

WESTERN PULASKI COUNTY WATER DISTRICT

WATER SYSTEM IMPROVEMENTS

CONTRACT NO. 2 - KENTUCKY HIGHWAY 914

BYPASS TRANSMISSION MAIN

PULASKI COUNTY, KENTUCKY

LOCATION MAP

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WESTERN PULASKI COUNTY WATER DISTRICT

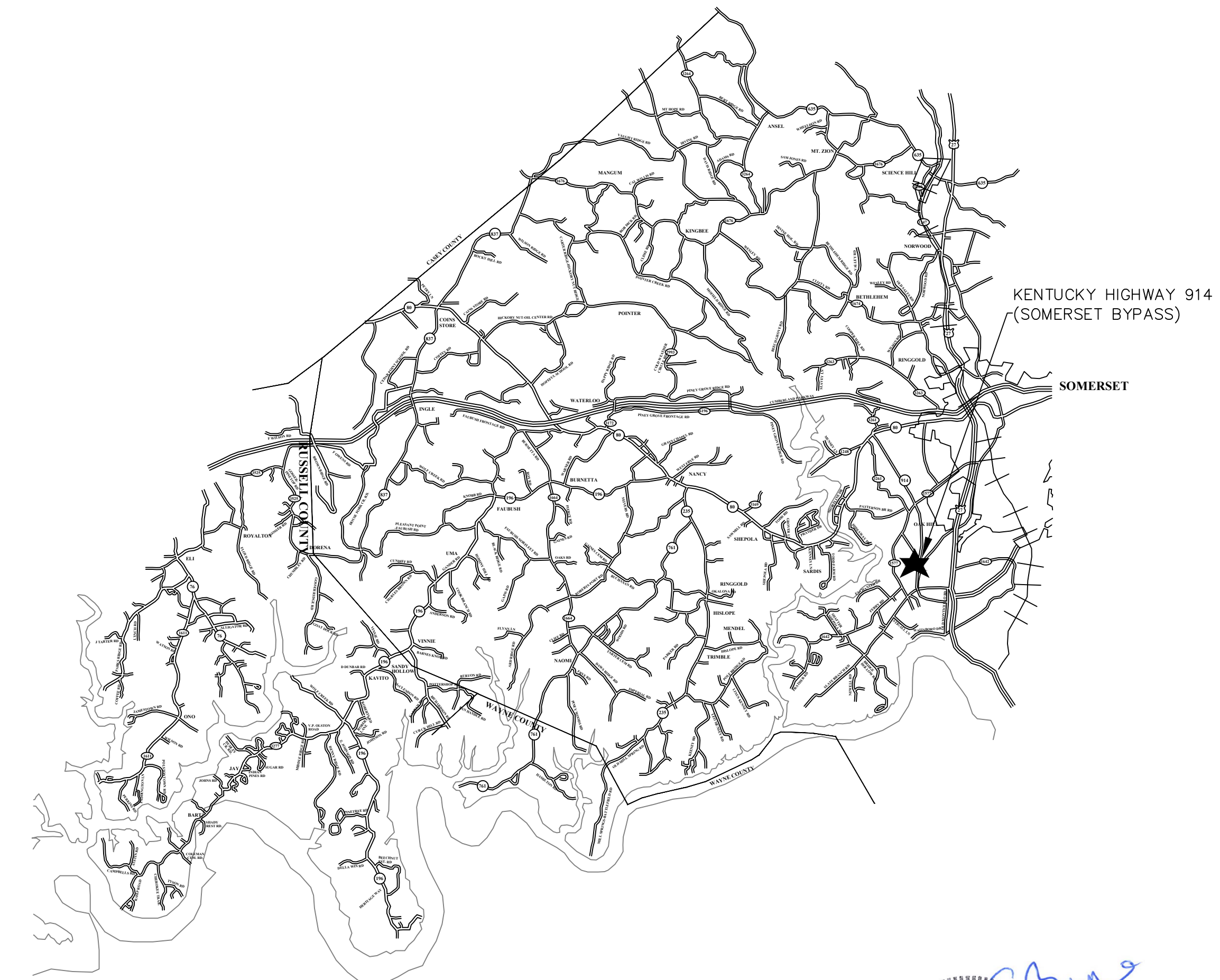
DON CALDER, CHAIRMAN

AMY POLSTON	JOEL WILSON
STEVE DAVIS	RANDALL WILSON

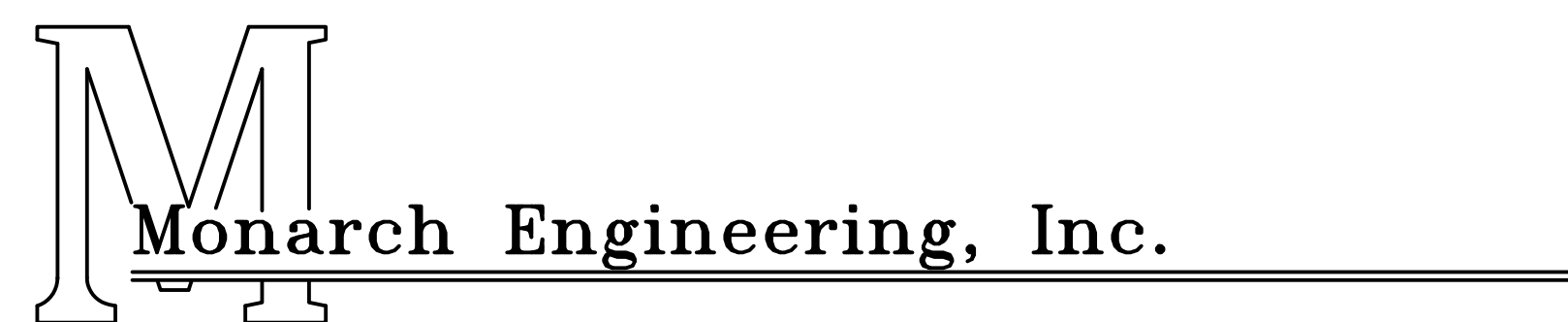
OFFICE MANAGER - TAMMY VAUGHT
UTILITIES MANAGER - JOE McCLENDON

ATTORNEY - JOHN PRUITT

MARCH 2020



THIS PROJECT FUNDED BY:
COMMONWEALTH OF KENTUCKY
DRINKING WATER STATE REVOLVING FUND (SRF) FUND F
F16-003



556 CARLTON DRIVE
LAWRENCEBURG, KY 40342



GENERAL NOTES TO CONTRACTOR

- BEFORE CONSTRUCTION BEGINS NEAR OR THROUGH EXISTING UTILITIES (i.e. GAS CO., TELEPHONE CO., CABLE CO., ETC.) EACH UTILITY COMPANY SHALL BE NOTIFIED. A REQUEST FOR THE EXACT LOCATION OF THE UTILITY SHALL BE MADE, AND PERMISSION TO PROCEED WITH CONSTRUCTION OBTAINED.
- BEFORE CONSTRUCTION BEGINS THROUGH ANY PROPERTY, THE CONTRACTOR SHALL MAKE HIMSELF AWARE OF THE EXACT LOCATION OF CONSTRUCTION THROUGH THE PROPERTY AND THE BOUNDS OF THE PERMANENT AND TEMPORARY CONSTRUCTION EASEMENTS.
- THE CONTRACTOR SHALL HAVE ON HAND AT THE JOB SITE 22, 45, AND 90 DEGREE BENDS TO ALLOW FOR THEIR USE WHERE WESTERN PULASKI COUNTY WATER DISTRICT REQUESTS INSTALLATION AS NECESSARY.
- PIPE JOINT DEFLECTION IS NOT TO EXCEED MANUFACTURER'S ALLOWABLE LIMITS.
- CONNECTING NEW LINES TO EXISTING LINES OR TO WORK IN THEIR CONTRACTS IS SUBSIDIARY TO THE CONTRACT. IT INCLUDES FITTINGS, SLEEVES, ETC., BUT DOES NOT INCLUDE GATE VALVES, WHICH ARE EXTRA PAY ITEM.
- THE CONTRACTOR SHALL FREE BORE ALL ASPHALT AND CONCRETE RESIDENTIAL DRIVEWAYS IN DIRT AND OPEN CUT IN ROCK AS DIRECTED BY THE WESTERN PULASKI COUNTY WATER DISTRICT AND ENGINEER. THE CONTRACTOR SHALL EXCAVATE FROM EITHER SIDE OF ALL FENCES TO AVOID CUTTING. FENCE CUTTING AND REPAIR SHALL BE LIMITED TO UNIQUE CONDITIONS WHERE APPROVED BY WESTERN PULASKI COUNTY WATER DISTRICT.
- ALL STREAM AND RIVER CROSSINGS GREATER THAN 15 FEET WIDE SHALL HAVE GATE VALVES INSTALLED ON EACH SIDE OF THE CROSSING. THE VALVE ON THE SOURCE SIDE SHALL HAVE A BYPASS SERVICE METER INSTALLED FOR LEAK DETECTION.
- ALL WATER LINES WITHIN 200 FEET RADIUS OF UNDERGROUND STORAGE TANKS (KRS-224.6-100), PETROLEUM STORAGE TANKS (KRS-224.60-115) AND ASSOCIATED PUMPS AND LINES SHALL BE DUCTILE IRON PIPE WITH PETROLEUM RESISTANT JOINTS AND ALL SERVICE LINE SHALL BE COPPER.
- WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS ABOVE OR BELOW THE SEWER AT CROSSINGS, ONE FULL LENGTH OF THE WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.
- WATER MAINS INSTALLED PARALLEL TO SEWERS SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER MAIN.
- THE CONTRACTOR SHALL NOT BE ALLOWED TO MAINTAIN PERSONNEL RESIDENCY FOR ANY EMPLOYEE ON THE CONSTRUCTION SITE.
- WHEN WORKING ALONG THE COMMONWEALTH OF KENTUCKY RIGHT OF WAY, THE CONTRACTOR SHALL BE ADVISED THAT THE WATER LINES SHALL NOT BE PLACED IN FILL AREAS.
- WHEN PERFORMING WORK ALONG OR ACROSS ANY PUBLIC ROADWAY, THE CONTRACTOR SHALL POST WARNING SIGNS PAINTED ORANGE AND THEY SHALL BE FOUR (4) FEET BY FOUR (4) FEET MOUNTED ON POSTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE SIGNS SHALL BE AS FOLLOWS:
 - CAUTION PIPELINE CONSTRUCTION 1500 FEET
 - CAUTION PIPELINE CONSTRUCTION 1000 FEET
 - CAUTION PIPELINE CONSTRUCTION 500 FEET
- THE CONTRACTOR SHALL MAINTAIN TWO (2) FLAG MEN AT ALL TIMES WHERE MACHINERY IS IN OPERATION WHEN WORKING THE FLOW OF TRAFFIC WILL BE DISTURBED. THERE IS NO EXCEPTION TO THIS REQUIREMENT. THE USE OF RADIOS WILL BE REQUIRED WHEN VISUAL CONTACT BETWEEN THE FLAG MEN DOES NOT EXIST.
- ALL SIGNS, BARRICADES, LIGHTS AND TRAFFIC CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- AT THE COMPLETION OF EACH WORK DAY, THE CONTRACTOR SHALL BACKFILL ALL OPEN TRENCHES AND INSTALL ALL TRAFFIC CONTROL SIGNS, BARRICADES AND LIGHTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ENTIRE ROADWAY FREE AND CLEAR AT THE END OF EACH WORKING DAY. NO EQUIPMENT SHALL BE LEFT ON OR PARKED ALONG THE ROAD RIGHT OF WAY.
- ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT EROSION OR SILTATION OF THE PUBLIC RIGHT OF WAY, ADJOINING PROPERTY AND WATER WAYS.

WATER LINE GENERAL NOTES

- ALL WATER LINES SHALL BE POLYVINYL CHLORIDE PIPE (PVC) CONFORMING TO ASTM SPECIFICATIONS D-1784 FOR MATERIAL AND SHALL BE CLASS 250 (SDR 17) OR CLASS 200 (SDR 21) AS SHOWN ON THE DRAWINGS. ALL JOINTS SHALL BE SLIP-TYPE WITH RUBBER GASKETS CONFORMING TO ASTM-1869.
- FITTINGS SHALL BE DUCTILE IRON CLASS 250 IN ACCORDANCE WITH AWWA C111-71 (ANSI A21.10).
- ALL VALVES SHALL CONFORM TO AWWA C500.
- CONSTRUCTION PRACTICES AND PROCEDURES SHALL CONFORM TO CURRENT AWWA STANDARDS AND BE APPROVED BY THE WESTERN PULASKI COUNTY WATER DISTRICT.
- AFTER INSTALLATION, WATER LINES SHALL BE DISINFECTED WITH A CHLORINE SOLUTION IN SUCH AMOUNTS AS TO PRODUCE A CONCENTRATION OF AT LEAST FIFTY (50) PPM AND A RESIDUAL OF AT LEAST TWENTY-FIVE (25) PPM AT THE END OF THE 24 HOURS AND FOLLOWED BY THROUGH FLUSHING.
- MINIMUM COVER OF WATER LINES SHALL BE 30 INCHES. WATER LINE WITHIN COMMONWEALTH OF KENTUCKY RIGHT-OF-WAYS SHALL HAVE A MINIMUM COVER OF 42-INCHES.
- CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND ENVIRONMENTAL REGULATIONS GOVERNING UTILITY CONSTRUCTION.
- ALL WATER LINE CROSSING PAVED SURFACE SHALL BE BACKFILLED FULL DEPTH WITH COMPACTED CRUSHED STONE.
- EXISTING AND PROPOSED WATER MAIN LOCATIONS SHALL BE VERIFIED BY WESTERN PULASKI COUNTY WATER DISTRICT PRIOR TO CONSTRUCTION.
- ALL PIPE AND FITTINGS SHALL HAVE A MINIMUM OF 6-INCHES OF BEDDING OF DIRT UNDER AND ON BOTH SIDES OF PIPE UNLESS OTHERWISE SPECIFIED. ALL PIPE AND FITTING SHALL BE BACK-FILLED WITH DIRT UNLESS OTHERWISE SPECIFIED.
- ALL FITTINGS: 90° BENDS, TEES, ETC., SHALL BE BLOCK WITH A MINIMUM OF 12-INCHES POURED CONCRETE AGAINST UNDISTURBED SOIL.
- ALL GATE VALVES SHALL TURN RIGHT TO CLOSE AND TURN LEFT TO OPEN.
- ALL VALVES SHALL BE C.I. VALVE BOXES EXTENDING 2-INCHES ABOVE SURFACE.
- ALL FLUSH HYDRANTS SHALL BE STANDARD 2-WAY 5 1/4-INCHES BREAKAWAY TYPE WITH A MINIMUM 3 1/2- FEET BURY AND TURN LEFT TO OPEN AND RIGHT TO CLOSE.
- ALL PROPOSED WATER LINES SHALL HAVE A #12 COATED TRACER WIRE.
- ALL FLUSH HYDRANTS, WATER VALVES AND FITTINGS SHALL HAVE RESTRAINER GLANDS.
- ALL WATER LINES SHALL BE PRESSURE TESTED TO 150 PSI FOR A MINIMUM OF FOUR (4) HOURS.
- CONTRACTOR SHALL PROVIDE BACTERIAL SAMPLE RESULTS OF PROPOSED WATER LINES TO THE WESTERN PULASKI COUNTY WATER DISTRICT.

OWNER

WESTERN PULASKI COUNTY WATER DISTRICT
 1059 WEST HIGHWAY 80
 SOMERSET, KY 42503
 (606) 679-1569

LINE/CABLE LOCATION SERVICES



BEFORE-U-DIG (BUD)
 (800) 752-6007

NOTE:
 KENTUCKY STATUTES (KRS 367.4901 THROUGH 367.4917) REQUIRE THAT ALL EXCAVATORS PLANNING EXCAVATION OR DEMOLITION WORK SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA AND/OR AN UNDERGROUND PROTECTION SERVICE SUCH AS BUD (800-752-6007) AT LEAST TWO (2) WORKING DAYS BEFORE COMMENCING WORK TO ALERT UTILITY COMPANIES IN THE AREA WITH UNDERGROUND FACILITIES OF THE PLANNED EXCAVATION OR DEMOLITION ACTIVITIES.

WATER SYSTEM EXTENSIONS & IMPROVEMENTS
 WESTERN PULASKI COUNTY WATER DISTRICT
 PULASKI COUNTY, KENTUCKY

GENERAL NOTES

	Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342		SHEET G-1	
	DRAWN BY: JRC	DATE: AUG 2019		REVISED
	CHECKED BY: DSB	SCALE: N.T.S.		
	CHECKED BY: DMB	PROJECT: 1533		



KENTUCKY HIGHWAY 914 (SOMERSET BYPASS)
TRANSMISSION MAIN

BOOSTER PUMP STATION LOCATION

WATER LINE EXTENSION WESTERN PULASKI COUNTY WATER DISTRICT PULASKI COUNTY, KENTUCKY			
LOCATION MAP			
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JRC	DATE: AUG 2019	REVISED
CHECKED BY: DSB	SCALE: 1"=100'	PROJECT: 1533	LM-1



STA. 0+00
 CONNECT NEW 16-INCH WATER LINE
 WITH DIRECT TIE-IN TO EXISTING
 16-INCH GATE VALVE (BY OTHERS).

STA. 0+00 TO STA. 19+00
 NEW 16-INCH WATER LINE
 SHALL BE INSTALLED ALONG
 COMMONWEALTH OF
 KENTUCKY RIGHT-OF-WAY

- 16-INCH DUCTILE IRON WATER LINE
- INSTALL ±40- FEET FROM EDGE OF PAVEMENT
- INSTALL 16-INCH BUTTERFLY VALVE
- INSTALL 3-WAY FLUSH HYDRANT
- INSTALL 20 LF OF FREE BORE FOR 16-INCH WATER LINE

INSTALL ±34- FEET FROM EDGE OF PAVEMENT

INSTALL ±25- FEET FROM EDGE OF PAVEMENT

INSTALL ±23- FEET FROM EDGE OF PAVEMENT

WATER LINE EXTENSION WESTERN PULASKI COUNTY WATER DISTRICT PULASKI COUNTY, KENTUCKY KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN				
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342			
	DRAWN BY: BGB	DATE: AUG 2019	REVISED	SHEET
	CHECKED BY: DSB	SCALE: 1"=100'	PROJECT: 1533	1



NOTE:
CONTRACTOR SHALL REMOVE
TREES, BUILDINGS AND DEBRIS
AS DIRECTED BY ENGINEER.

PROPOSED PUMP STATION
SEE DETAILS SHEET PS-1

TREES TO REMAIN

INSTALL 16-INCH WATER
LINE BETWEEN EDGE OF
RIGHT-OF-WAY AND RIP
RAP DITCH LINE

INSTALL MASTER METER VAULT.
SEE DETAILS SHEET MM-1.

INSTALL 3-WAY
FLUSH HYDRANT
45' FROM EDGE
OF PAVEMENT

INSTALL 200 LF OF BORE & CASE
FOR 16-INCH WATER LINE

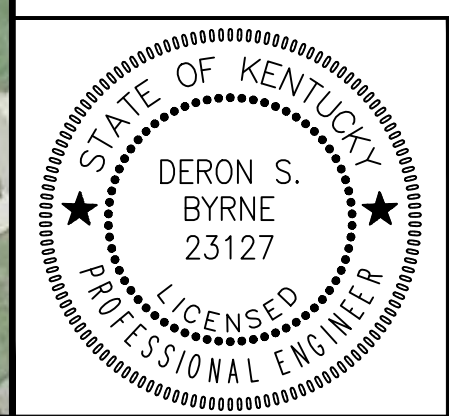
INSTALL 16-INCHx16-INCH
DUCTILE IRON MJ TEE WITH CAP

INSTALL 220 LF OF BORE & CASE
FOR 16-INCH WATER LINE

INSTALL 50 LF OF BORE & CASE
FOR 16-INCH WATER LINE

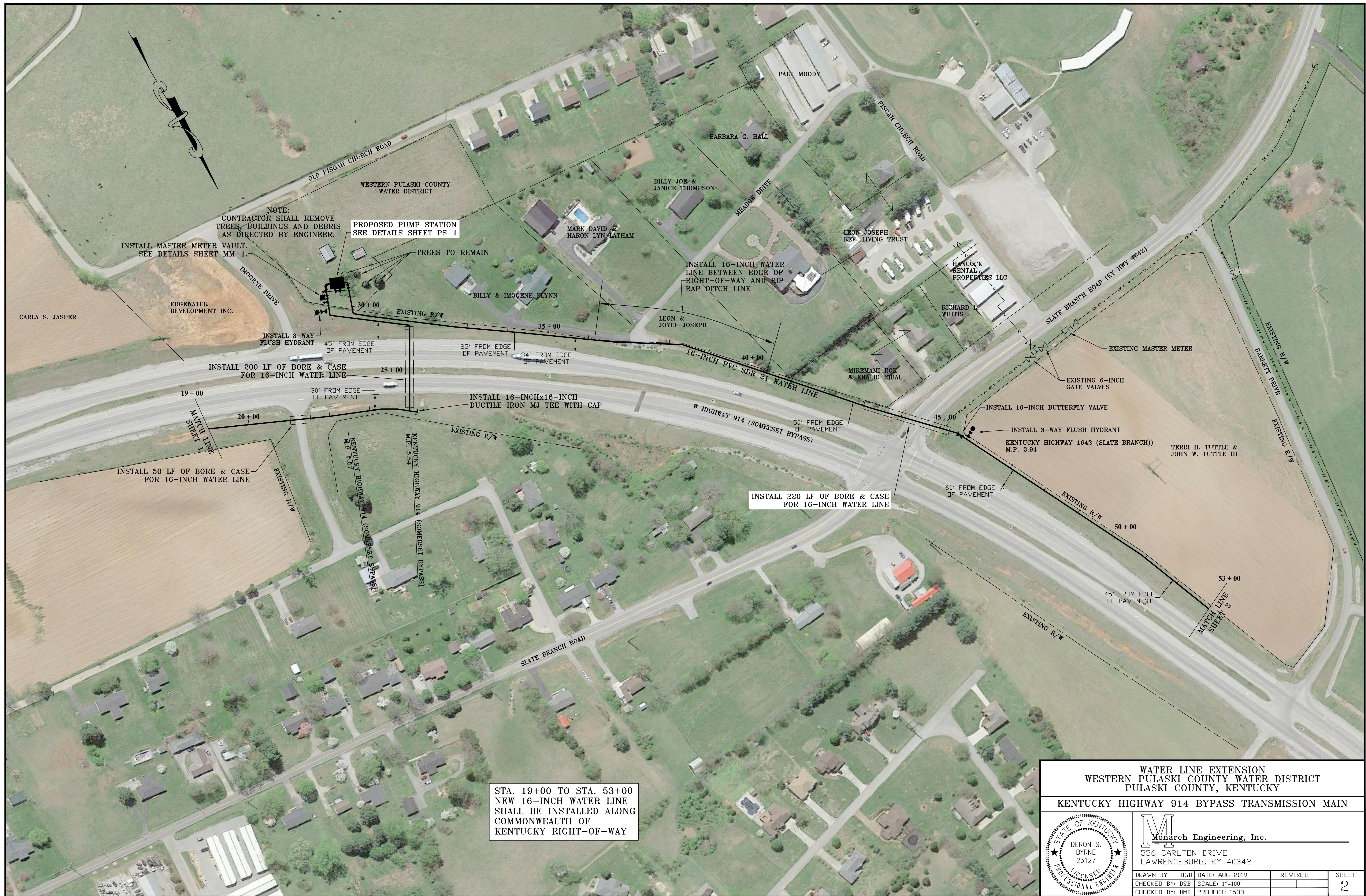
STA. 19+00 TO STA. 53+00
NEW 16-INCH WATER LINE
SHALL BE INSTALLED ALONG
COMMONWEALTH OF
KENTUCKY RIGHT-OF-WAY

WATER LINE EXTENSION
WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY
KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN



Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DRAWN BY: BGB	DATE: AUG 2019	REVISED	SHEET
CHECKED BY: DSB	SCALE: 1"=100'		2
CHECKED BY: DMB	PROJECT: 1533		





NEW 16-INCH & 12-INCH WATER LINE SHALL BE INSTALLED ALONG COMMONWEALTH OF KENTUCKY RIGHT-OF-WAY.

