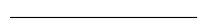


IRRIGATION SCHEDULE				
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
	RAIN BIRD	FESB-R	ELECTRIC CONTROL VALVE	7
	RAIN BIRD	44-NP	QUICK COUPLING VALVE	4
N/S	OLDCASTLE / CARSON	REFER TO SPECIFICATIONS AND DETAILS	VALVE BOXES	VARIOUS
	AMERICAN	SERIES 66 BUTT FUSION GATE VALVE	BUTT FUSION, EPOXY COATED RESILIENT WEDGE GATE VALVE	6
		HDPE DR11 MAINLINE - 3" & LARGER	HDPE MAINLINE WITH FUSION WELDED FITTINGS	1 & 2
	FLOMEC	Q5200 WITH 4" FLANGED STEEL SADDLE	ULTRASONIC FLOW SENSOR WITH STEEL SADDLE	5
			EPOXY COATED SCHEDULE 40 STEEL PIPE	2
			EXISTING MAINLINE	
		CLASS 200 BE	PVC LATERAL	7
		EXISTING SLEEVES	CONTRACTOR TO RE-USE EXISTING PVC SLEEVES. SIZES PROVIDED ON PLANS FOR CLARIFICATION OF CASE BY CASE NEW SLEEVE REQUIREMENTS	3
	RAIN BIRD	XCZ-100-PRF-R	DRIP VALVE ASSEMBLY	8
	POLY-CAM	SERIES 500 STANDARD REDUCING TRANSITION	REDUCING TRANSITIONAL FITTING, 3" MPT STEEL WITH 6" HDPE BUTT FUSION, REQUIRES 3" EPOXY COATED SCH 40 STEEL FFLT COUPLING	2
	TORO	SENTINEL DXI-SM11NM&CP, 204 STATION	TWO-WIRE CENTRAL CONTROLLER W/CELL MODEM AND PROMAX RECEIVER	12
N/S	TORO	SB-DAC-1	AC VALVE DECODER	7, 8, & 9
	TORO	SB-BLA	AC SURGE PROTECTION	11
N/S	TORO	TWDAGFLOW	AC FLOW SENSOR DECODER	5
N/S	REGENCY	RB MAXI TWO WIRE	PARALLEL 14/12 UF TWO WIRE CABLE	VARIOUS
			EXISTING LATERAL LINE	
 CONTROL VALVE SIZE				

A FIELD LOCATE EXISTING 4" STEEL PUMP DISCHARGE PIPE AT THIS LOCATION OUTSIDE THE PUMP HOUSE. MAKE NEW 4" EPOXY COATED SCHEDULE 40 STEEL CONNECTION TO STEEL PUMP DISCHARGE PIPE USING 150 LB STEEL FLANGES OR APPROVED MECHANICAL JOINT. INSTALL NEW 4" EPOXY COATED SCHEDULE 40 STEEL PIPE WITH QUICK COUPLER, MASTER VALVE, FLOW SENSOR AND TRANSITION TO 6" HDPE DR11 USING POLYCAM TRANSITION FITTING, SEE SCHEDULE. INSTALL TWO (2) PAIGE TWO-WIRE COMMUNICATION CABLE WITH NEW MAINLINE TO SERVE NEW CONTROL VALVE REPLACEMENTS.

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C INSTALL NEW 6" HDPE DR11 MAINLINE AT 36" DEPTH.

D MAKE NEW HDPE D11 REMOVABLE PIPE CONNECTION TO WATER TAP AT THIS LOCATION, MAKE CONNECTION TO EXISTING DOWNSTREAM OF IRRIGATION BACKFLOW PREVENTER

E INSTALL A 400 SQUARE FEET SPRAY SPRINKLER ZONE WITH 1.5" RAIN BIRD FESBR CONTROL VALVE, CLASS 200 PVC LATERALS AND RAIN BIRD RD1806-S-P30 SPRAY SPRINKLERS, DESIGN COMING IN THE FUTURE FOR RE-BIDDING

