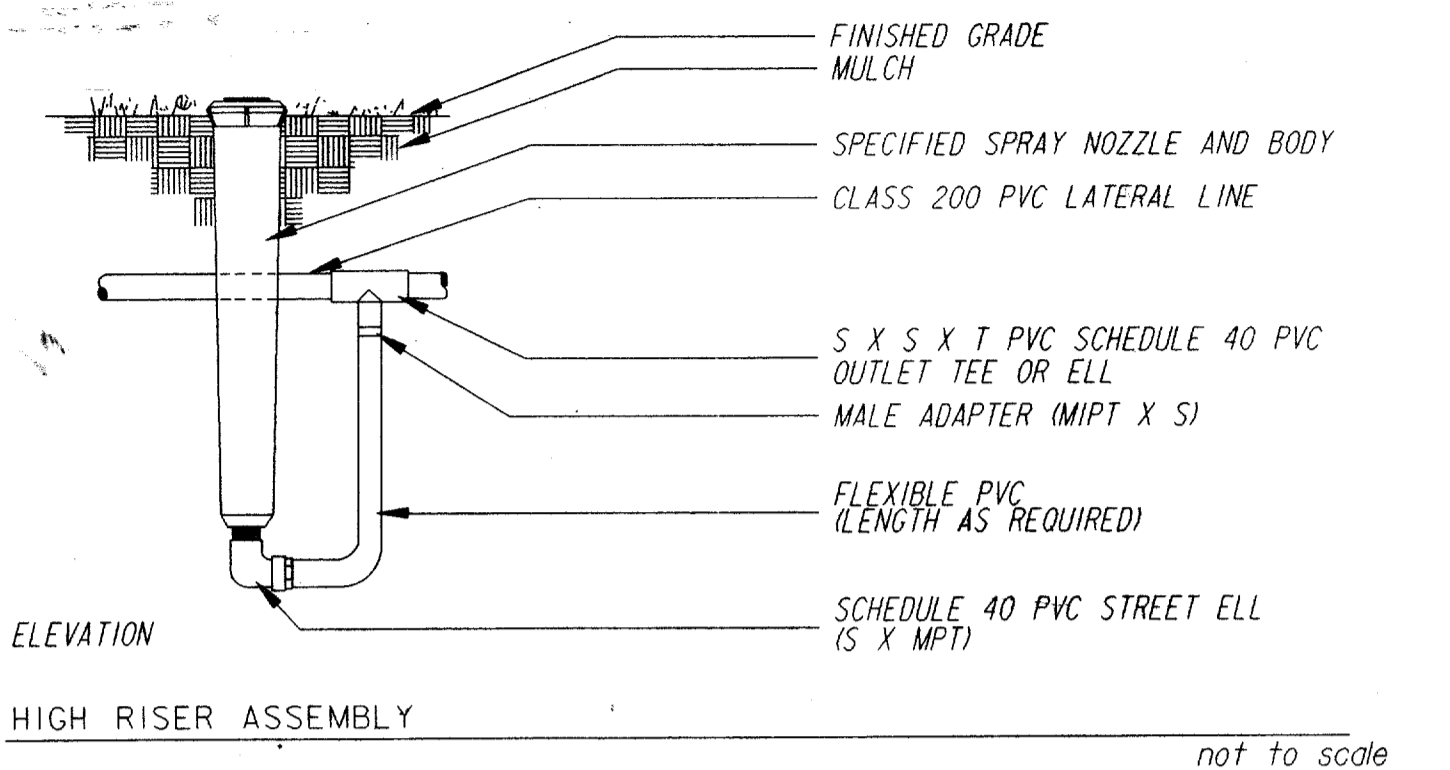
18. PRIOR TO ANY BACKFILLING OF TRENCHES, AN INSPECTION BY THE TOWN'S REPRESENTATIVE MUST TAKE PLACE AND CONTRACTOR SHALL IMPLEMENT ANY NECESSARY CHANGES; OTHERWISE, MANUAL EXCAVATION TO ENABLE PROPER INSPECTION WILL BE NECESSARY.