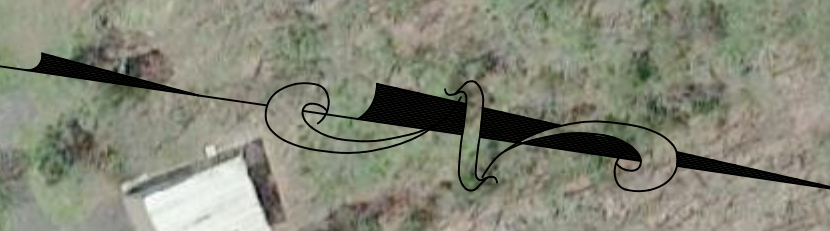
NEW 16-INCH WATER LINE SHALL BE INSTALLED ALONG COMMONWEALTH OF KENTUCKY RIGHT-OF-WAY BETWEEN EDGE OF RIGHT-OF-WAY AND RIP RAP DITCH LINE

STA. 53+00 TO 80+00
NEW 16-INCH & 12-INCH WATER LINES SHALL BE INSTALLED ALONG COMMONWEALTH OF KENTUCKY RIGHT-OF-WAY

WATER LINE EXTENSION
WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN

	Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: BGB	DATE: AUG 2019	REVISED
	CHECKED BY: DSB	SCALE: 1"=100'	SHEET
	CHECKED BY: DMB	PROJECT: 1533	3



STA. 80+00 TO STA. 99+00
 NEW 12-INCH WATER LINE
 SHALL BE INSTALLED ALONG
 COMMONWEALTH OF KENTUCKY
 RIGHT-OF-WAY

WATER LINE EXTENSION WESTERN PULASKI COUNTY WATER DISTRICT PULASKI COUNTY, KENTUCKY KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN			
	Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342		SHEET 4
	DRAWN BY: BGB CHECKED BY: DSB CHECKED BY: DMB	DATE: AUG 2019 SCALE: 1"=100' PROJECT: 1533	



STA. 99+00 TO STA. 107+50
 NEW 12-INCH WATER LINE
 SHALL BE INSTALLED ALONG
 COMMONWEALTH OF KENTUCKY
 RIGHT-OF-WAY

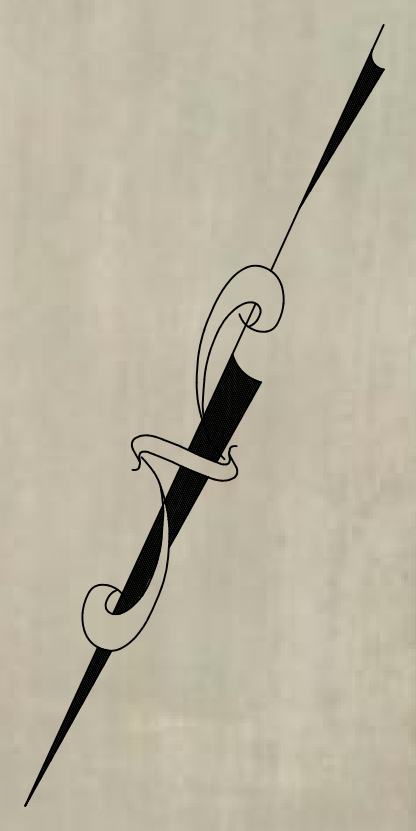
WATER LINE EXTENSION WESTERN PULASKI COUNTY WATER DISTRICT PULASKI COUNTY, KENTUCKY KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN				
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342			
	DRAWN BY: BGB CHECKED BY: DSB CHECKED BY: DMB	DATE: AUG 2019 SCALE: 1"=100' PROJECT: 1533	REVISED:	SHEET 5



STA. 0+00
 CONNECT NEW 12-INCH WATER LINE
 TO EXISTING 12-INCH WATER LINE
 BY REMOVING EXISTING CAP/PLUG
 AND CONNECTING DIRECTLY INTO
 EXISTING 12-INCH WATER LINE.

STA. 0+00 TO STA. 10+00
 NEW 12-INCH WATER LINE
 SHALL BE INSTALLED ALONG
 COMMONWEALTH OF KENTUCKY
 RIGHT-OF-WAY

WATER LINE EXTENSION WESTERN PULASKI COUNTY WATER DISTRICT PULASKI COUNTY, KENTUCKY KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN			
	Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: BGB	DATE: AUG 2019	REVISED:
	CHECKED BY: DSB	SCALE: 1"=100'	
	CHECKED BY: DMB	PROJECT: 1533	
			SHEET 6



MATCH LINE SHEET 6
10+00

60' FROM EDGE OF PAVEMENT

WARD & REGINA CORRELL

TRADEWIND SHOPPING CENTER INC.

KENTUCKY HIGHWAY 3261
M.P. 0.014

KENTUCKY HIGHWAY 914
M.P. 3.70

EXISTING FIBER OPTIC CABLE

INSTALL 180 LF OF BORE & CASE FOR 12-INCH WATER LINE

INSTALL 12-INCHx12-INCH TEE, TWO (2) 12-INCH GATE VALVES, AND 12-INCH CAP/PLUG.

INSTALL 12-INCH GATE VALVE

INSTALL 3-WAY FLUSH HYDRANT

30' FROM EDGE OF PAVEMENT

EXISTING FIBER OPTIC CABLE
55' EOP

KY 3261 (WTLO ROAD)

20' FROM EDGE OF PAVEMENT

18' FROM EDGE OF PAVEMENT

EXISTING FIBER OPTIC CABLE
37' EOP

INSTALL 15 LF OF FREE BORE FOR 12-INCH WATER LINE

INSTALL 20 LF OF FREE BORE FOR 12-INCH WATER LINE

INSTALL 15 LF OF FREE BORE FOR 12-INCH WATER LINE

INSTALL 20 LF OF FREE BORE FOR 12-INCH WATER LINE

INSTALL 50 LF OF BORE & CASE FOR 12-INCH WATER LINE

HOLLY HILL ROAD

MARVIN & BETTY WALL

GAYLA JOAN & ROBERT DAVIS

MARK A. & TAMMY JACOBS

KY HIGHWAY 3261
M.P. 0.43

GARY & DEBRA EDWARDS

STA. 42+30
CONNECT NEW 12-INCH WATER LINE TO EXISTING 8-INCH WATER LINE WITH 12-INCHx8-INCH TAPPING SLEEVE AND VALVE.

STA. 10+00 TO STA. 19+20
NEW 12-INCH WATER LINE SHALL BE INSTALLED ALONG COMMONWEALTH OF KENTUCKY RIGHT-OF-WAY (KY 914)

STA. 19+20 TO STA. 42+30
NEW 12-INCH WATER LINE SHALL BE INSTALLED ALONG COMMONWEALTH OF KENTUCKY RIGHT-OF-WAY (KY 3261)

TRADEWIND SHOPPING CENTER INC.

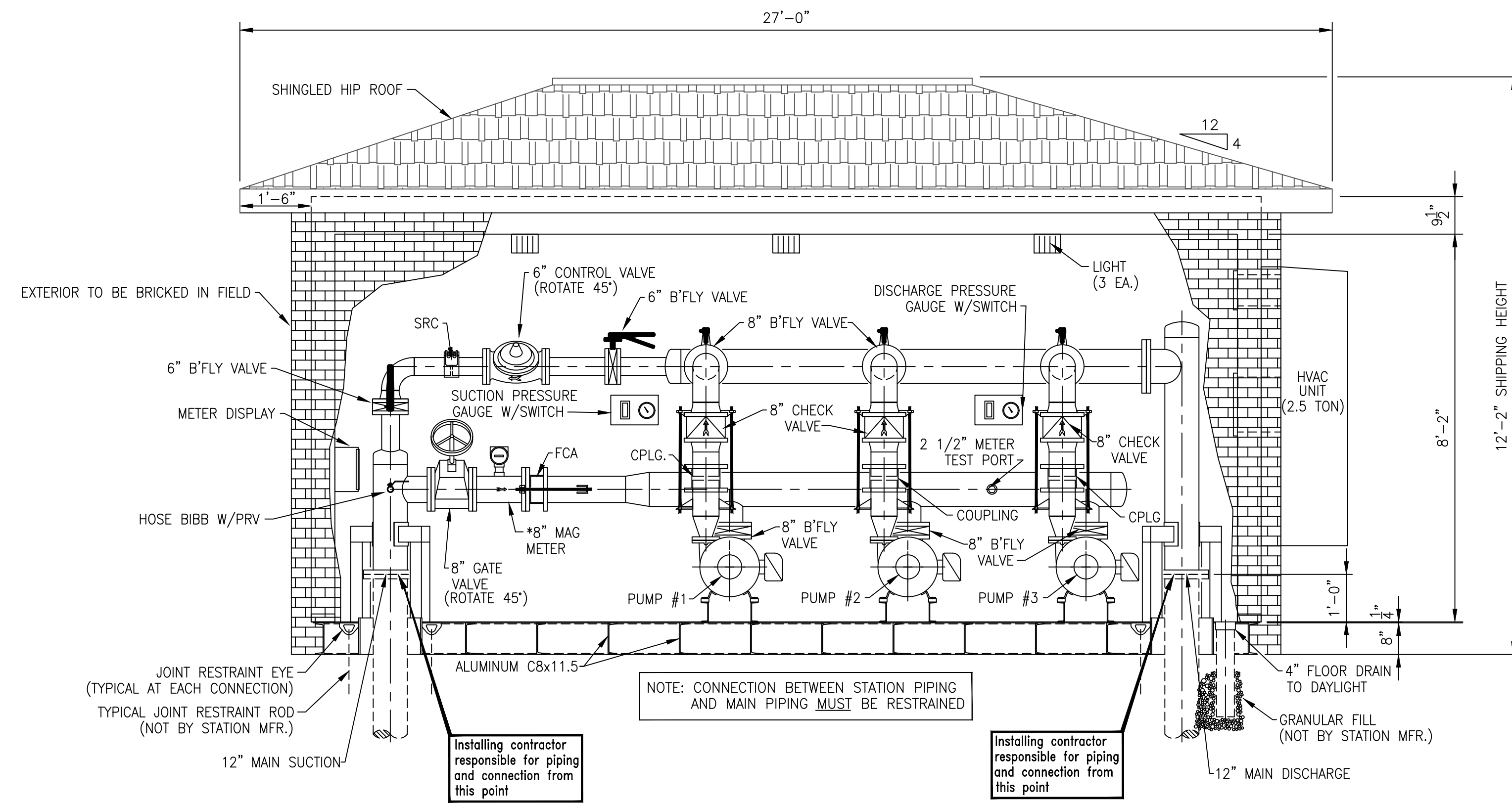
GARY & DEBRA EDWARDS

W HIGHWAY 914
(US 27 SOMERSET BYPASS)

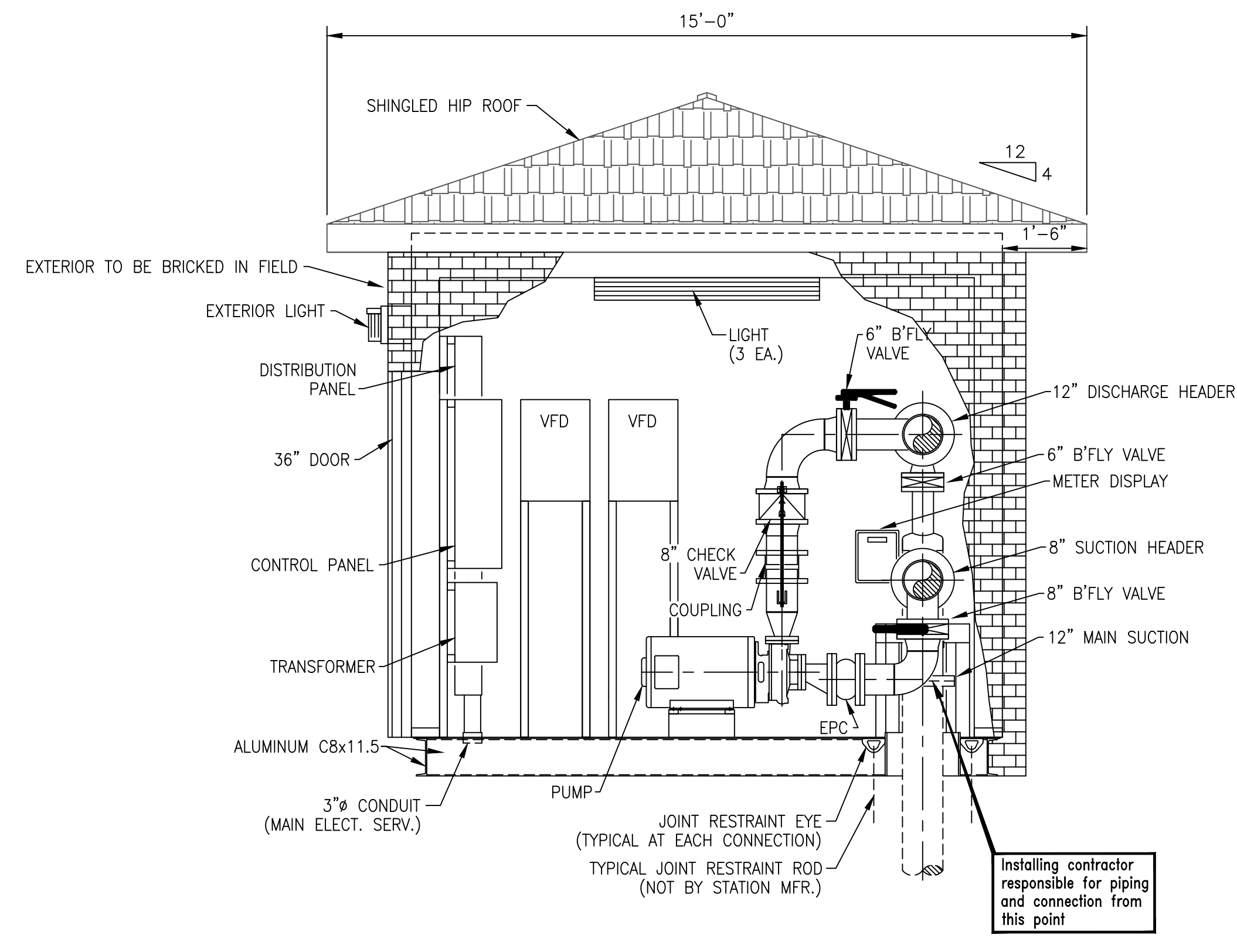
WATER LINE EXTENSION
WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

KENTUCKY HIGHWAY 914 BYPASS TRANSMISSION MAIN

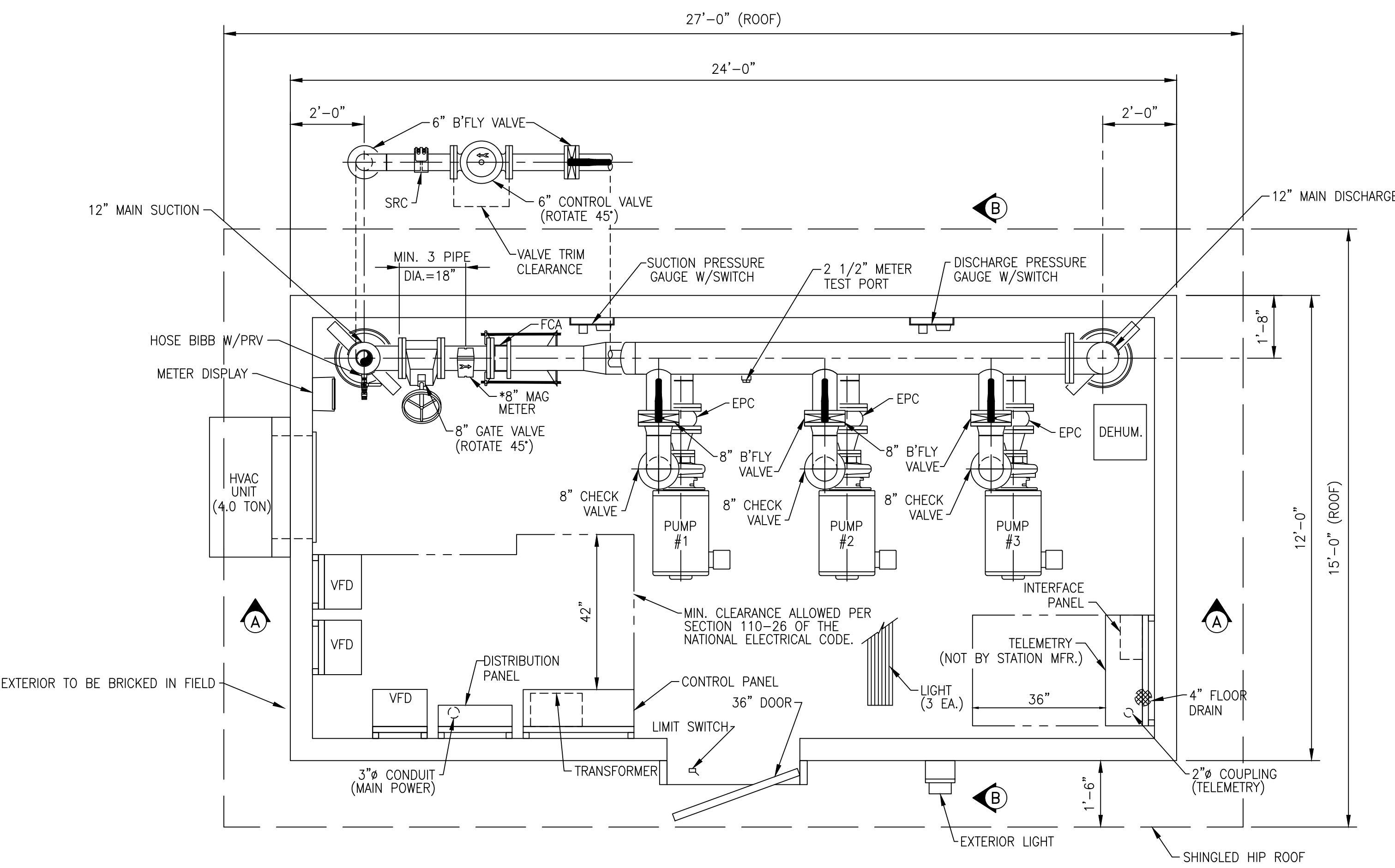
	Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342	
	DRAWN BY: BGB	DATE: AUG 2019
	CHECKED BY: DSB	SCALE: 1"=100'
	CHECKED BY: DMB	PROJECT: 1533
REVISIONS	REVISED	SHEET
		7



SECTION A-A



SECTION B-B



INTERIOR PLAN

DESIGN CRITERIA

CONTROLS: TELEMETRY (BY OTHERS)
POWER SERVICE: 480 VOLTS, 3 PHASE, 60 CYCLE

PUMP DATA

TYPE: HORIZ., CLOSE CPLD., END SUCTION
PUMP: 1, 2 & 3
CAPACITY: 1200 G.P.M. @ 235' T.D.H. (3200 G.P.M.)
& 1600 G.P.M. @ 130' T.D.H. (2390 G.P.M.)
MOTOR: 125 H.P., 3600 R.P.M.

* THIS DESIGN IS BASED ON THE SPARLING MODEL 656 MAGNETIC FLOW METER, REQUIRING 3' UPSTREAM AND ZERO DOWNSTREAM STRAIGHT PIPE DIAMETER LENGTHS FOR MAINTAINING STATED ACCURACY LIMITS. SPECIFICATION OR USE OF ANY OTHER MANUFACTURERS FLOW METER WILL NOT KEEP THIS DESIGN WITHIN THE ACCURACY LIMITS OF THAT FLOW METER.

