

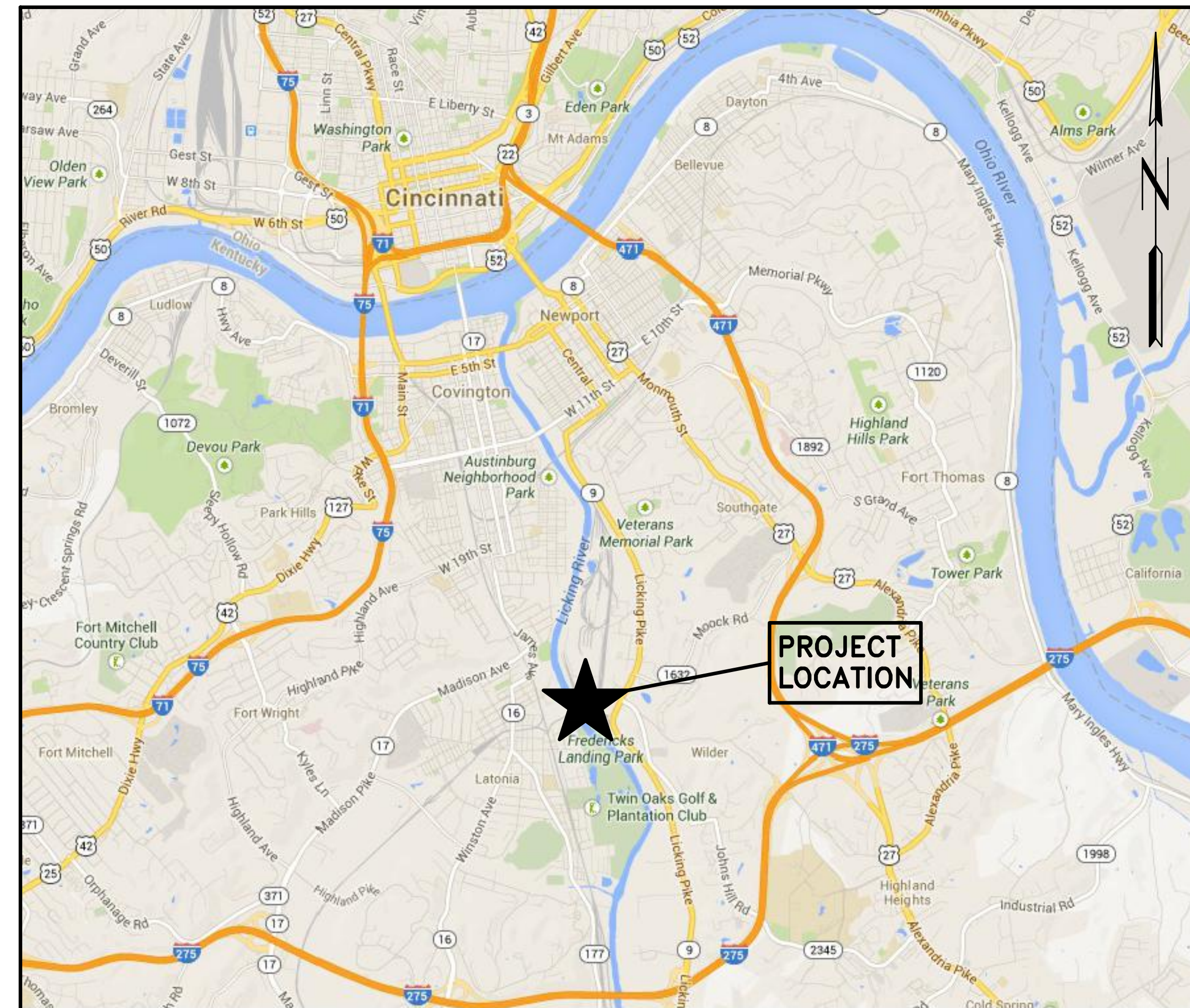


LICKING RIVER CROSSING

MAY 2022

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VICINITY MAP
NOT TO SCALE



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HDR ENGINEERING, INC.
 DATE 11-10-23, BY ROSS L. GUFFEY
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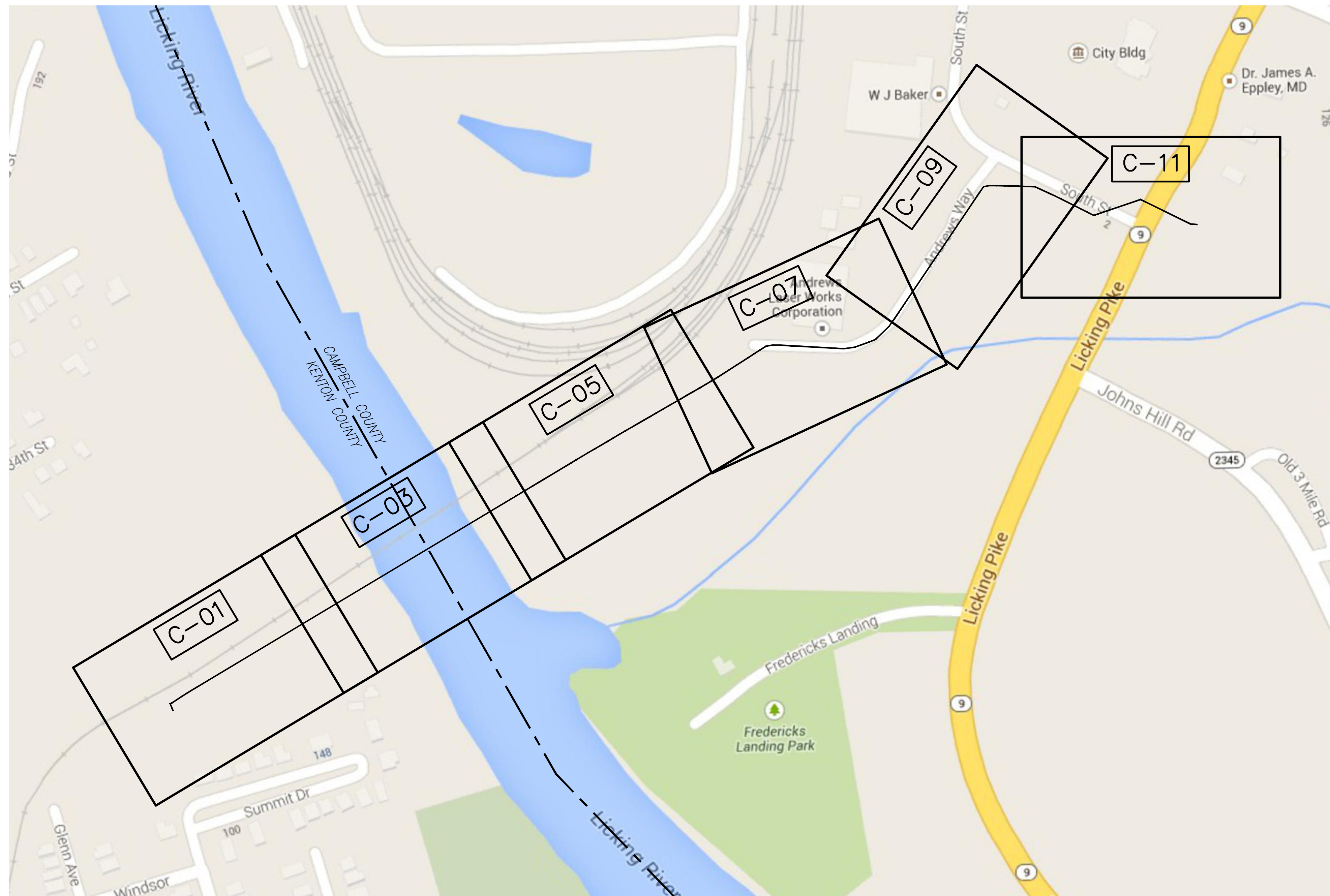
GOVERNING BODY

COMMISSIONERS:

- JOSEPH J. KOESTER-CHAIR
- FRED MACKE, JR-VICE-CHAIR
- JODY R. LANGE, CPA, CGMA-SECRETARY
- DOUG WAGNER-TREASURER
- CLYDE CUNNINGHAM-COMMISSIONER
- NICHOLAS E. WINNIKE-COMMISSIONER

RON LOVAN, PRESIDENT/CEO

RECORD DRAWINGS



SHEET LAYOUT
NTS

LEGEND

	PROPOSED	EXISTING
WATER MAIN	PROPOSED WATER MAIN —— WM —— WM —— WM —— WM —— WM ——	EXIST. WATER MAIN —— WM —— WM —— WM —— WM —— WM ——
GATE VALVE		
REDUCER		
FIRE HYDRANT ASSEMBLY		
PROPERTY LINE	——	——
FENCE	——	——
GUARDRAIL	—— □ —— □ —— □ —— □ ——	—— □ —— □ —— □ —— □ ——
OVERHEAD POWER	—— OU —— OU —— OU ——	—— OU —— OU —— OU ——
UNDERGROUND ELECTRIC	—— UE —— UE —— UE —— UE ——	—— UE —— UE —— UE —— UE ——
EDGE OF ROAD	——	——
CONTOUR LINES	——	——
TELEPHONE	—— T —— T —— T —— T ——	—— T —— T —— T —— T ——
FIBER OPTICS	——	—— FO ——
STREAM	——	——
TREES		
TEST BORING		

ABBREVIATIONS

ASPH	ASPHALT
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DI	DUCTILE IRON PIPE
DRIVE	DRIVEWAY
EOP	EDGE OF PAVEMENT
EX	EXISTING
GRAV	GRAVEL
IPS	IRON PIPE SIZE
HDPE	HIGH DENSITY POLYETHYLENE
LF	LINEAR FOOT
MJ	MECHANICAL JOINT
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE
RS	RESILIENT SEATED
RCP	REINFORCED CONCRETE PIPE
STL	STEEL
SY	SQUARE YARD
TFNO	TANGENTIAL FLANGED NECK OUTLET
WM	WATER MAIN

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DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

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HDR ENGINEERING, INC.
DATE: 11-10-23 BY: ROSS L. GUFFEY

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LICKING RIVER CROSSING
SHEET LAYOUT, LEGEND AND ABBREVIATIONS



FILENAME	00G-02.dwg
SCALE	NTS

SHEET
02

GENERAL NOTES:

1. EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS HEREON ARE BASED ON AVAILABLE INFORMATION AND ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY CONTRACTOR'S FAILURE TO LOCATE OR PRESERVE THESE UNDEGROUND FACILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICES.
2. KENTUCKY STATUTE (KRS 367) REQUIRES THAT ALL EXCAVATORS PLANNING EXCAVATION OR DEMOLITION WORK SHALL NOTIFY AND ALERT ALL UTILITY COMPANIES IN THE AREA AND/OR UNDERGROUND PROTECTION SERVICE SUCH AS KENTUCKY811 (811) AT LEAST TWO (2) WORKING DAYS BEFORE COMMENCING THE PLANNED EXCAVATION OR DEMOLITION ACTIVITIES.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TWO (2) WORKING DAYS IN ADVANCE OF ANY WORK THAT REQUIRES EXISTING UTILITIES TO BE TEMPORARILY TAKEN OUT OF SERVICE.
4. A MINIMUM 24 HOURS NOTICE SHALL BE GIVEN TO NKWD BY THE CONTRACTOR PRIOR TO THE START OF WATER MAIN WORK.
5. THE INSTALLATION OF WATER MAINS, SERVICES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE NORTHERN KENTUCKY WATER DISTRICT'S (NKWD) LATEST STANDARD SPECIFICATIONS AND DRAWINGS FOUND AT WWW.NKYWATER.ORG AND THE BID DRAWINGS AND SPECIFICATIONS.
6. ALL DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED JOINT PIPE. PUSH ON JOINTS SHALL BE U.S. PIPE TR FLEX, AMERICAN FLEX RING, OR APPROVED EQUAL. MECHANICAL JOINTS SHALL BE MEGALUG FRICTION TYPE RESTRAINT, OR APPROVED EQUAL.
7. IN ADDITION TO PROVIDING RESTRAINED JOINT PIPE THROUGHOUT THE ENTIRE PROJECT THE CONTRACTOR SHALL INSTALL CONCRETE THRUST BLOCK AND BACKING. ALL BENDS OVER FIVE (5) DEGREES SHALL BE SECURELY BLOCKED AGAINST MOVEMENT WITH CONCRETE THRUST BLOCKS PLACED AGAINST UNDISTURBED EARTH IN ACCORDANCE WITH THRUST BLOCK DETAILS SHOWN ON SHEET 16 FOR 8" TO 20" PIPE SIZES AND SHEET 18 FOR 36" PIPE SIZE.
8. PRIOR TO CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DEPTH AND LOCATION OF CONNECTION POINTS TO THE EXISTING WATER MAIN. ADJUSTMENT OF PIPE ALIGNMENT AND PROFILE AND ADDITIONAL HORIZONTAL AND VERTICAL BENDS MAY BE REQUIRED TO ACCOMMODATE THE TIE-INS.
9. WHERE POSSIBLE, WATERLINE DEFLECTION SHOWN (OTHER THAN BENDS) SHALL OCCUR UNIFORMLY OVER MULTIPLE PIPE JOINTS. JOINT DEFLECTION SHALL BE LIMITED TO THREE QUATERS OF THE PIPE MANUFACTURE'S RECOMMENDED ALLOWABLE DEFLECTION FOR RESTRAINED JOINTS.
10. PROPERTY LINES AND HIGHWAY RIGHT-OF-WAY HAVE BEEN OBTAINED FROM AVAILABLE PVA SOURCES AND KDOT HIGHWAY PLANS. PORTIONS OF THE ROUTE MAY HAVE ONLY PRESCRIPTIVE RIGHT-OF-WAY BASED ON KDOT INFORMATION. PRESCRIPTIVE RIGHT-OF-WAY IS DEFINED AS FOLLOWS BY KRS 178.025:
 - A. IN ABSENCE OF ANY RECORD, THE WIDTH OF A PUBLIC ROAD RIGHT-OF-WAY SHALL BE PRESUMED TO EXTEND TO AND INCLUDE THAT AREA LYING OUTSIDE THE SHOULDERS AND DITCH LINES AND WITHIN ANY LANDMARKS SUCH AS FENCES, FENCE POSTS, CORNERSTONES OR OTHER SIMILAR MONUMENTS INDICATING THE BOUNDARY LINES
 - B. IN THE ABSENCE OF BOTH RECORD OR LANDMARK, THE RIGHT-OF-WAY OF A PUBLIC ROAD SHALL BE DEEMED TO EXTEND TO AND INCLUDE THE SHOULDERS AND DITCH LINE ADJACENT TO SAID ROAD AND TO THE TOP OF CUTS OR TOE OF FILLS WHERE SUCH EXISTS
11. THE COST OF THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS SHALL BE INCIDENTAL TO THE PROJECT.
12. SHOULD GAS LINE FACILITIES BE DAMAGED, ALL GAS LINE REPAIRS SHALL BE COMPLETED BY A CERTIFIED GAS LINE CONTRACTOR AND APPROVED BY DUKE ENERGY.
13. ALL LAND, WHICH IS DISTURBED BY THIS CONSTRUCTION SHALL BE ADEQUATELY STABILIZED BOTH TEMPORARILY AND PERMANENTLY TO CONTROL EROSION AND SEDIMENTATION. SEE EPSC PLANS, DETAILS & NOTES IN THIS DRAWING SET.
14. THE CONTRACTOR SHALL MAKE OWNER IMMEDIATELY AWARE OF ANY MATERIAL EXCAVATED THAT COULD HAVE HISTORICAL RELEVANCE AND WILL LEAVE WORK AREA UNTIL A DETERMINATION IS MADE.
15. BOND ALL BURIED NON-WELDED DUCTILE IRON JOINTS PER DETAIL #1, SHEET 22. DO NOT BOND ACROSS ISOLATION JOINTS.
16. THE SANITATION DISTRICT NO. 1 OF NORTHERN KENTUCKY (SD1) WAS ACTIVELY CONSTRUCTING A 7 MILLION GALLON EQUALIZATION TANK AND APPURTENANCES AT THE TIME THESE WATER MAIN PLANS WERE PREPARED. SD1 IMPROVEMENTS SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY AND ARE NOT A RESULT OF AN AS-BUILT SURVEY. CONTRACTOR TO FIELD VERIFY THESE IMPROVEMENTS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY THE ENGINEER IF DISCREPANCIES EXIST.