19. VALVE SEQUENCING MUST BE PERFORMED BY THE CONTRACTOR AND IN 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 NEAT AND PROPERLY IN APPEARANCE.

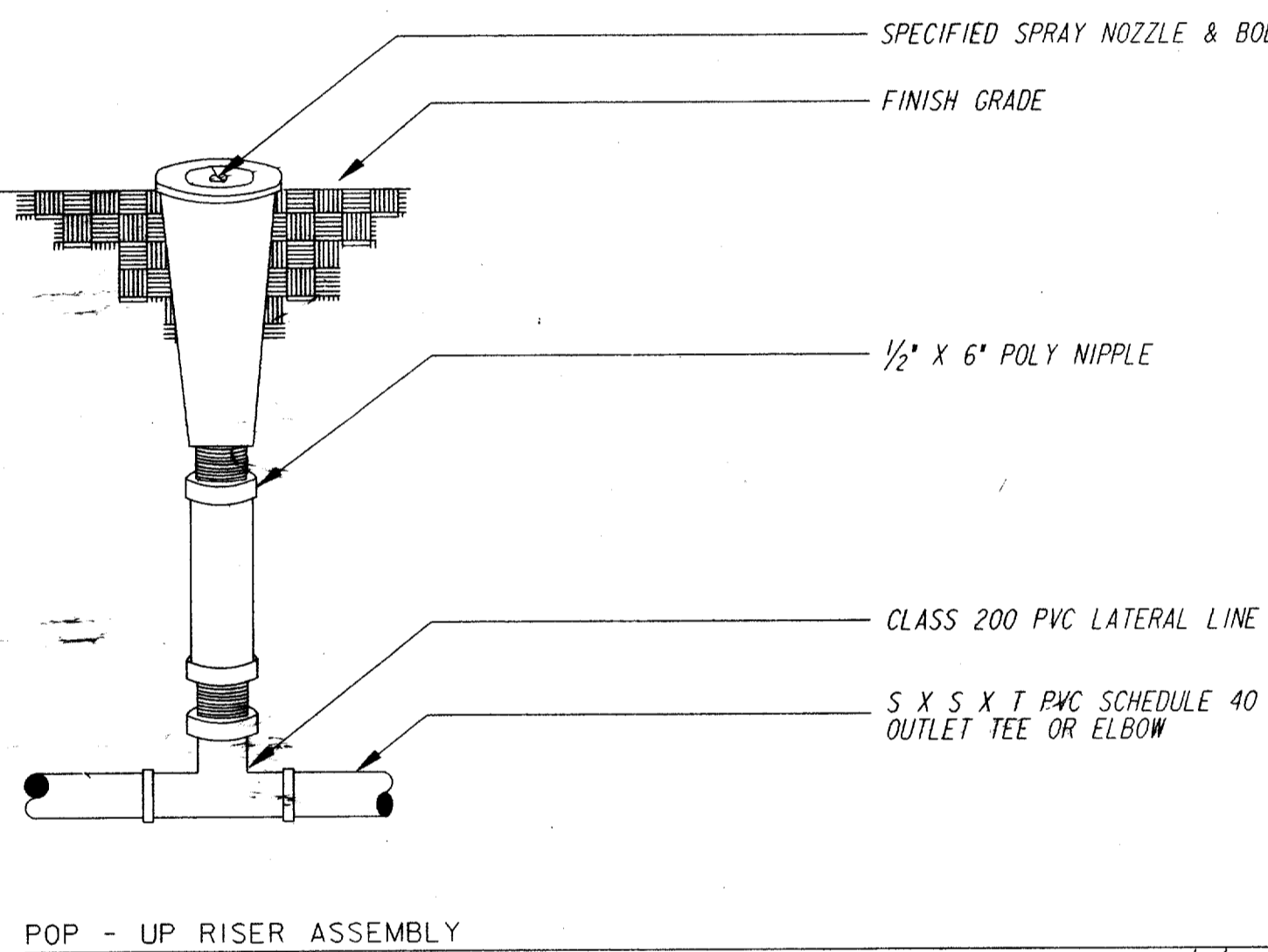
20. PLANS ARE DIAGRAMMATIC AND FIELD ADJUSTMENTS ARE OFTEN NECESSARY. FOR THIS REASON, PRIOR TO TRENCHING, HEAD FLASGS NEEDS TO BE DONE AND LOCATIONS APPROVED BY TOWN'S REPRESENTATIVE. NOT DOING SO MAY RESULT IN THE RELOCATION OF HEADS AT THE CONTRACTOR'S EXPENSE.