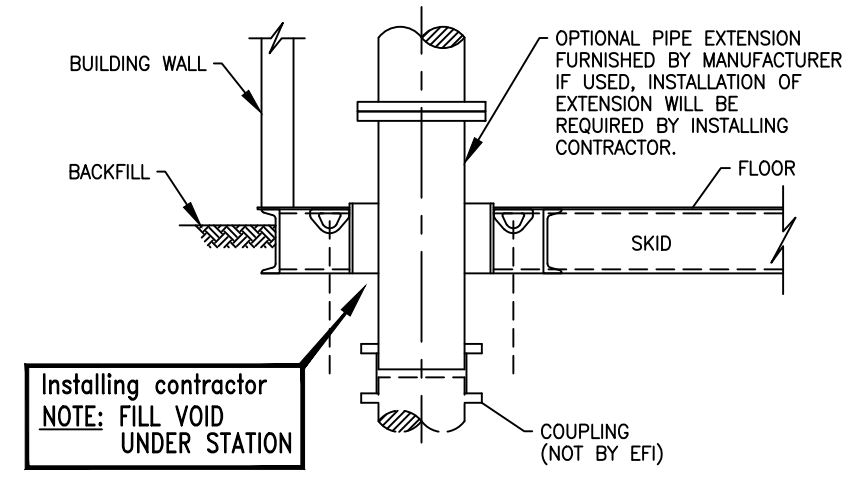
* EXCEPT FOR PIPE END SUPPORTS, WHICH ARE SHOWN, VERTICAL AND ANGLE PIPE BRACES ARE NOT SHOWN FOR DRAWING CLARITY

GENERAL NOTES:

- ALL STATION PIPING SHALL BE SCHEDULE 40 STEEL PIPE
- MAIN SUCTION & DISCHARGE SHALL BE ANSI STANDARD B16.5, CLASS 150 FLANGE
- ALL PIPING AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED AND BRACED
- PLATE AND STRUCTURAL STEEL SHALL BE ASTM A-36
- STRUCTURAL TUBING SHALL BE A500, GRADE B

CONTRACTOR NOTES:

- DEHUMIDIFIER MUST BE POWERED UP AND TURNED ON IMMEDIATELY AFTER THIS STATION IS SET IN PLACE.
- SHIMS MAY BE REQUIRED AROUND PERIMETER OF THE STATION TO ENSURE PROPER LEVEL. THIS IS CRITICAL FOR PROPER DOOR OPERATION.
- PLEASE NOTE ORIENTATION OF THE INLET AND OUTLET PIPE AND ELECTRICAL/TELEMETRY LOCATIONS IN REFERENCE TO THE JOBSITE LAYOUT.
- THE STATION IS NOT DESIGNED TO ACCEPT PIPELINE FORCES. THRUST BLOCKING MUST BE PROVIDED EXTERNAL TO THE STATION



PIPING CONNECTION DETAIL
NOT TO SCALE

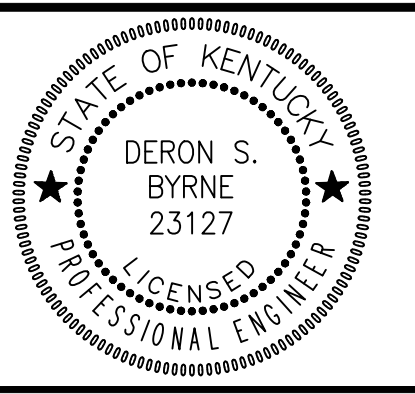
Monarch Engineering, Inc.

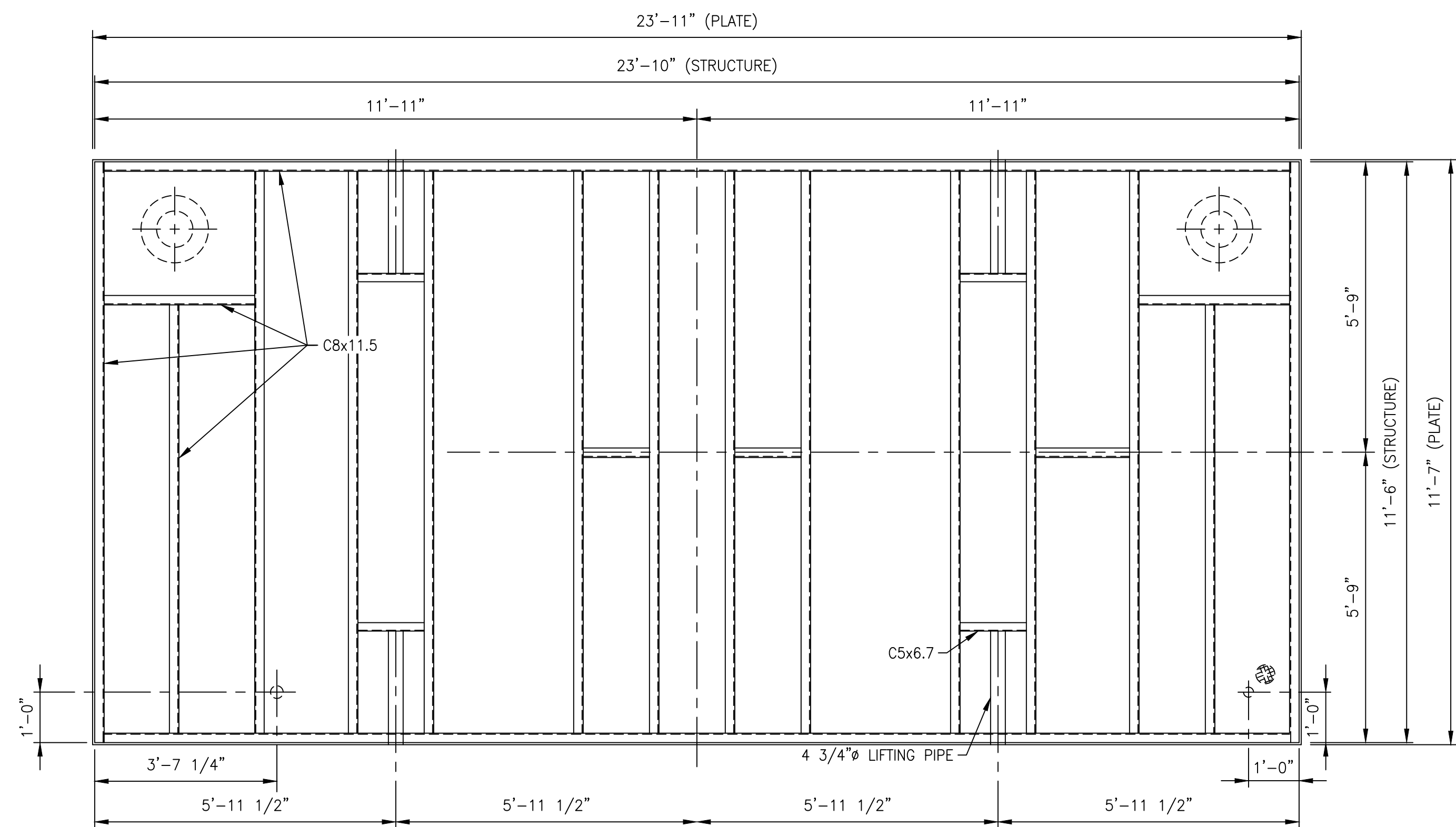
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DESCRIPTION: KY 914 BOOSTER PUMP STATION
CUSTOMER: WESTER PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

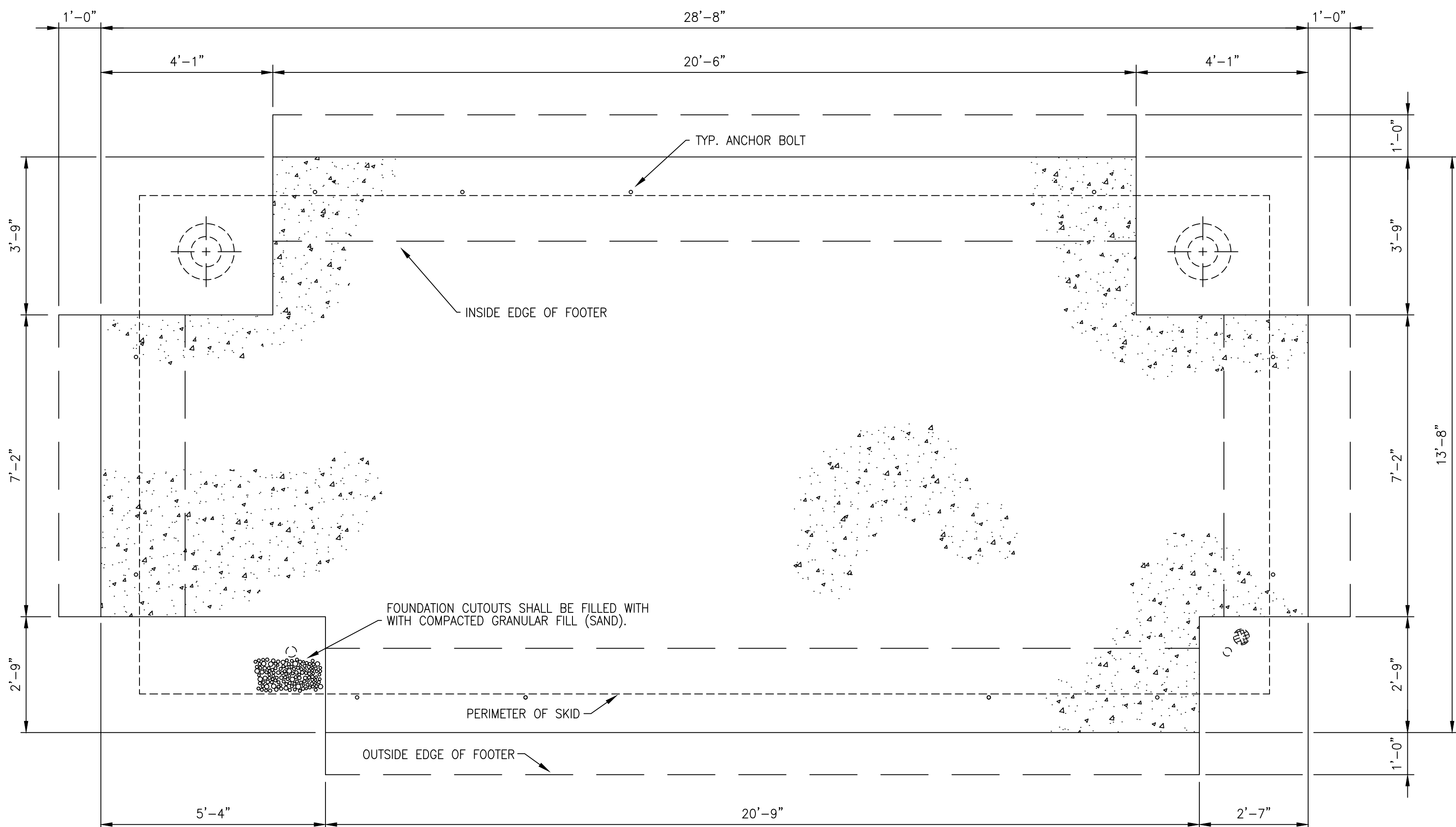
PROJECT NO. 1533
DATE: AUG 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: 1/2" = 1'-0"

SHEET: BPS-1





SKID PLAN
SCALE: 1/2"=1'-0"

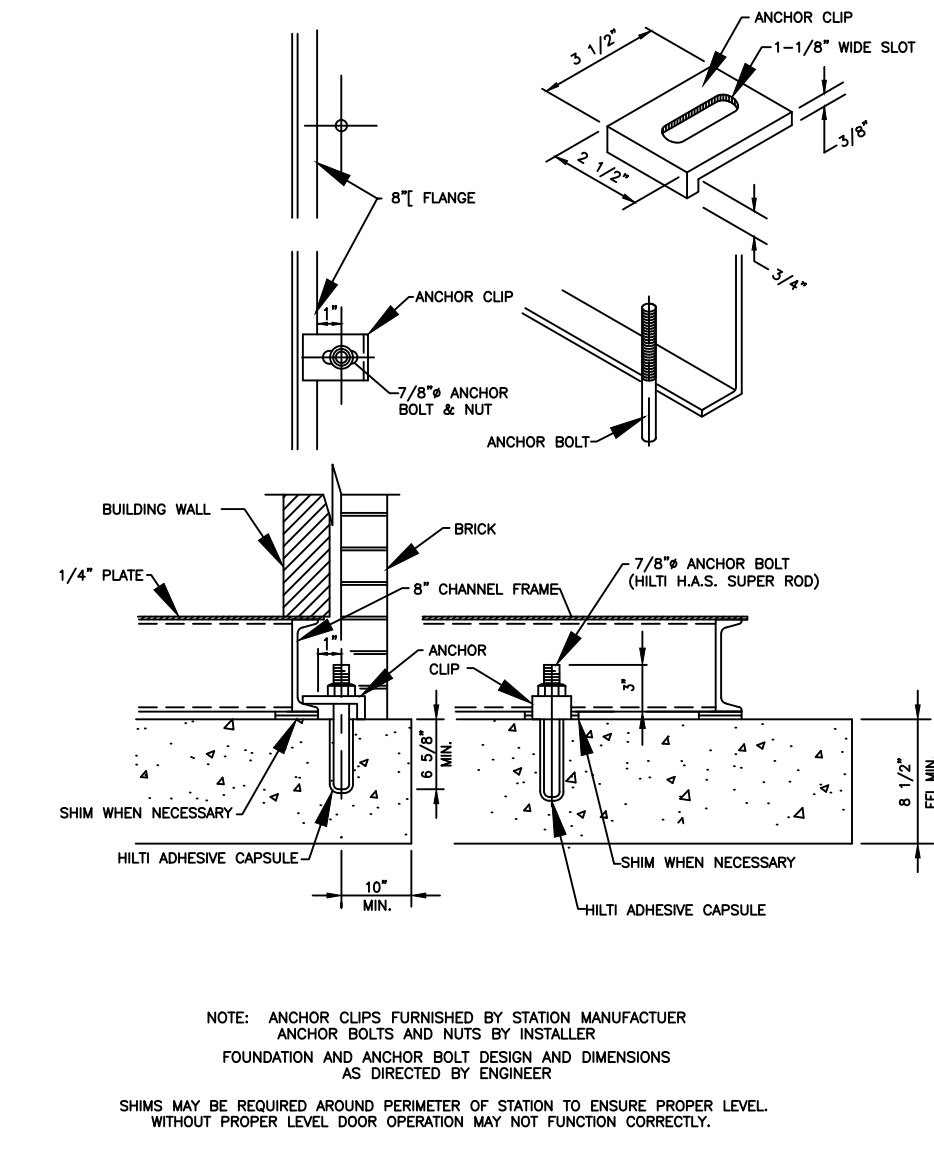


FOUNDATION LAYOUT
SCALE: 1/2"=1'-0"

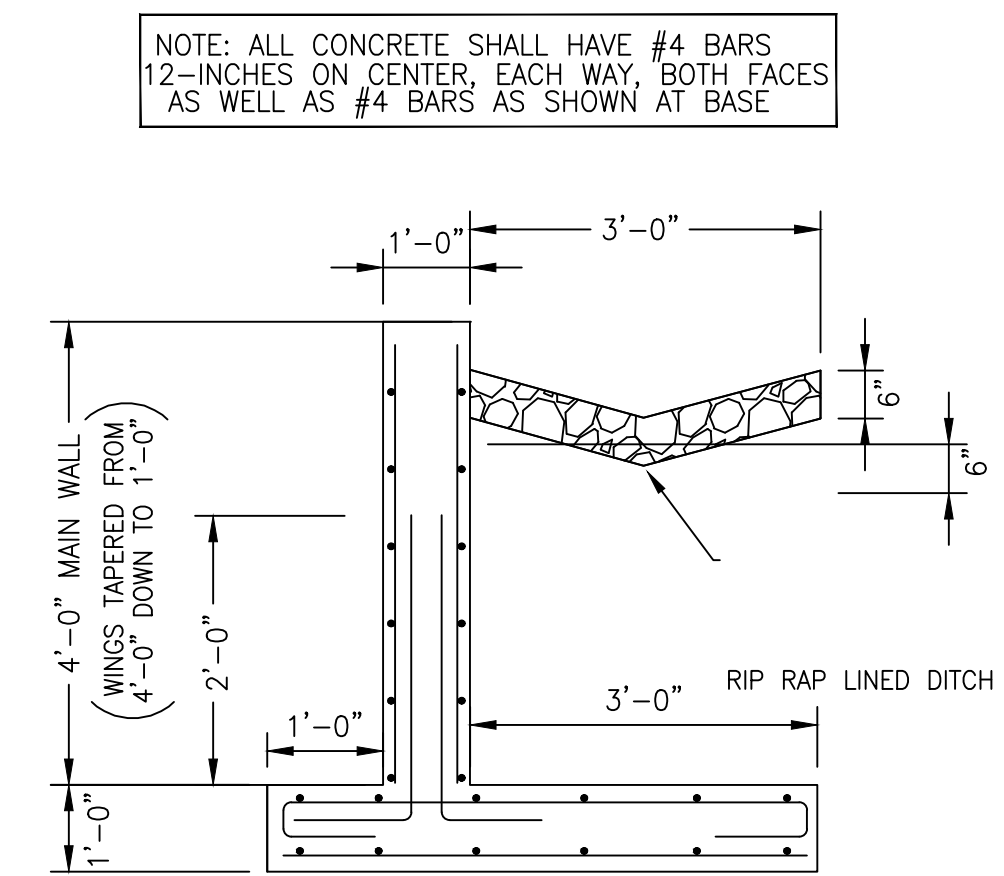
NOTE: FOUNDATION CUTOUT MUST BE PROVIDED TO ACCOMMODATE ADEQUATE SPACE TO CONNECT DRAIN PIPING

NOTE: FOUNDATION CUTOUT MUST BE PROVIDED TO ACCOMMODATE ADEQUATE SPACE TO CONNECT MAIN PIPING

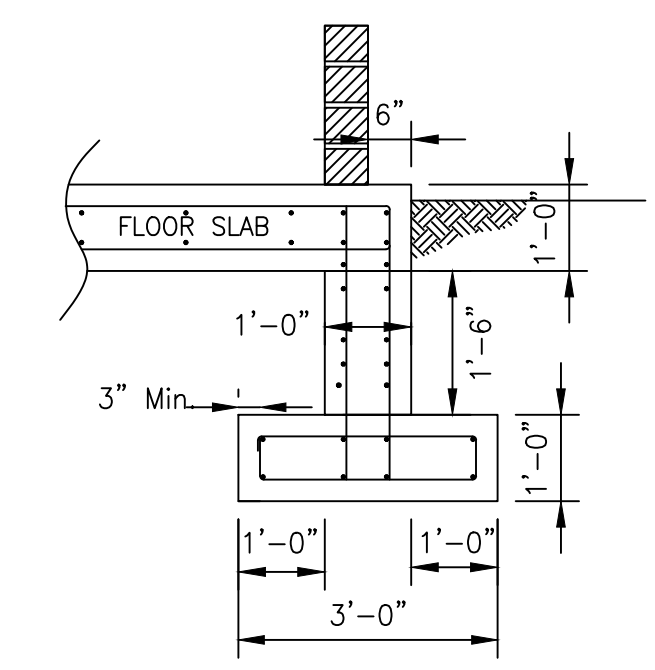
NOTE: FOUNDATION CUTOUT MUST BE PROVIDED TO ACCOMMODATE ADEQUATE SPACE TO CONNECT ELECTRICAL/TELEMETRY CONDUIT(S)



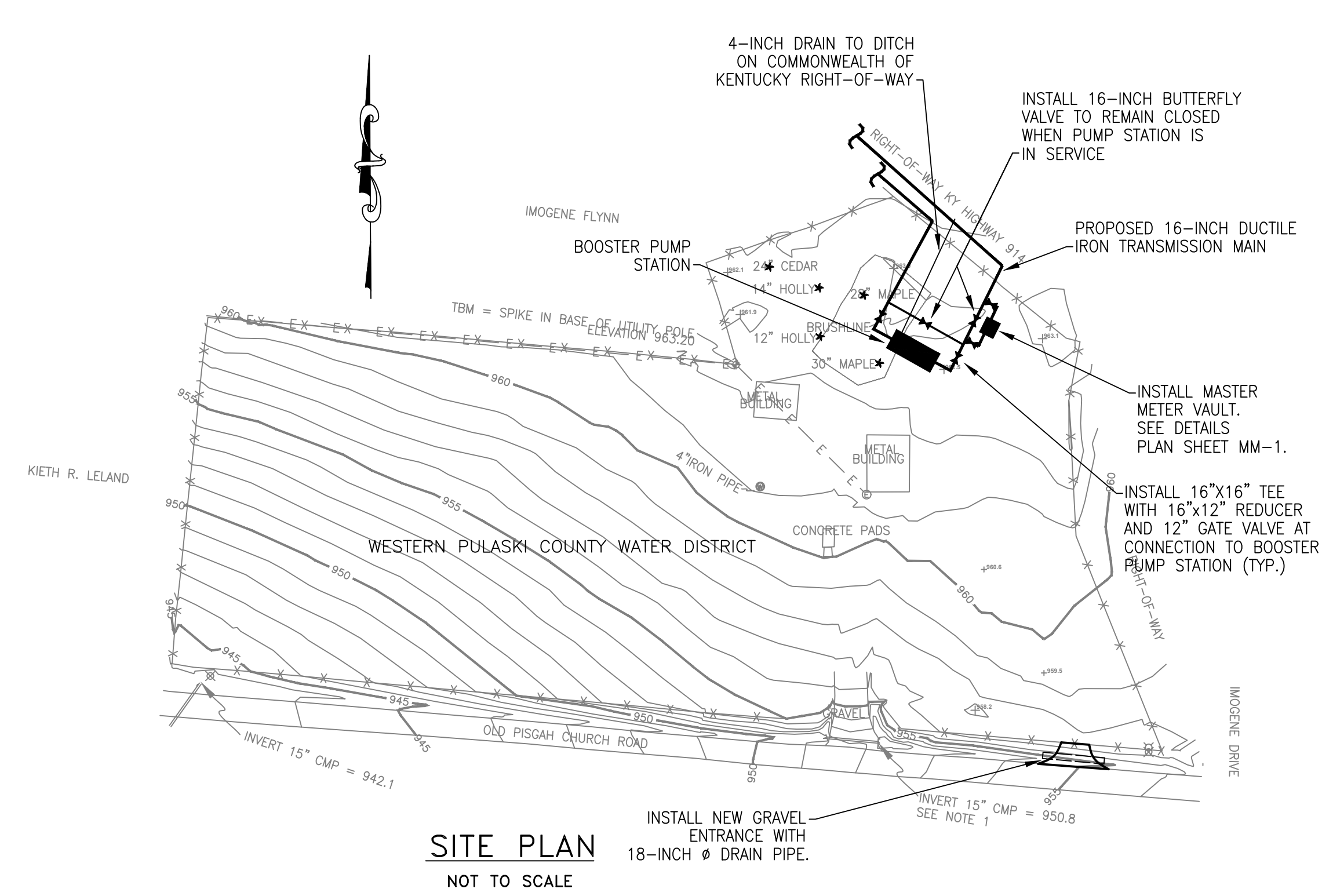
TYPICAL ANCHOR DETAIL
NOT TO SCALE



RETAINING WALL SECTION DETAIL
NOT TO SCALE



TYPICAL SECTION FOUNDATION & REINFORCING DETAIL
NOT TO SCALE



SITE PLAN
NOT TO SCALE

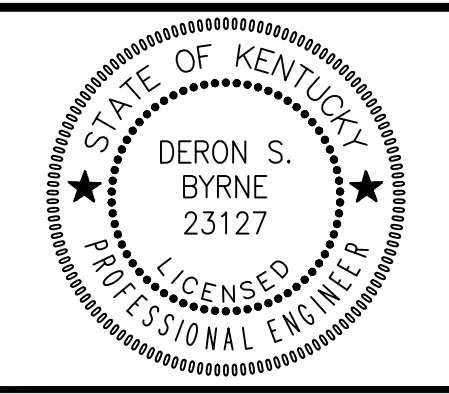
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556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