UTILITY INFORMATION

KENTUCK811: 811 OR 800-752-6007

WATER: NORTHERN KENTUCKY WATER DISTRICT (859) 578-9898
KYLE RYAN (859) 426-2713

ELECTRIC: OWEN ELECTRIC COOPERATIVE (800) 372-7612

TELEPHONE: CINCINNATI BELL (888) 638-1699

SEWER: SANITATION DISTRICT NO.1 (859) 578-7450

GAS: DUKE ENERGY (877) 675-1656

CABLE: SPECTRUM (855) 281-1806

TRANSPORTATION

STATE: KTC-DOH DISTRICT #6 COVINGTON, KY.
(859) 341-2700

COUNTY: KENTON COUNTY PUBLIC WORKS
(859) 392-1920

CITY: CITY OF WILDER PUBLIC WORKS
(859) 581-9515

CSX RAILROAD: 1-800-232-0144

RECORD DRAWINGS



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DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

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HDR ENGINEERING, INC.

DATE 11-10-23 BY ROSS L. GUFFEY

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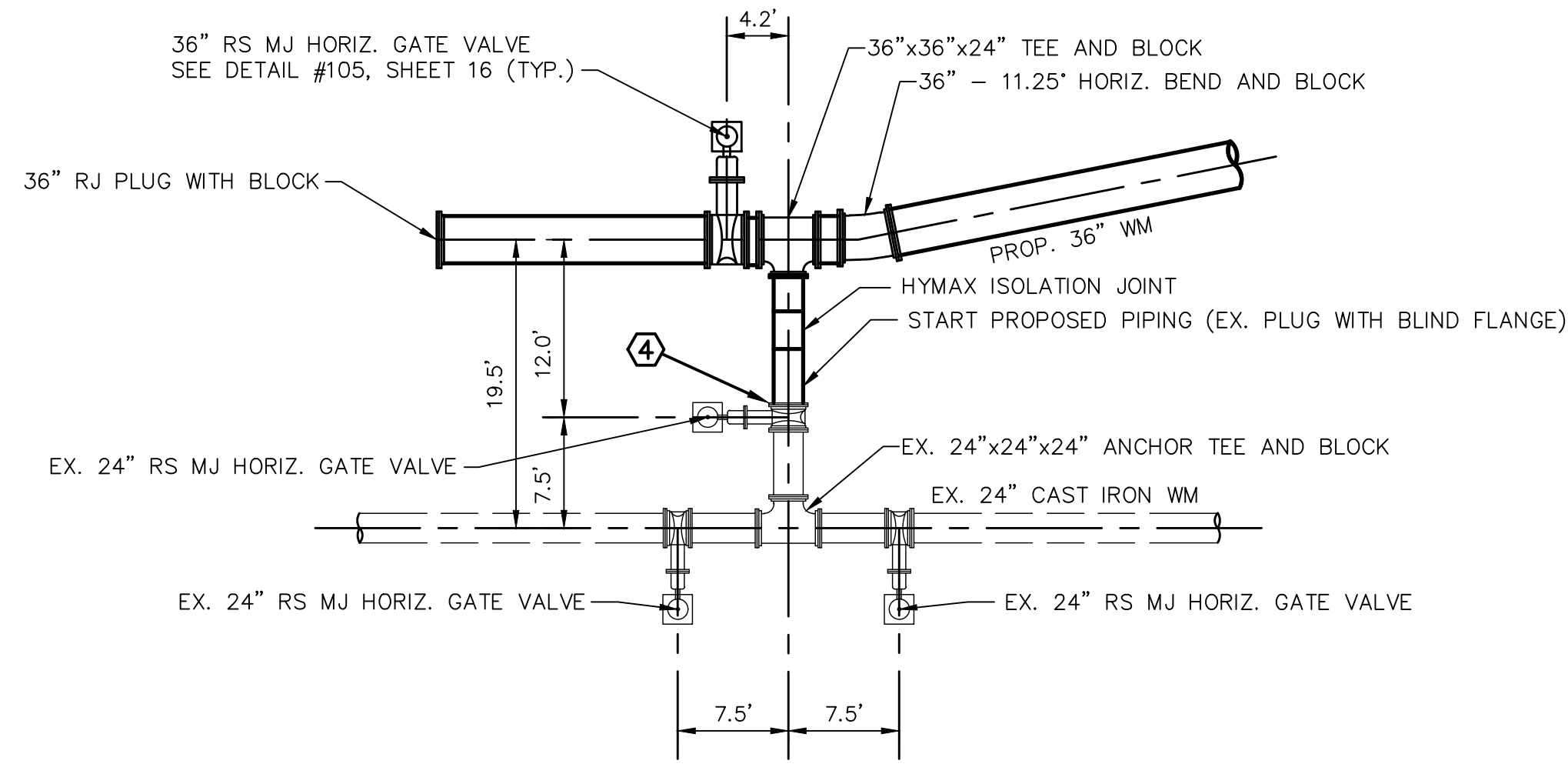
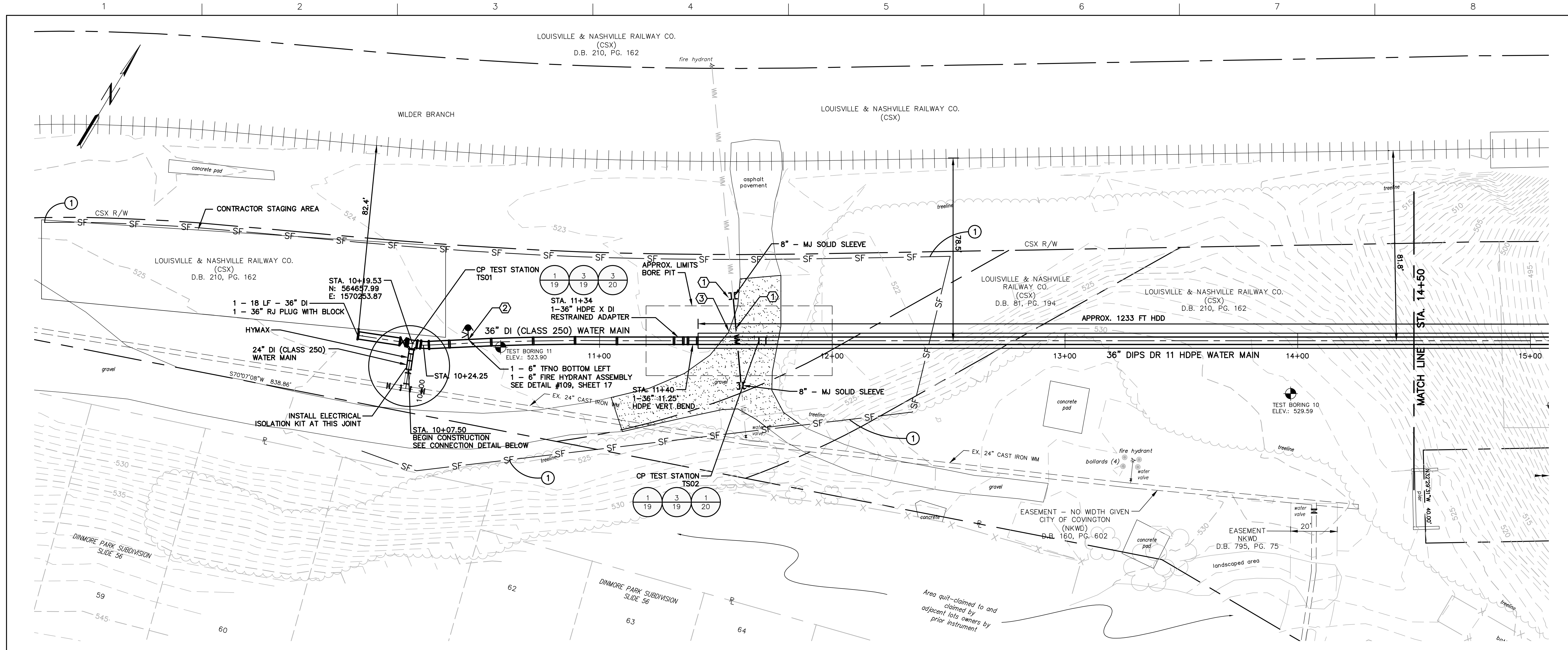


