

IRRIGATION LEGEND

- POINT-OF-CONNECTION ASSEMBLY
- MAINLINE PIPE: CLASS 200 PVC 4-INCH SIZE UNLESS OTHERWISE INDICATED
- MAINLINE PIPE: CLASS 200 PVC EXISTING
- LATERAL PIPE TO SPRINKLERS: CLASS 200 PVC 1 1/2-INCH SIZE UNLESS OTHERWISE INDICATED
- UNCONNECTED PIPE CROSSING
- REMOTE CONTROL VALVE ASSEMBLY FOR SPRINKLER LATERALS: HUNTER PGV SERIES
- QUICK COUPLING VALVE ASSEMBLY: HUNTER HQ-5RC
- ISOLATION GATE VALVE ASSEMBLY: MATCO 514
- FLOW SENSOR ASSEMBLY: HUNTER HC-200-FLOW
- MASTER VALVE ASSEMBLY: SUPERIOR 3300300 (3") NORMALLY OPEN
- BACKFLOW PREVENTION ASSEMBLY: 3" FEBCO LF880V
- WATER METER AND CURB STOP ASSEMBLY: 3" BY UTILITY CONTRACTOR
- PUMP ASSEMBLY:SEE SHEET IR3
- IRRIGATION CONTROLLER UNIT HUNTER HPC-400 WITH PC-DM TWO-WIRE MODULE MOUNTED IN STRONGBOX SB-16SS PEDESTAL ENCLOSURE AND WIFI-EXT-KIT UNIVERSAL ANTENNA EXTENTION KIT

- INDICATES CONTROLLER AND STATION NUMBER
- INDICATES LATERAL DISCHARGE (GPM)
- INDICATES VALVE SIZE (INCHES)
- INDICATES WHICH FIELD THE VALVE IRRIGATES (M=MATCH, P=PRACTICE)

POP-UP GEAR DRIVEN ROTORS: HUNTER I-40-04-SS			
PRESSURE: 60 PSI			
NOZZLE	RADIUS	FLOW	
8	46'	9.2 GPM	
10	50'	11.3 GPM	
13	51'	12.3 GPM	
15	55'	15.7 GPM	
23	62'	21.3 GPM	
25	66'	23.9 GPM	

POP-UP GEAR DRIVEN ROTORS: HUNTER I-40-04-SS-ON			
PRESSURE: 60 PSI			
NOZZLE	RADIUS	FLOW	
18	59'	15.2 GPM	

INSTALLATION GENERAL NOTES

- THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 41 PSI (AT THE IRRIGATION WATER METER), AT A DESIGN FLOW OF 120 GPM AT THE 4-INCH IRRIGATION POINT-OF-CONNECTION (POC). BOOSTER PUMP TO PROVIDE A MINIMUM DISCHARGE PRESSURE OF 80PSI AT THE POINT OF CONNECTION TO THE IRRIGATION MAINLINE. TAP, METER, BACKFLOW PREVENTER, MASTER VALVE AND FLOW METER SHALL BE SIZED AS INDICATED IN THE DRAWING LEGEND. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION.
- READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
- COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
- THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
 - TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF TEES IN THE BULLNOSE CONFIGURATION, OR USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.
- PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
 - TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
- SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.
- THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. PIPE SLEEVES SHALL BE SIZED TWICE THE NOMINAL SIZE OF THE PIPE PASSING THROUGH.
- INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
- THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
- INSTALL TWO (2) #14 AWG CONTROL WIRES ON STANDARD WIRE SYSTEMS OR ONE (1) #14 AWG TWO-WIRE PAIR ON TWO-WIRE SYSTEMS, FOR USE AS SPARES. INSTALL SPARE WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE. COIL 3 FEET OF WIRE IN VALVE BOX.
- IRRIGATION CONTRACTOR TO INSTALL PAIGE DECODER CABLE FUSE DEVICES (DCFD), AT ALL DECODER CABLE DIRECTIONAL SPLITS AND/OR CHANGES. INSTALL ALL SPLICES WITHIN A 10" VALVE BOX.

CONSTRUCTION NOTES

- THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE DOWNSTREAM OF THE IRRIGATION WATER TAP AND METER INSTALLED BY OTHERS AT THE APPROXIMATE LOCATION SHOWN. INSTALL BACKFLOW PREVENTION UNIT AND MASTER VALVE ASSEMBLY AS INDICATED. VERIFY EXACT LOCATION OF POC WITH OWNER'S REPRESENTATIVE.
- PEDESTAL MOUNT THE IRRIGATION CONTROLLER AT THE APPROXIMATE LOCATION SHOWN. COORDINATE ELECTRICAL POWER TO THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE. CARE SHOULD BE TAKEN TO INSTALL THE IRRIGATION CONTROLLER IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE, AND SCREENED FROM VIEW EITHER BEHIND ENTRY WALLS, NEXT TO BUILDINGS, OR BEHIND PLANT MATERIAL. FINAL LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.
- ABANDON EXISTING IRRIGATION DISTRIBUTION PIPING IN PLACE. CAP ALL OPEN ENDS OF PIPE.
- CONNECT TO EXISTING LATERAL PIPING.
- REMOVE EXISTING IRRIGATION CONTROL VALVE AND VALVE BOX AND SURRENDER EQUIPMENT TO OWNER. INSTALL NEW CONTROL VALVE, VALVE BOX AND VALVE DECODER AND WIRE TO NEW IRRIGATION CONTROLLER.
- REPLACE EXISTING MAINLINE IN THIS AREA.
- SEE CIVIL DRAWINGS FOR THE TAP OF THE 10" WATER MAIN, WATER METER, AND PIPING TO BACKFLOW PREVENTER. IRRIGATION CONTRACTOR'S SCOPE OF WORK WILL BEGIN WITH THE BACKFLOW PREVENTER INSTALLATION.

EXISTING IRRIGATION OPERATION

THE MATCH PLAY FIELD IRRIGATION IS TO REMAIN ACTIVE DURING CONSTRUCTION ON THE PRACTICE FIELD. TEMPORARY 1-2 DAY INTERRUPTIONS IN IRRIGATION WILL BE ACCEPTED TO ALLOW FOR CONNECTION OF NEW CONTROL VALVES TO MATCH FIELD IRRIGATION ZONES, RECONFIGURING OF NEW IRRIGATION WATER SUPPLY, AND OTHER INSTANCES AS NECESSARY FOR THE INSTALLATION OF THE PRACTICE FIELD IRRIGATION SYSTEM.

ANY INTERRUPTION IN IRRIGATION FOR THE MATCH FIELD IS TO BE COORDINATED WITH FACILITIES STAFF 5 DAYS PRIOR TO THE PLANNED INTERRUPTION.

ANY NON-PLANNED INTERRUPTION OF THE MATCH FIELD IRRIGATION OPERATION SHALL BE IMMEDIATELY REPORTED TO FACILITIES STAFF AND REPAIRS TO BE MADE TO RETURN THE SYSTEM TO OPERATIONAL STATUS WITHIN 48 HOURS.