IRRIGATION CONSTRUCTION NOTES

- DRAWINGS AND BASE INFORMATION - ALL BASE INFORMATION HAS BEEN DEVELOPED BY HYDROSYSTEMS-KDI AND FROM CITY OF LOUISVILLE AS-BUILTS. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY HYDROSYSTEMS-KDI OF ANY DISCREPANCIES BETWEEN THE UTILITY OR PLANTING PLANS AND THE IRRIGATION PLAN. IF CONTRACTOR FAILS TO NOTIFY HYDROSYSTEMS-KDI AND MAKES CHANGES TO THE IRRIGATION SYSTEM DESIGN, HE ASSUMES ALL COSTS AND LIABILITIES ASSOCIATED WITH THOSE FIELD CHANGES. REFER TO SPECIFICATIONS FOR ADDITIONAL PROJECT REQUIREMENTS. CONTACT IRRIGATION CONSULTANT FOR CURRENT SPECIFICATIONS IF NOT PROVIDED.
- SYSTEM PRESSURE - EXISTING IRRIGATION PUMP STATION PRESSURE IS ASSUMED TO BE 100 PSI, CONTRACOTR SHALL VERIFY EXISTING PRESSURE PRIOR TO INSTALLATION.
- NON-POTABLE WATER SOURCE - THIS SITE HAS BEEN DESIGNED TO BE IRRIGATED WITH NON-POTABLE RECLAIMED WATER. ALL VALVE HANDLES, VALVE BOX LIDS SHALL BE CONSTRUCTED OF PURPLE MATERIALS AND LABELED TO INDICATE NON-POTABLE WATER SUPPLY. ALL MAINLINE PIPING SHALL BE PURPLE, HAVE A PURPLE STRIPE OR BE IDENTIFIED BY PURPLE MARKING TAPE, AS REQUIRED BY THE SUPPLYING UTILITY. THE CONTRACTOR SHALL CONTACT THE RECLAIMED WATER SUPPLYING AGENCY TO OBTAIN THE REGULATIONS AND SPECIFICATIONS FOR IRRIGATION MAINLINE PIPE.
- EXISTING EQUIPMENT DEMOLITION - THE CONTRACTOR SHALL PLAN ON PHASED INSTALLATION OF THE NEW IRRIGATION MAINLINE PIPE, CONTROL WIRES AND VALVES. WHILE COMPLETING THE CONSTRUCTION OF EACH PHASE THE CONTRACTOR SHALL WALK THE EXISTING SYSTEM WITH CITY OF LOUISVILLE PERSONNEL TO VERIFY THE SPECIFIC IRRIGATION EQUIPMENT TO SALVAGE, REMOVE AND TO REMAIN IN PLACE. AT A MINIMUM ALL EXISTING CONTROL VALVES, AND QUICK COUPLERS SHALL BE SALVAGED AND TURNED OVER TO THE CITY OF LOUISVILLE. EXISTING VALVE BOXES SHALL BE REMOVED AND DISPOSED OF, CONFIRM WITH CITY PERSONNEL. IRRIGATION MAINLINE AND CONTROL WIRES SHALL BE PRIMARILY ABANDONED IN PLACE UNDER GROUND. EXISTING CONTROL WIRES SHALL REMAIN OPERATIONAL FROM THE EXISTING CONTROLLER THROUGHOUT THE PHASED CONSTRUCTION OF THE SYSTEM UNTIL THE NEW TWO-WIRE CONTROLLER IS CONNECTED TO ALL IRRIGATION ZONES. ALL AREAS WHERE EXISTING EQUIPMENT HAS BEEN REMOVED SHALL BE BACKFILLED AND COMPACTED TO MATCH EXISTING GRADE. CONTRACTOR IS RESPONSIBLE TO RE-INSTALL LANDSCAPE MATERIAL MATCHING THE EXISTING SURROUNDING MATERIAL: SOD, MULCH OR OTHER, CONFIRM WITH CITY. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING LANDSCAPE AREAS WHILE COMPLETING THE PHASED CONSTRUCTION OF THE SYSTEM, CONFIRM ALL REPLACEMENT MATERIALS AND LANDSCAPE INSTALLATION DETAILS WITH THE CITY OF LOUISVILLE.
- PHASED IRRIGATION MAINLINE REPLACEMENT - THE CONTRACTOR SHALL PLAN ON PHASED INSTALLATION OF THE NEW IRRIGATION MAINLINE PIPE, CONTROL WIRES AND VALVES. IT IS THE INTENT OF THE CITY OF LOUISVILLE TO ALLOW SAFE PUBLIC ACCESS TO THE PARK, AND COMMUNITY EVENTS IN THE PARK, THROUGHOUT THE IRRIGATION SYSTEM CONSTRUCTION, REQUIRING A PHASED INSTALLATION APPROACH TO THE IRRIGATION SYSTEM. THE CONTRACTOR SHALL PLAN ON 6-8 PHASES OF IRRIGATION MAINLINE, CONTROL WIRES AND VALVE INSTALLATION. THE EXISTING IRRIGATION SYSTEM MUST REMAIN OPERATIONAL THROUGHOUT THE PHASED INSTALLATION, THIS WILL REQUIRE THE CONTRACTOR TO CONNECT NEWLY INSTALLED HDPE MAINLINE TO EXISTING PVC MAINLINE AT EACH PHASE BOUNDARY. PHASE BOUNDARIES WILL BE DETERMINED IN COORDINATION WITH THE CITY OF LOUISVILLE. ALL LANDSCAPE REPAIRS SHALL BE COMPLETED IN EACH PHASED CONSTRUCTION AREA BEFORE MOVING TO THE NEXT PHASED AREA.
- EQUIPMENT INSTALLATION - IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN PROPERTY LIMITS AND WITHIN LANDSCAPED AREAS, AND ANY EQUIPMENT OTHER THAN VALVE BOXES OR SLEEVING THAT CONTAINS PIPE OR WIRES SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 2'-0" FROM EDGE OF ANY PAVED SURFACES UNLESS SPECIFICALLY INDICATED ON PLANS AND AS APPROVED BY THE CITY OF LOUISVILLE. BOXES INSTALLED IN OPEN TURF AREAS SHALL BE KEPT TO EDGES AND STAKED FOR REVIEW IF ALONG HIGH TRAFFIC AREAS. ALL VALVE BOXES SHALL BE PLACED A MINIMUM OF 3'-0" FROM THE CENTERLINE OF ANY DRAINAGE SWALE. ALL VALVE BOXES WITHIN PAVEMENT SHALL BE TIER 15 RATED BOXES FOR HEAVY DUTY NON-DELIBERATE TRAFFIC. BOX LID COLOR SHALL BE PURPLE FOR RECLAIMED WATER SYSTEMS. ALL BOXES SHALL BE INSTALLED TO BE FLUSH WITH GRADE AND IN AN ORDERLY MANNER. WHERE MORTAR PAVING LIDS ARE INSTALLED ABOVE BOXES, IRRIGATION BOX WITH LID SHALL BE LOWERED TO ACCOMMODATE PAVING LID. REFER TO LANDSCAPE FOR ADDITIONAL INFORMATION, TO BE INSTALLED PER MANUFACTURE RECOMMENDATIONS.
- 2-WIRE SYSTEM NOTES - CONTRACTOR SHALL INSTALL ALL TWO-WIRE COMPONENTS PER MANUFACTURER'S RECOMMENDATIONS AND STANDARDS. INSTALL PRIMARY TWO-WIRE CABLE AND SPARE TWO-WIRE PULLED INTO EACH CONTROL VALVE BOX AND AS STATED BELOW.
 - CONTRACTOR SHALL USE ONLY MANUFACTURED 2-WIRE DECODER CABLE (SEE SCHEDULE FOR SPECIFIC 2-WIRE CABLE).
 - ONLY USE SINGLE STATION DECODERS (SEE SCHEDULE FOR SPECIFIC MODEL).
 - ONLY USE SENSOR DECODER FOR FLOW SENSOR (SEE SCHEDULE FOR SPECIFIC MODEL) IF INDICATED ON PLANS.
 - LOOP 5' OF 2-WIRE DECODER CABLE INTO ALL VALVE BOXES (WITH DECODERS AND SPLICES) FOR MAINTENANCE.
 - LOOP 2' OF 2-WIRE DECODER CABLE AS AN EXPANSION LOOP AT ALL CHANGES OF DIRECTION.
 - USE ONLY 3M DBR-6 WATERPROOF CONNECTORS ON ALL WIRE SPLICES AND ALL WIRE SPLICES ARE TO BE MADE WITHIN A VALVE BOX WITH CONTROL VALVES OR A SEPARATE 10" ROUND VALVE BOX FOR WIRE SPLICES.
 - INSTALL SURGE PROTECTOR RODS OR PLATES 8 LF. PERPENDICULARLY FROM VALVES, DECODERS, AND COMMUNICATION WIRE. WHERE 8 LF IS NOT AVAILABLE, REFER TO ASIC GUIDELINES FOR PLATE LAYOUT.
 - GROUNDING SHALL BE IN AN IRRIGATED AREA.
 - GROUND ALL DECODERS AND DECODER WIRE A MINIMUM OF EVERY 500' OF WIRE OR EVERY 8th DECODER AND AT ALL ENDS OF 2-WIRE DECODER CABLE RUN.
 - LOOP EXTRA 10' OF 2-WIRE DECODER CABLE INTO A VALVE BOX AT PHASING LINES FOR FUTURE CONNECTION (IF INDICATED ON PLANS).
- PLANS AND SPECIFICATIONS - CONTRACTOR RESPONSIBLE TO ENSURE WORK CONFORMS TO PLANS AND SPECIFICATIONS. AT ONSET OF CONSTRUCTION, VERIFY PLANS ARE CURRENT. WHERE REQUIRED BY CITY OR TOWN, CONTRACTOR SHALL CONSTRUCT ONLY OFF CITY OR TOWN STAMPED PLANS. REVISIONS TO CITY OR TOWN STAMPED PLANS SHALL CONFORM TO CITY OR TOWN FIELD CHANGE PROCEDURES AND DOCUMENTATION.
- EXISTING IRRIGATION DAMAGE - CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING IRRIGATION SYSTEMS DAMAGED DURING NEW INSTALLATION. REPAIR OR REPLACEMENT SHALL BE DETERMINED BY OWNER OR OWNER'S REPRESENTATIVE AND PAID FOR BY THE LANDSCAPE CONTRACTOR.
- EXISTING TREE IRRIGATION - CONTRACTOR SHALL PROVIDE IRRIGATION DURING CONSTRUCTION TO EXISTING TREES AS REQUIRED.
- CONSTRUCTION SITE - CONTRACTOR SHALL SECURE THE CONSTRUCTION AREA PER CITY OF LOUISVILLE DIRECTION.
- SLEEVING - CONTRACTOR SHALL FIELD LOCATE AND RE-USE EXISTING PVC SLEEVES WHEREVER POSSIBLE. IF EXISTING SLEEVES ARE DAMAGED, TOO SMALL OR UNUSABLE, COMMUNICATE THE ISSUES WITH THE CITY OF LOUISVILLE WHO WILL PROVIDE DIRECTION ON A CASE BY CASE BASIS. WHERE SLEEVES ARE SHOWN, BUT NOT LABELED, FOLLOW THE SCHEDULE BELOW. ALL MAINLINE, CONTROL WIRES AND DRIP LINES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. ALL MAINLINE SLEEVE LOCATIONS SHALL INCLUDE A SEPARATE WIRE SLEEVE.