21. TOWN OF ADDISON IRRIGATION SPECIFICATIONS DATED 2/20/97 SUPERSEDE ANY AND ALL OTHERS. HOWEVER, ANY DISCREPANCIES BETWEEN THOSE OF THE APPROVED CONSTRUCTION PLANS AND THOSE OF THE TOWN MUST BE BROUGHT TO THE ATTENTION OF THE TOWN'S DESIGNATED REPRESENTATIVE FOR A FINAL DETERMINATION TO OBTAIN A SET. CONTACT THE TOWN OF ADDISON PARKS DEPT. AT (972) 450-2851.

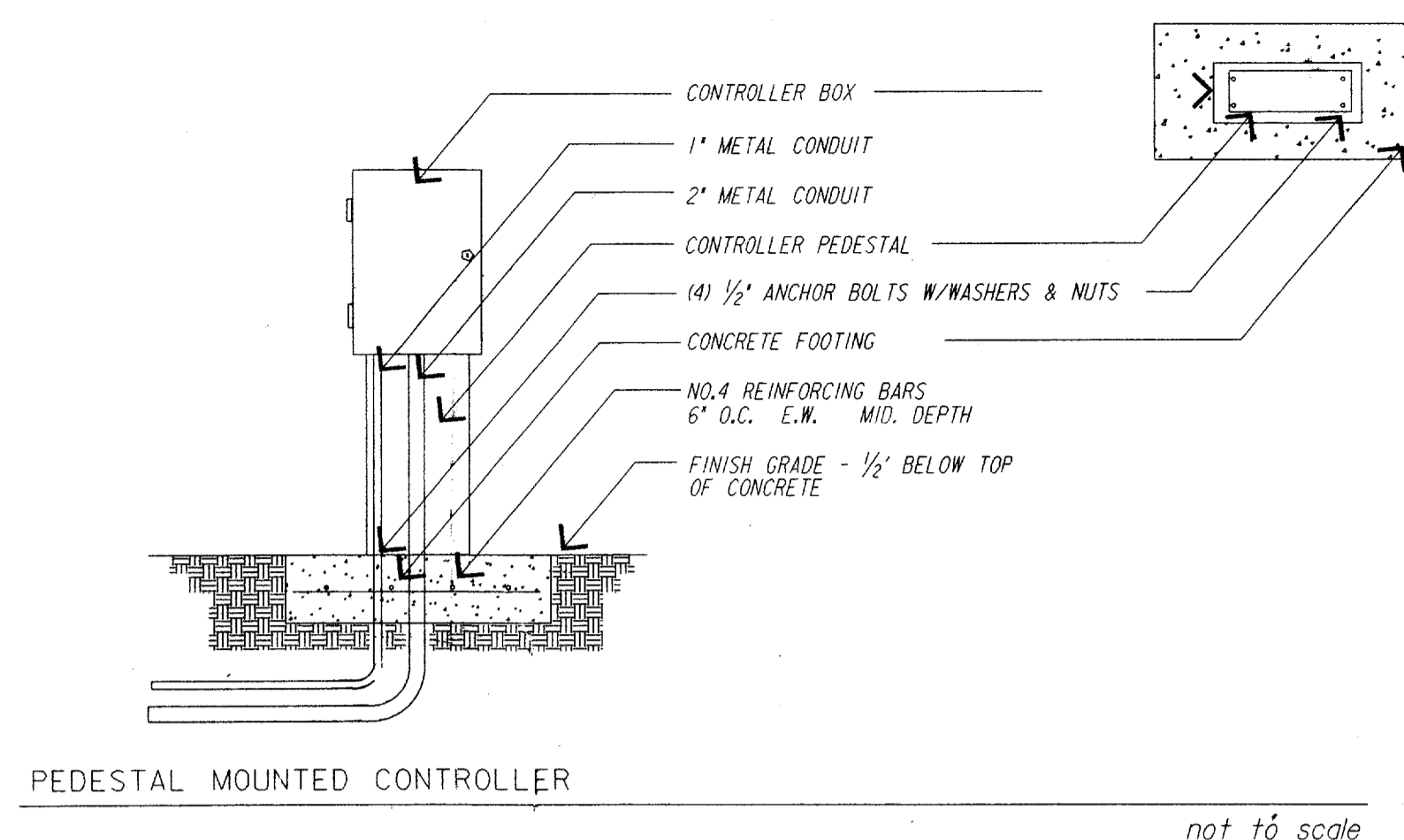
DETAILS ARE DIAGRAMMATIC ONLY, CONTACTOR SHALL FOLLOW THE TOWN OF ADDISON AND RAINMASTER SPECIFICATION.