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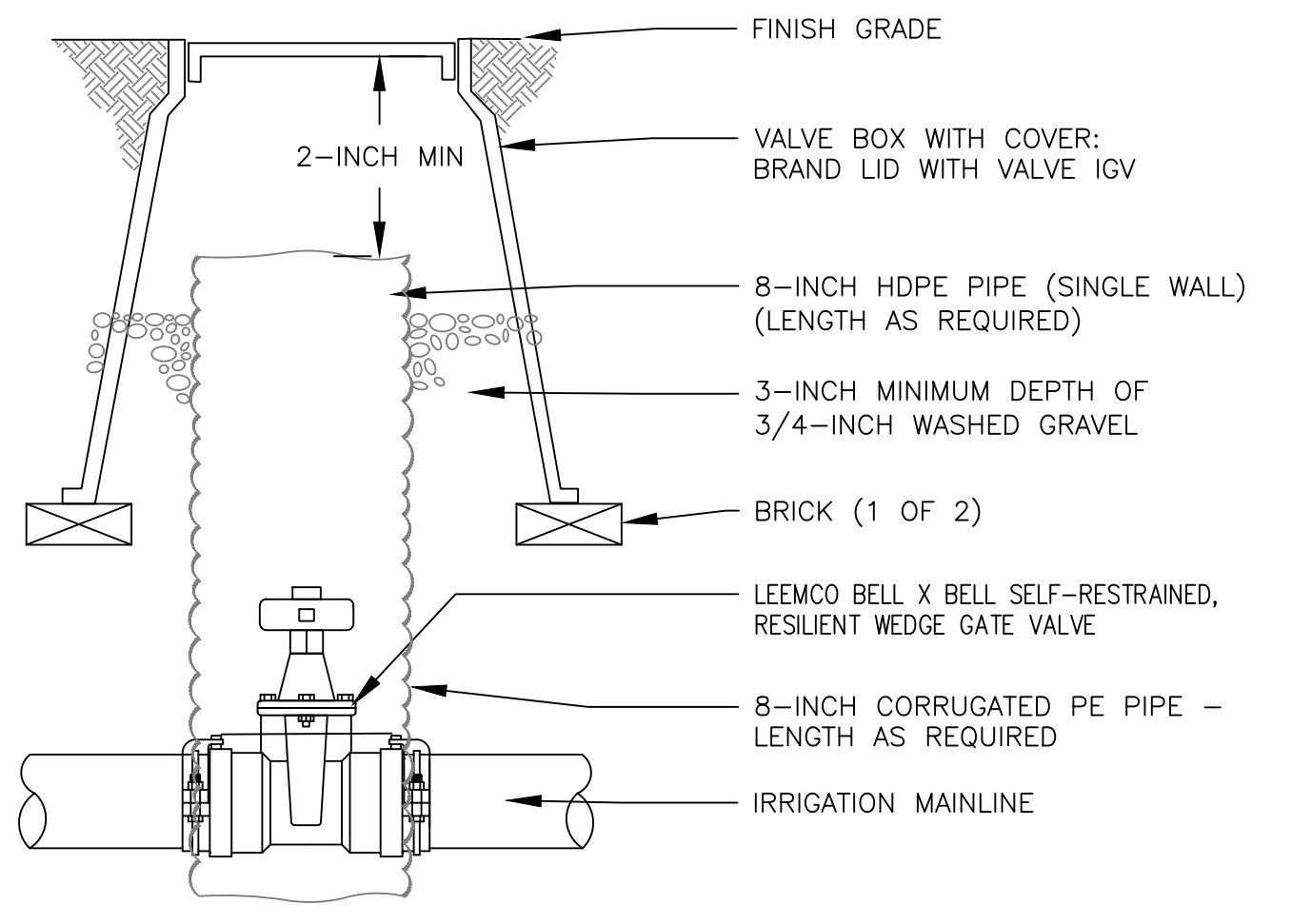
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Sheet Title:
IRRIGATION PLAN, NOTES,
& LEGEND
Sheet Number:

IR1

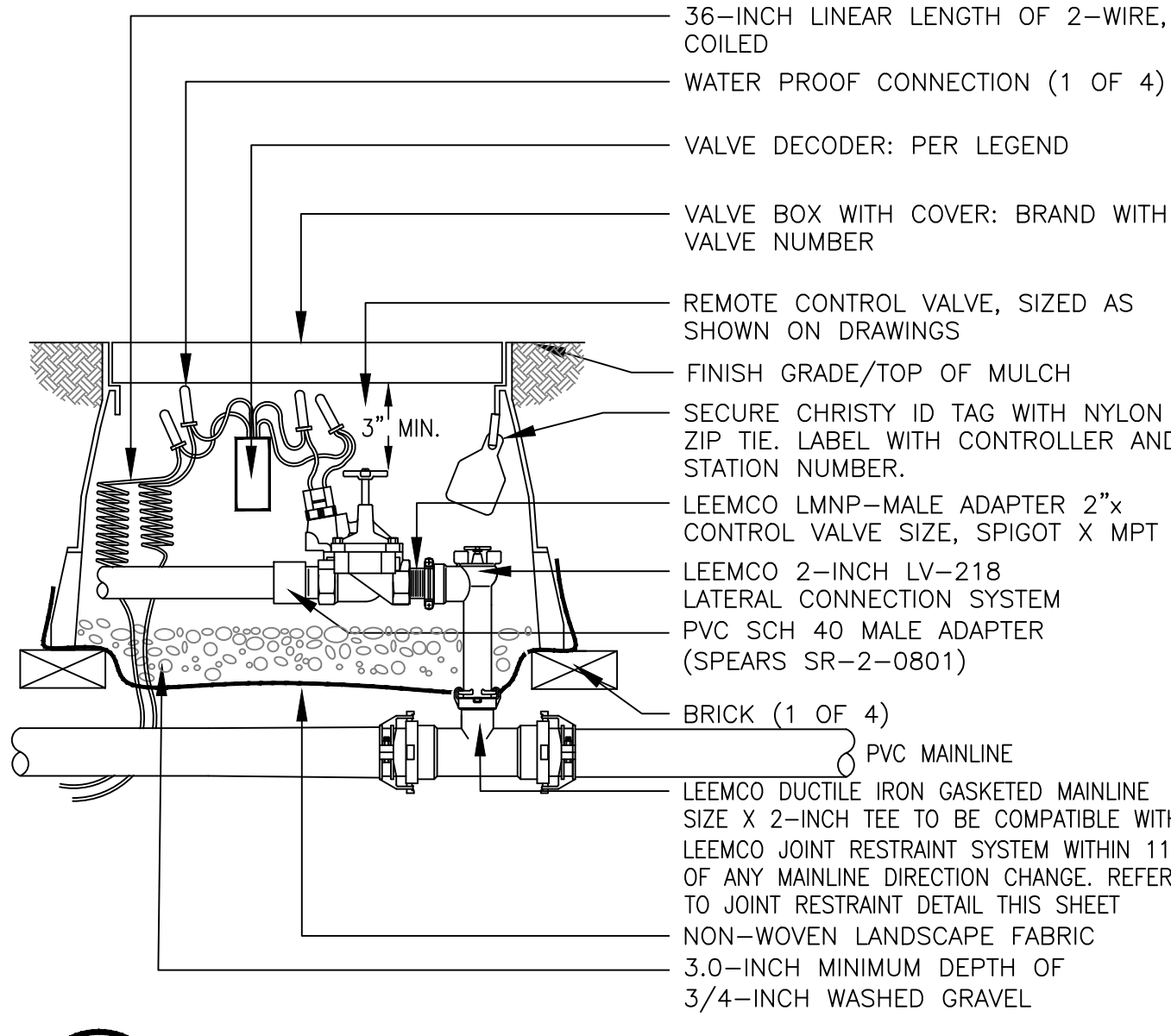


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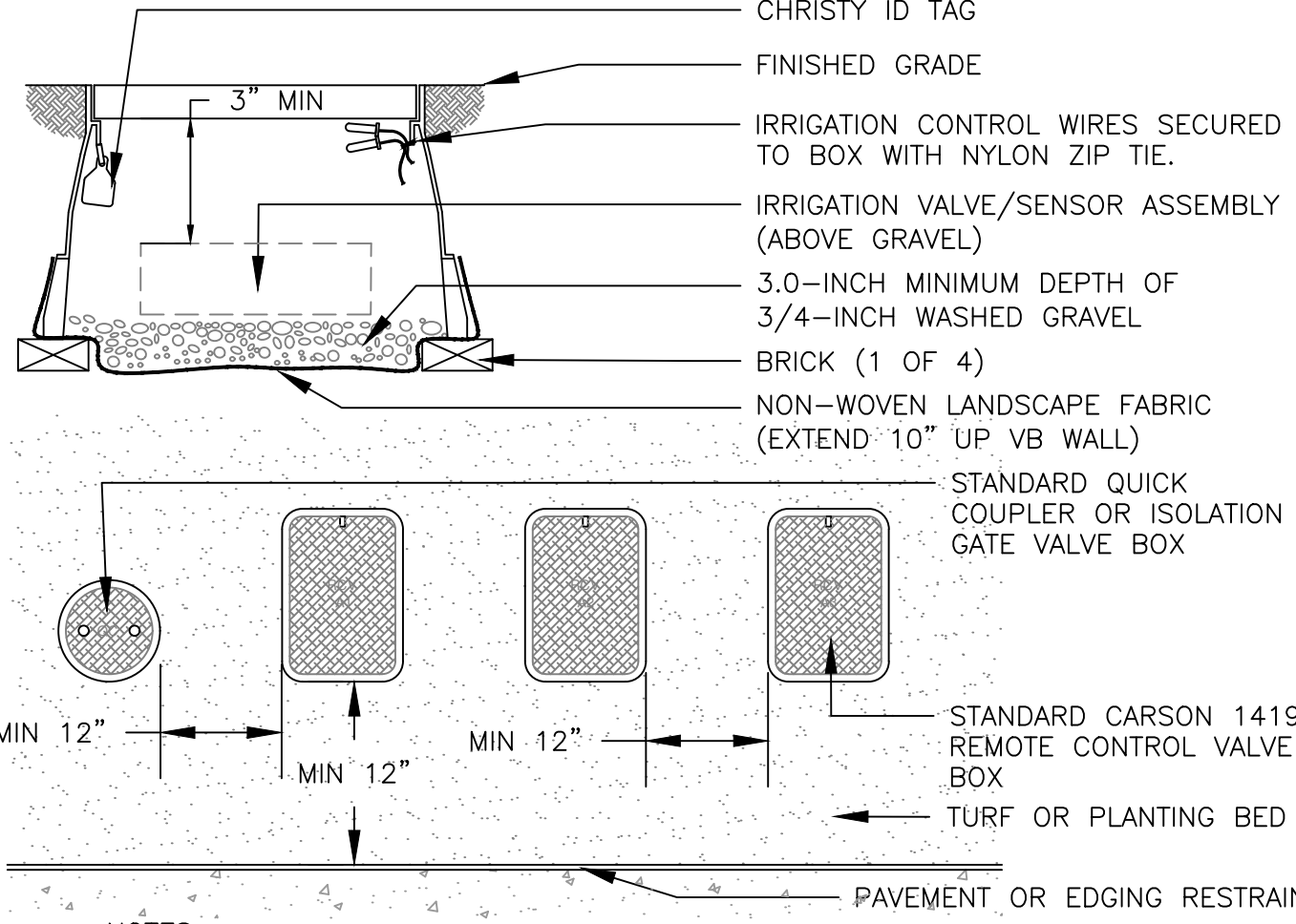