SLEEVED PIPE SIZE/WIRE QUANTITY	REQUIRED SLEEVE SIZE & (QUANTITY)
4" PIPING	8" PVC (1)
6" PIPING	10" PVC (1)
TWO-WIRE CONTROL CABLE	2" PVC (1)
COMMUNICATION CABLE	2" PVC (1)

DIRECTORY

IRRIGATION SCHEDULE AND NOTES IR-1

IRRIGATION PLANS IR-2 - IR-6

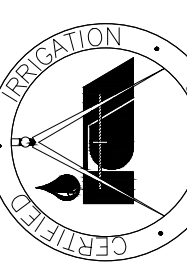
IRRIGATION DETAILS IR-7 - IR-8



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LOUISVILLE COMMUNITY
PARK
LOUISVILLE, CO

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BY:

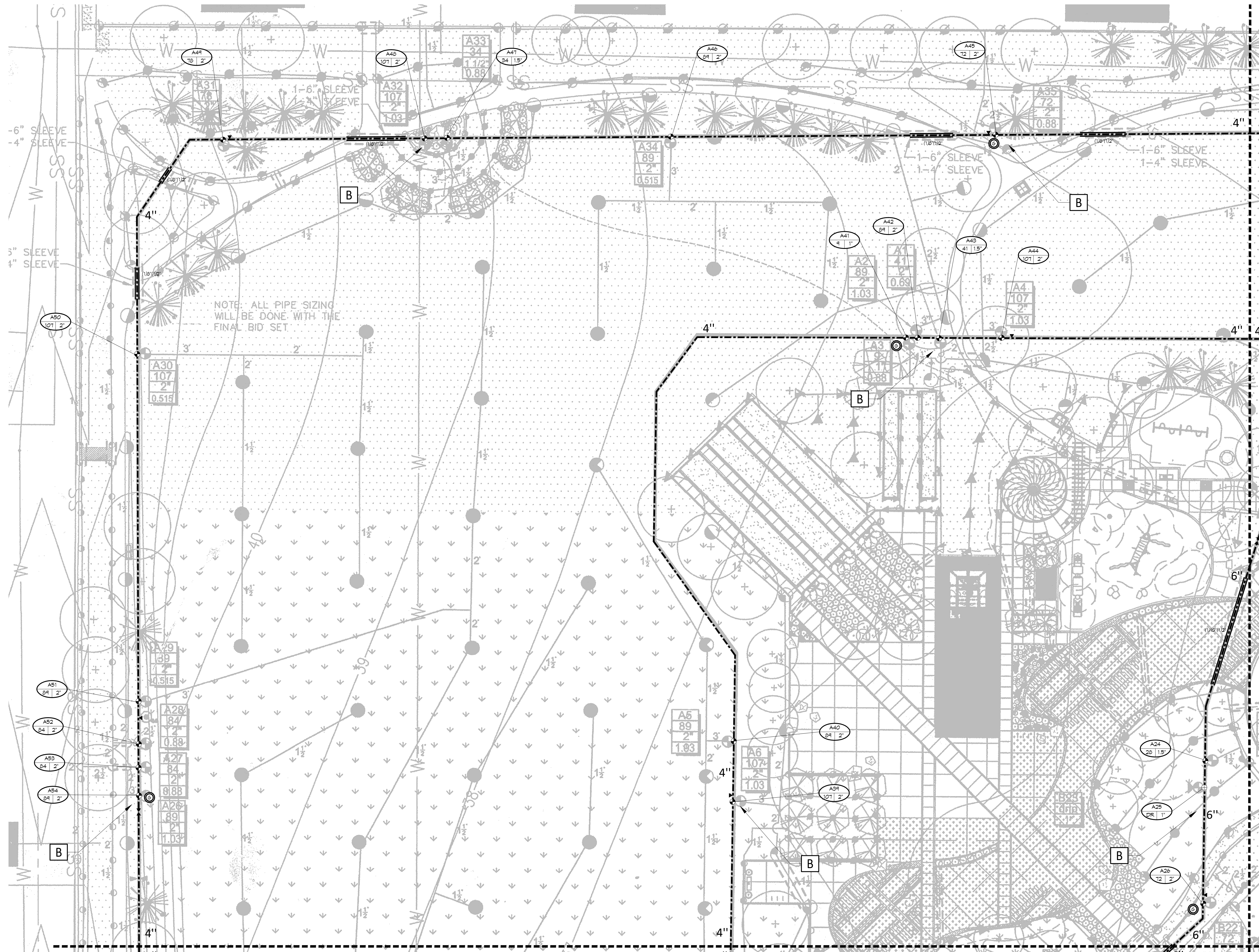
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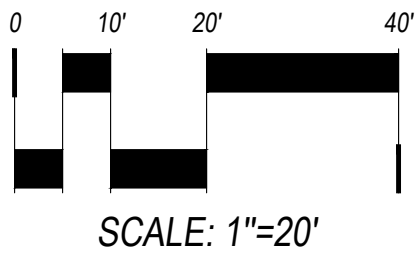
IR-1



NOTE: ALL PIPE SIZING
WILL BE DONE WITH THE
FINAL BID SET

MATCHLINE: SEE SHEET IR-3

MATCHLINE: SEE SHEET IR-4



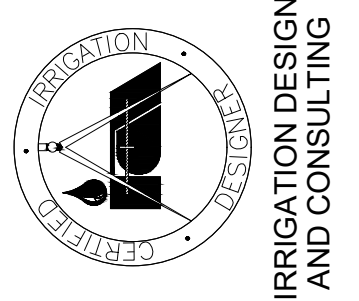
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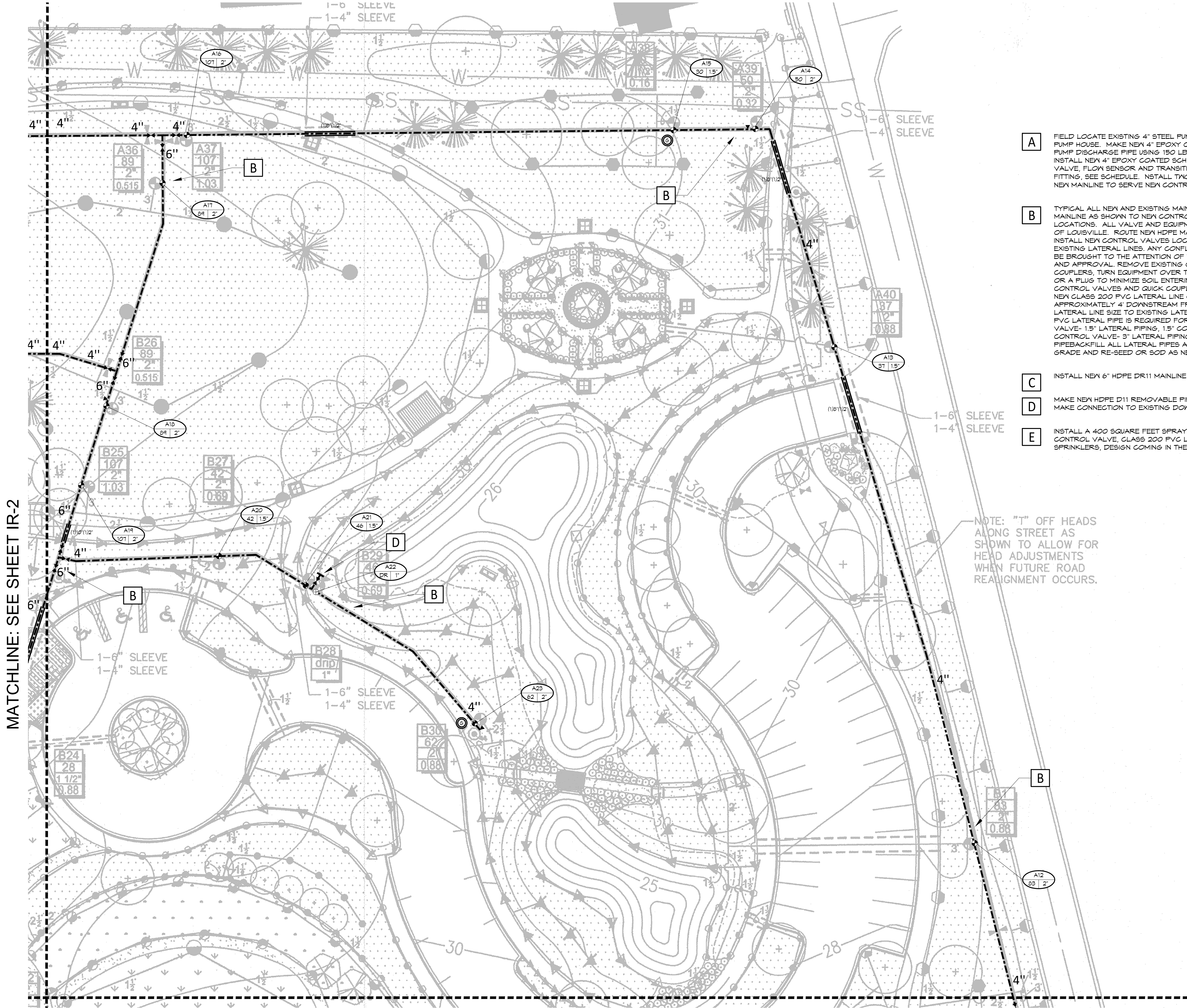
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IR-2