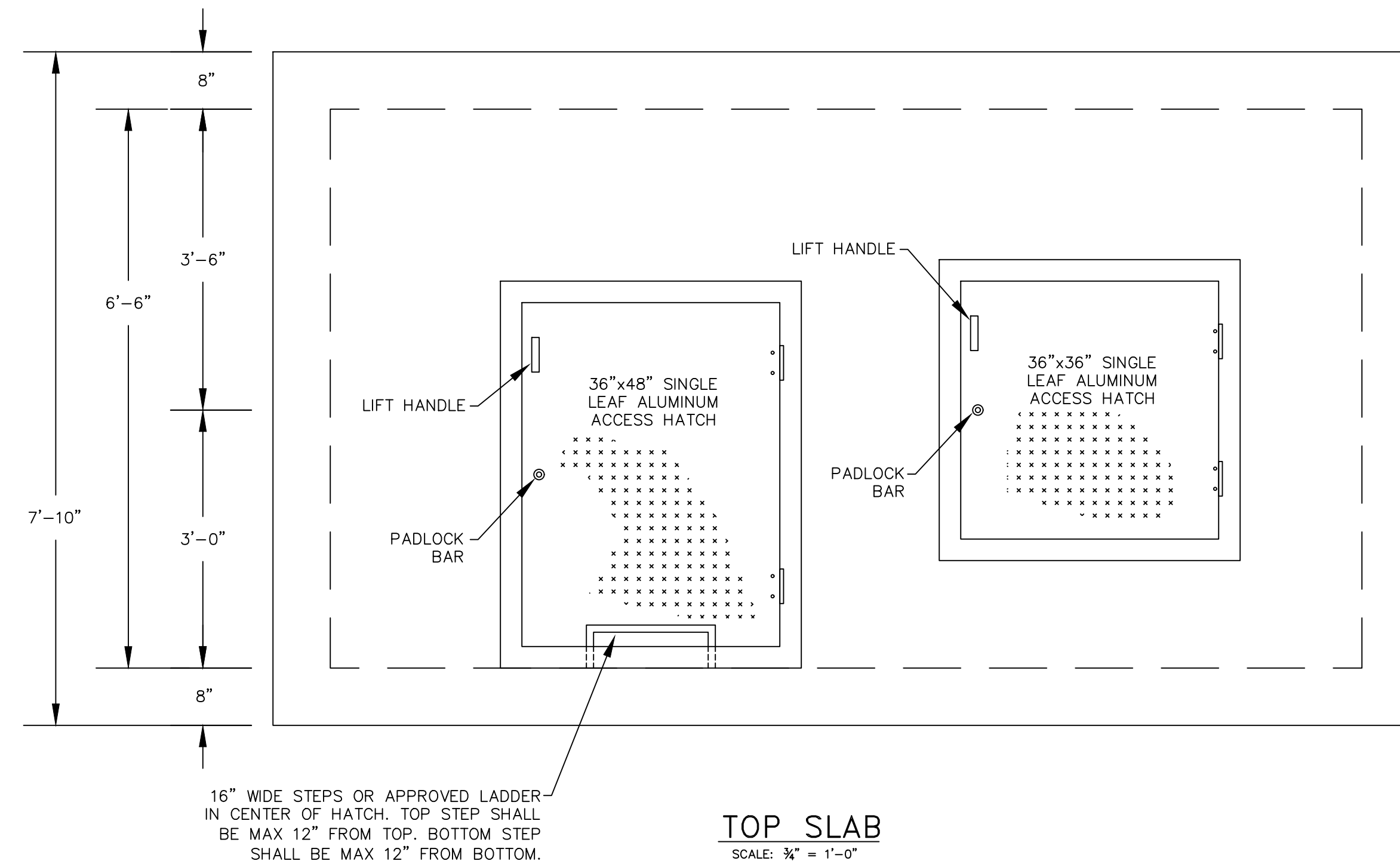
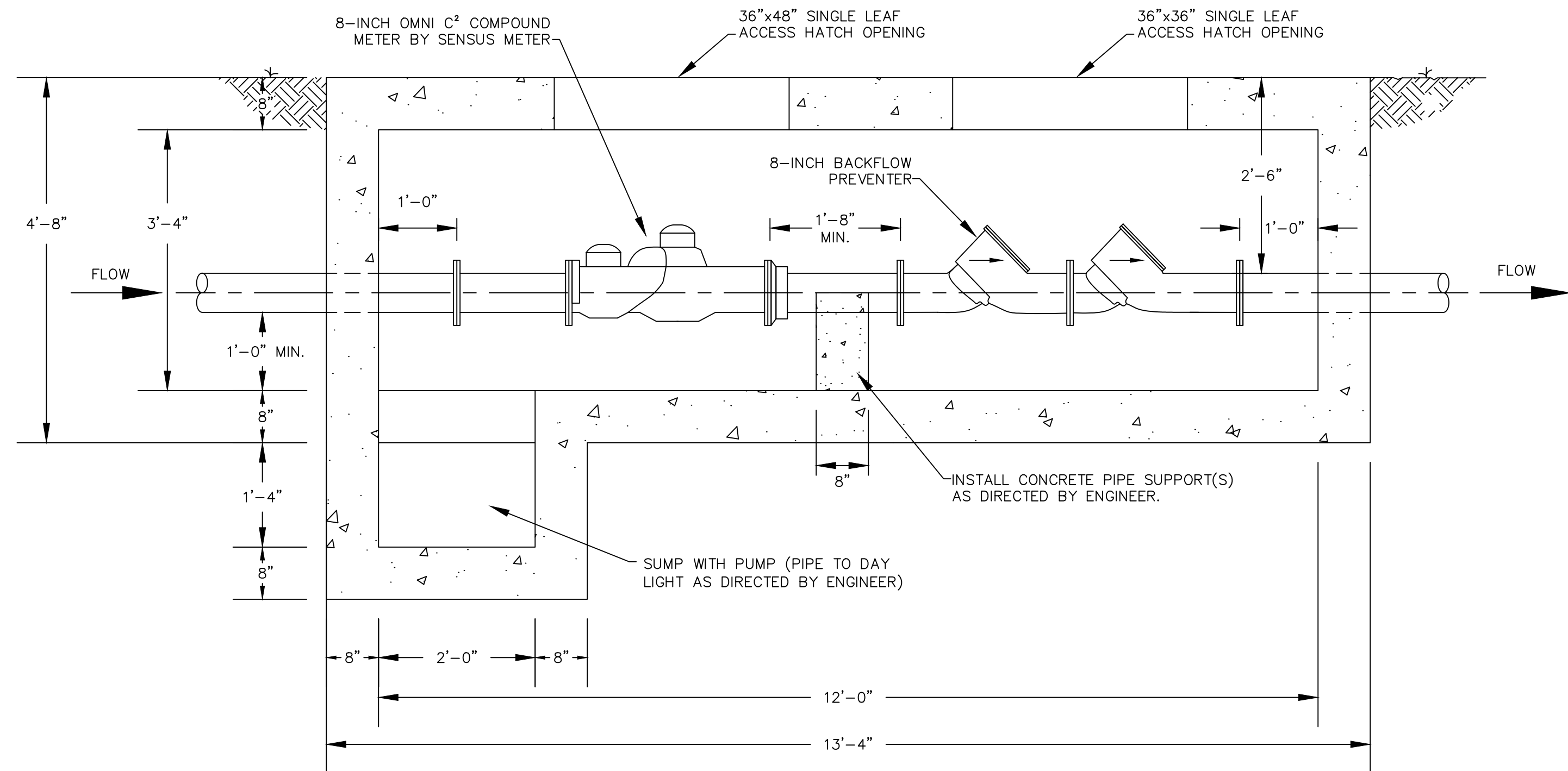
DESCRIPTION:
KY 914 BOOSTER PUMP STATION

CUSTOMER:
WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

PROJECT NO. 1533
DATE: AUG 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

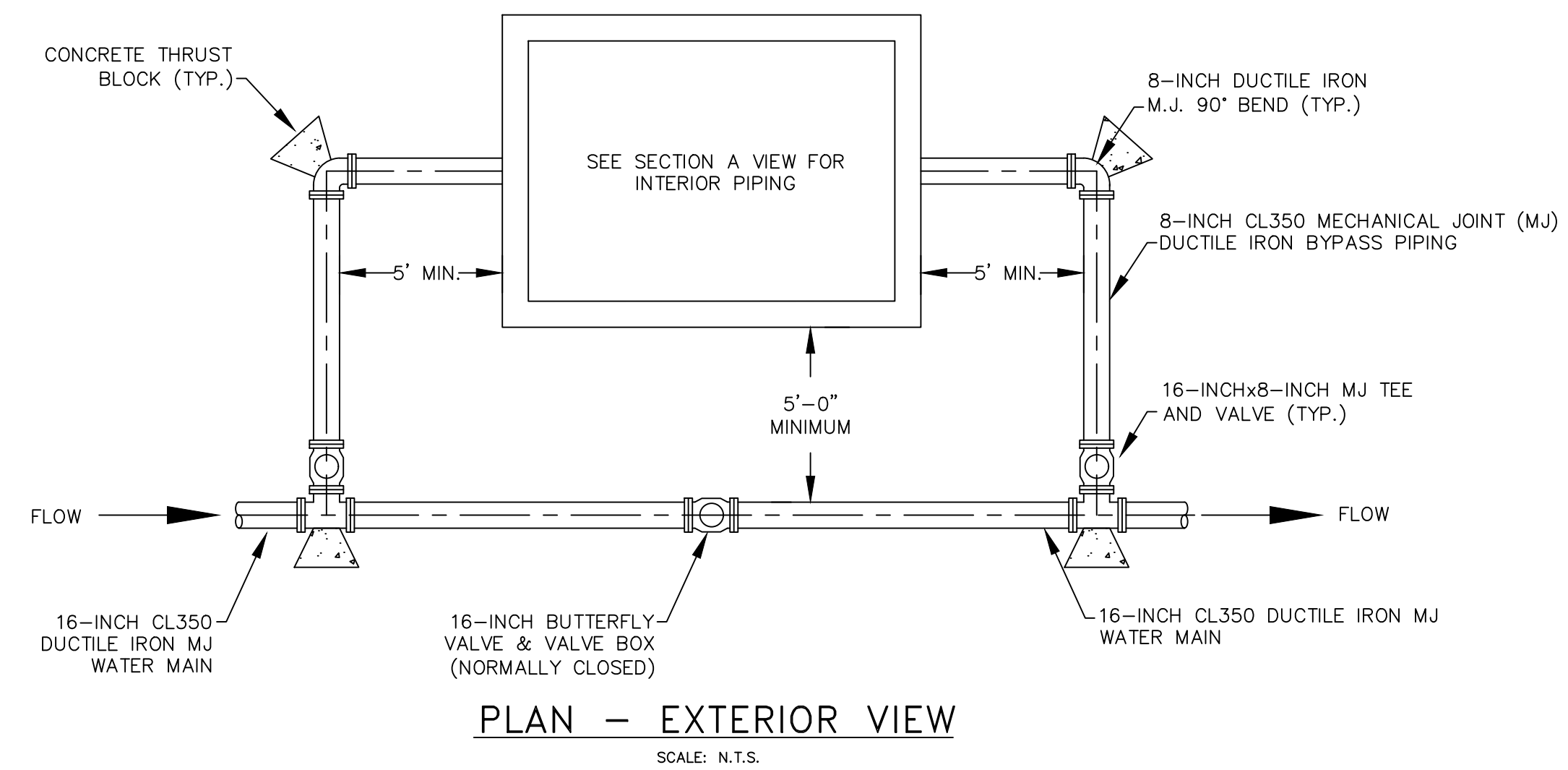
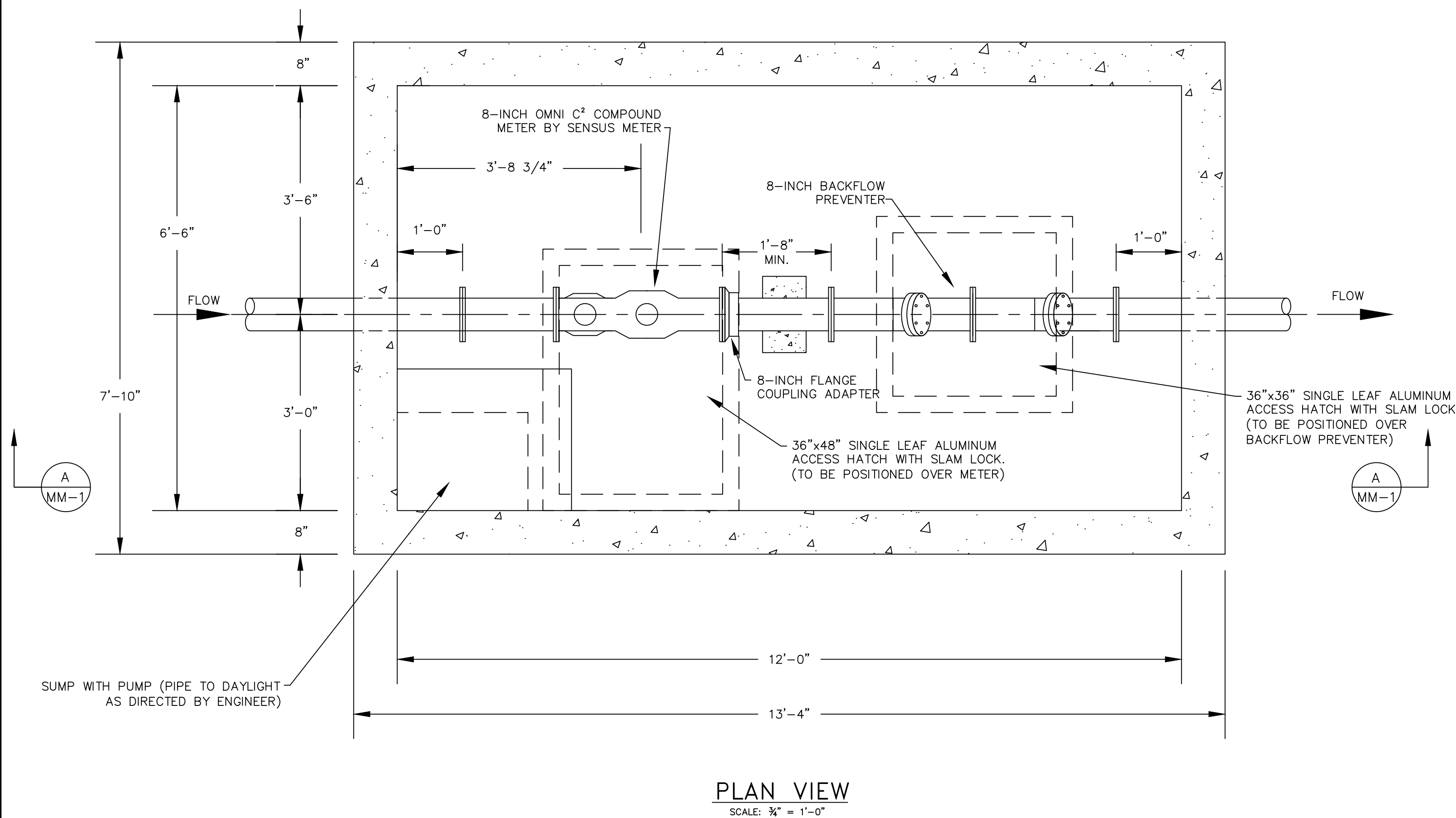
SHEET:
BPS-2





NOTES:

1. VAULT SHALL BE 8-INCH THICK CLASS A CONCRETE WITH NO. 4 BARS 12-INCHES O.C. BOTH WAYS, ALL WALLS, BOTTOM, AND TOP SLAB.
2. ALL INSIDE PIPING AND FITTINGS SHALL BE 8-INCH DUCTILE IRON WITH 150# FLANGES.
3. 36"x48" ACCESS HATCH SHALL BE HALLIDAY SIR3648, OR APPROVED EQUAL. 36"x36" ACCESS HATCH SHALL BE HALLIDAY SIR3636, OR APPROVED EQUAL.
4. SUMP PUMP SHALL BE ZOELLER 50 SERIES "MIGHTY-MATE," OR APPROVED EQUAL.



DESCRIPTION: BYPASS (KY HIGHWAY 914)
6-INCH MASTER METER WITH
BACKFLOW PREVENTER DETAILS

CUSTOMER:

WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

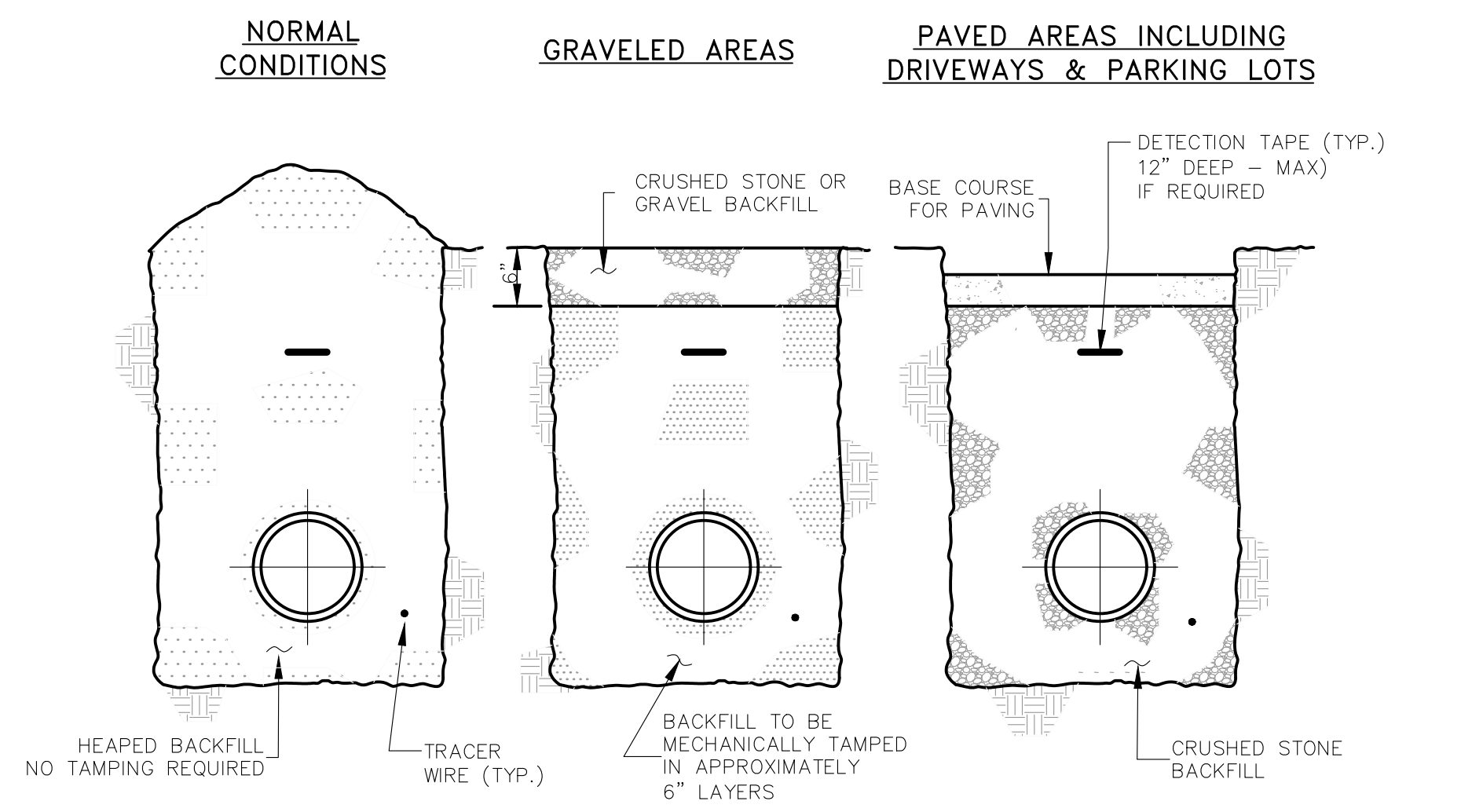
PROJECT NO. 1533
DATE: AUG 2019
DRAWN BY: JRC
CHECKED BY: JLM
CHECKED BY: DSB
SCALE: AS SHOWN