NOTES: 1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.

1 ISOLATION GATE VALVE ASSEMBLY 4-INCH MAINLINE AND LARGER

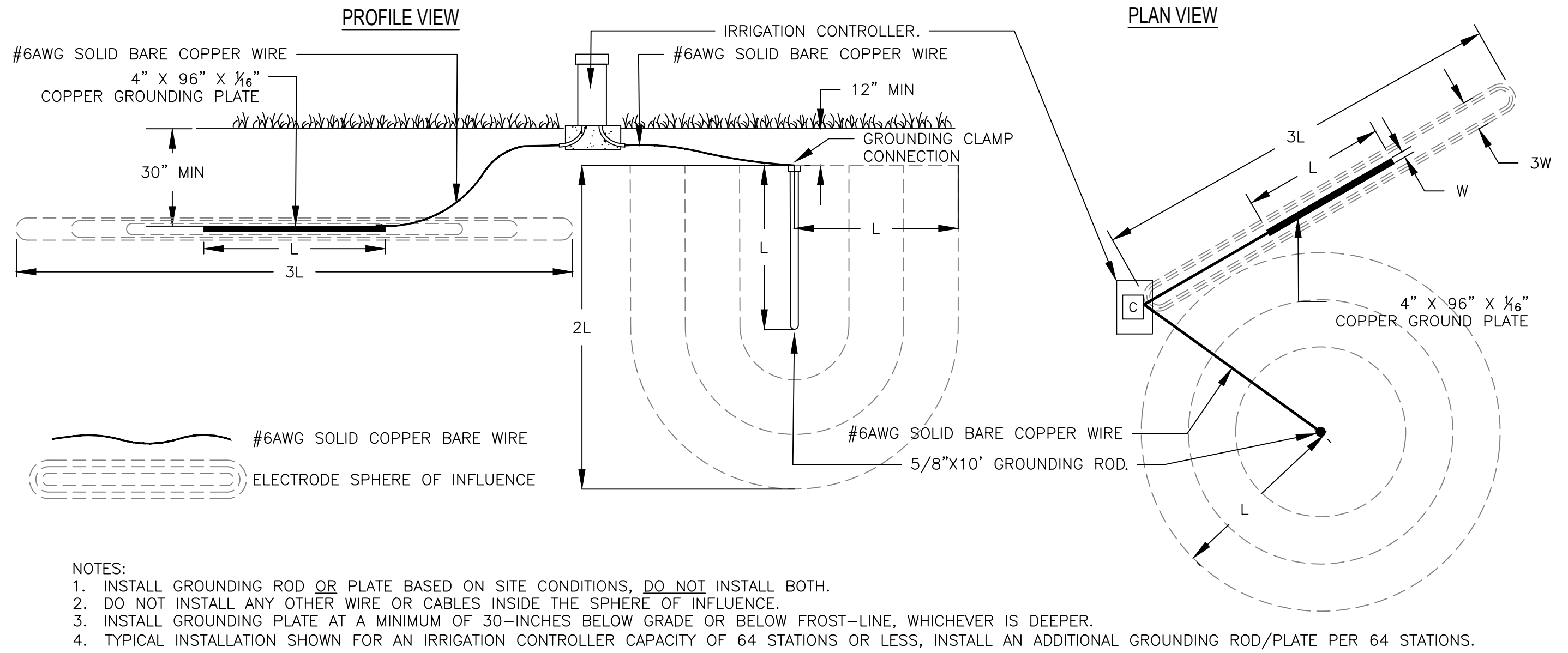


1 REMOTE CONTROL TURF VALVE ASSEMBLY 3-INCH MAINLINE AND LARGER



NOTES:
1. INSTALL ONLY ONE RCV TO VALVE BOX. LOCATE AT LEAST 12-INCHES FROM AND ALIGN WITH NEARBY WALLS OR EDGES OF PAVED AREAS. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL.
4. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL, BUT AVOID GROUPING MORE THAN THREE (3) STANDARD VALVE BOXES TOGETHER IN A SERIES.
5. ARRANGE GROUPED VALVE BOXES IN RECTANGULAR PATTERNS.

10 TYPICAL VALVE BOX INSTALLATION



NOTES:
1. INSTALL GROUNDING ROD OR PLATE BASED ON SITE CONDITIONS, DO NOT INSTALL BOTH.
2. DO NOT INSTALL ANY OTHER WIRE OR CABLES INSIDE THE SPHERE OF INFLUENCE.
3. INSTALL GROUNDING PLATE AT A MINIMUM OF 30-INCHES BELOW GRADE OR BELOW FROST-LINE, WHICHEVER IS DEEPER.
4. TYPICAL INSTALLATION SHOWN FOR AN IRRIGATION CONTROLLER CAPACITY OF 64 STATIONS OR LESS, INSTALL AN ADDITIONAL GROUNDING ROD/PLATE PER 64 STATIONS.