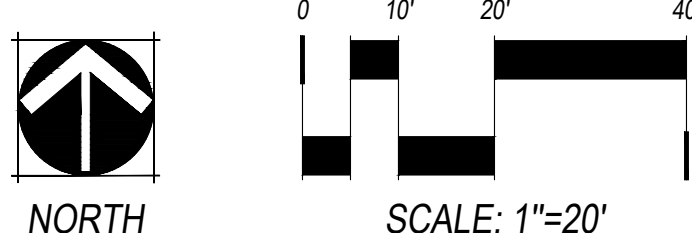
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FOR A LIST OF PARTICIPATING UTILITIES



- A** FIELD LOCATE EXISTING 4" STEEL PUMP DISCHARGE PIPE AT THIS LOCATION OUTSIDE THE PUMP HOUSE. MAKE NEW 4" EPOXY COATED SCHEDULE 40 STEEL CONNECTION TO STEEL PUMP DISCHARGE PIPE USING 150 LB STEEL FLANGES OR APPROVED MECHANICAL JOINT. INSTALL NEW 4" EPOXY COATED SCHEDULE 40 STEEL PIPE WITH QUICK COUPLER, MASTER VALVE, FLOW SENSOR AND TRANSITION TO 6" HDPE DR11 USING POLYCAM TRANSITION FITTING. SEE SCHEDULE. INSTALL TWO (2) PAIR TWO-WIRE COMMUNICATION CABLE WITH NEW MAINLINE TO SERVE NEW CONTROL VALVE REPLACEMENTS.
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- C** INSTALL NEW 6" HDPE DR11 MAINLINE AT 36" DEPTH.
- D** MAKE NEW HDPE D11 REMOVABLE PIPE CONNECTION TO WATER TAP AT THIS LOCATION, MAKE CONNECTION TO EXISTING DOWNSTREAM OF IRRIGATION BACKFLOW PREVENTER
- E** INSTALL A 400 SQUARE FEET SPRAY SPRINKLER ZONE WITH 1.5" RAIN BIRD PESBR CONTROL VALVE, CLASS 200 PVC LATERALS AND RAIN BIRD RD1806-S-P30 SPRAY SPRINKLERS, DESIGN COMING IN THE FUTURE FOR RE-BIDDING

NOTE: "T" OFF HEADS ALONG STREET AS SHOWN TO ALLOW FOR HEAD ADJUSTMENTS WHEN FUTURE ROAD REALIGNMENT OCCURS.



MATCHLINE: SEE SHEET IR-2

MATCHLINE: SEE SHEET IR-5



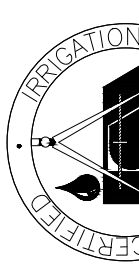
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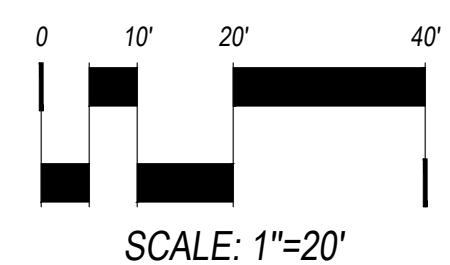
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IR-3



NORTH

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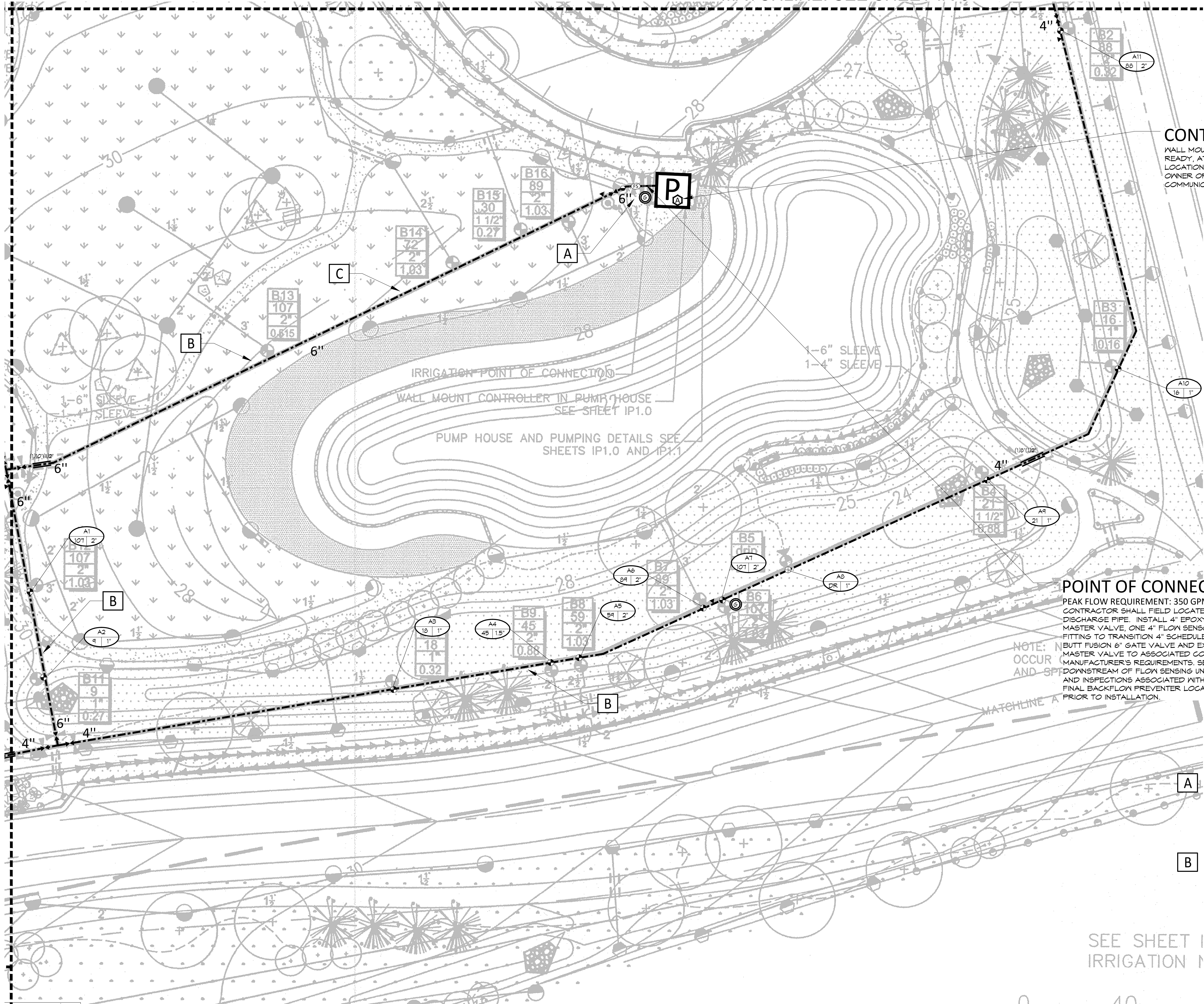
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MATCHLINE: SEE SHEET IR-4



CONTROLLER LOCATION "A"

WALL MOUNT ONE CONTROLLER (REFER TO SCHEDULE FOR MODEL & STATION COUNT), REMOTE READY, AT INDICATED LOCATION. 120 VOLT POWER IS AVAILABLE WITHIN 5 LF. OF CONTROLLER LOCATION FROM WALL RECEPTACLE. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. COORDINATE RADIO COMMUNICATION EQUIPMENT WITH CITY OF LOUISVILLE AND THEIR TORO SENTINEL DISTRIBUTOR