LICKING RIVER CROSSING

GENERAL NOTES

0 1" 2"

FILENAME	00G-03.dwg	SHEET	03
SCALE	NTS		



CONNECTION DETAIL STA. 10+07.50
1" = 10'

SHEET NOTES:

- ① CUT AND REMOVE EXISTING 8" WATER MAIN AS NECESSARY TO EXCAVATE FOR BORE PIT AND INSTALL NEW 36" WATER MAIN. REPLACE SECTION OF REMOVED PIPE WITH NEW 8" DI WATER MAIN AFTER THE INSTALLATION OF NEW 36" WATER MAIN.
- ② INSTALL NITRILE GASKETS ON DUCTILE IRON PIPE LOCATED ON CSX PROPERTY
- ③ REPAIR GRAVEL DRIVEWAY AS NECESSARY FOR 36" WATER MAIN INSTALLATION.
- ④ CONTRACTOR TO CONFIRM ALL EXISTING TIE-INS ARE RESTRAINED.

○ **BMP KEYNOTES:**

- ① SILT FENCE NO. 1. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.



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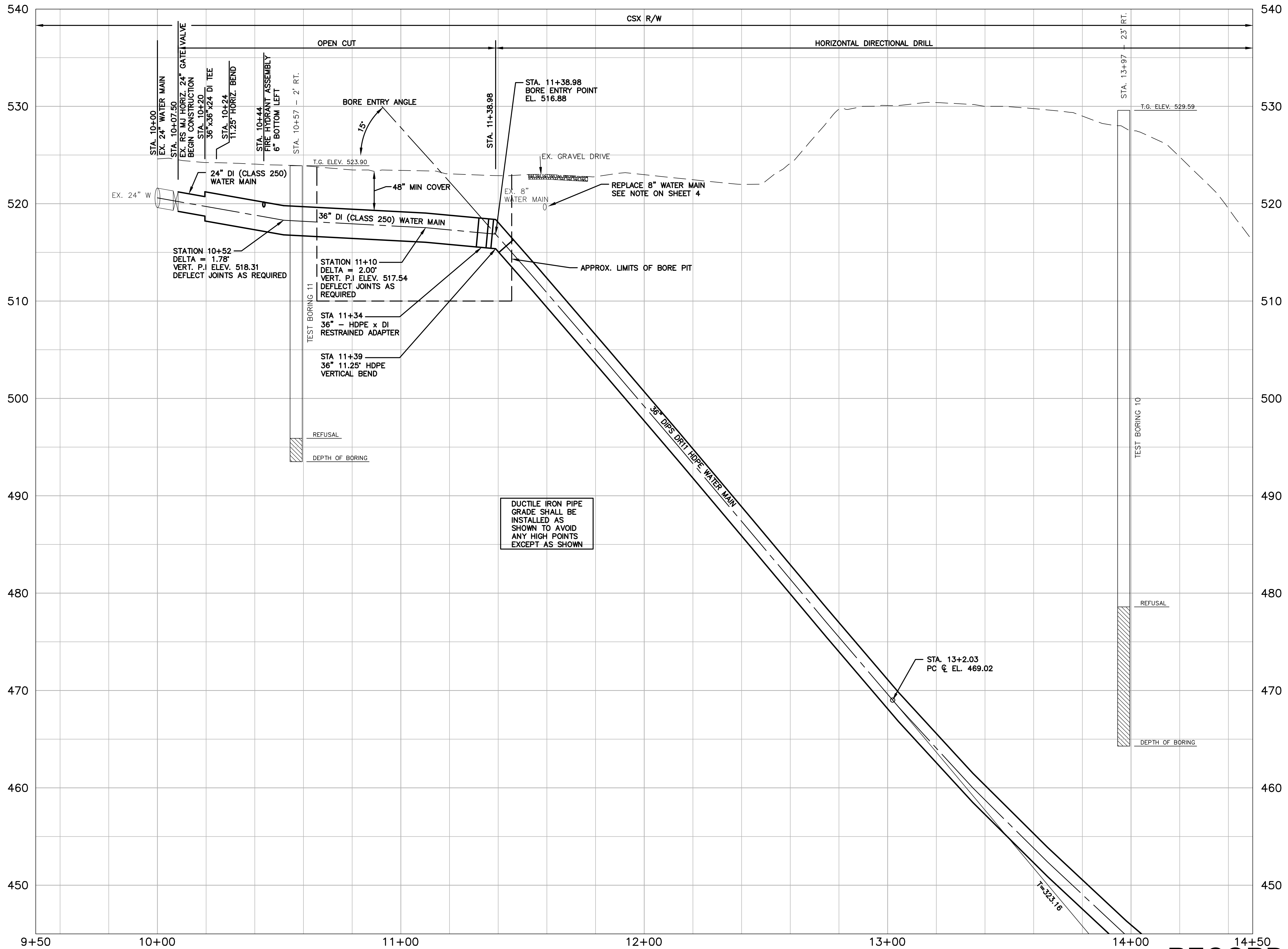
LICKING RIVER CROSSING

PLAN
STA 10+07.50 TO 14+50

SCALE 1" = 20'

FILENAME Base.dwg

SHEET **04**



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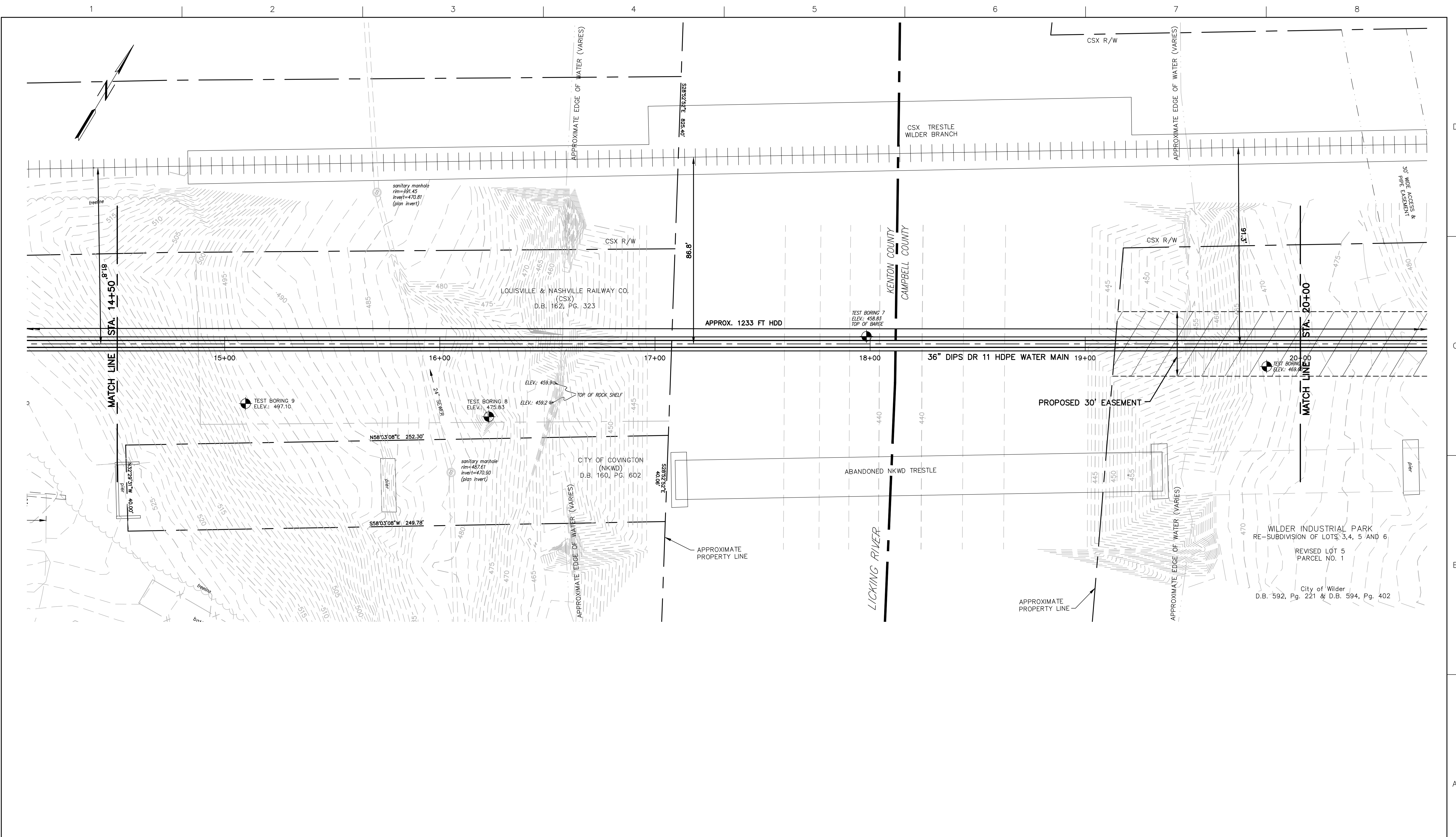
RECORD DRAWINGS