2 TYPICAL IRRIGATION CONTROLLER GROUNDING ROD OR PLATE INSTALLATION

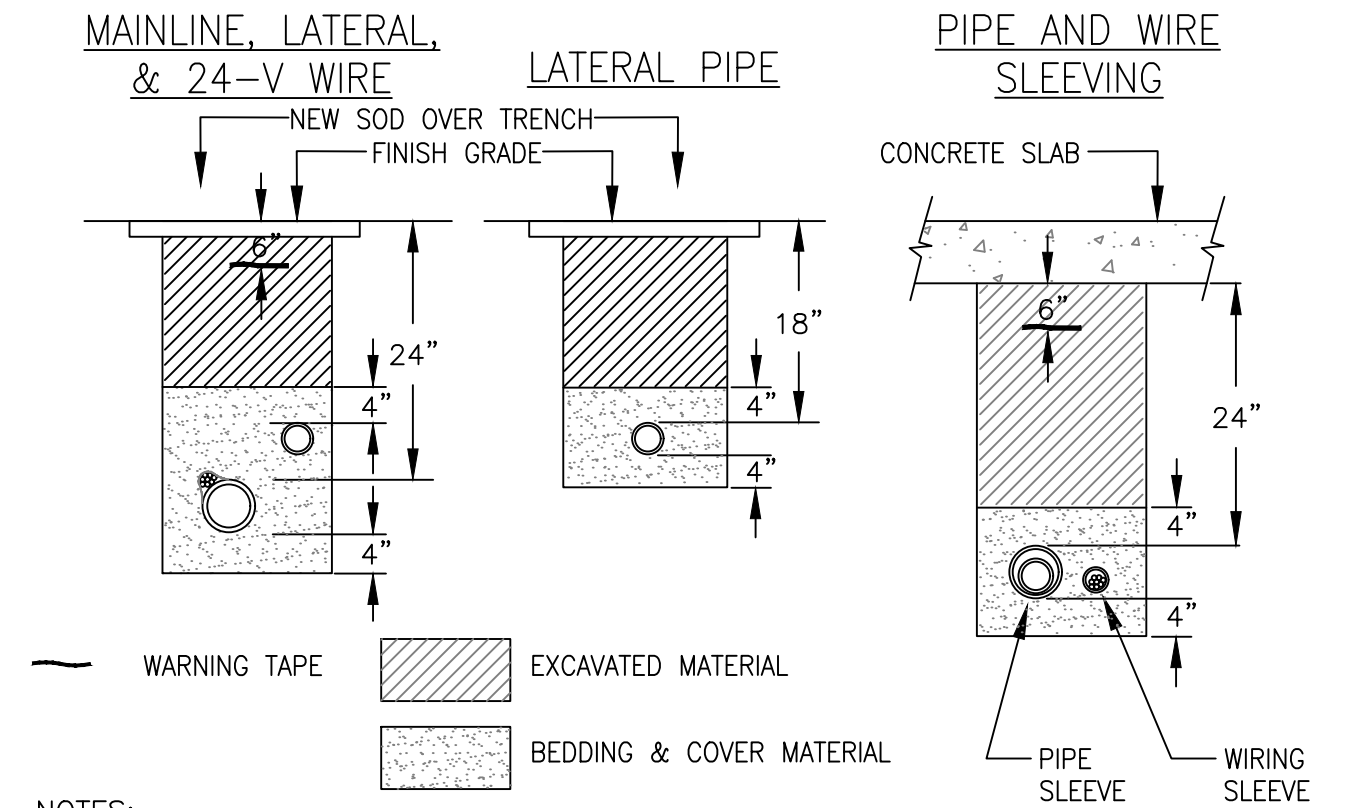
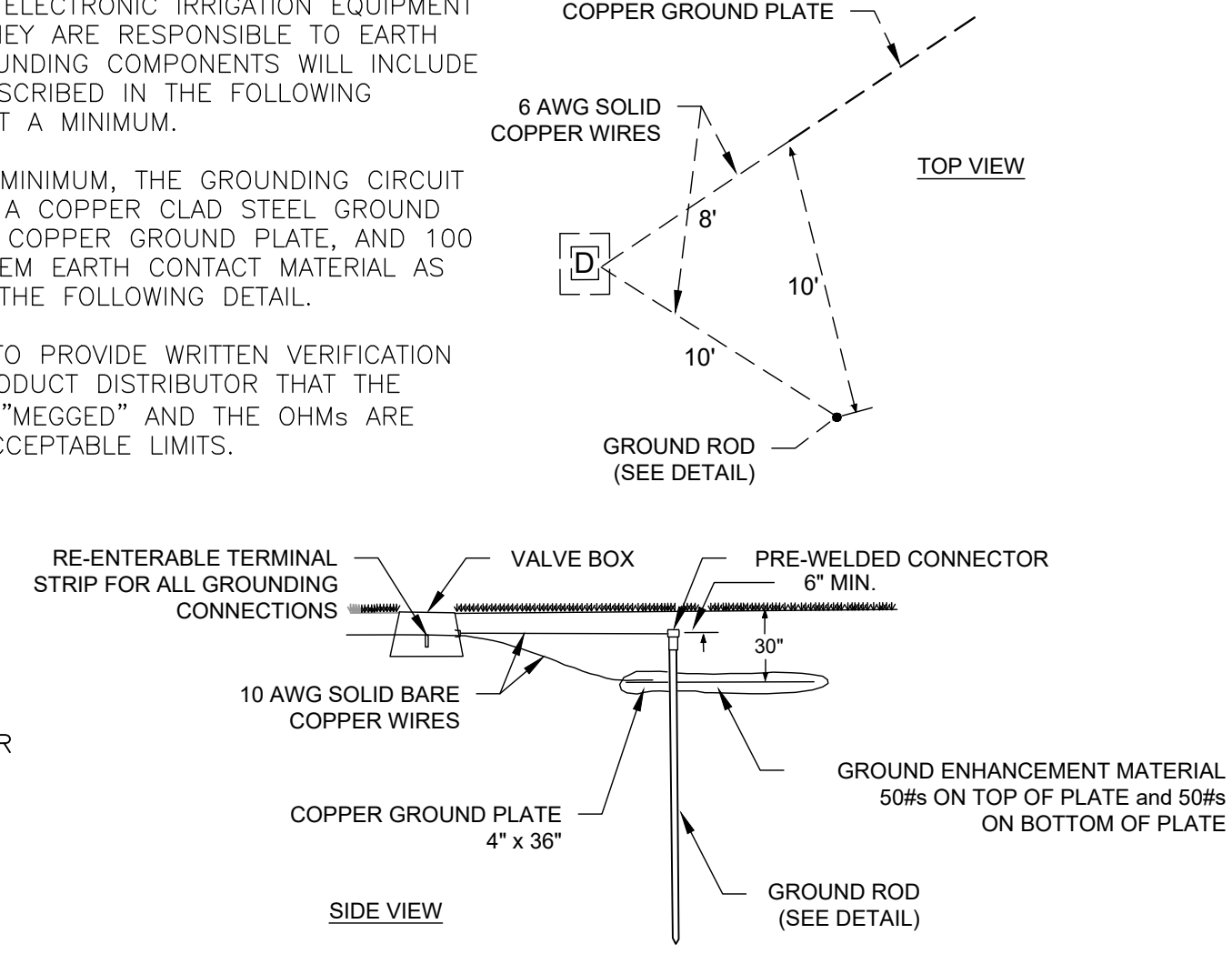
EARTH GROUNDING

IT IS THE RESPONSIBILITY OF THE INSTALLER TO CONNECT ALL ELECTRONIC IRRIGATION EQUIPMENT FOR WHICH THEY ARE RESPONSIBLE TO EARTH GROUND. GROUNDING COMPONENTS WILL INCLUDE THE ITEMS DESCRIBED IN THE FOLLOWING PARAGRAPH, AT A MINIMUM.

AT THE VERY MINIMUM, THE GROUNDING CIRCUIT WILL INCLUDE A COPPER CLAD STEEL GROUND ROD, A SOLID COPPER GROUND PLATE, AND 100 POUNDS OF GEM EARTH CONTACT MATERIAL AS DEFINED PER THE FOLLOWING DETAIL.

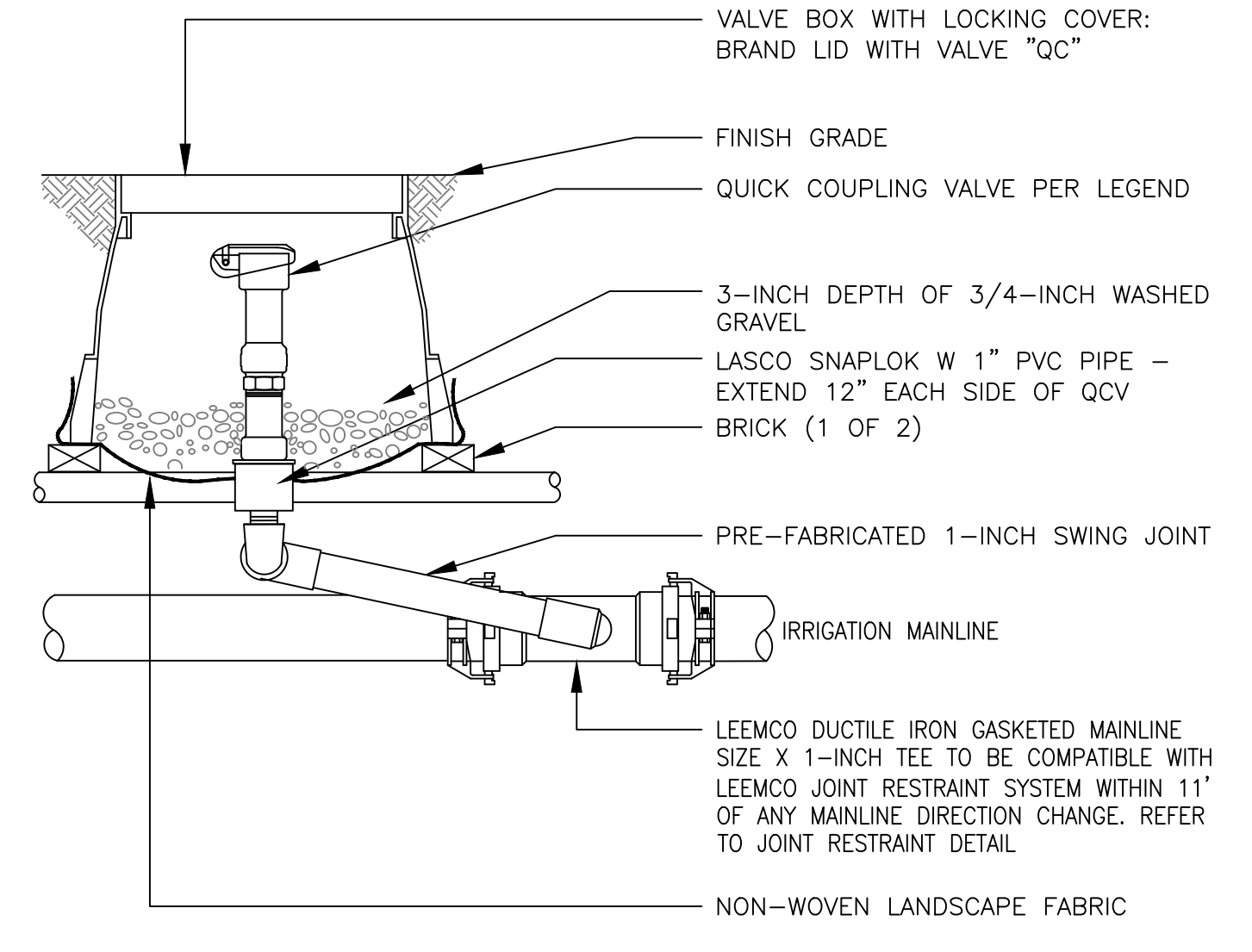
CONTRACTOR TO PROVIDE WRITTEN VERIFICATION FROM THE PRODUCT DISTRIBUTOR THAT THE GROUND WAS "MEGGED" AND THE OHMS ARE WITHIN THE ACCEPTABLE LIMITS.