POINT OF CONNECTION #1 - 4"

PEAK FLOW REQUIREMENT: 350 GPM. REQUIRED STATIC PRESSURE: 95 PSI
CONTRACTOR SHALL FIELD LOCATE AND TIE ONTO 4" EPOXY COATED SCHEDULE 40 STEEL PUMP DISCHARGE PIPE. INSTALL 4" EPOXY COATED, FLANGED SCHEDULE 40 STEEL PIPE TO ONE 4" MASTER VALVE, ONE 4" FLOW SENSOR, ONE QUICK COUPLING VALVE, USE POLY CAM TRANSITION FITTING TO TRANSITION 4" SCHEDULE 40 STEEL PIPE TO 6" HDPE DR11 MAINLINE AND INSTALL ONE BUTT FUSION 6" GATE VALVE AND EXTEND PVC MAINLINE AS SHOWN. CONNECT FLOW SENSOR AND MASTER VALVE TO ASSOCIATED CONTROLLER VIA TWO-WIRE COMMUNICATION CABLE PER MANUFACTURER'S REQUIREMENTS. SEE DETAIL SHEET FOR REQUIRED PIPE LENGTHS UPSTREAM AND DOWNSTREAM OF FLOW SENSING UNIT. WORK SHALL CONFORM TO LOCAL CODE. FEES, PERMITS AND INSPECTIONS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL BACKFLOW PREVENTER LOCATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

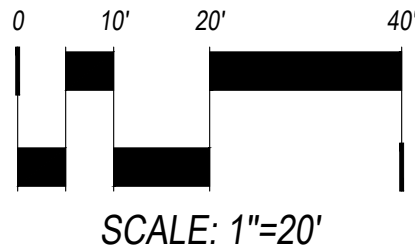
FIELD LOCATE EXISTING 4" STEEL PUMP DISCHARGE PIPE AT THIS LOCATION OUTSIDE THE PUMP HOUSE. MAKE NEW 4" EPOXY COATED SCHEDULE 40 STEEL CONNECTION TO STEEL PUMP DISCHARGE PIPE USING 150 LB STEEL FLANGES OR APPROVED MECHANICAL JOINT. INSTALL NEW 4" EPOXY COATED SCHEDULE 40 STEEL PIPE WITH QUICK COUPLER, MASTER VALVE, FLOW SENSOR AND TRANSITION TO 6" HDPE DR11 USING POLYCAM TRANSITION FITTING. SEE SCHEDULE. INSTALL TWO (2) PAIGE TWO-WIRE COMMUNICATION CABLE WITH NEW MAINLINE TO SERVE NEW CONTROL VALVE REPLACEMENTS.

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MAKE NEW HDPE D11 REMOVABLE PIPE CONNECTION TO WATER TAP AT THIS LOCATION, MAKE CONNECTION TO EXISTING DOWNSTREAM OF IRRIGATION BACKFLOW PREVENTER

INSTALL A 400 SQUARE FEET SPRAY SPRINKLER ZONE WITH 1.5" RAIN BIRD PESBR CONTROL VALVE, CLASS 200 PVC LATERALS AND RAIN BIRD RD1806-S-P30 SPRAY SPRINKLERS, DESIGN COMING IN THE FUTURE FOR RE-BIDDING



SCALE: 1"=20'

C

D

E

LOUISVILLE COMMUNITY

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LOUISVILLE, CO

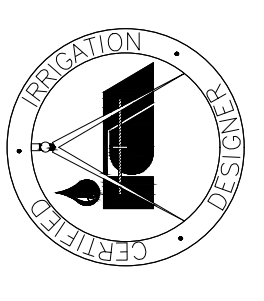
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IR-5