LICKING RIVER CROSSING

PROFILE
STA 10+07.50 TO 14+00

SCALE: H:1"=20' V:1"=5'

FILENAME: Base.dwg SHEET: **05**



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DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

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LICKING RIVER CROSSING

PLAN
STA 14+50 TO 20+00

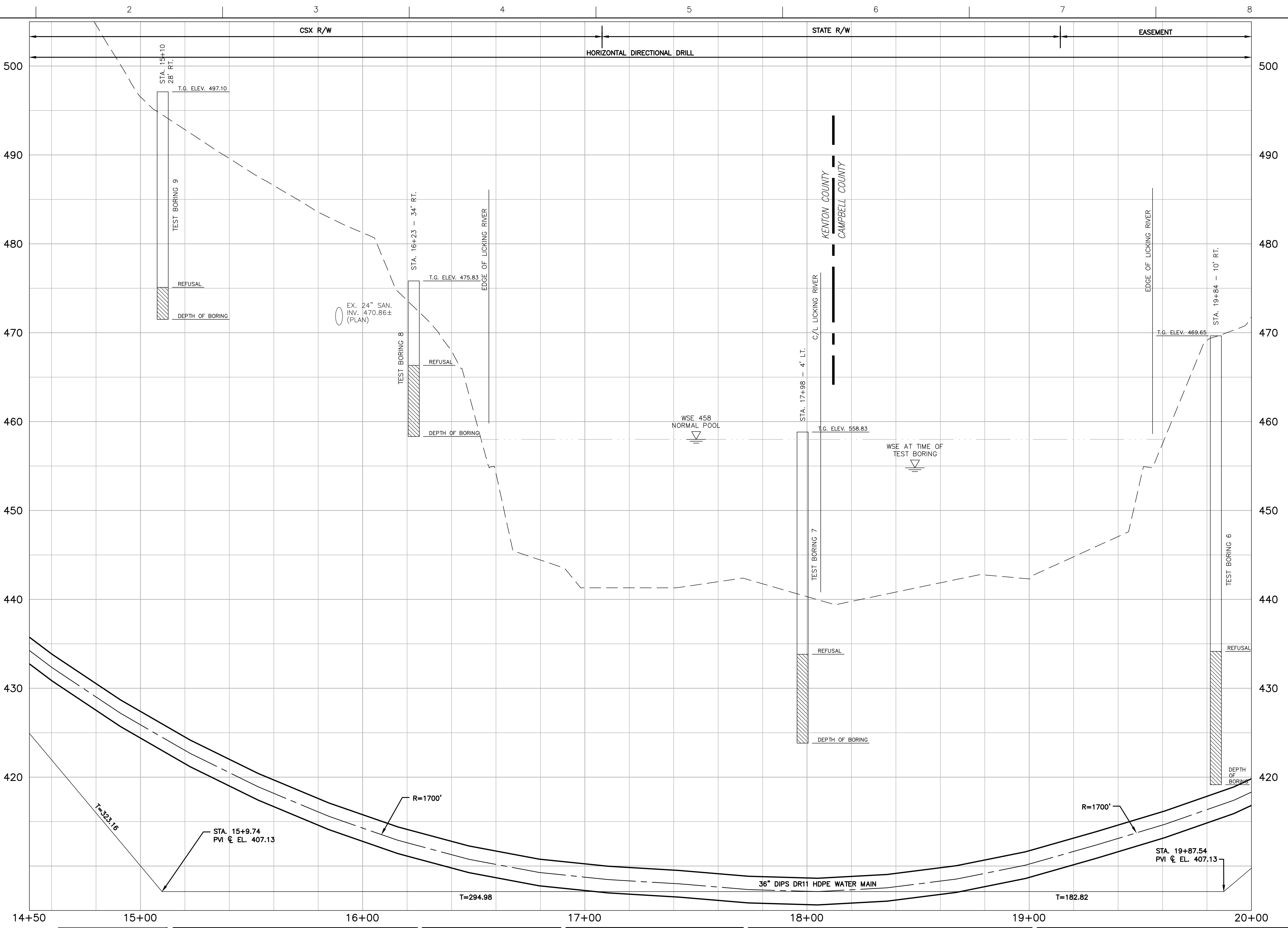
SCALE 1" = 20'

FILENAME Base.dwg

SHEET **06**



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DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	M. HANSEN
PROJECT NUMBER	197474