NOTE: GROUNDING PLATE AND ALL OTHER RELATED MATERIALS BY PAIGE ELECTRIC CO. OR APPROVED EQUAL.

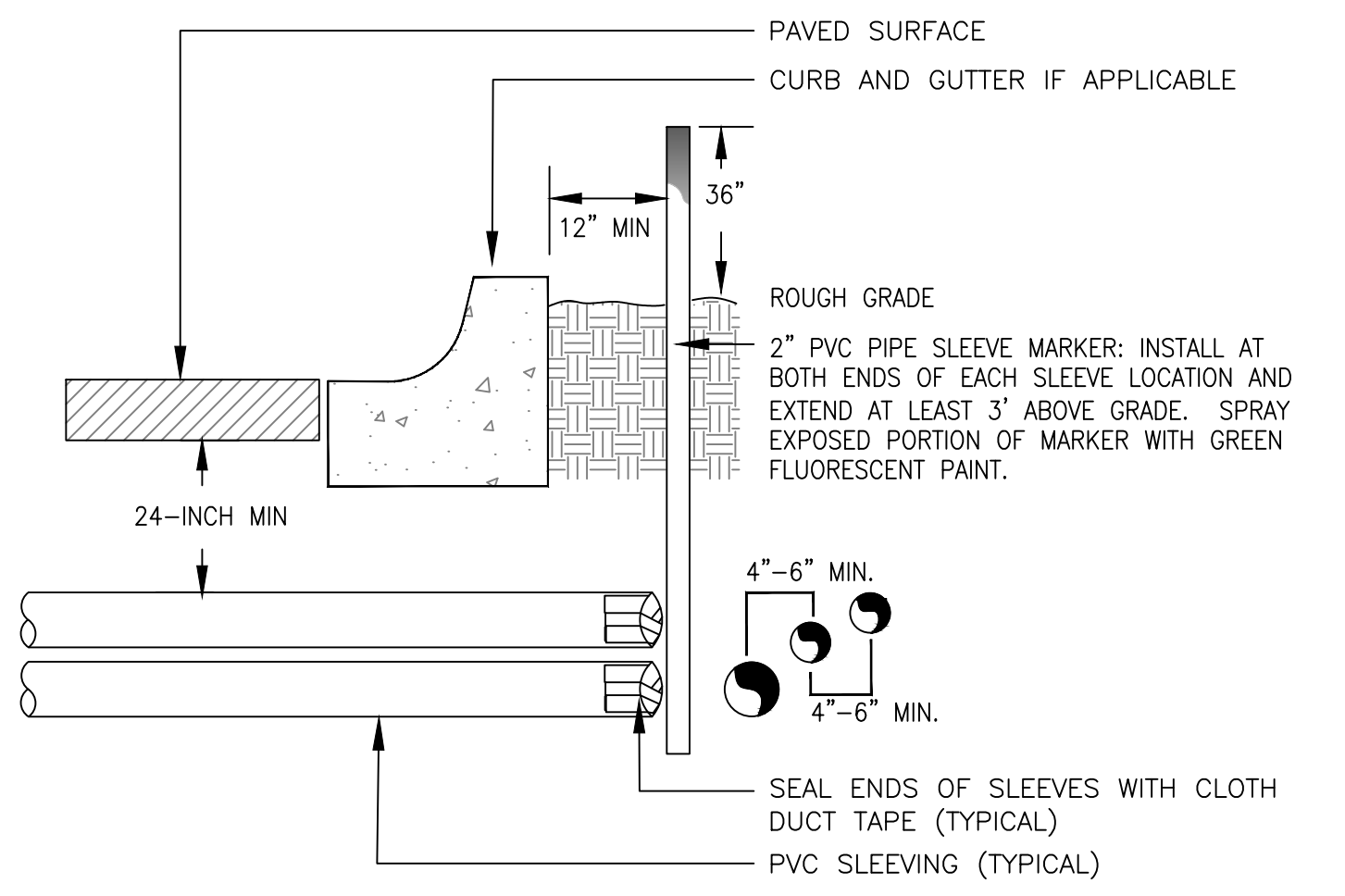


NOTES:
1. SLEEVE ALL PIPE AND WIRE SEPARATELY.
2. ALL PIPE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS."SNAKE" UNSLEEVED PLASTIC PIPE IN TRENCH. PROVIDE A MINIMUM OF 2" CLEARANCE TO SIDE OF TRENCH AND BETWEEN PIPES.
3. ALL 120-V WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS. PROVIDE LOOSE 20" LOOP OF 2-WIRE CABLE AT ALL CHANGES OF DIRECTION OVER 30 DEGREES.
4. EXCAVATE ALONG TRENCH AS NECESSARY TO MATCH NEW SOD ROLL WIDTH AND TO TOP OF SOIL IN SOD EVEN WITH EXISTING GRADE. SEE LANDSCAPE PLANS FOR SOD REQUIREMENTS AND INSTALLATION.