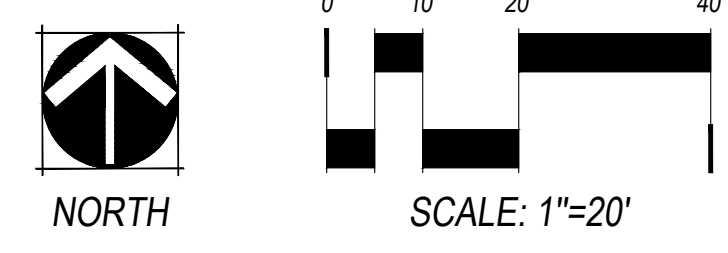
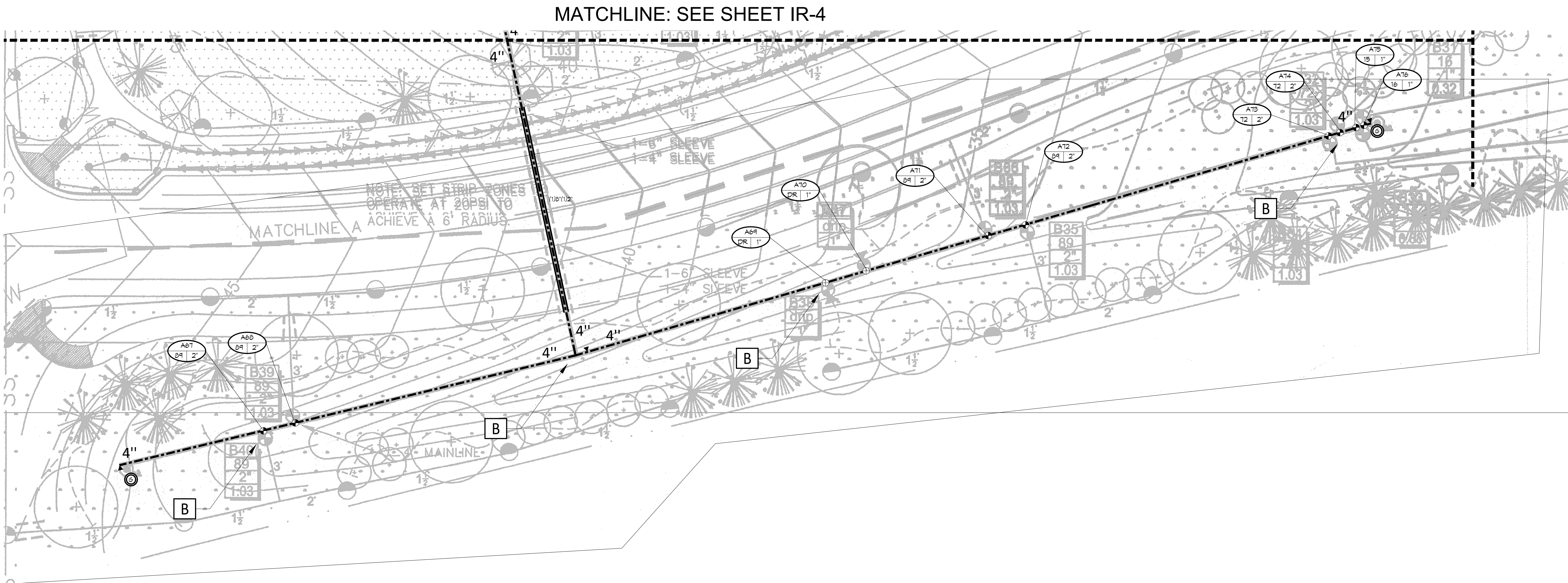
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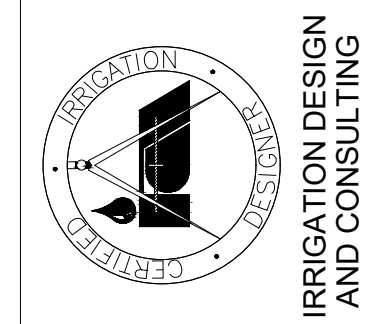
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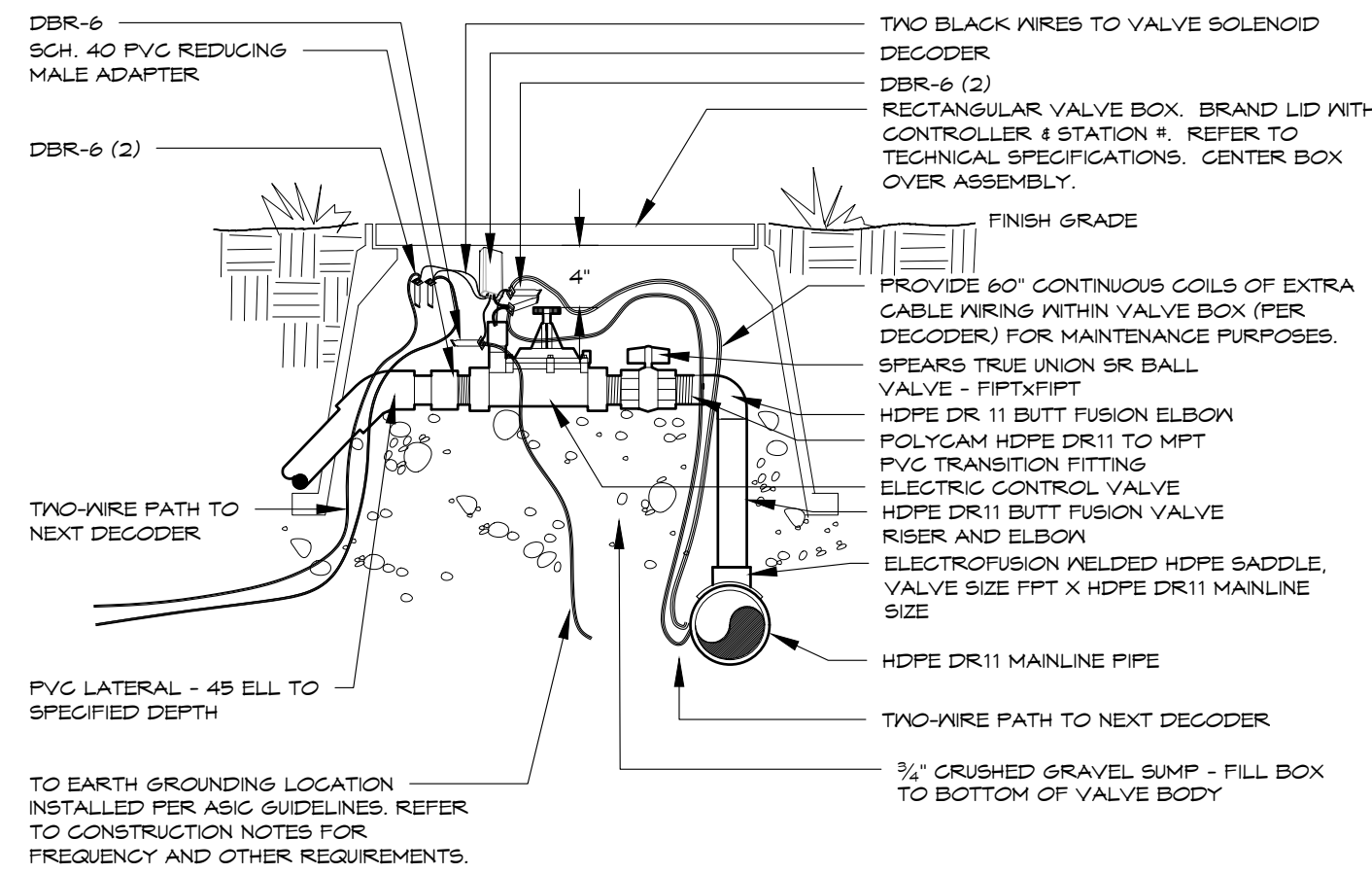
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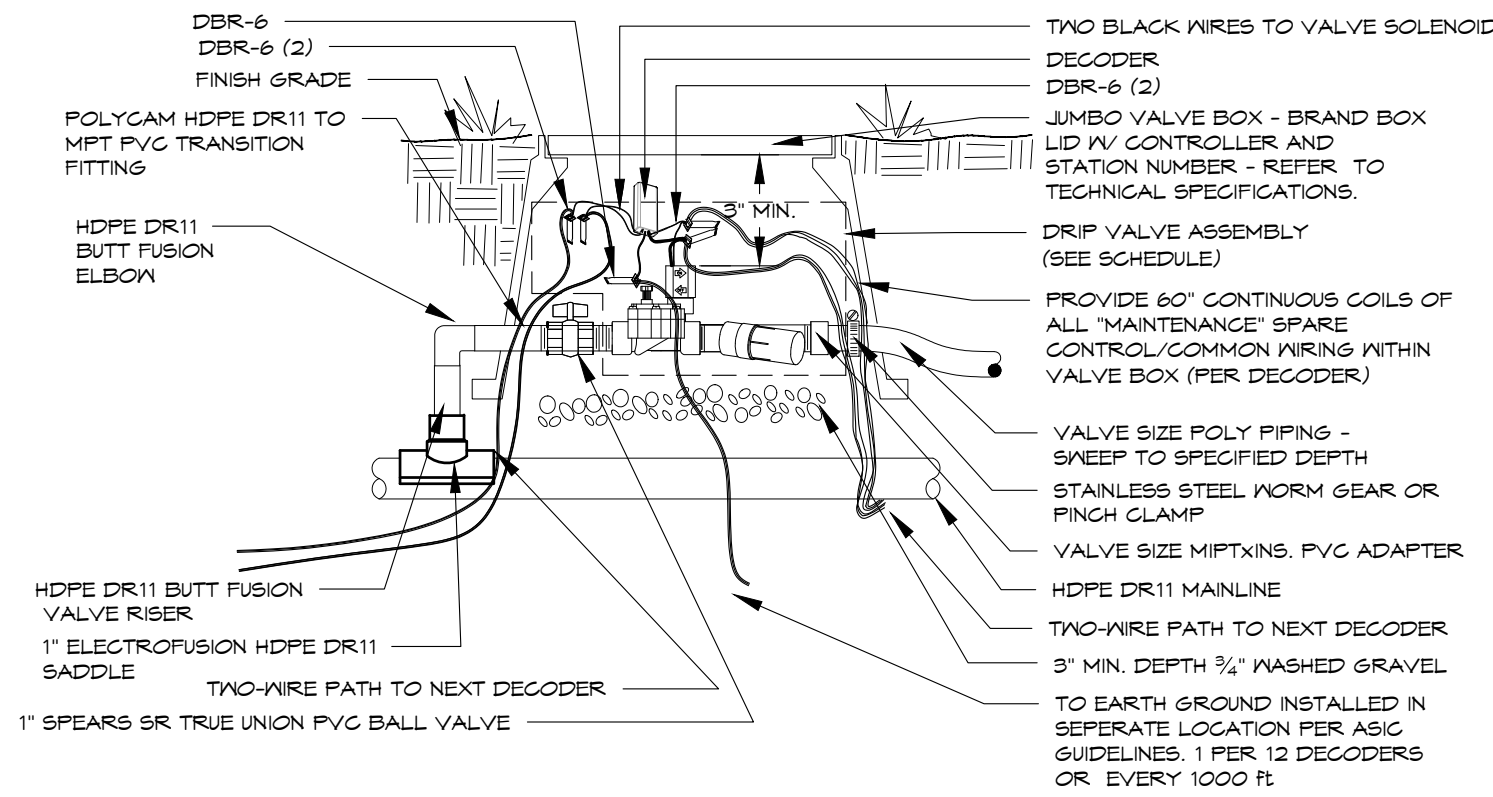
BUTT FUSION RESILIENT WEDGE GATE VALVE