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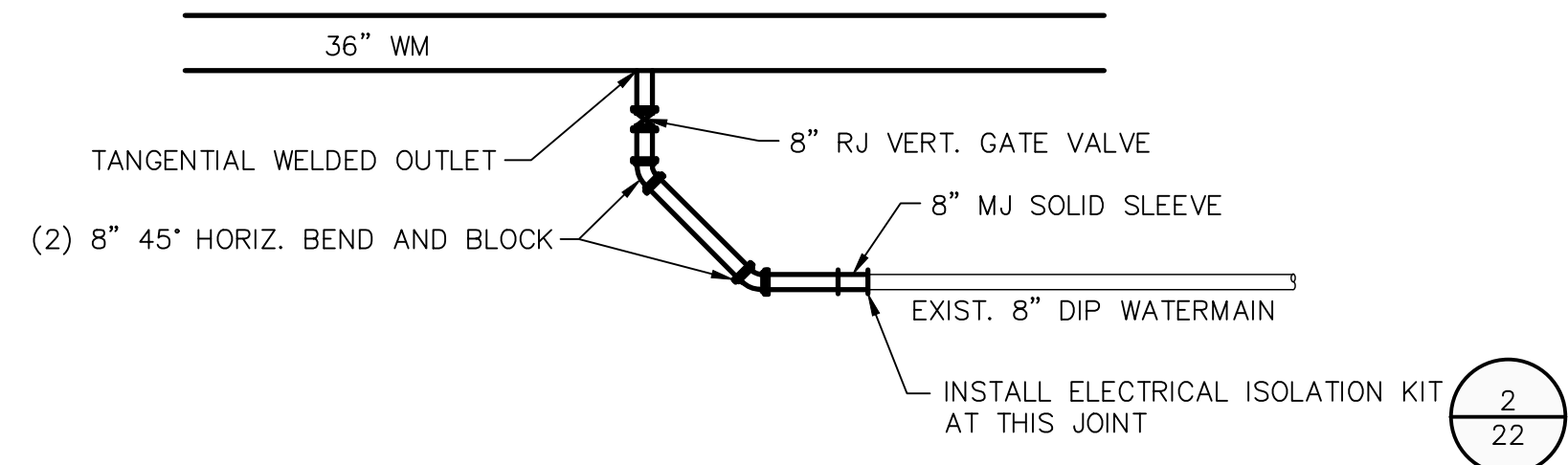
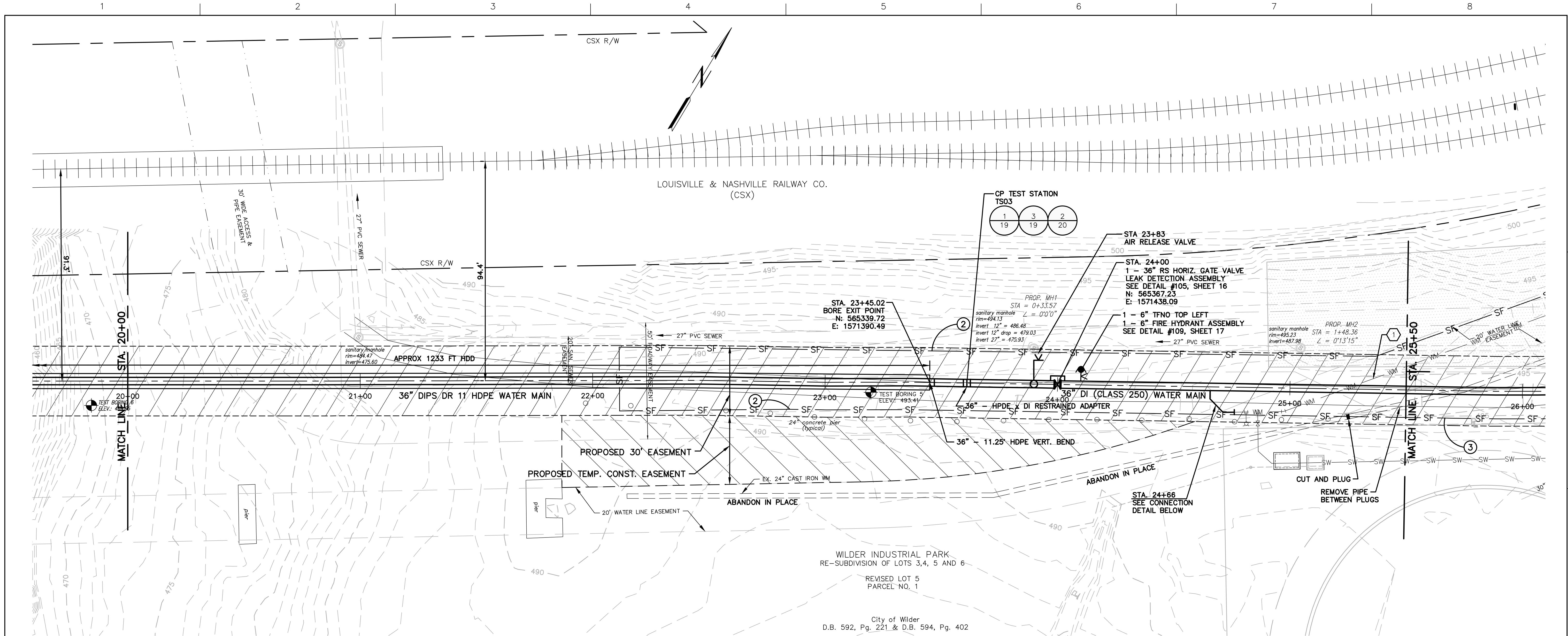
LICKING RIVER CROSSING
PROFILE
STA 14+50 TO 20+00

0 1" 2"

FILENAME Base.dwg SHEET 07

SCALE H:1"=20' V:1"=5'

RECORD DRAWINGS



CONNECTION DETAIL STA. 24+66
NTS

- BMP KEYNOTES:**
- ② SILT FENCE NO. 2. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.

- SHEET NOTES**
- ① SUPPORT EXISTING 8" WATER MAIN FOR INSTALLATION OF NEW 36" WATER MAIN. CUT AND REMOVE EXISTING 8" WATER MAIN IF SUPPORT OR INSTALLATION REQUIRES. REPLACE SECTION OF REMOVED PIPE WITH NEW 8" DI WATER MAIN AFTER THE INSTALLATION OF NEW 36" WATER MAIN. CONTRACTOR TO TEMPORARILY PROVIDE WATER SERVICE TO SD1.



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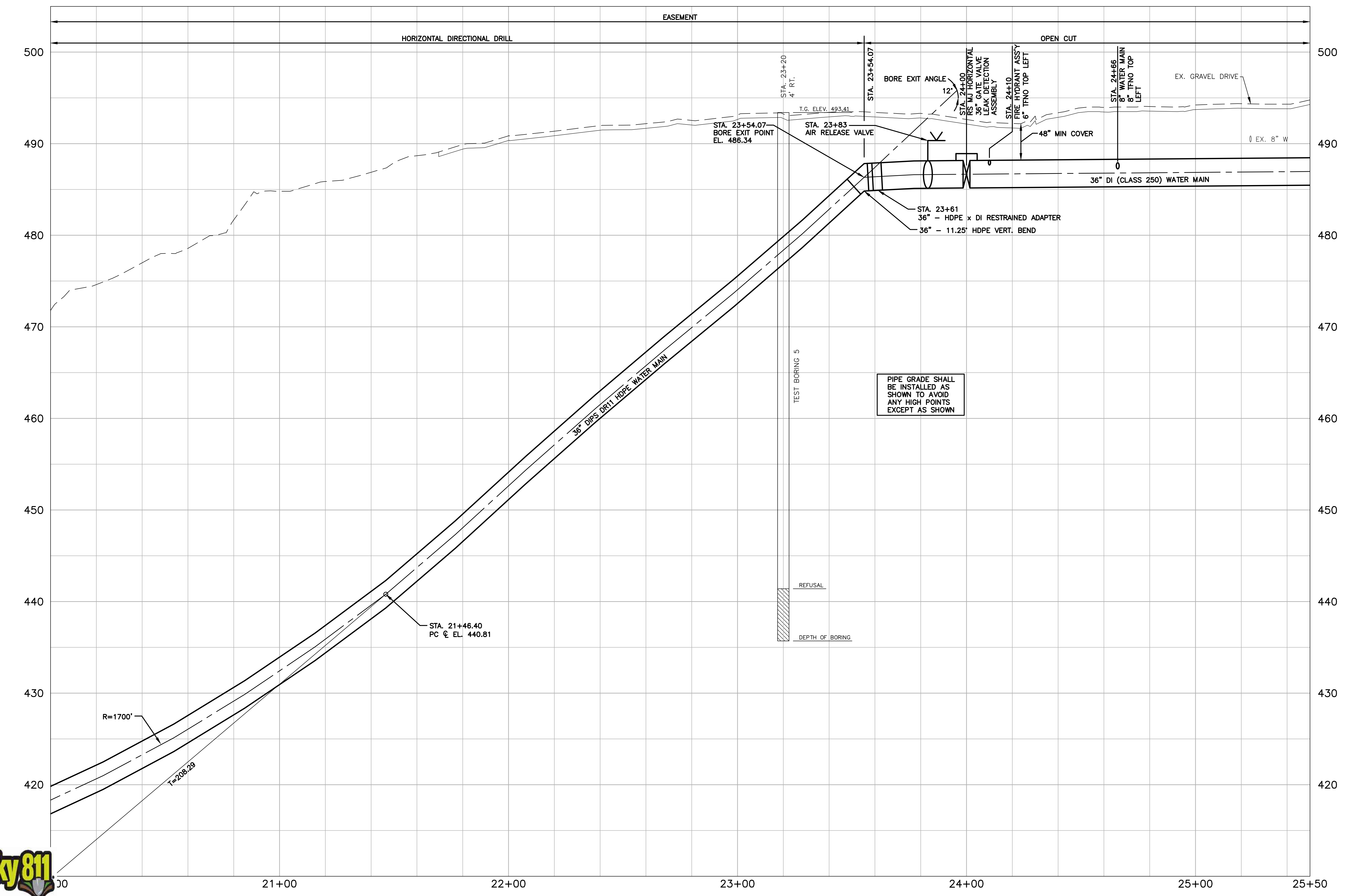
LICKING RIVER CROSSING