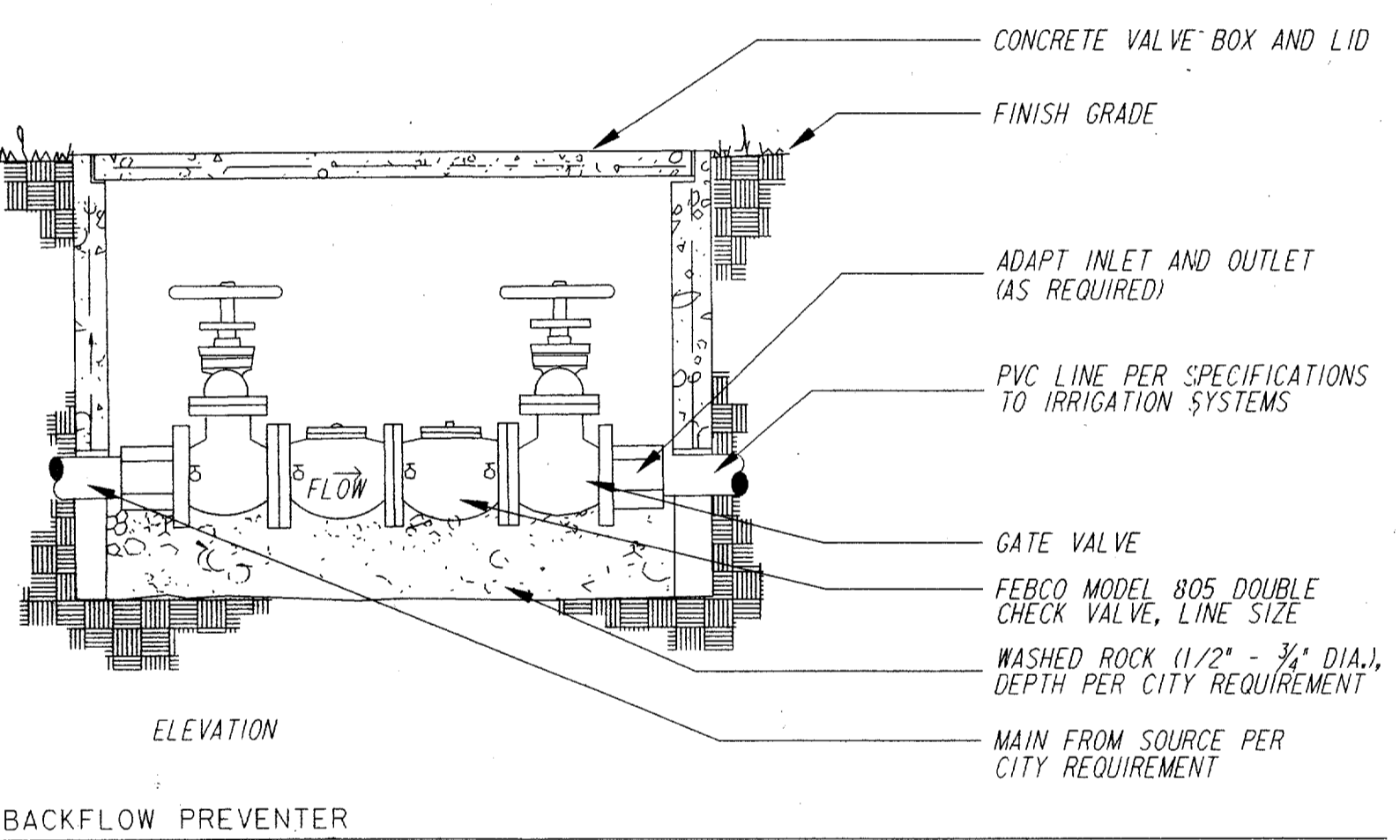
HIGH RISER ASSEMBLY not to scale



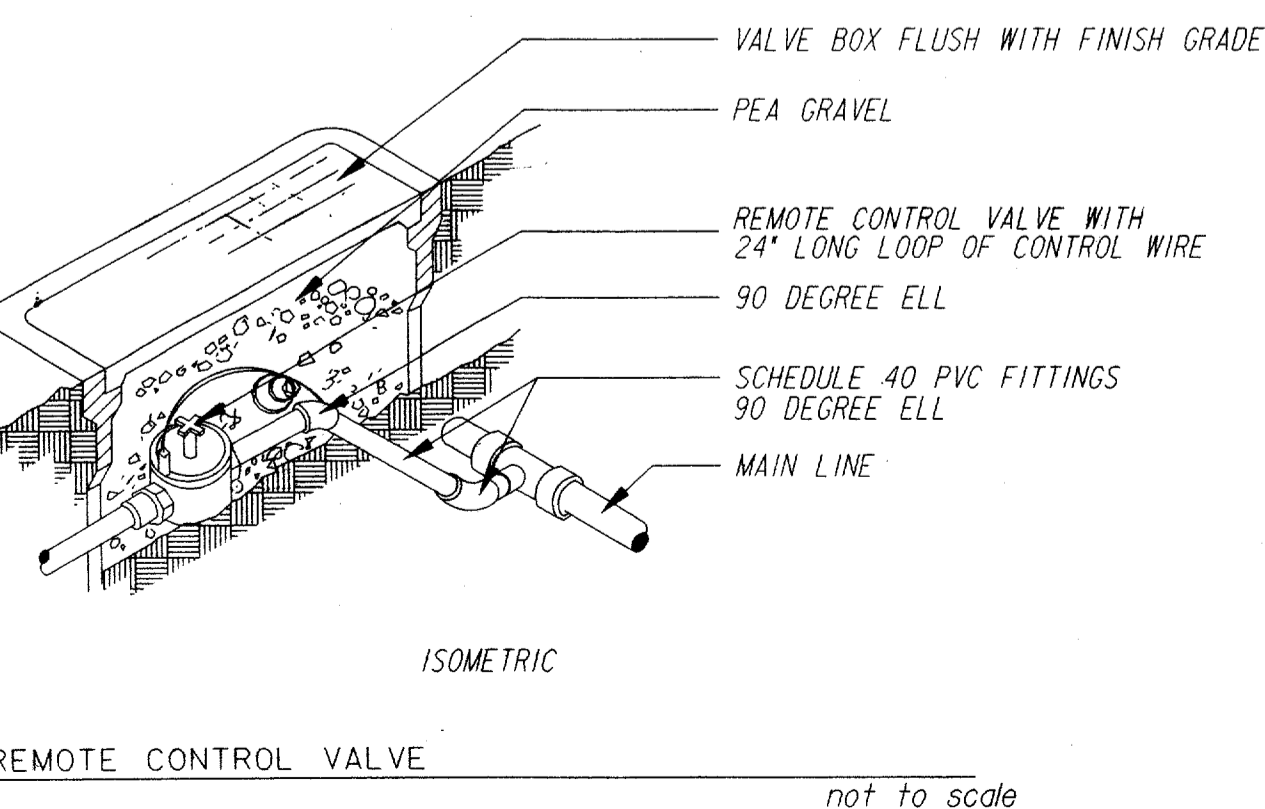
POP - UP RISER ASSEMBLY not to scale



PEDESTAL MOUNTED CONTROLLER not to scale



BACKFLOW PREVENTER not to scale



REMOTE CONTROL VALVE not to scale

## IRRIGATION LEGEND

- ① TORO POP-UP BUBBLER HEAD 570 SERIES NO. 58-2-180X.5 GPM QUARTER ON A NO. 570Z 4P BODY
- ② TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 8 QUARTER ON A 1/2" COPPER RISER BELOW TREE GRATE
- ③ TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 8 QUARTER ON A NO. 570Z 12P BODY
- ④ TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 2-SS1 SIDE STRIP ON A NO. 570Z 4P BODY
- ⑤ TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 4-SS1 SIDE STRIP ON A NO. 570Z 4P BODY