R-7



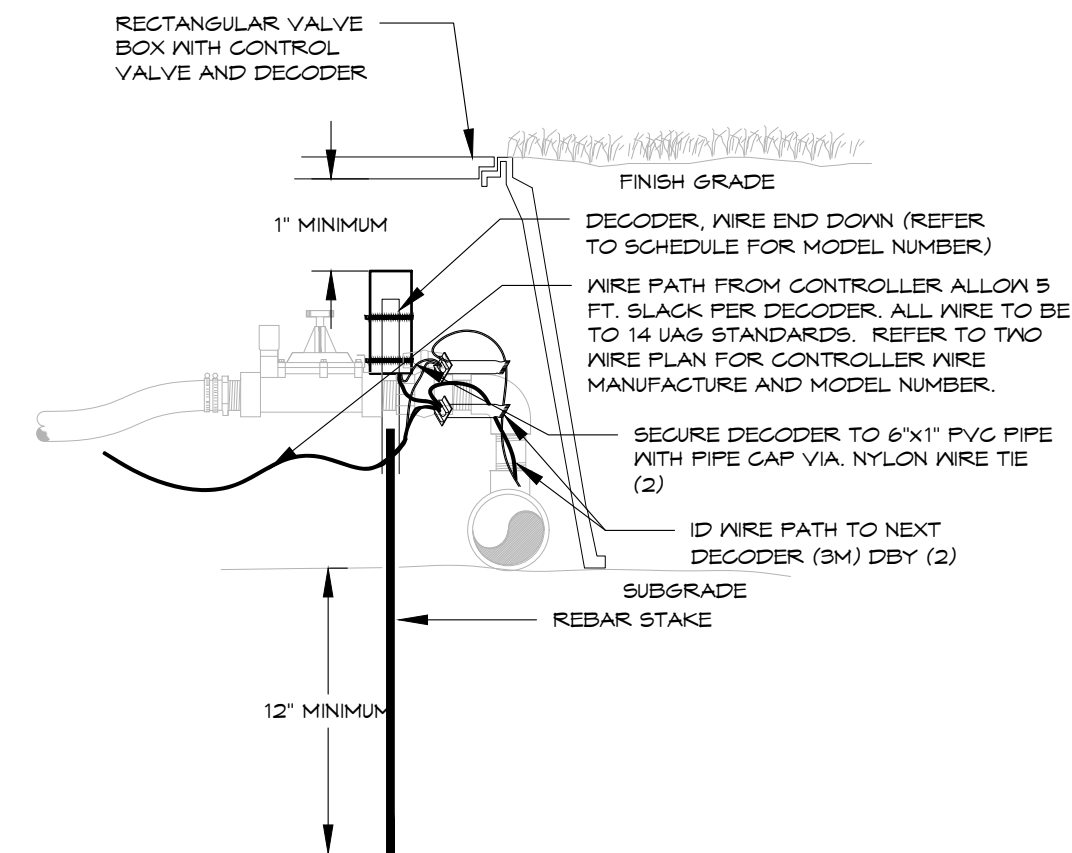
TWO-WIRE ELECTRIC CONTROL VALVE

7



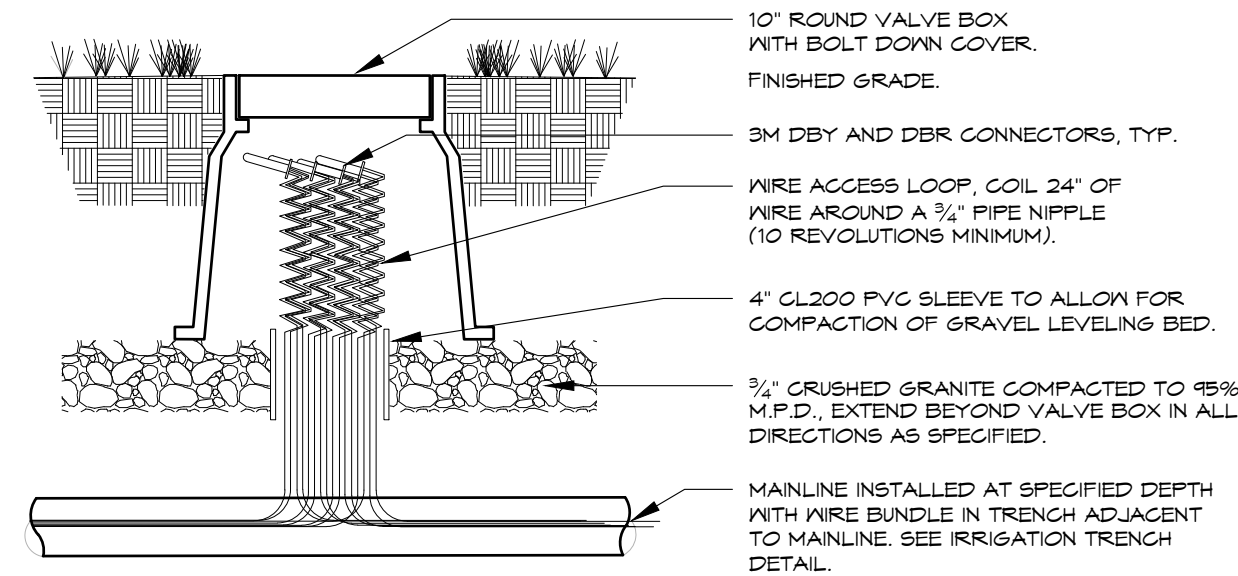
TWO-WIRE DRIP CONTROL VALVE

8



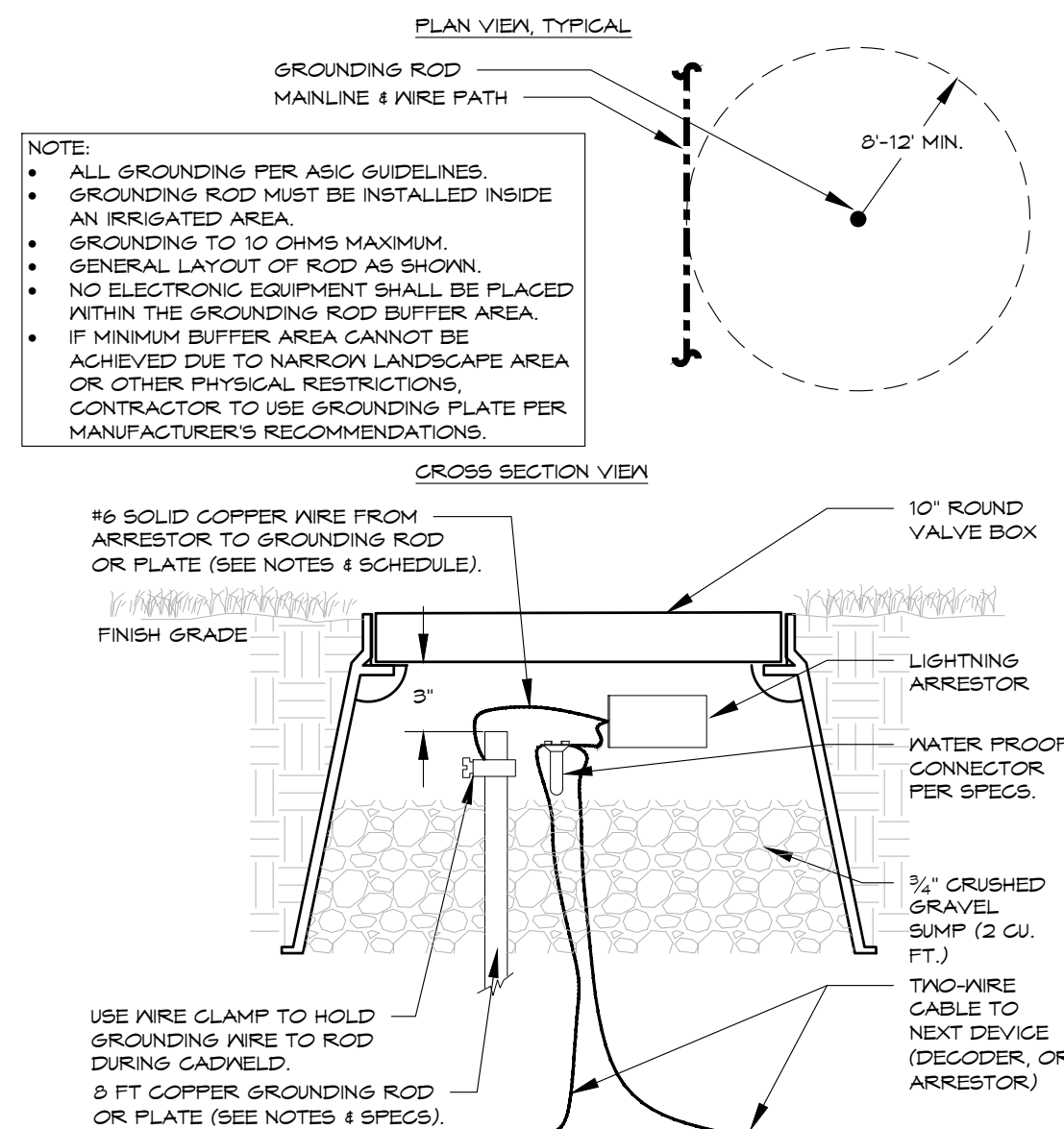
DECODER INSTALLATION
TWO-WIRE SYSTEM

9



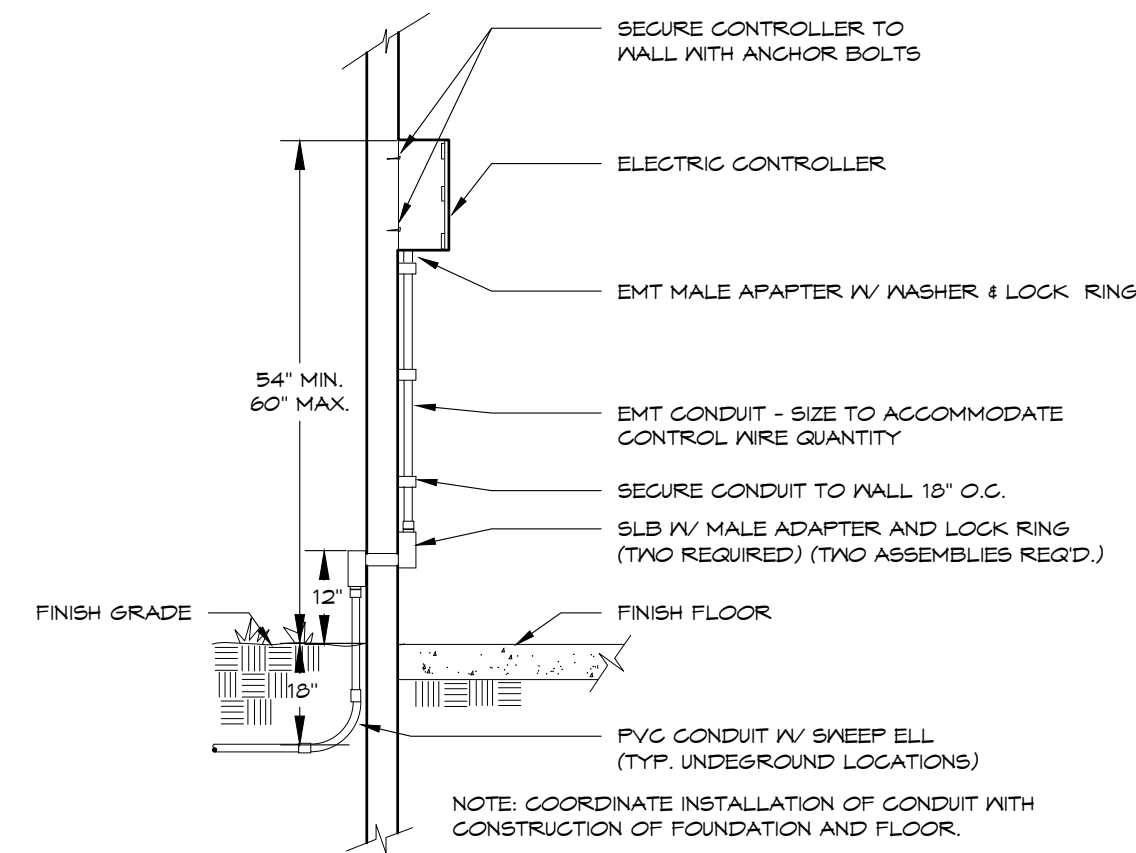
WIRE SLICE BOX