PLAN
STA 20+00 TO 25+00

SCALE 1" = 20'

FILENAME Base.dwg

SHEET **08**



RECORD DRAWINGS



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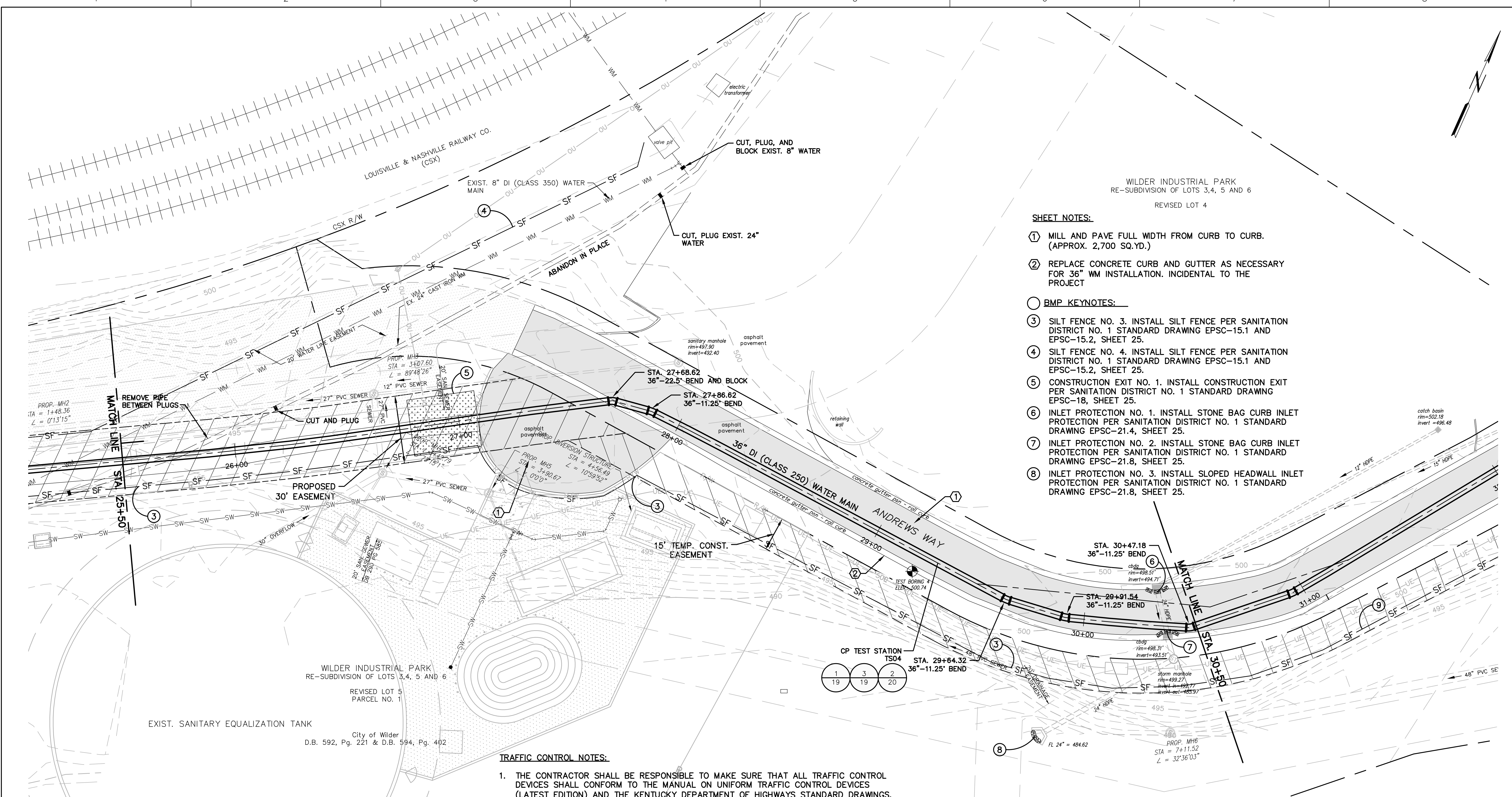
LICKING RIVER CROSSING

PROFILE
STA 20+00 TO 25+00

SCALE: H:1"=20' V:1"=5'

FILENAME: Base.dwg

SHEET: **09**



SHEET NOTES:

- ① MILL AND PAVE FULL WIDTH FROM CURB TO CURB. (APPROX. 2,700 SQ. YD.)
- ② REPLACE CONCRETE CURB AND GUTTER AS NECESSARY FOR 36" WM INSTALLATION. INCIDENTAL TO THE PROJECT
- ③ **BMP KEYNOTES:**
- ③ SILT FENCE NO. 3. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
- ④ SILT FENCE NO. 4. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
- ⑤ CONSTRUCTION EXIT NO. 1. INSTALL CONSTRUCTION EXIT PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-18, SHEET 25.
- ⑥ INLET PROTECTION NO. 1. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.4, SHEET 25.
- ⑦ INLET PROTECTION NO. 2. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.8, SHEET 25.
- ⑧ INLET PROTECTION NO. 3. INSTALL SLOPED HEADWALL INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.8, SHEET 25.

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS, OR AS APPROVED BY THE CITY OF WILDER PUBLIC WORKS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS, DISTRICT 6. SEE SHEET 18 FOR TYPICAL LAYOUT OF TRAFFIC CONTROL DEVICES.
2. LOCAL ACCESS TO BUSINESSES ALONG SOUTH STREET AND ANDREWS WAY SHALL BE PROVIDED DURING THE WATER MAIN CONSTRUCTION. THIS SHALL BE ACCOMPLISHED WITHING THE PUBLIC ROAD RIGHT OF WAY AND TEMPORARY AND PERMANENT WATER LINE EASEMENTS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL UTILIZE STEEL PLATES; INSTALL TEMPORARY CRUSHED STONE ACCESS ROAD, PROVIDE FLAGGERS, AND IMPLEMENT OTHER MEASURES AS DEEMED NECESSARY TO MAINTAIN ACCESS.
3. PERMISSION TO USE PRIVATE PROPERTY OUTSIDE THE PUBLIC RIGHT OF WAY AND EASEMENTS FOR ACCESS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

NOTE:
IMPROVEMENTS ASSOCIATED WITH THE ONGOING SD1 EQ TANK PROJECT (BY OTHERS) ARE SHOWN ON THE PLANS FOR REFERENCE ONLY AND ARE NOT A RESULT OF AN AS-BUILT SURVEY. CONTRACTOR TO FIELD VERIFY THESE IMPROVEMENTS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY THE ENGINEER IF DISCREPANCIES EXIST.



Call 811 Before You Dig www.kentucky811.org



ISSUE	DATE	DESCRIPTION
04	11/10/2023	RECORD DRAWINGS
03	05/12/2022	BID SET
02	03/04/2021	KDOW SUBMITTAL
01	08/03/2020	REVIEW SET

PROJECT MANAGER	ROSS L. GUFFEY
DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

RECORD DRAWING
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HDR ENGINEERING, INC.
DATE 11-10-23 BY ROSS L. GUFFEY
NOTE: THE ORIGINAL CONSTRUCTION DRAWING WITH ISSUE DATE MAY 2022 HAD THE P.E. SEAL OF STATE OF KENTUCKY NUMBER 52153 AFFIXED.