SHEET:
MM-1

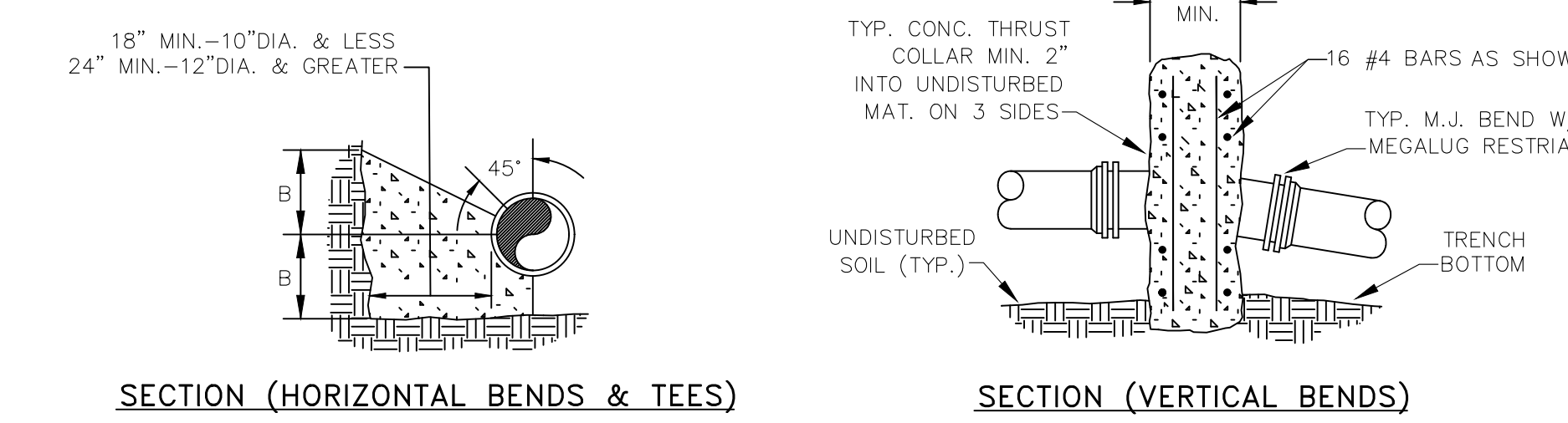
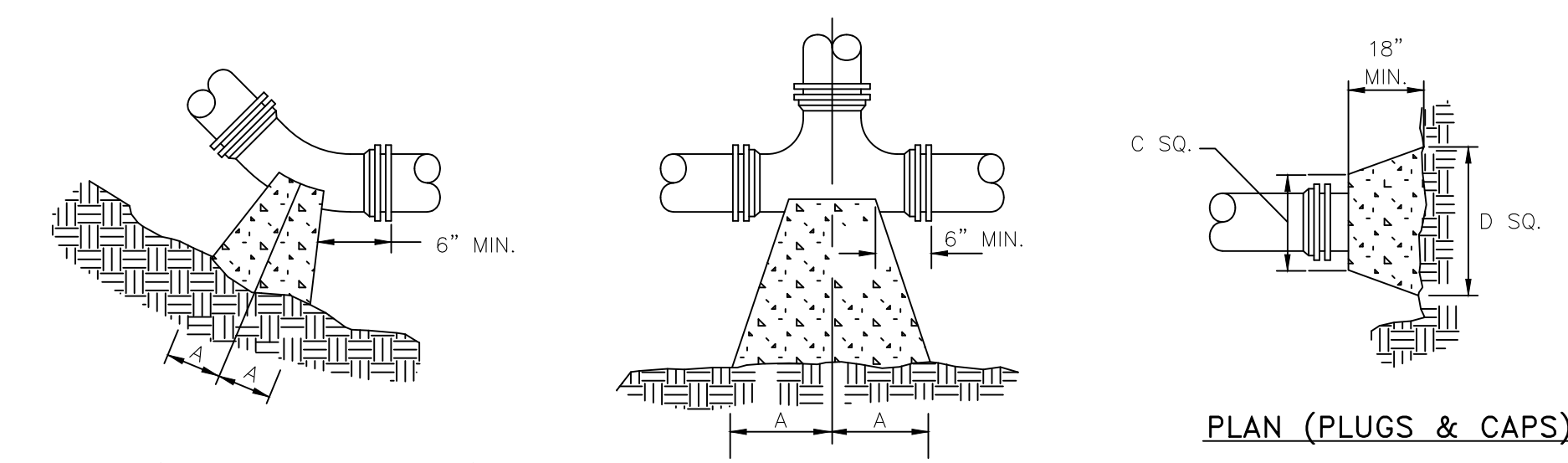
Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342





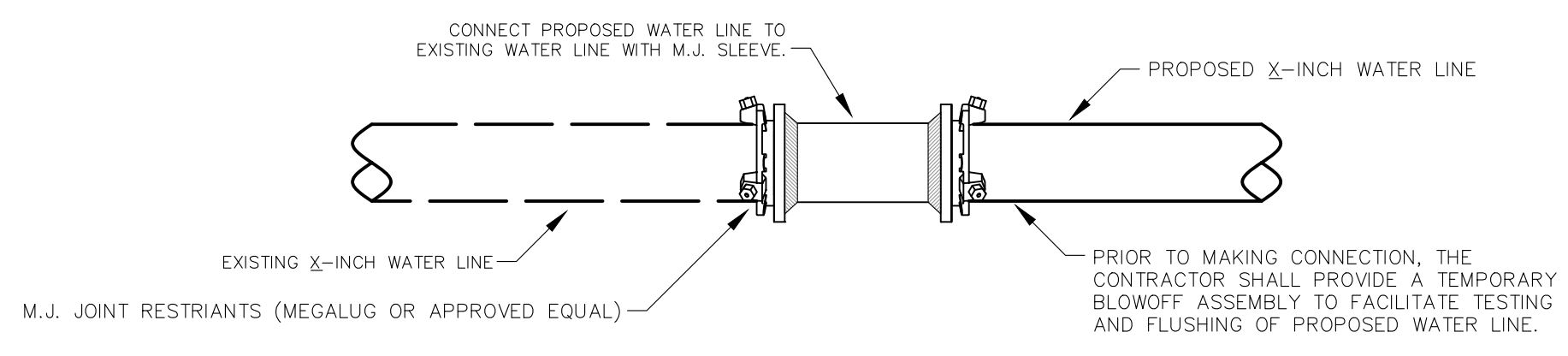
BACKFILLING



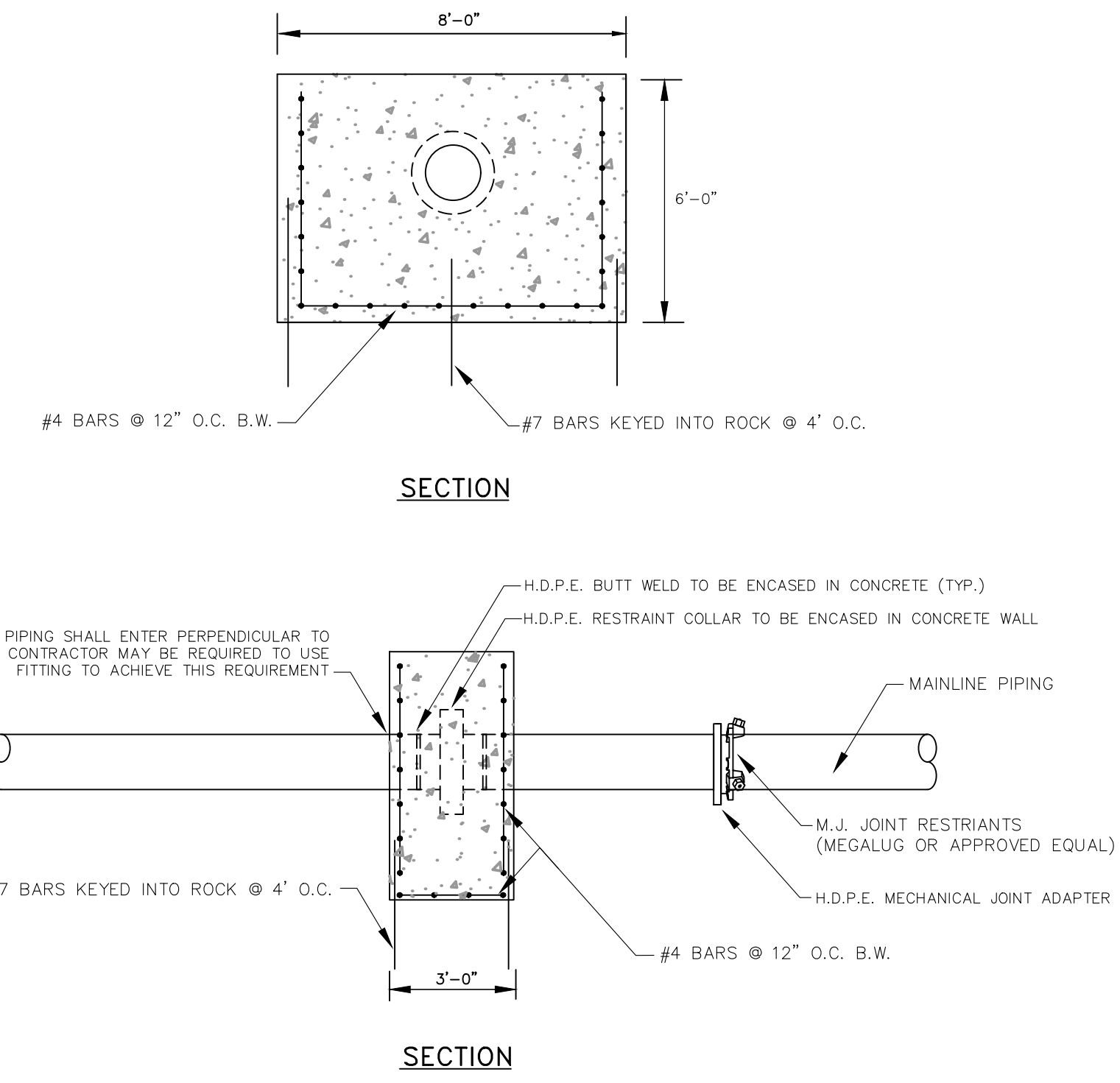
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	11"	9"	10"	6"		
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

- NOTES:
- FOR VERT. BEND DOWN IN EXCESS OF 11 1/4° BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
 - FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
 - GLANDS & BOLTS SHALL REMAIN ACCESSIBLE AND MUST BE PROTECTED FROM CONCRETE BY PLASTIC SHEETING OR OTHERWISE.
 - ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX
 - THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
 - DESIGN CRITERIA:
LINE PRESSURE = 200 psi
SOIL BEARING CAPACITY = 2000 psf
FACTOR OF SAFETY = 1.5