8 TYPICAL TRENCHING DETAIL

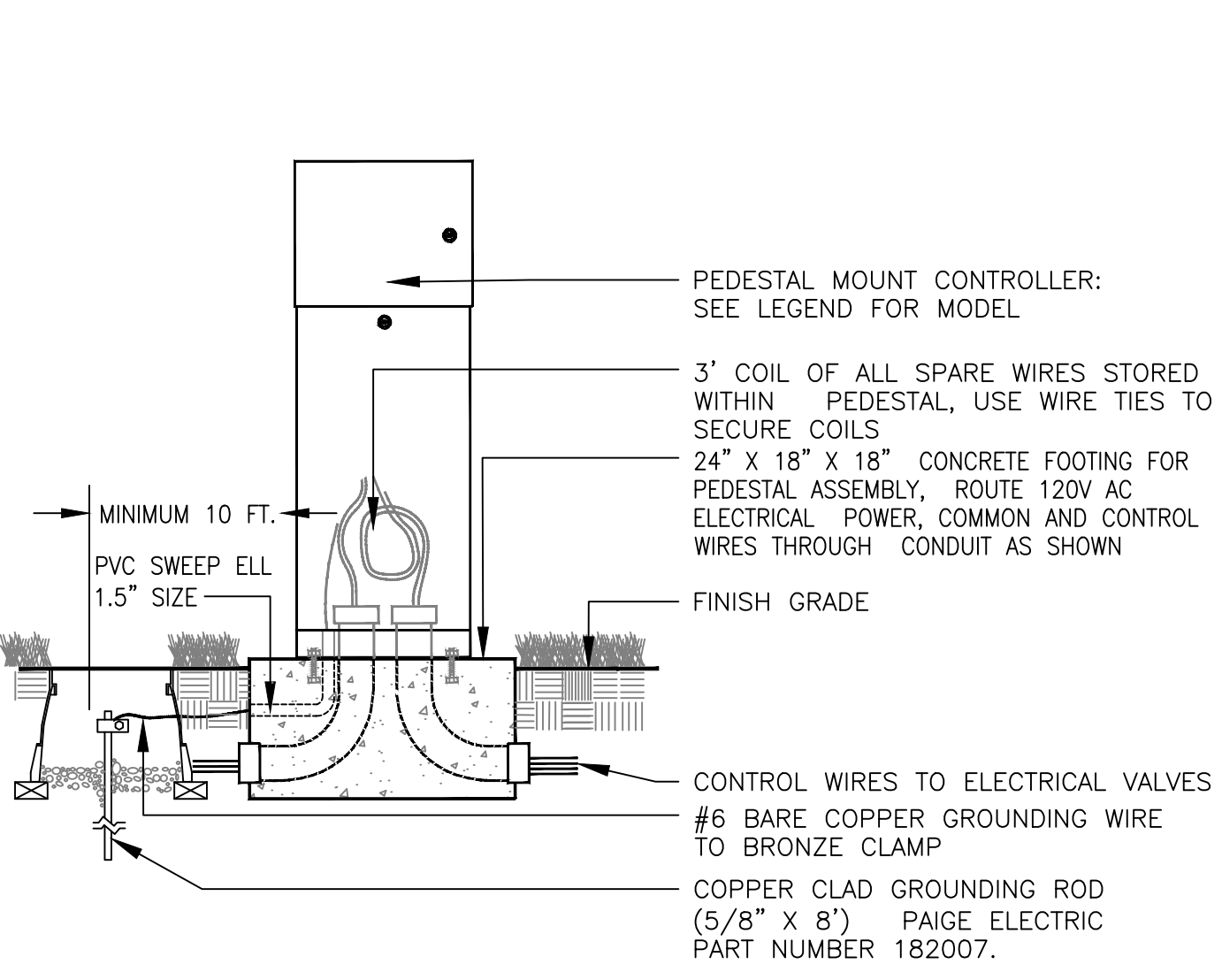


1 QUICK COUPLING VALVE ASSEMBLY 3-INCH MAINLINE AND LARGER



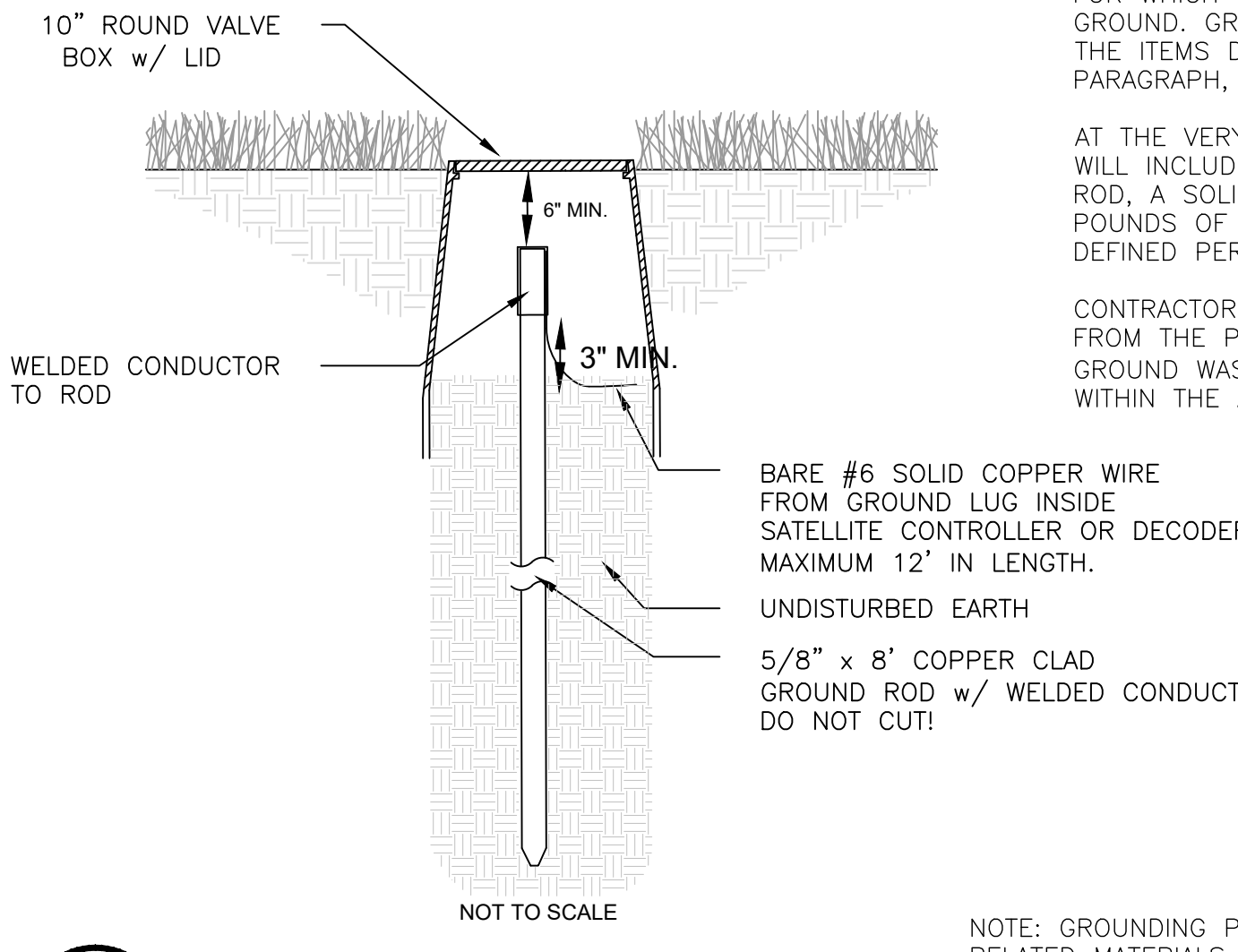
NOTE:
1) ALL SLEEVEING TO BE CLASS 200 BE PVC, SIZED AS NOTED.
2) INSTALL SLEEVES IN SIDE-BY-SIDE CONFIGURATION WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED. SPACE SLEEVES 4" TO 6" APART. DO NOT STACK SLEEVES VERTICALLY.

9 TYPICAL SLEEVEING DETAIL

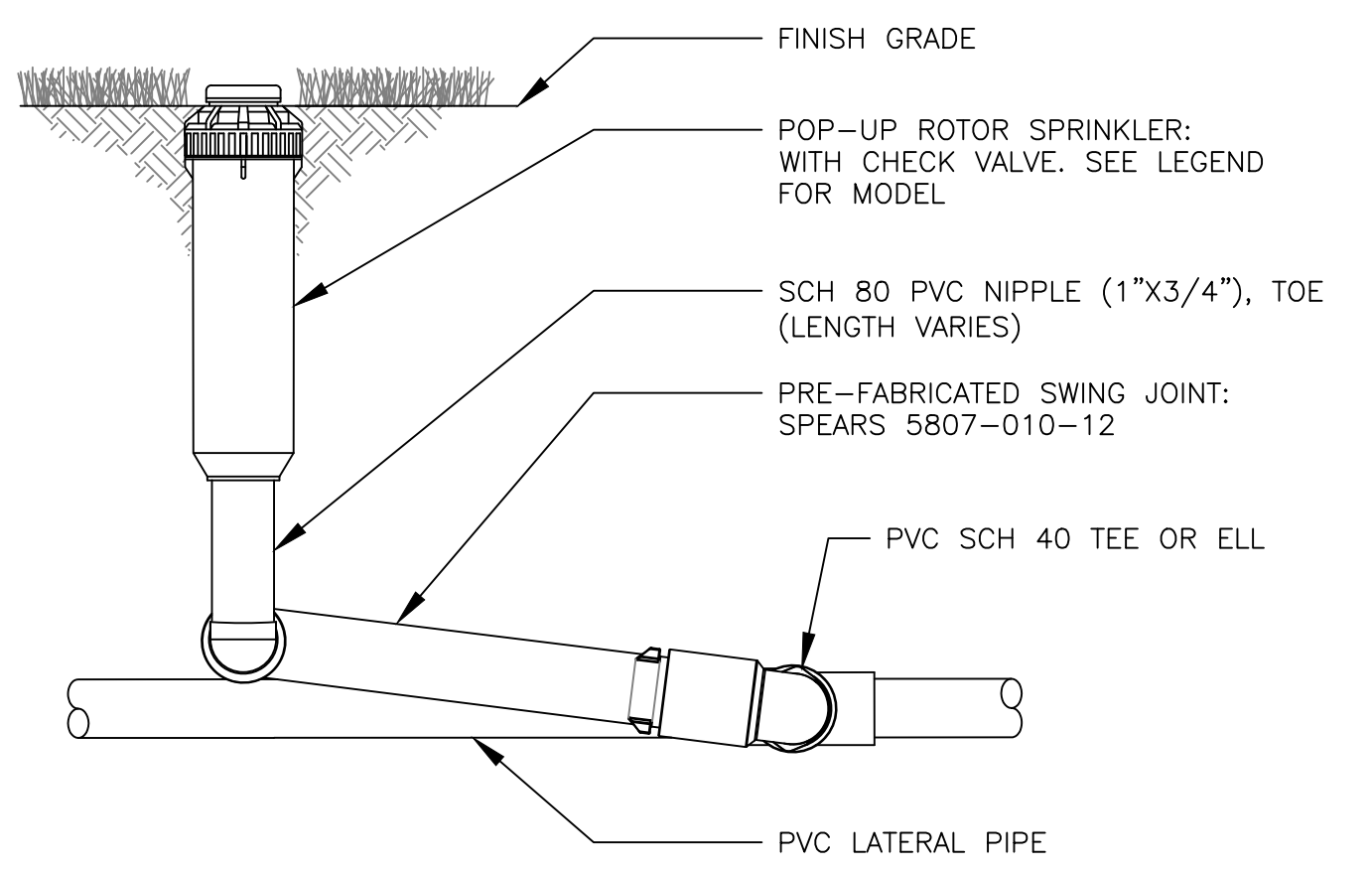


NOTES:
1. INSTALL RAIN SENSOR ON TREATED 4X4 POST IF CONTROLLER IS IN TURF AREA. POST TO BE MOUNTED IN SHRUB BED TO AVOID BEING IRRIGATED BY OVERHEAD SPRINKLERS.