24V WIRING SYSTEM

10



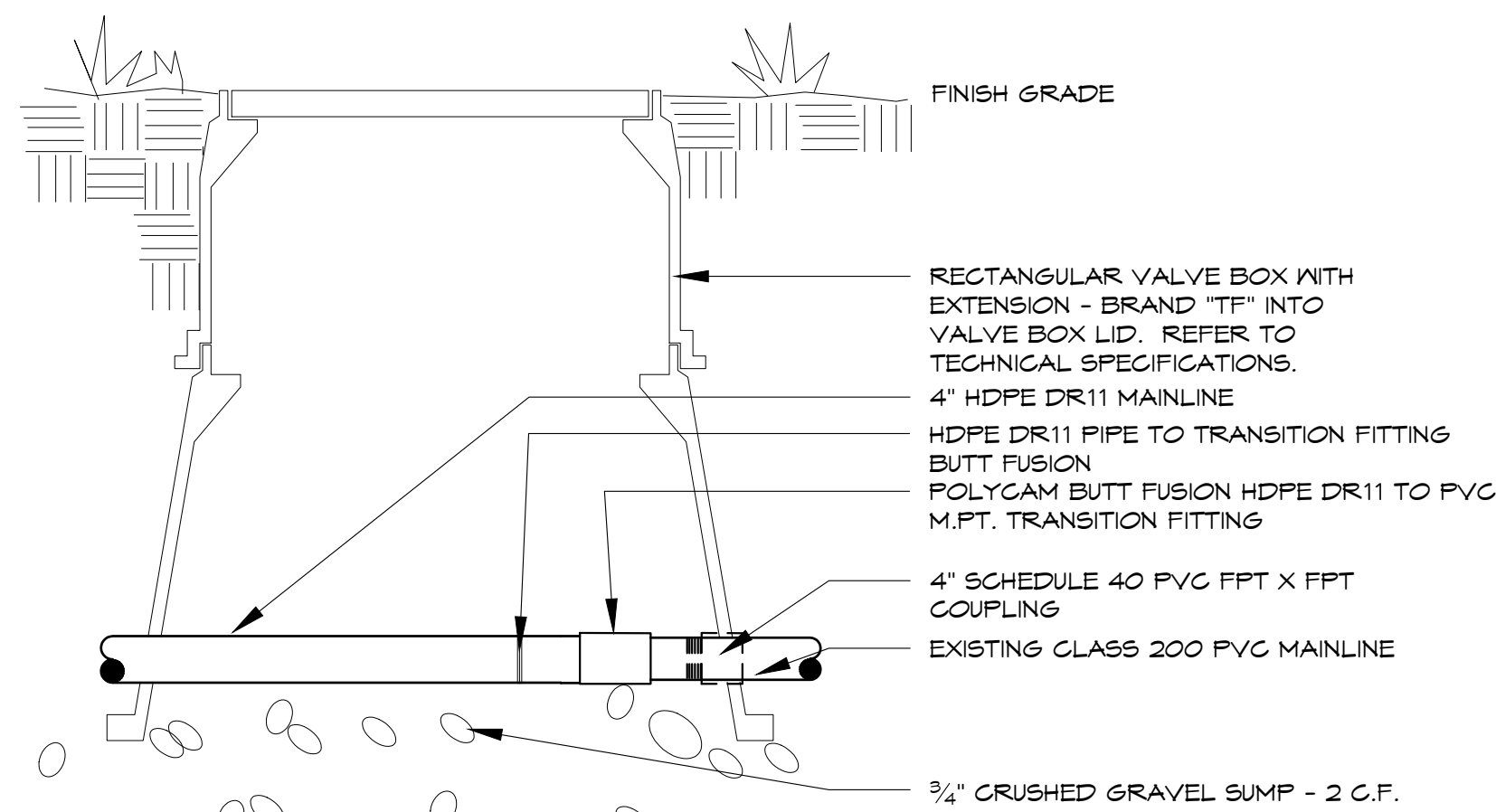
ARRESTOR GROUNDING
TWO-WIRE SYSTEM - TYPICAL

11



ELECTRIC CONTROLLER
INTERIOR WALL MOUNT - WALL PENETRATING

12



HDPE DR11 TO PVC TRANSITION FITTING FOR
PHASED CONNECTION TO EXISTING SYSTEM

13

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