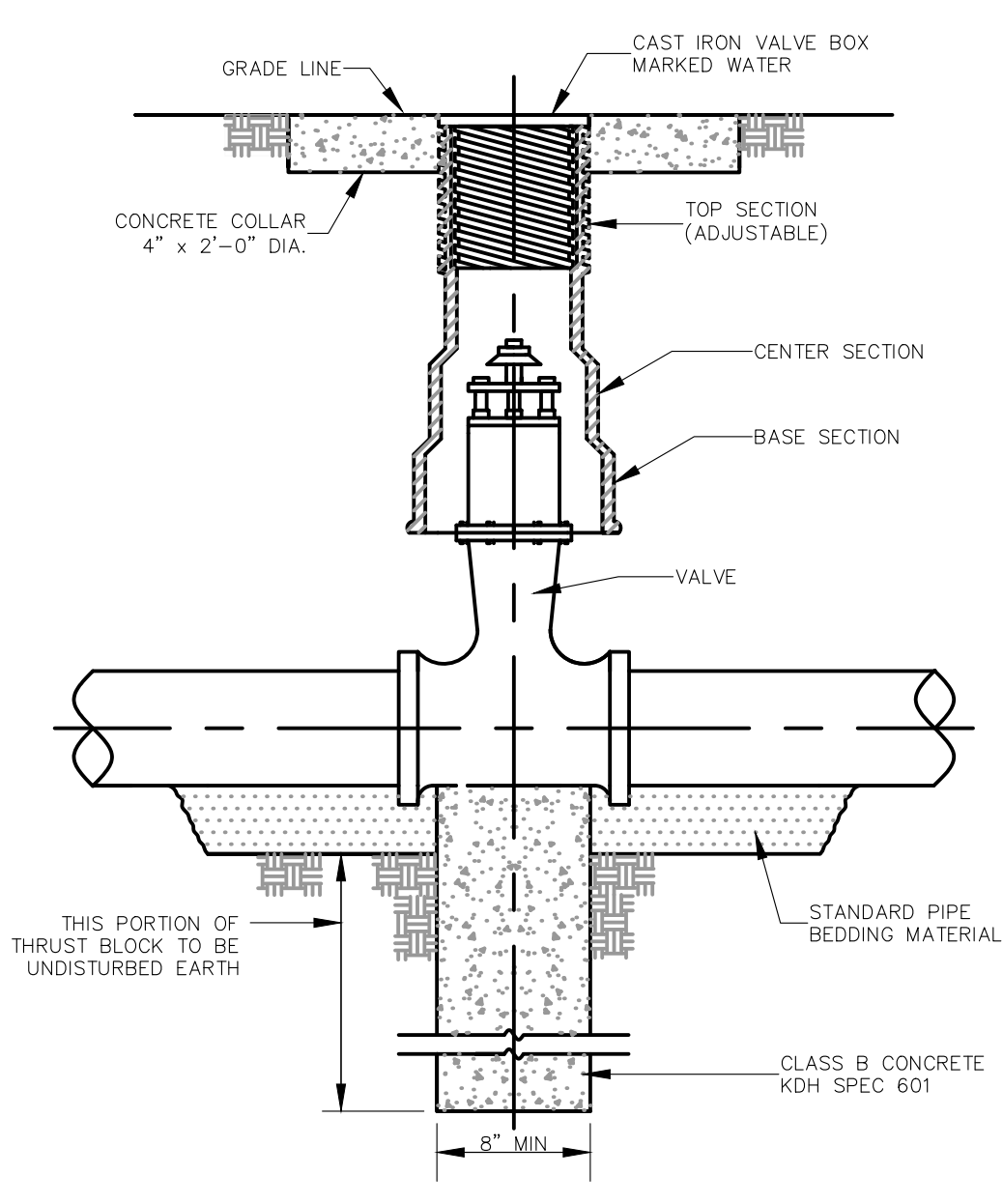
THRUST BLOCK DETAILS



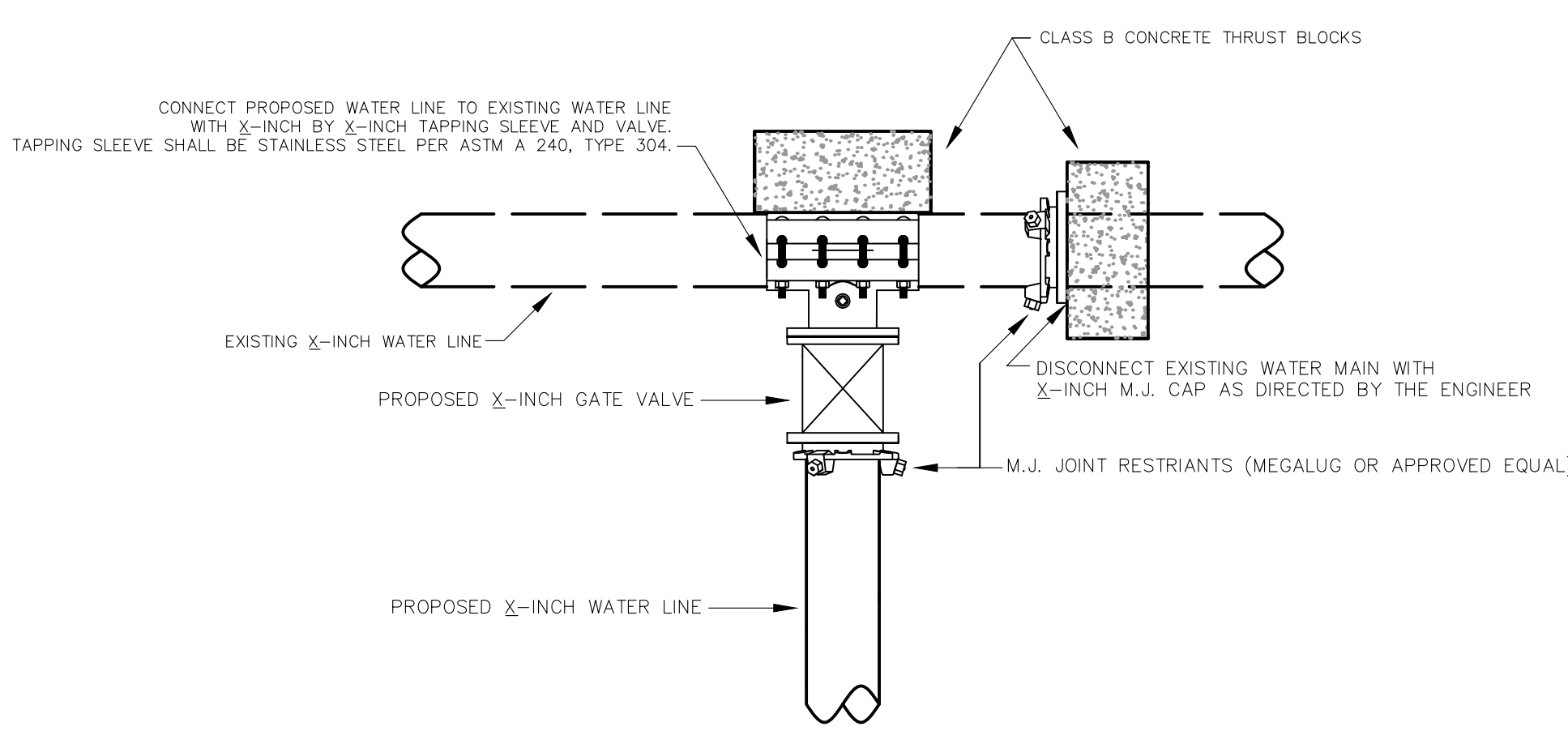
DIRECT CONNECTION



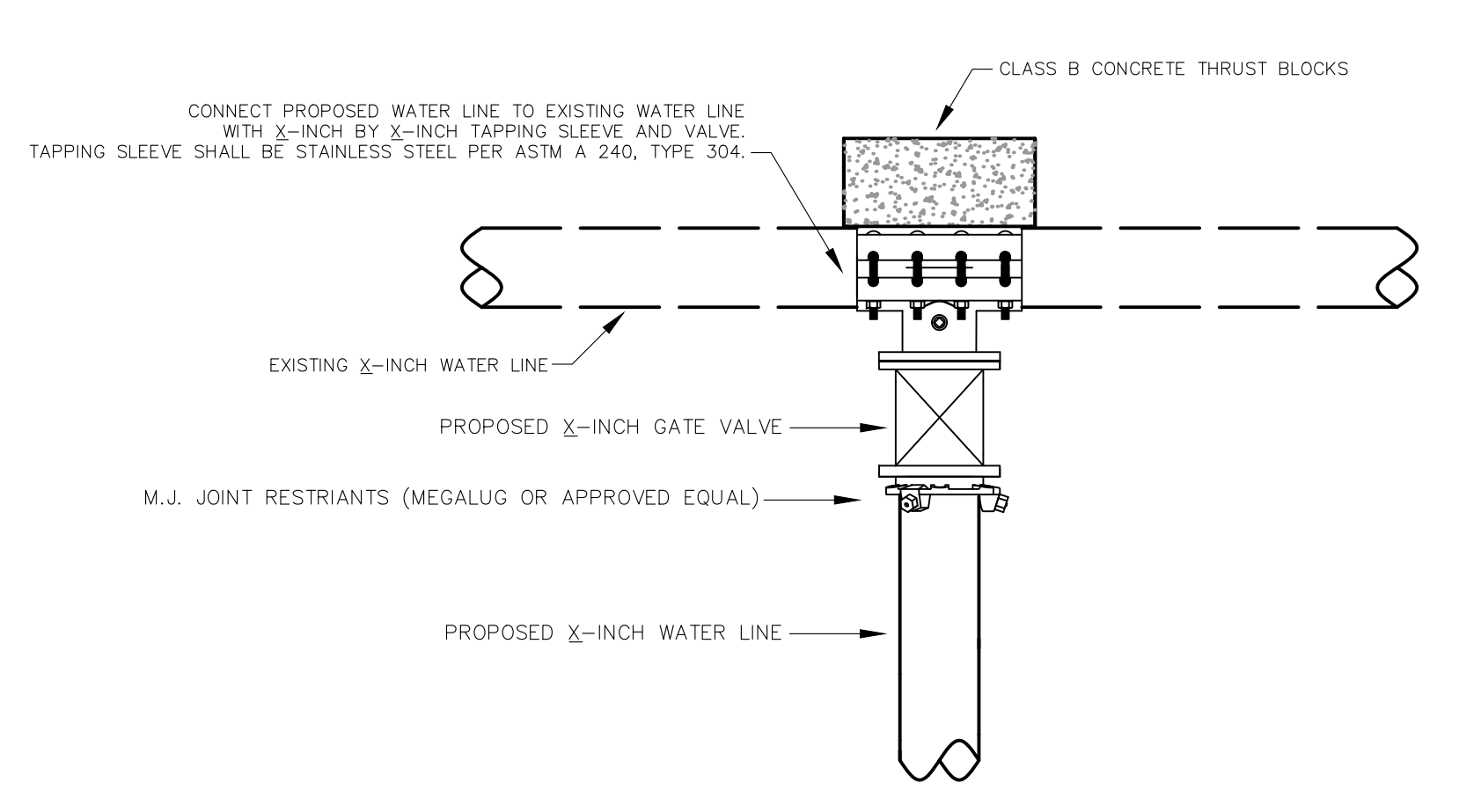
HDPE RESTRAINT WALL



GATE VALVE

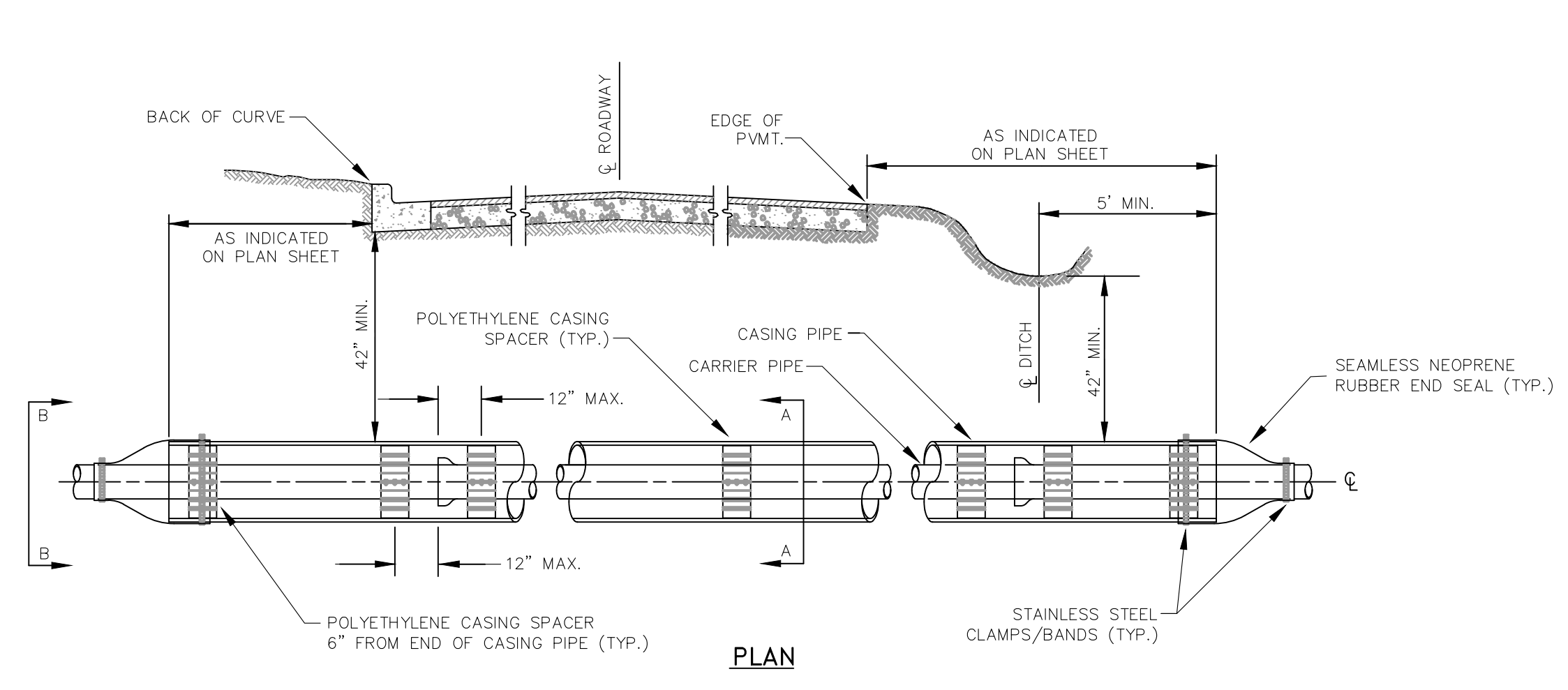


TYPE I CONNECTION

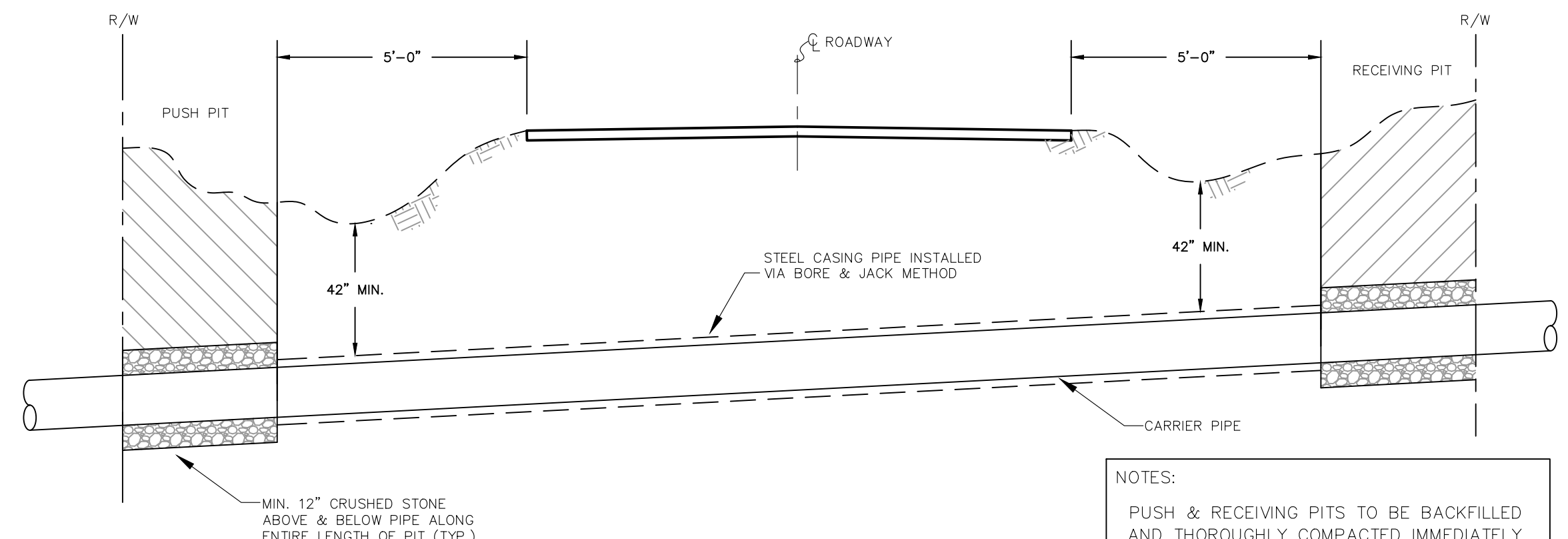


TYPE II CONNECTION

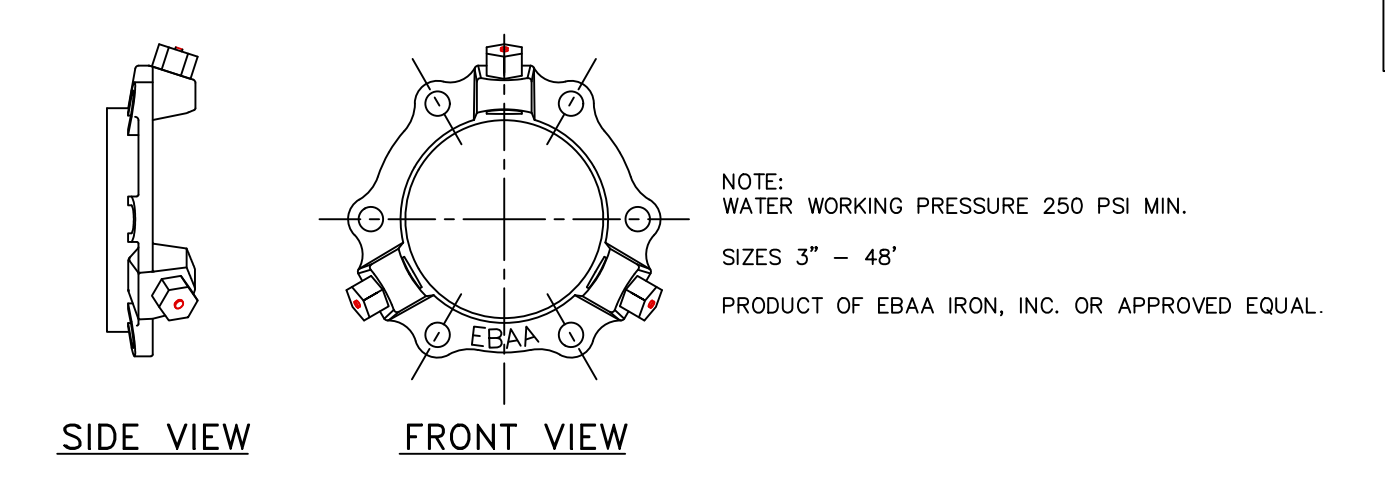
NOTE: SEE SPECIFICATION FOR PIPING MATERIALS AND PIPING JOINTS



ENCASEMENT PIPE DETAILS



STATE HIGHWAY ENCASED BORE CROSSING



MEGA LUG JOINT RESTRAINT

- NOTES:
- A MINIMUM OF THREE CASING SPACERS ARE REQUIRED PER JOINT; ONE EACH AT THE SPIGOT, MIDDLE & BELL.
 - ALL D.I. PIPE JOINTS WITHIN THE CASING PIPE SHALL BE EQUIPPED WITH A MECHANICAL JOINT RESTRAINT DEVICE.
 - CASING SPACERS SHALL BE AS MANUFACTURED BY CCI PIPELINE SYSTEMS, MODEL CSP, OR APPROVED EQUAL.
 - END SEALS SHALL BE AS MANUFACTURED BY CCI PIPELINE SYSTEMS, MODEL ESC, OR APPROVED EQUAL.

- NOTES:
- PUSH & RECEIVING PITS TO BE BACKFILLED AND THOROUGHLY COMPACTED IMMEDIATELY FOLLOWING INSTALLATION.
 - ALL HIGHWAY DITCHLINES TO REMAIN FREE AND CLEAR FOLLOWING INSTALLATION.
 - GROUND COVER SHALL BE RESTORED IN ALL DISTURBED AREAS VIA SEED AND STRAW AS SOON AS POSSIBLE.

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

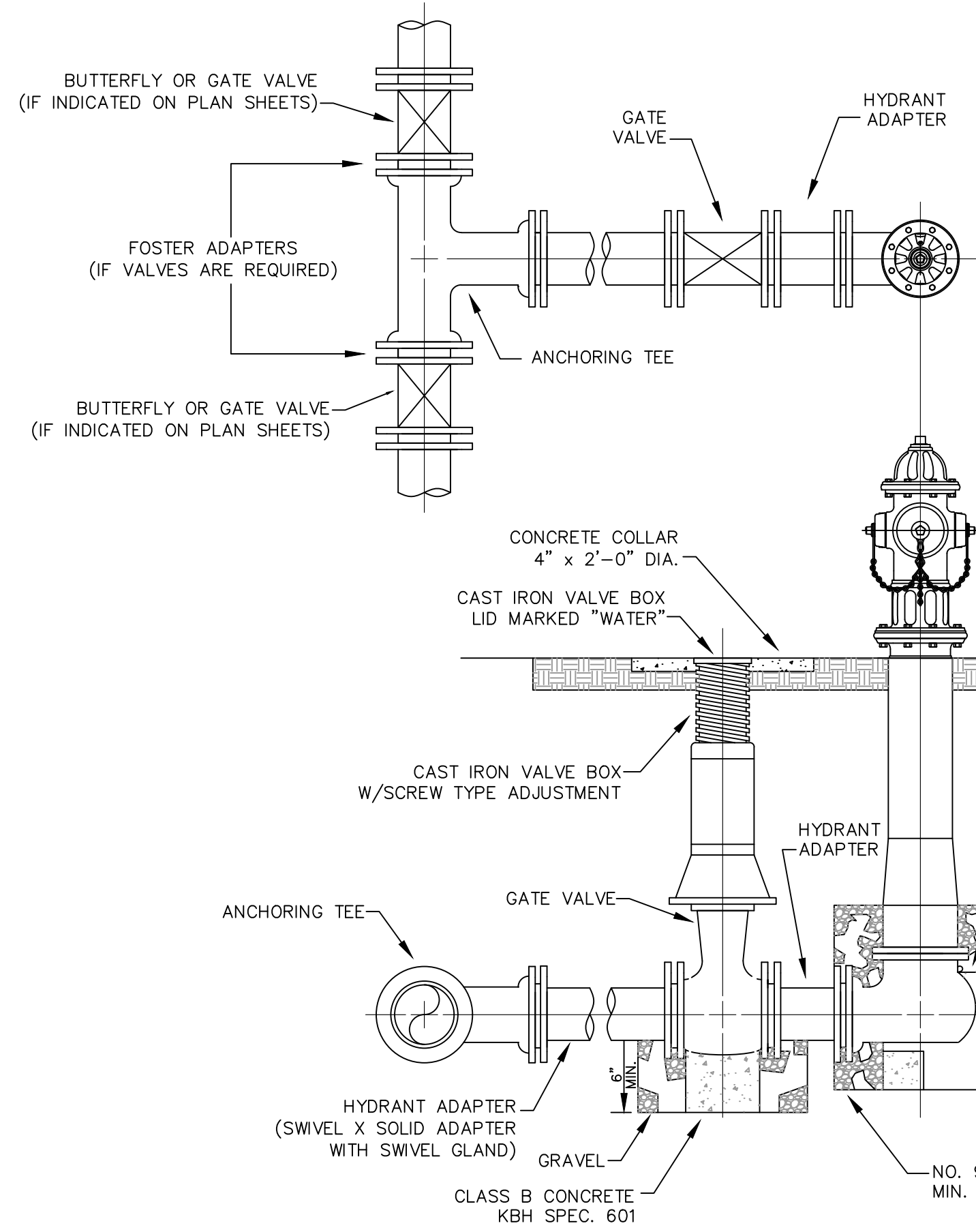
STANDARD DETAIL DRAWINGS

DESCRIPTION: WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

CUSTOMER: WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

PROJECT NO. 1533
DATE: AUG 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: JLM
SCALE: N.T.S.

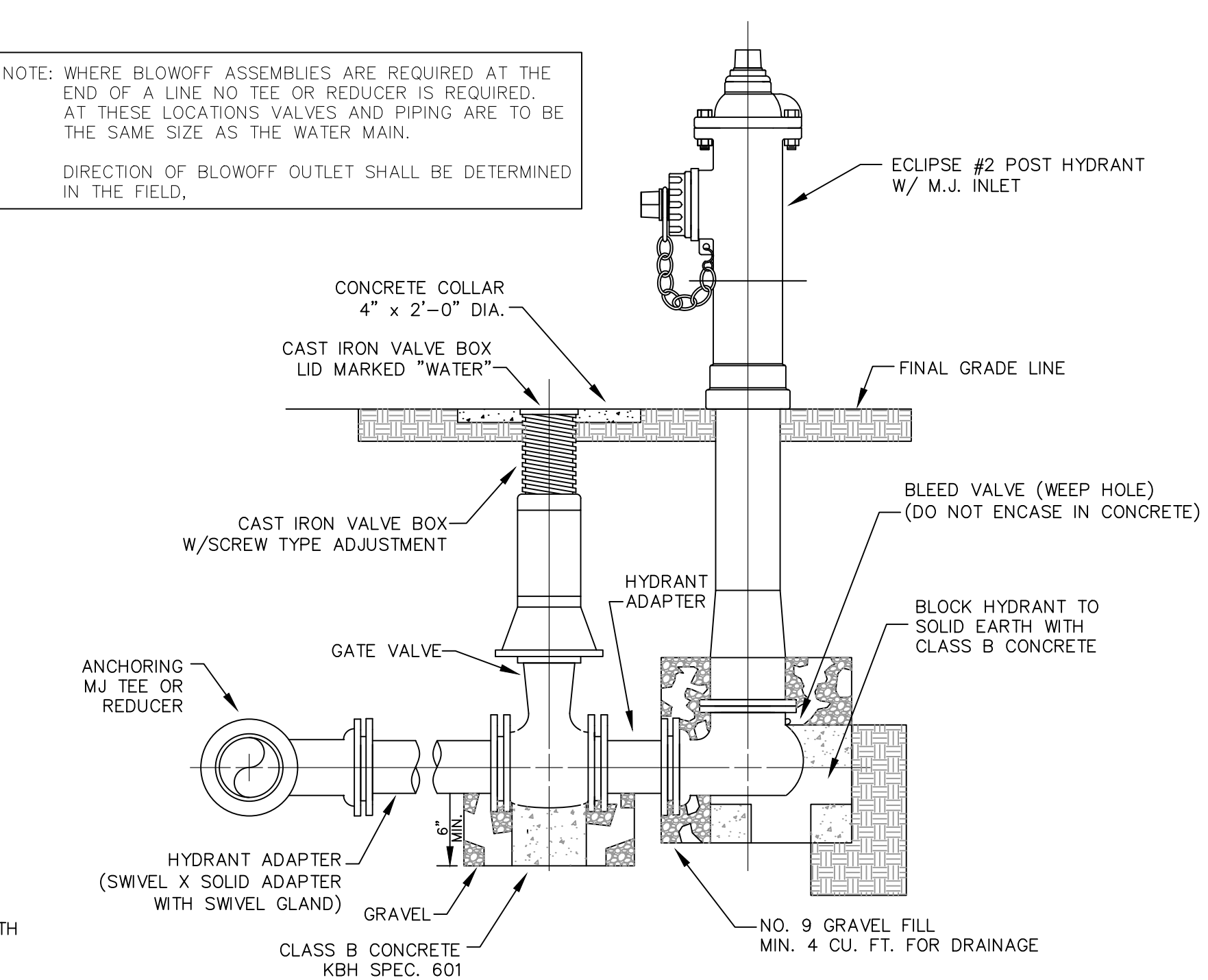
SHEET: SD-1



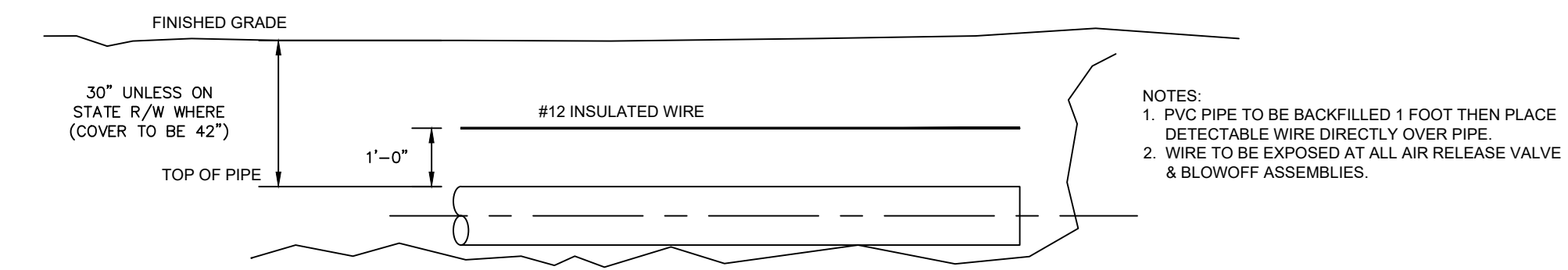
FLUSH HYDRANT ASSEMBLY

NOTE: SEE SPECIFICATIONS FOR MATERIALS

NOTE: WHERE BLOWOFF ASSEMBLIES ARE REQUIRED AT THE END OF A LINE NO TEE OR REDUCER IS REQUIRED. AT THESE LOCATIONS VALVES AND PIPING ARE TO BE THE SAME SIZE AS THE WATER MAIN.
DIRECTION OF BLOWOFF OUTLET SHALL BE DETERMINED IN THE FIELD.

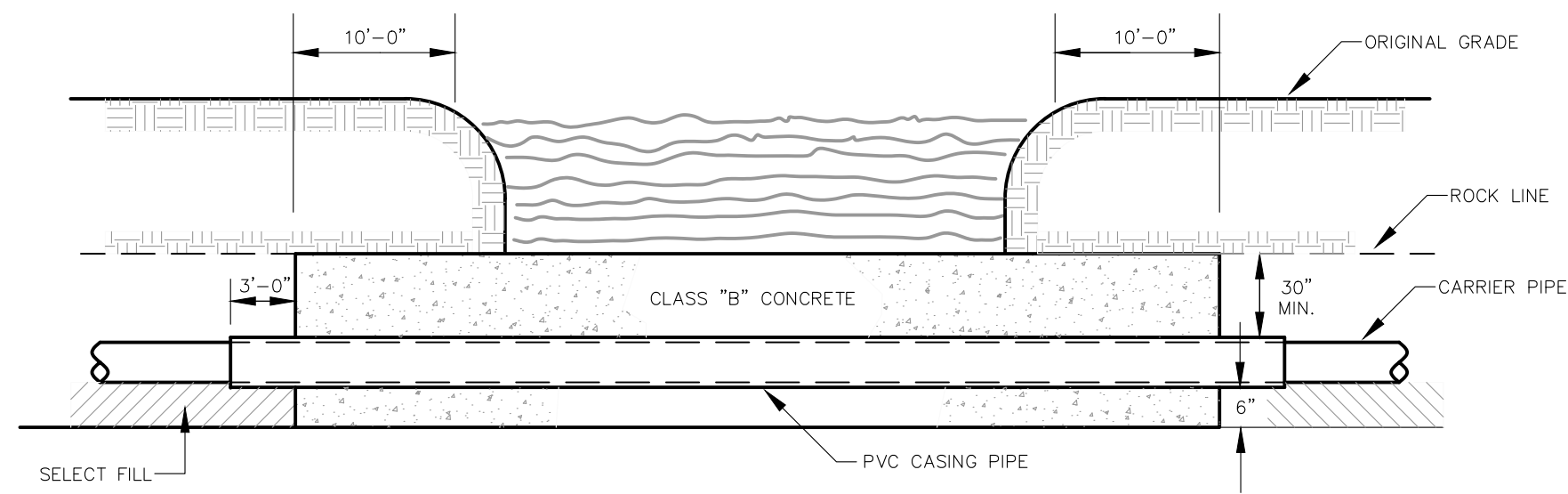


BLOWOFF ASSEMBLY

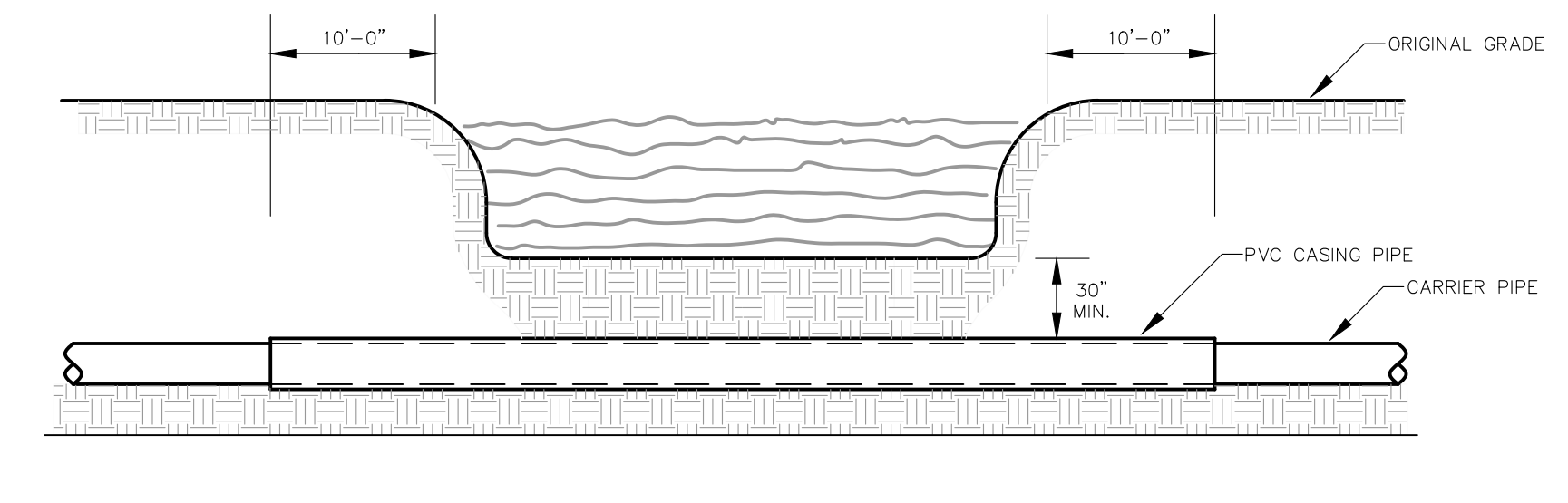


DETECTABLE WIRE INSTALLATION

NOTES:
1. PVC PIPE TO BE BACKFILLED 1 FOOT THEN PLACE DETECTABLE WIRE DIRECTLY OVER PIPE
2. WIRE TO BE EXPOSED AT ALL AIR RELEASE VALVE & BLOWOFF ASSEMBLIES.