1 PEDESTAL MOUNTED CONTROLLER ASSEMBLY



4 TYPICAL GROUNDING SCHEMATIC INSTALLATION



NOTES:
1. INSTALL PLASTIC RISERS FOR ROTORS IN NATIVE AREAS.

7 6-INCH GEAR DRIVEN ROTOR ASSEMBLY W/SWING JOINT



OAKTON COMMUNITY COLLEGE SOCCER FIELD

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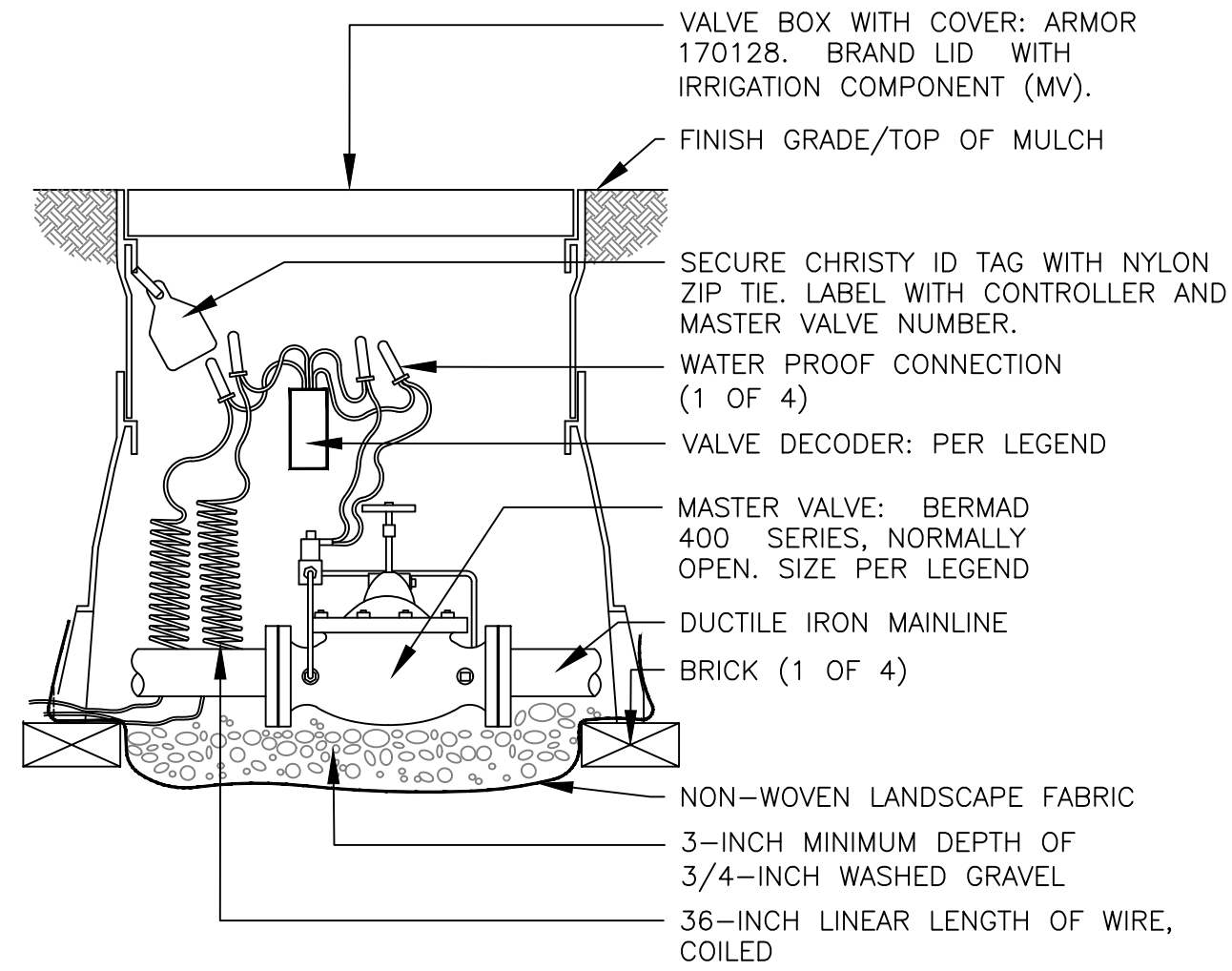
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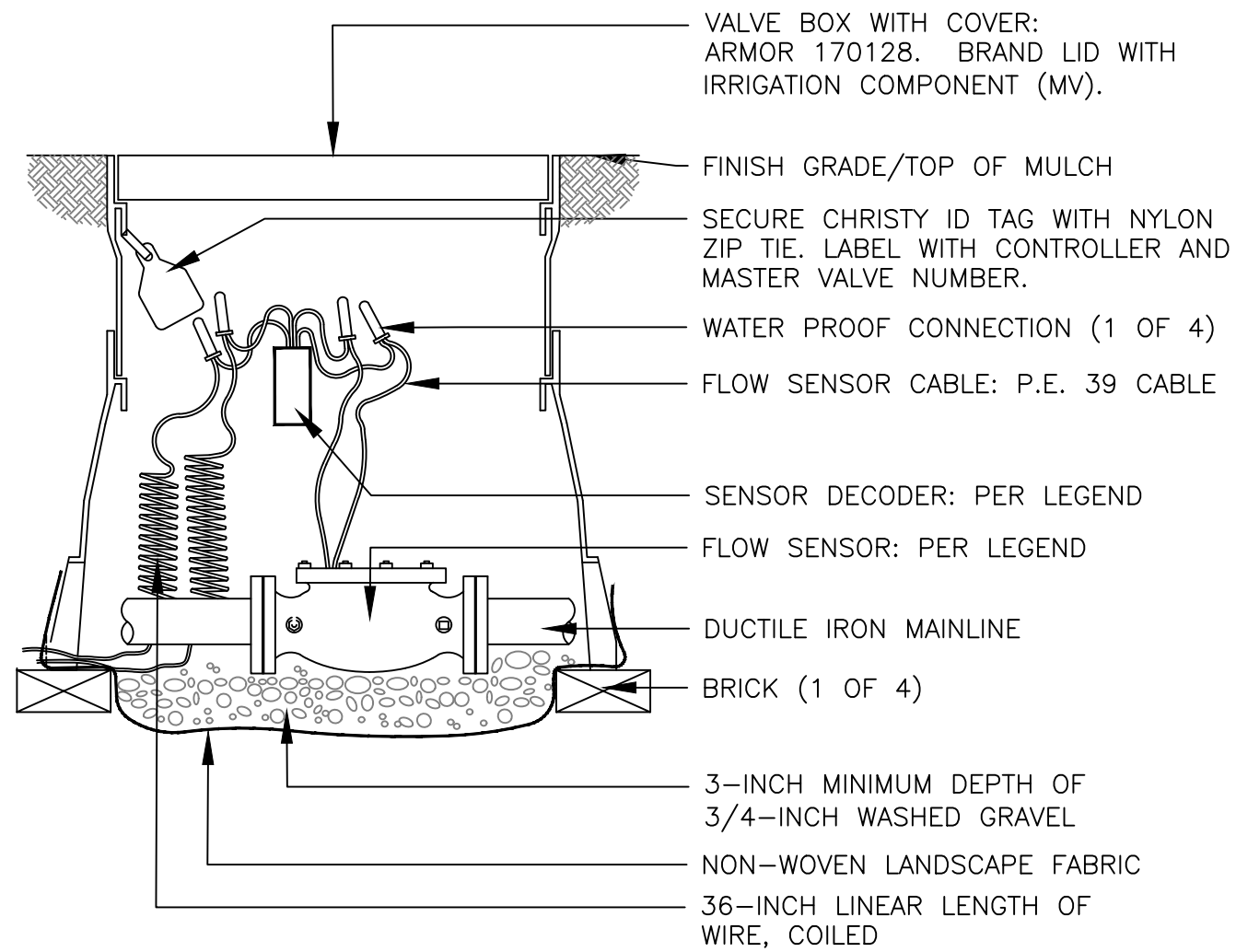
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IRRIGATION BOOSTER
PUMP
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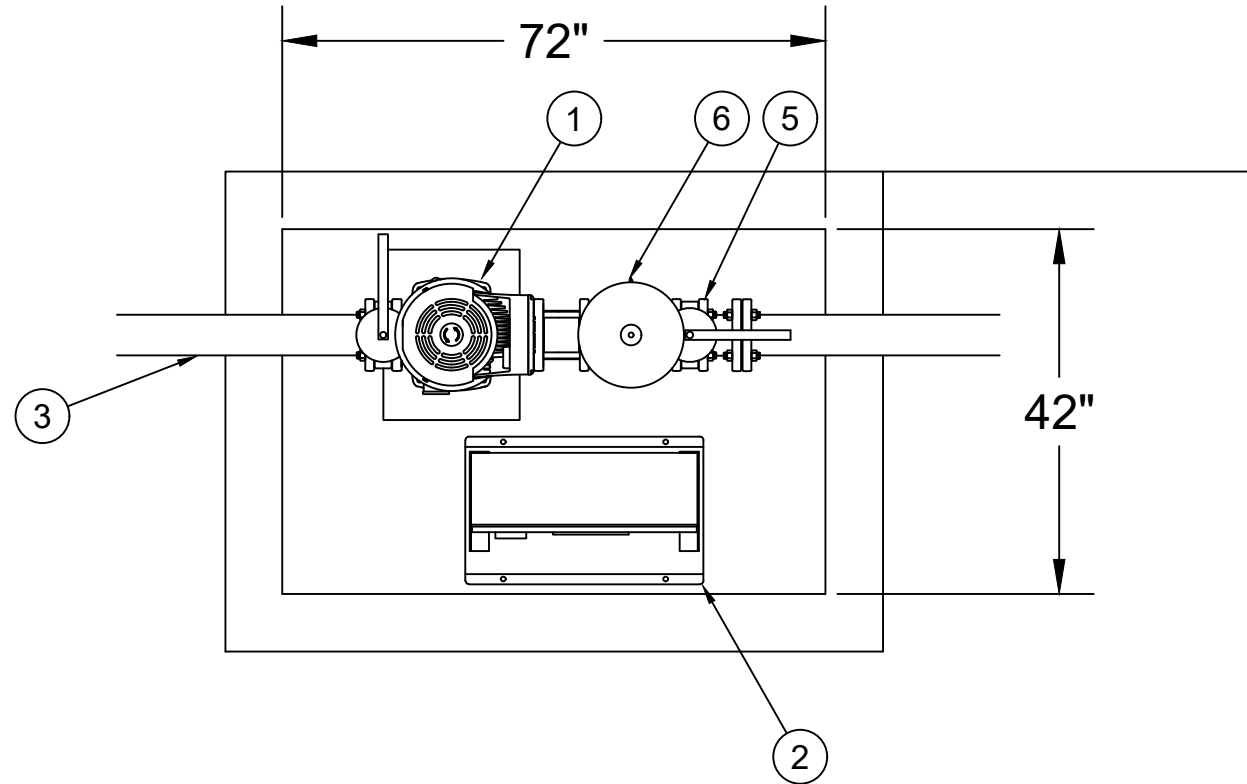
NOTE:
1. INSTALL MASTER VALVE IN EXISTING MASTER VALVE VAULT, VERIFY LOCATION WITH PARKS DEPT.
2. ROUTE TWO-WIRE FROM CONTROLLER TO MASTER VALVE AND FLOW SENSOR