- ⑥ TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 8 FULL HALF QUARTER ON A NO. 570Z 4P BODY
- ⑦ TORO POP-UP LOW ANGLE SHRUB SPRAY MPR SERIES NO. 12" FULL, HALF, & QUARTER ON A NO. 570Z 4P BODY
- ⑧ QUICK COUPLER VALVE -BUCKNER MODEL 30A
- ⑨ WEATHERMATIC 11000 OR SERIES WITH FLOW CONTROL. ELECTRIC REMOTE CONTROL 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
- GPM THROUGH VALVE
- VALVE SEQUENCING NUMBER
- SIZE OF VALVE
- MANUAL GATE VALVE-LINE SIZE
- FLOW METER AND MASTER VALVE AND WIRING
- CONTROLLER: RAIN MASTER DX SERIES MODEL DX-PH-03-05-03-04 STATIONS WITH PHONE/PH OPTION AND SENSORS (03). REFERENCE THE TOWN OF ADDISON IRRIGATION SPECIFICATIONS -SECTION 12

- 4" CLASS 200 PVC SLEEVE
- GALVANIZED STEEL SLEEVESIZE AS NOTED
- FREEZE SENSOR-MINI-CLICK MODEL 401
- BALL VALVE
- IRRIGATION WATER METER & TAPING SLEEVE (PROVIDE 1-1/2" IRRIGATION METER)
- FEBCO DOUBLE CHECK VALVE: 1-1/2" BODY IN FLUSH VALVE BOX(BELOW GRADE)



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## RECORD DRAWING

DATE	DESCRIPTION	REF NO.
10/3/97	ISSUED FOR CONSTRUCTION	N/A
7/14/97	ISSUED FOR BID	N/A

DESIGN	DRAWN	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	SCB	N.T.S.	OCT. 97	01-1822-21	IR9

## IRRIGATION NOTES

- LINE LAYOUT IS DIAGRAMMATIC-ADJUST HEAD AND LINE LOCATIONS ON SITE TO ACCOMMODATE EXISTING JOB CONDITIONS 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 BLACK IN COLOR/BODY AND LID. SIZES SHALL BE TEN(10) INCHES BY FOUR(TEN(10) INCHES (RECTANGULAR) FOR REMOTE CONTROL VALVES AND NINE(9) INCHES/ROUND FOR GATE AND 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 60 PSI.
- ALL IRRIGATION INSTALLATION SHALL CONFORM TO THE LOCAL CODES AND REGULATIONS.