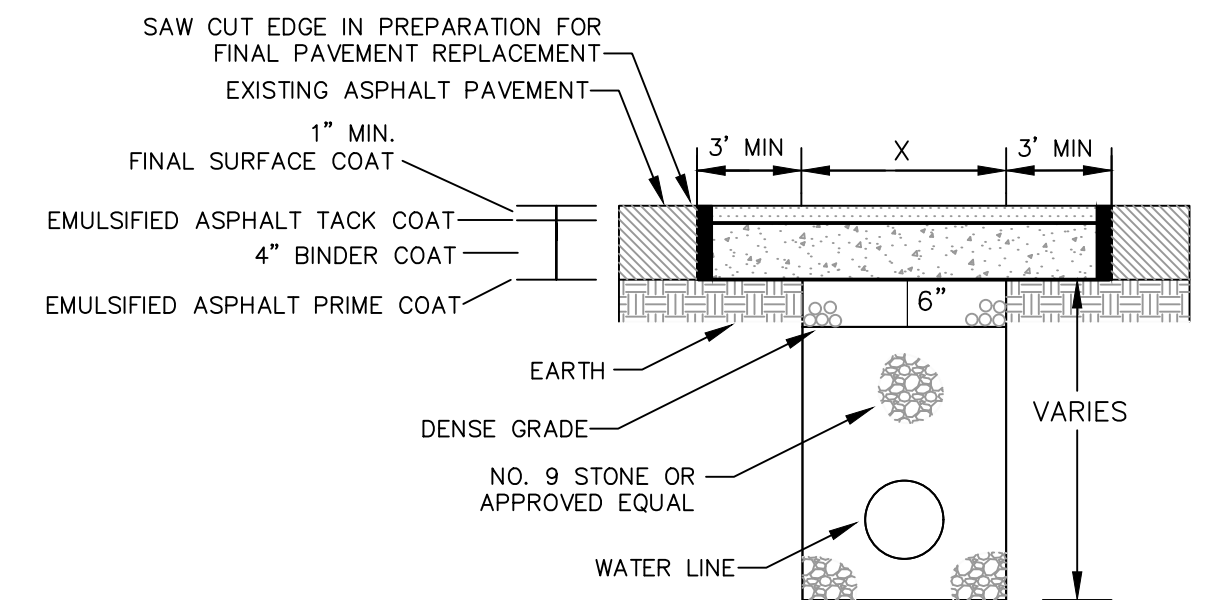


CREEK CROSSING IN ROCK

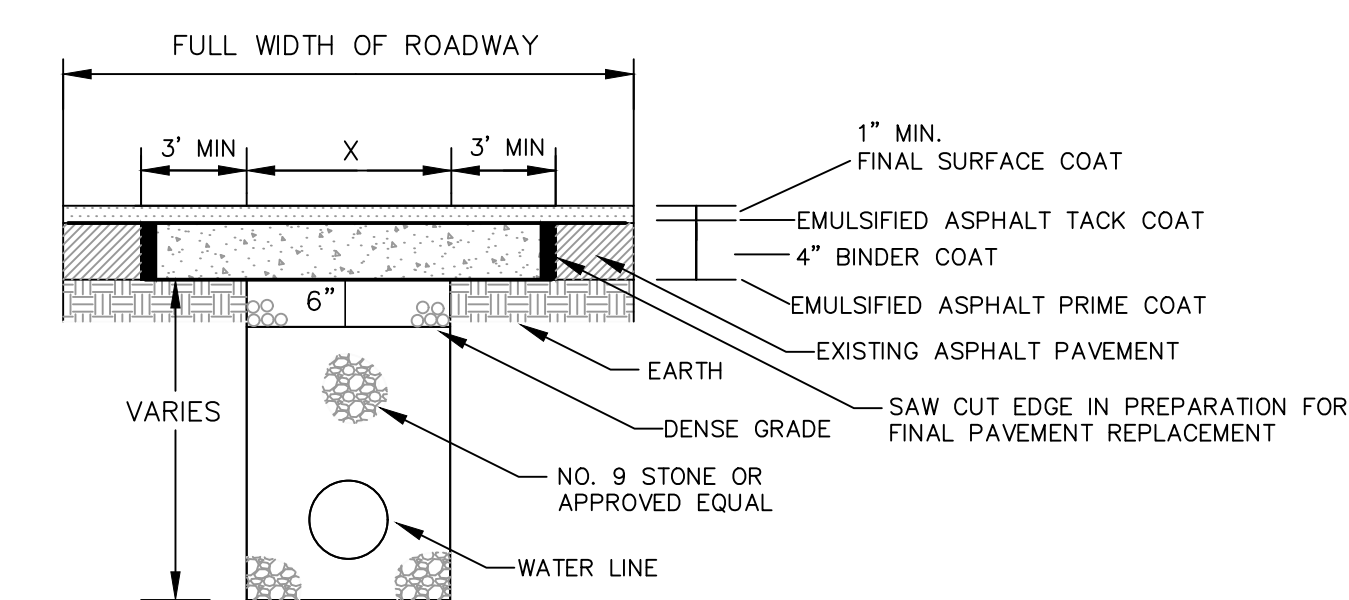


CREEK CROSSING IN SOIL

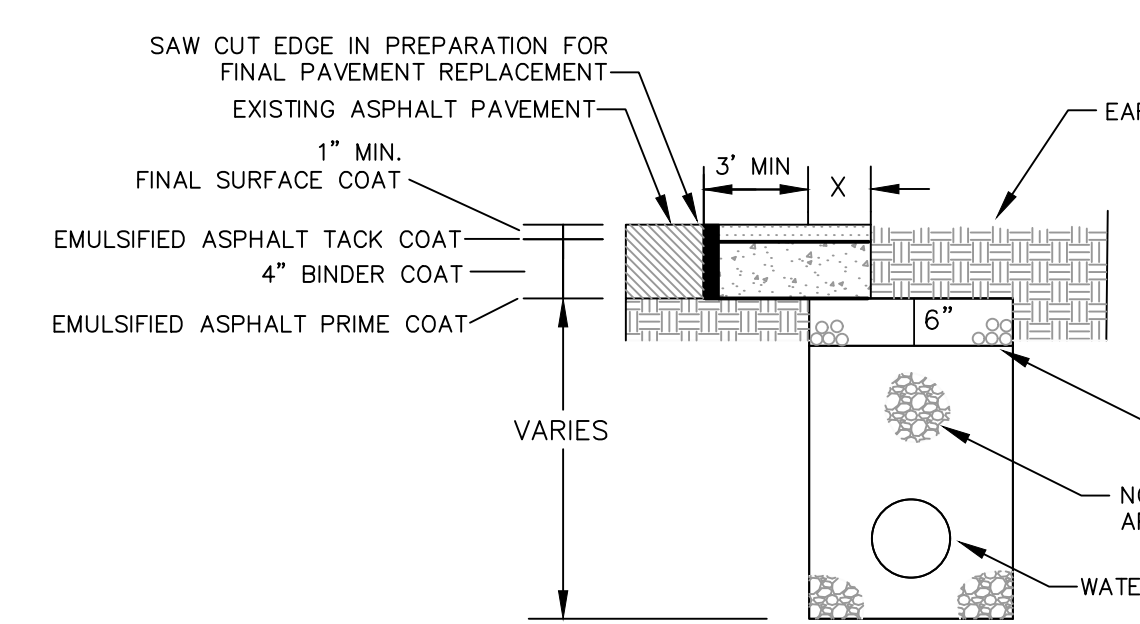
CREEK CROSSING



PAVEMENT REPLACEMENT



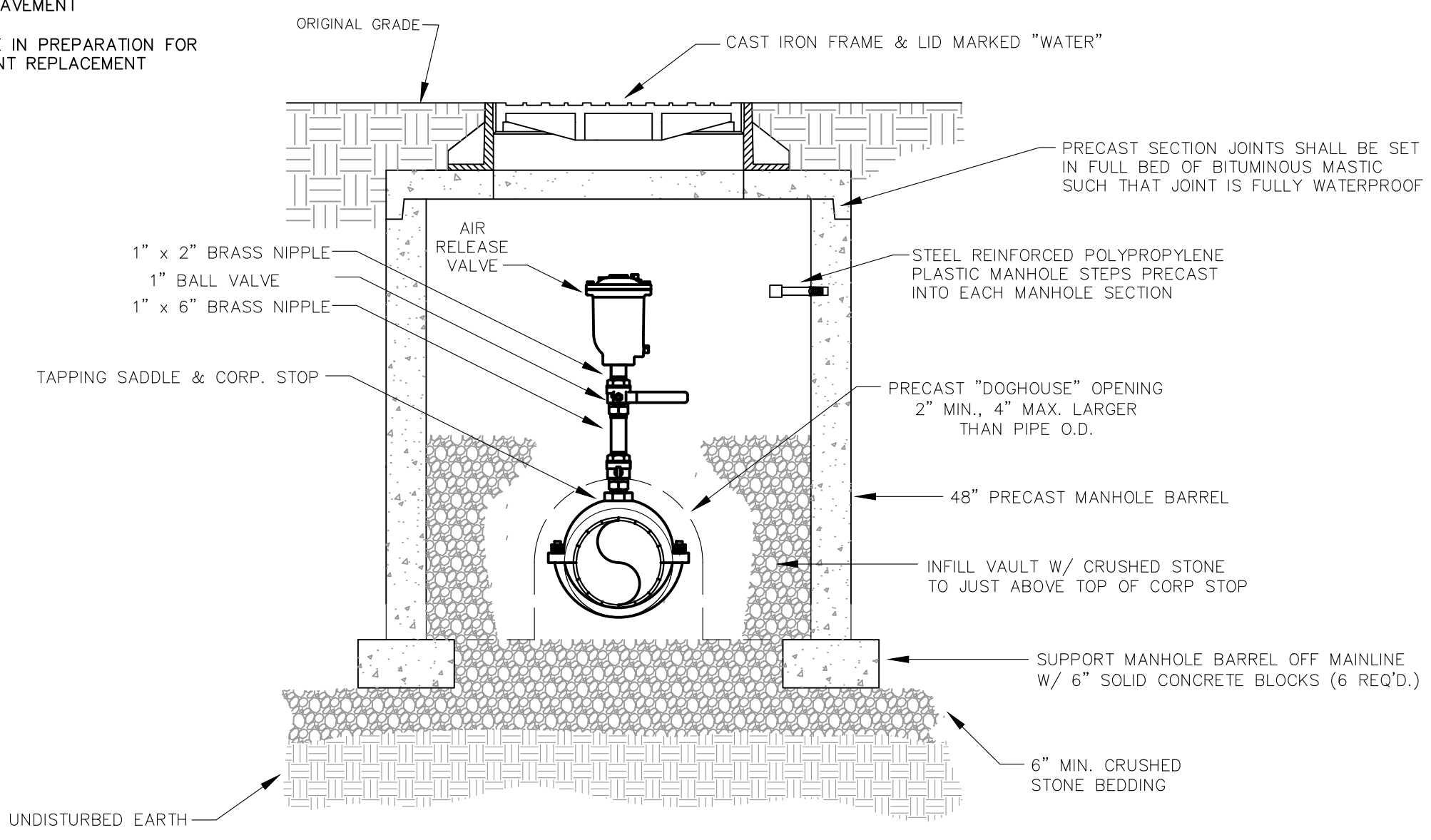
FULL WIDTH PAVEMENT REPLACEMENT



PARTIAL PAVEMENT REPLACEMENT

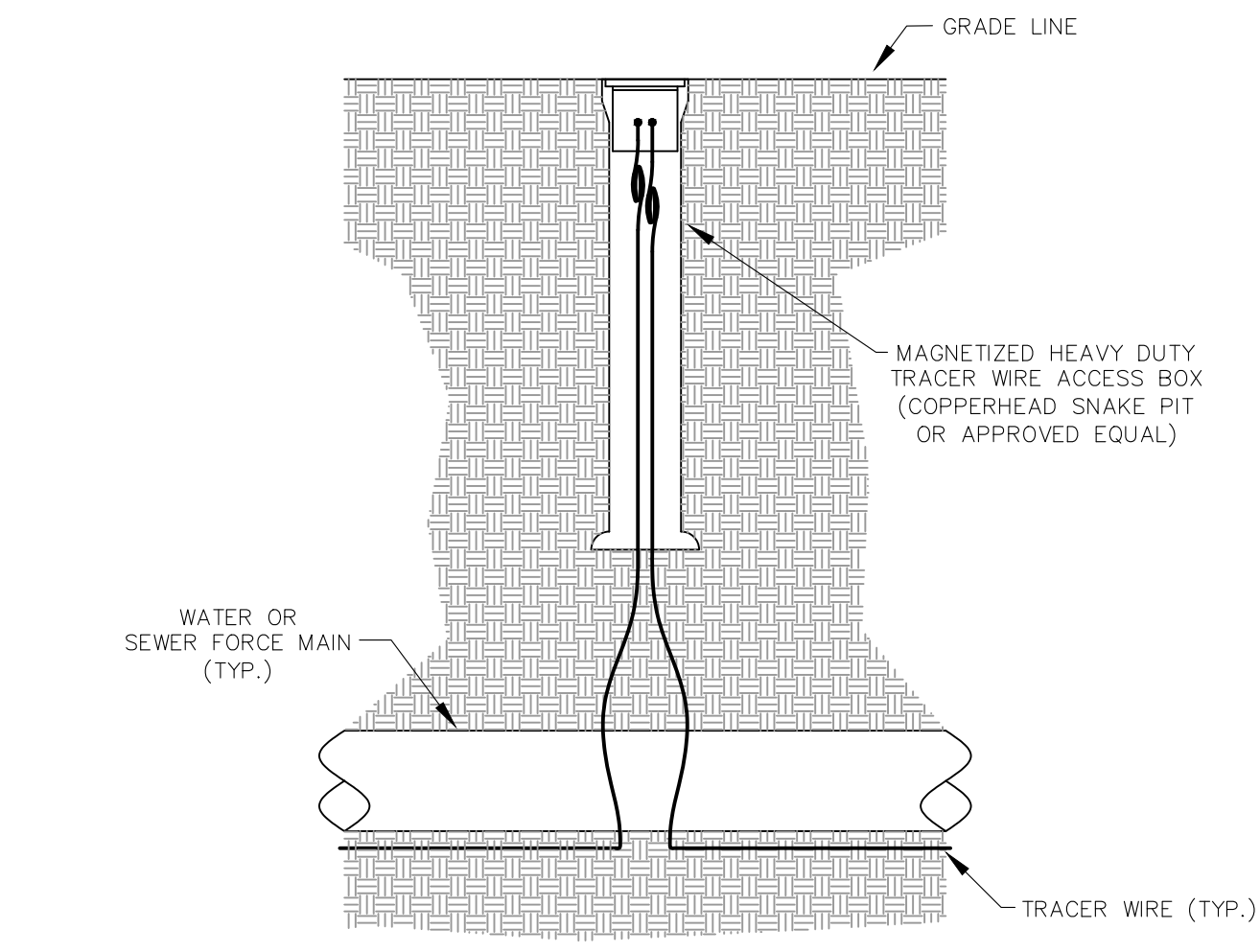
NOTES:
ANY TRENCH THAT DISTURBS PAVEMENT SHALL BE BACKFILLED WITH STONE
REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND DEPTH AS EXISTING PAVEMENT
ANY PUBLICLY TRAVELED AREA (I.E. COUNTY ROADS, BUSINESS ENTRANCES, BUSINESS AND PUBLIC PARKING LOTS, ETC.) SHALL BE TEMPORARILY RESTORED AT THE END OF EACH WORK DAY USING AN APPROVED COLD PATCH ASPHALT PAVEMENT

BITUMINOUS PAVEMENT REPLACEMENT

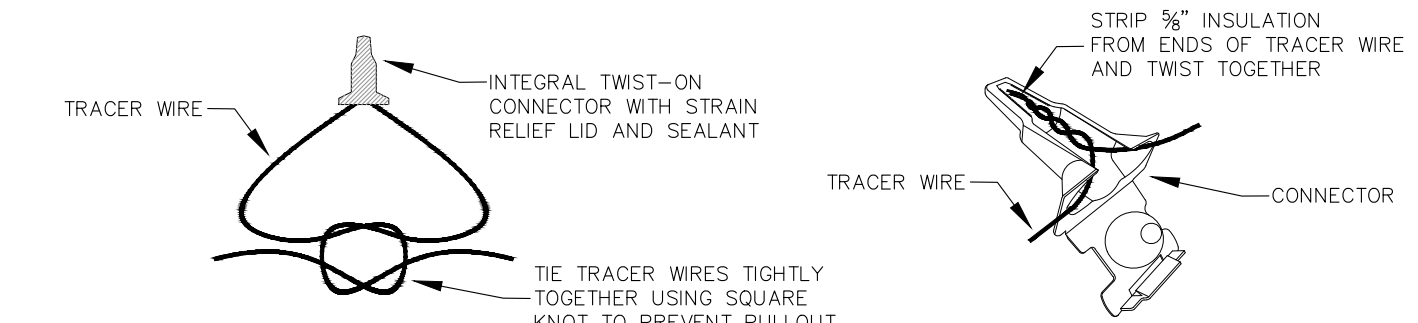


NOTE:
WHERE THE WATER LINE IS LOCATED IN A STREET OR ROAD, THE AIR RELEASE VALVE AND BOX ARE TO BE LOCATED OFF THE ROAD AS DIRECTED BY THE ENGINEER AND CONNECTED TO THE MAINLINE BY 1" P.E. SERVICE LINE. THE SERVICE LINE WILL BE A SEPARATE PAY ITEM.

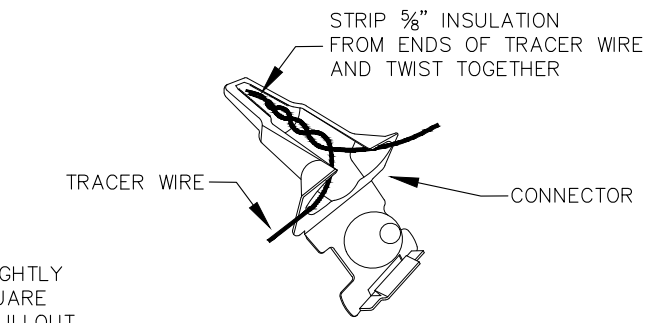
AIR RELEASE VALVE



TRACER WIRE ACCESS BOX



TRACER WIRE CONNECTION



TRACER WIRE CONNECTOR DETAIL

NOTES:
FOR OPEN CUT INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER WITH 30 MIL BLUE HMWPE INSULATION. FOR TRENCHLESS INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER CLAD STEEL CORE WITH 45 MIL BLUE HDPE INSULATION.
TRACER WIRE SHALL BE INSTALLED WITH THE PIPE AT THE TRENCH BOTTOM. ACCESS BOXES SHALL BE INSTALLED AT EACH VALVE, HYDRANT AND AIR RELEASE VALVE. TRACER WIRE ACCESS BOXES SHALL BE SPACED NO FURTHER THAN 1000' APART. A MINIMUM OF 3 FEET OF TRACER WIRE SHOULD BE COILED UP INSIDE OF EACH ACCESS BOX.

TRACER WIRE DETAILS

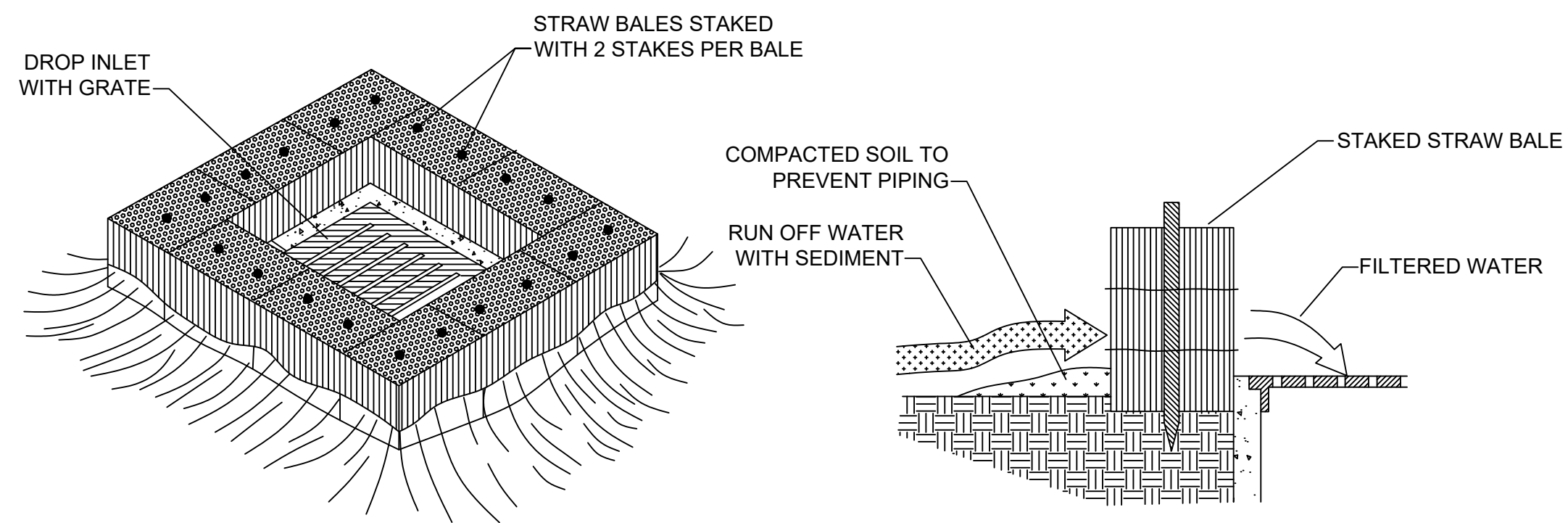
Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

STANDARD DETAIL DRAWINGS

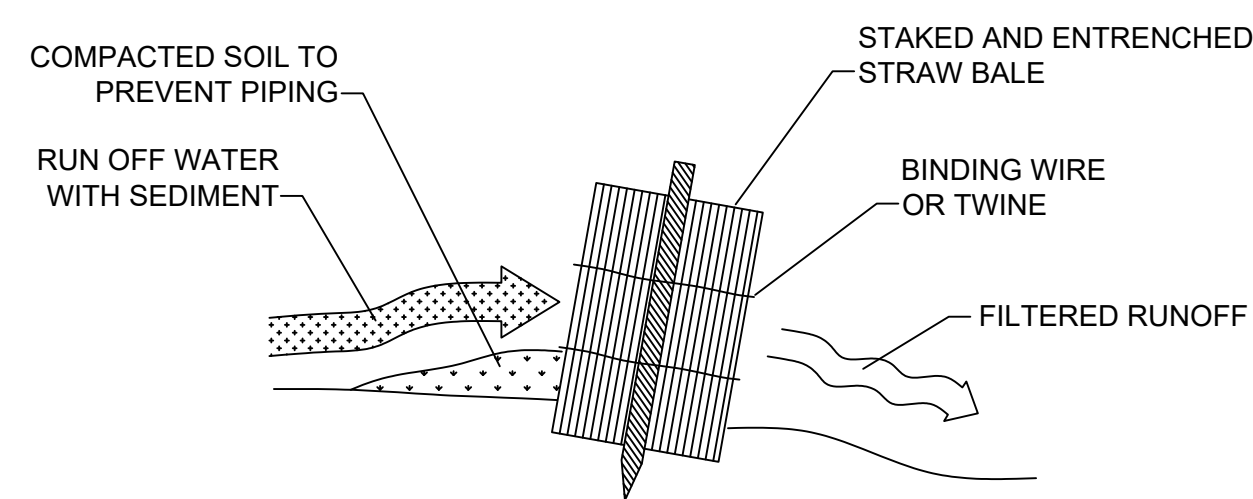
DESCRIPTION: WESTERN PULASKI COUNTY WATER DISTRICT
PULASKI COUNTY, KENTUCKY

PROJECT NO. 1533
DATE: AUG 2019
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: JLM
SCALE: N.T.S.