11 MASTER VALVE ASSEMBLY



NOTE:
1. SEE PLAN FOR EXACT INSTALLATION LOCATION
2. ROUTE TWO-WIRE FROM CONTROLLER TO MASTER VALVE AND FLOW SENSOR

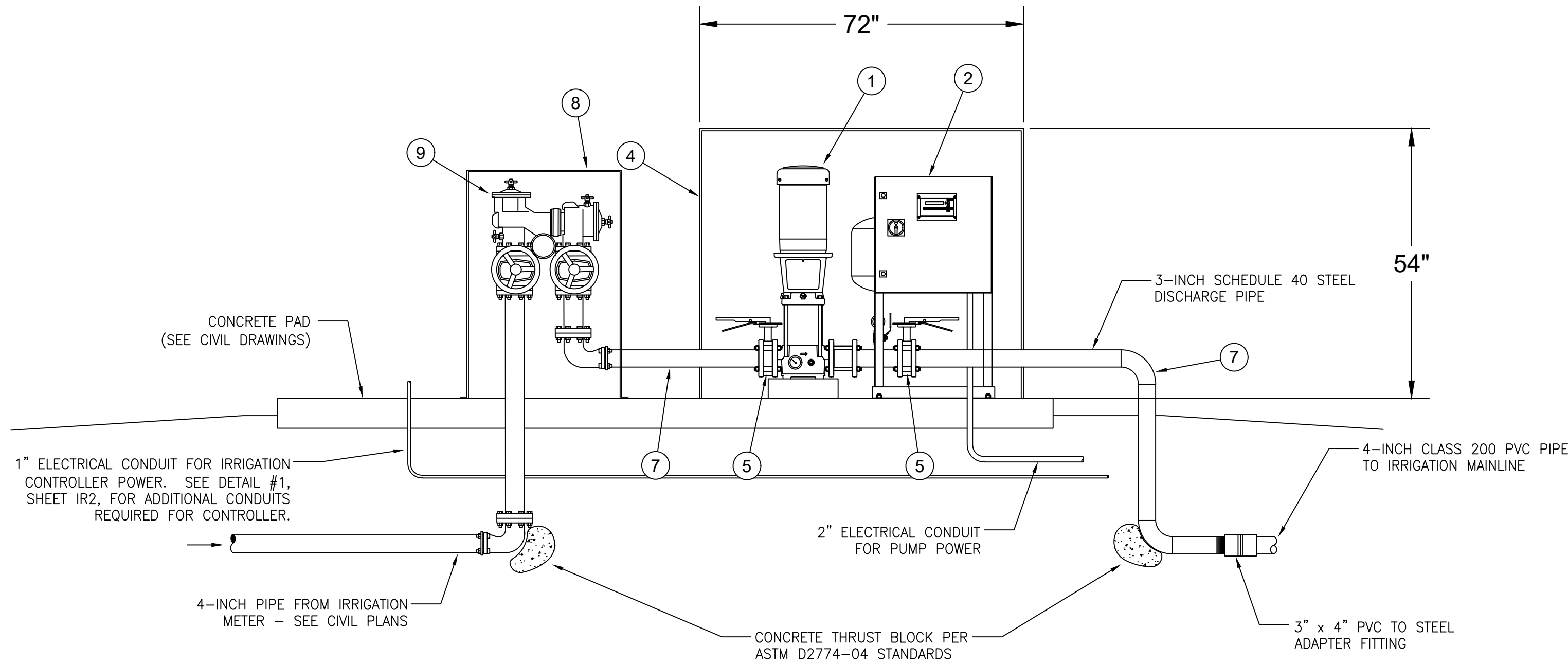
12 FLOW SENSOR ASSEMBLY



13 IRRIGATION BACKFLOW AND PUMP STATION SECTION VIEW

IRRIGATION PUMP LEGEND

- 7.5HP GRUNDFOS CR 15-4 A-GJ-A-E-HQE VERTICAL MULTISTAGE PUMP (OWNER PROVIDED)
- NEMA RATED CONTROL PANEL, CONTAINS PUMP VFD, STARTER AND ALL PUMP STATION RELATED CONTROLS. PANEL TO BE BY WATERTRONICS.
- 3-INCH SCHEDULE 40 STEEL PIPE.
- MARINE GRADE WEATHER PROOF ALUMINUM ENCLOSURE.
- 3-INCH BUTTERFLY VALVE
- EXPANSION TANK
- 3-INCH STEEL INTAKE AND DISCHARGE PIPES TO BE FABRICATED BY WATERTRONICS
- BACKFLOW ENCLOSURE: STRONGBOX SBBC-40ALHP
- REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE: FEBCK LF880V, 3-INCH SIZE. INSTALL PER LOCAL CODES.



14 IRRIGATION BACKFLOW AND PUMP STATION SECTION VIEW