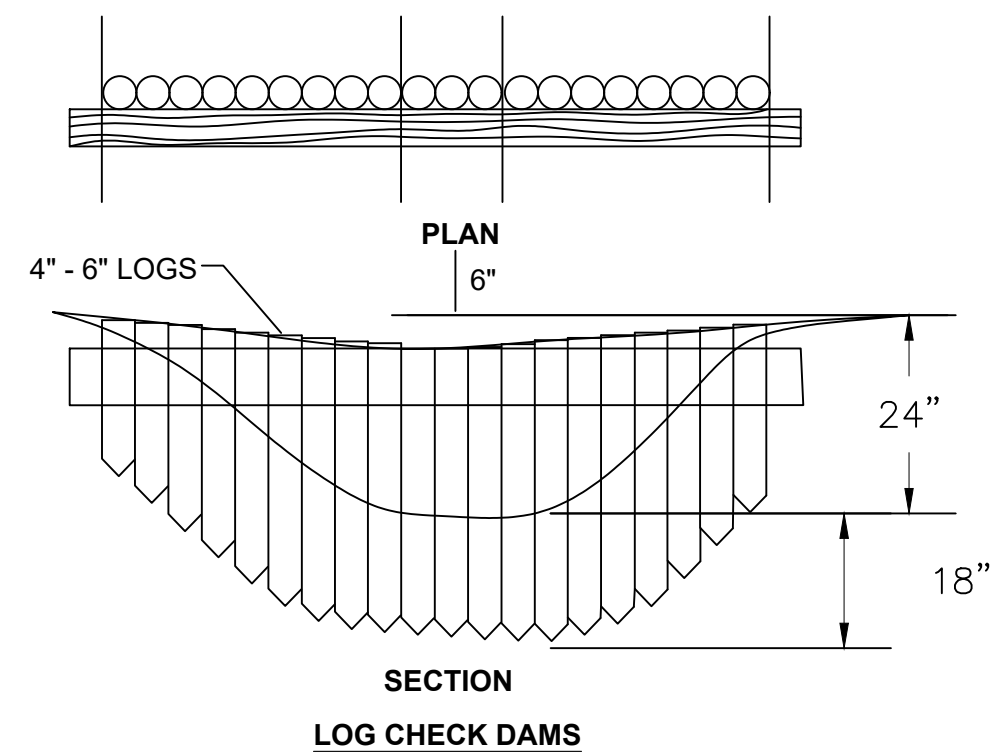
SHEET: SD-2



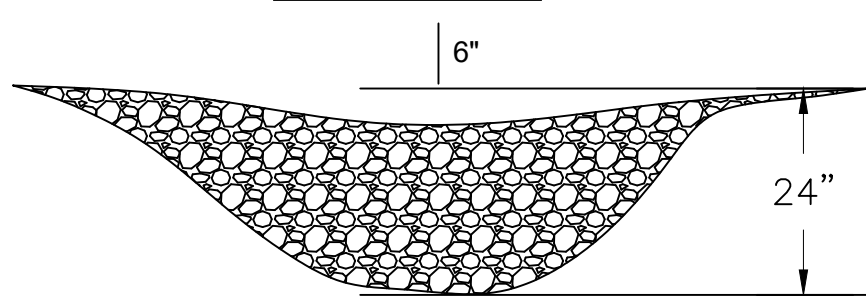
STRAW BALE DROP INLET SEDIMENT FILTER
N.T.S.



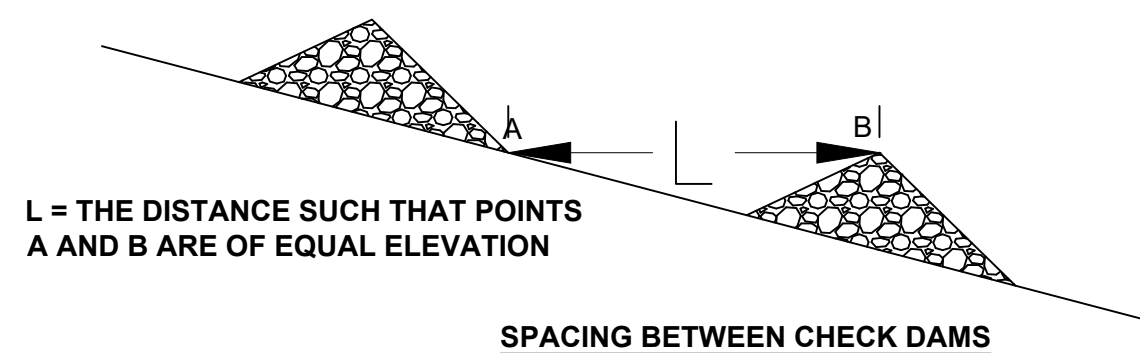
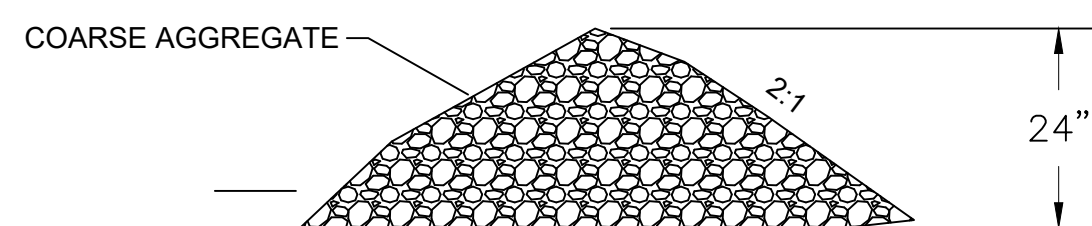
STRAW BALE INSTALLATION PROCEDURES
N.T.S.



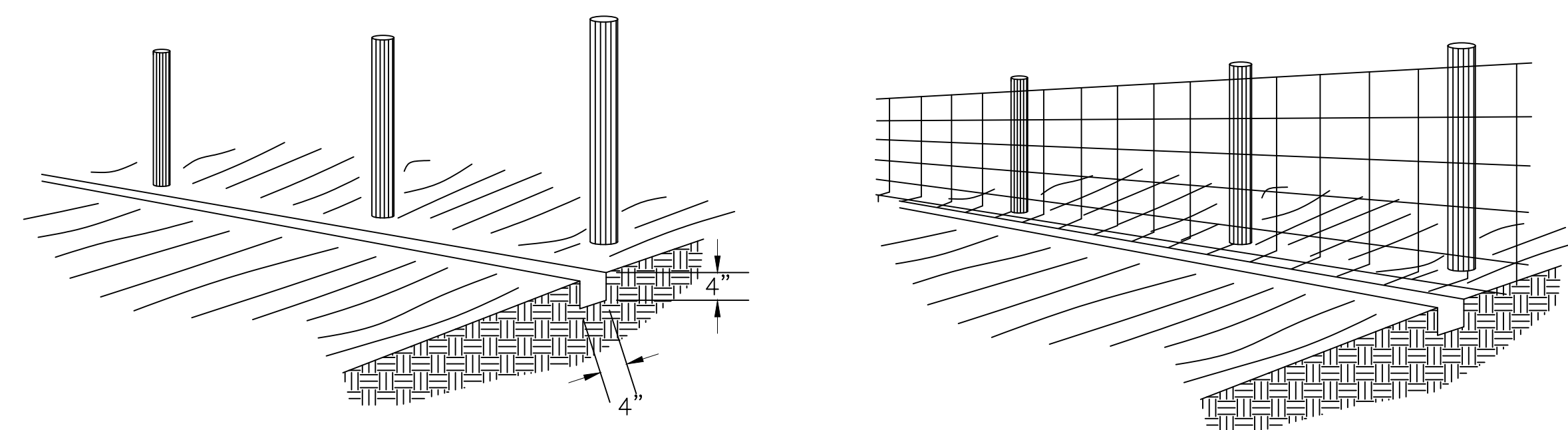
LOG CHECK DAMS



ROCK CHECK DAMS

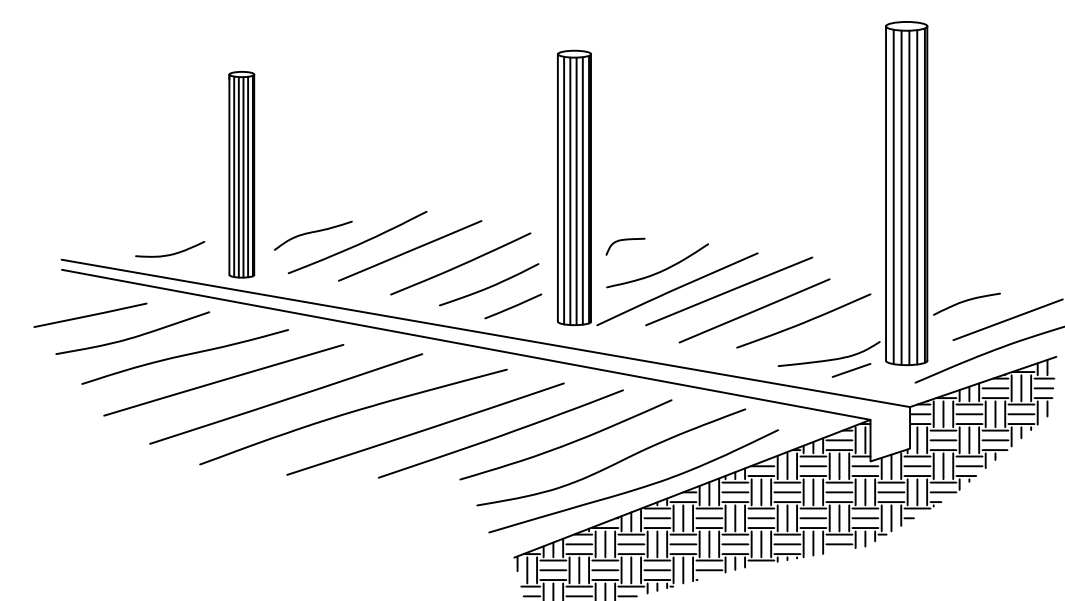


CHECK DAM DETAILS
N.T.S.

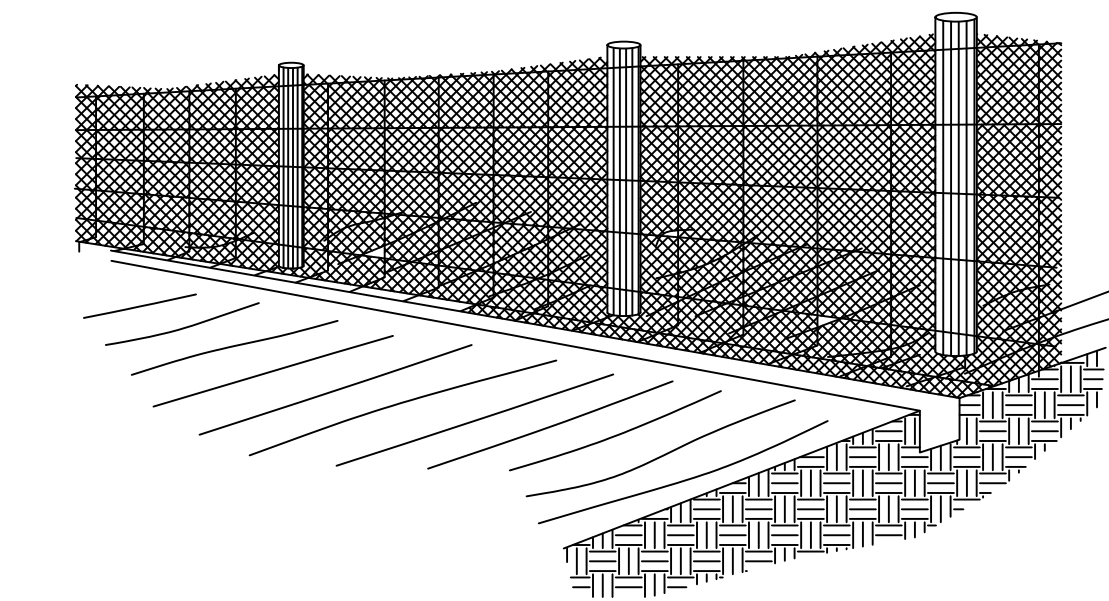


1. SET POSTS AND EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS

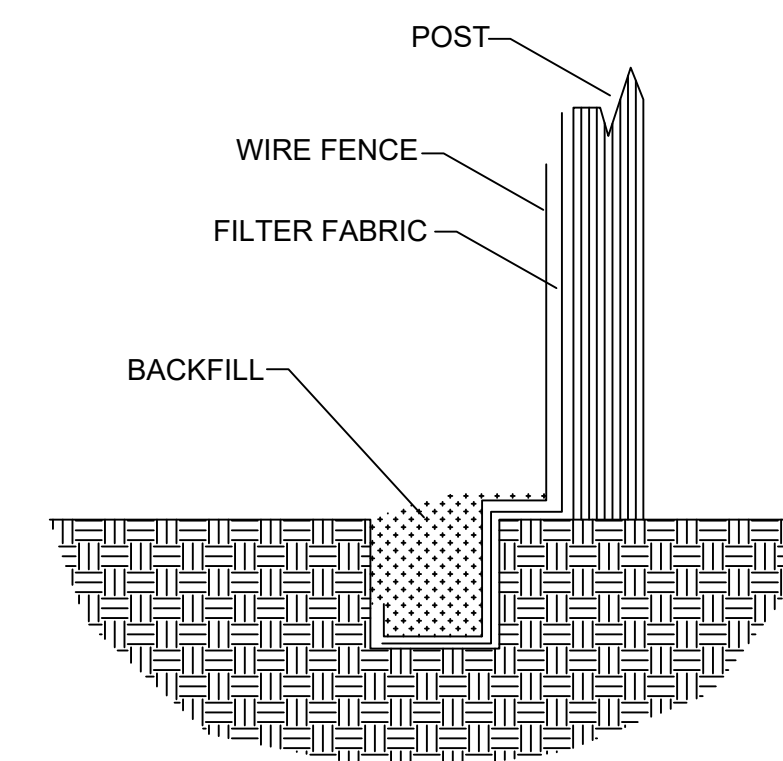
2. STAPLE WIRE FENCING TO POSTS



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH

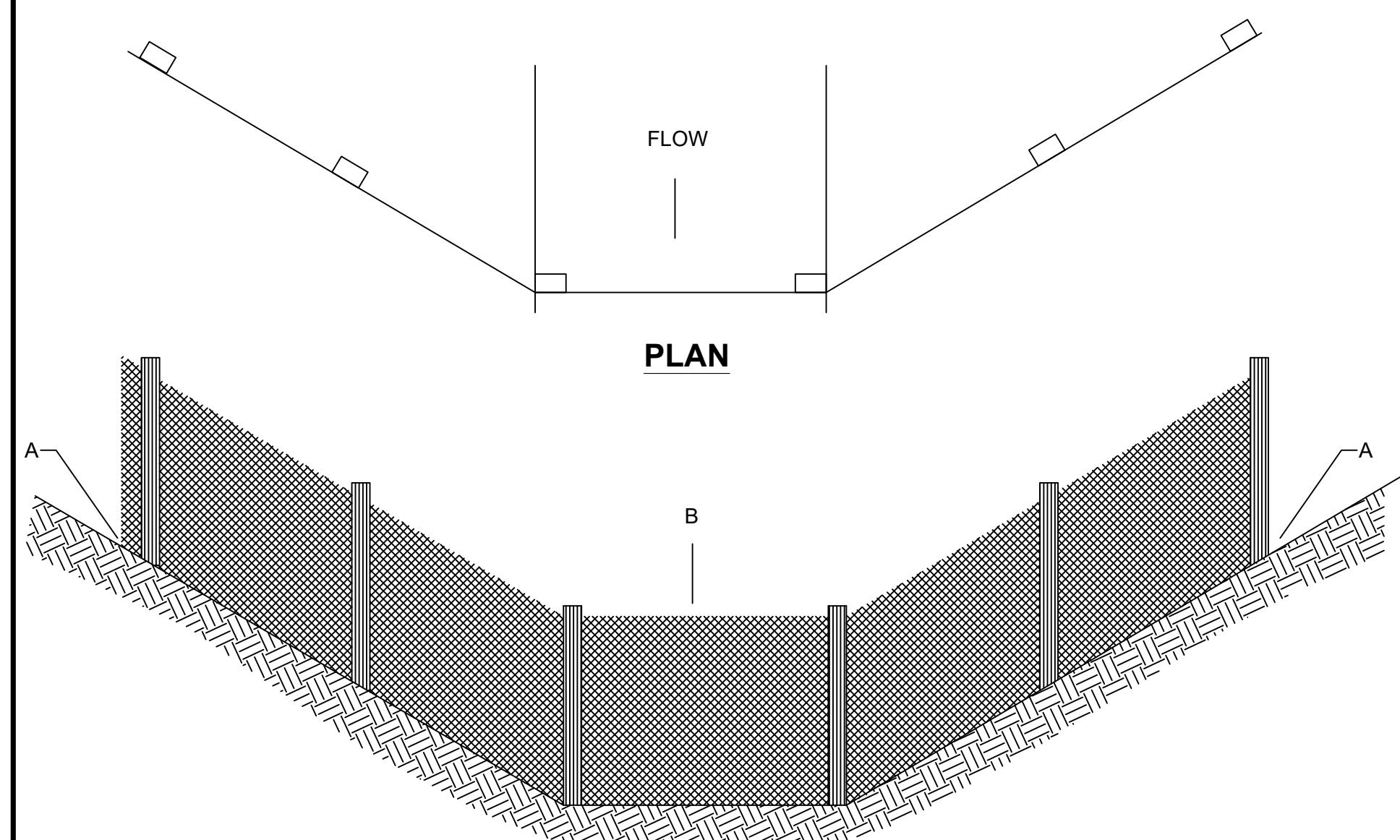


4. BACKFILL AND COMPACT THE EXCAVATED SOIL



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH

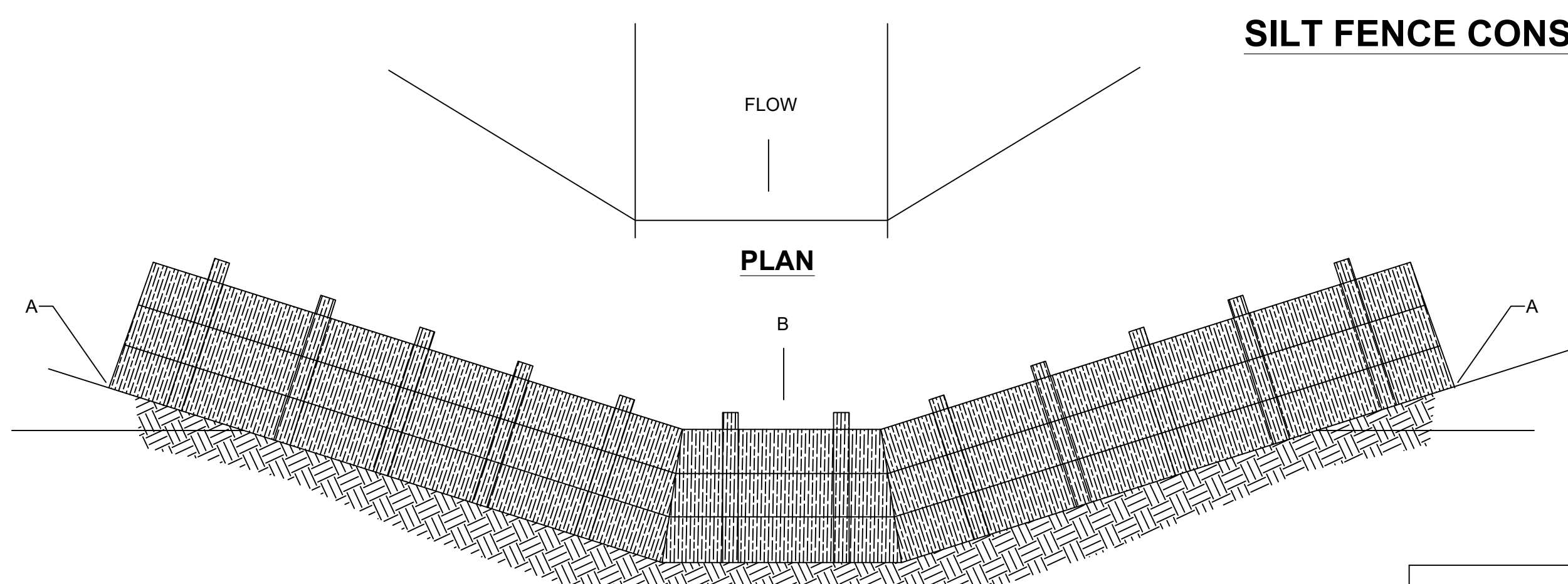
SILT FENCE CONSTRUCTION PROCEDURES
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF FILTER BARRIER
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF STRAW BALE BARRIER
N.T.S.

EROSION CONTROL DETAILS
N.T.S.

The Contractor shall do all work and take all measures necessary to control soil erosion resulting from construction operations, and shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within their protected working area so as to prevent damage to the adjacent wetlands and water courses. The Contractor shall use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of water diversion structures, diversion ditches, and settling basins.