RECORD DRAWINGS

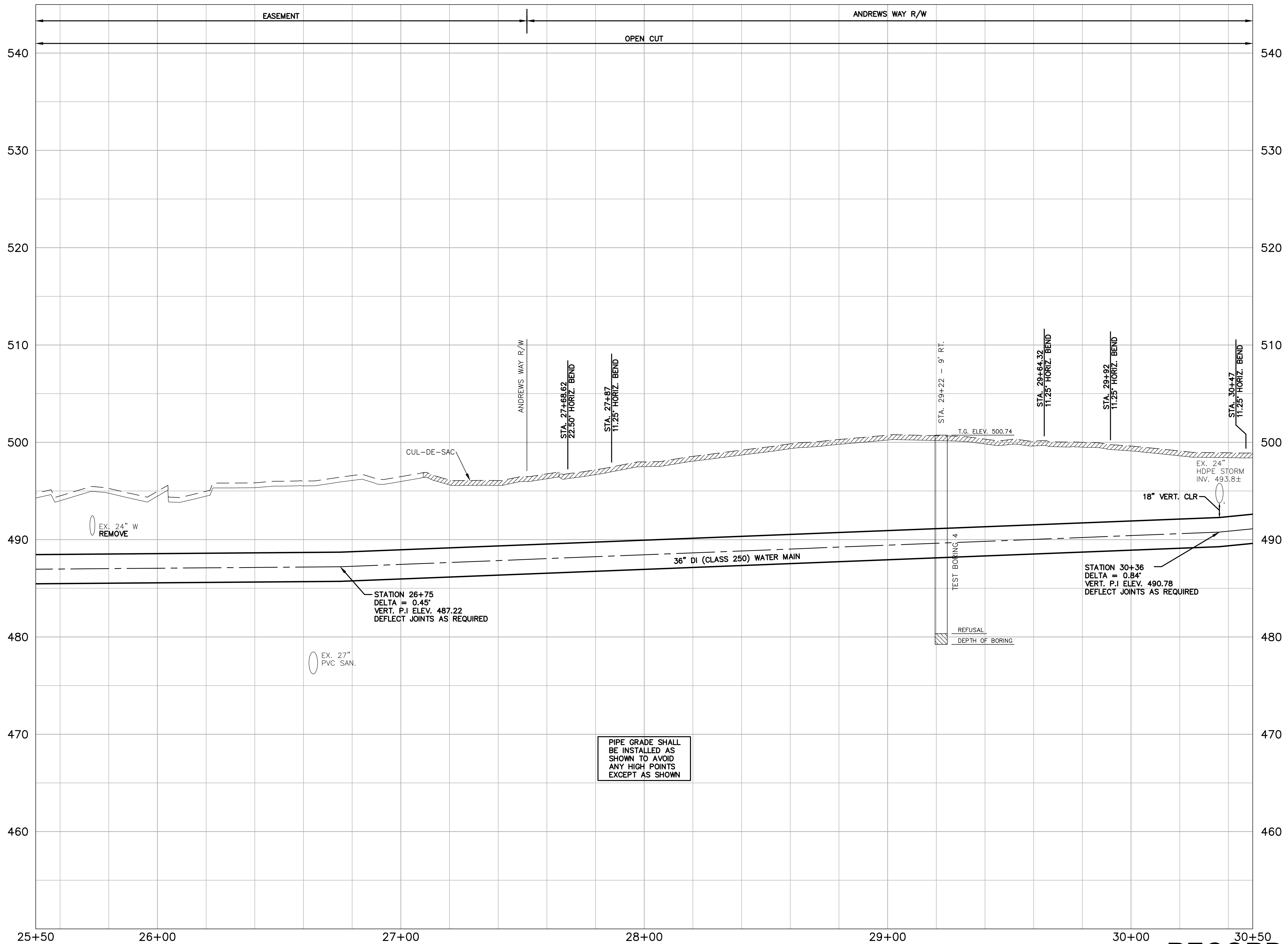
LICKING RIVER CROSSING

PLAN
LINE 25+50 TO 30+50

SCALE 1" = 20'

FILENAME Base.dwg

SHEET **10**



PIPE GRADE SHALL BE INSTALLED AS SHOWN TO AVOID ANY HIGH POINTS EXCEPT AS SHOWN



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LICKING RIVER CROSSING
PROFILE
STA 25+50 TO 30+50

0 1" 2"

FILENAME	Base.dwg	SHEET	11
SCALE	H:1"=20' V:1"=5'		

TRAFFIC CONTROL NOTES:

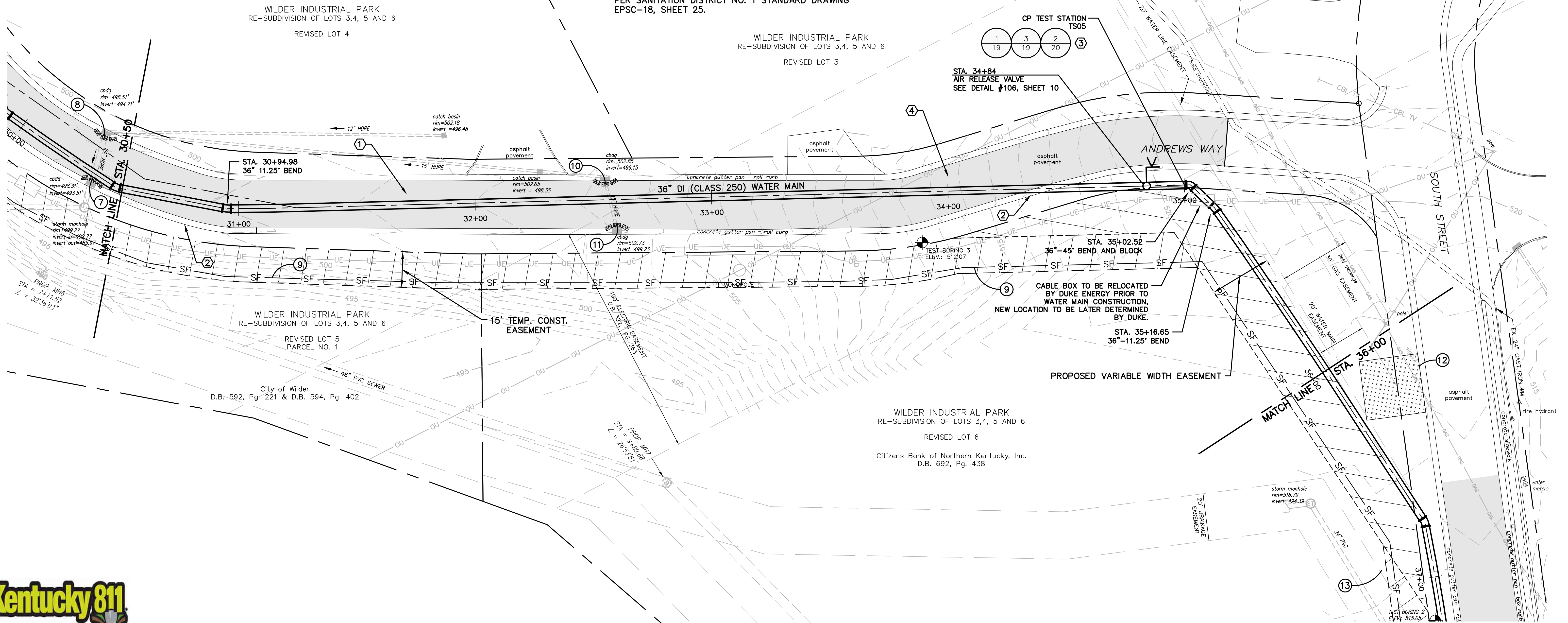
1. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS, OR AS APPROVED BY THE CITY OF WILDER PUBLIC WORKS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS, DISTRICT 6. SEE SHEET 18 FOR TYPICAL LAYOUT OF TRAFFIC CONTROL DEVICES.
2. LOCAL ACCESS TO BUSINESSES ALONG SOUTH STREET AND ANDREWS WAY SHALL BE PROVIDED DURING THE WATER MAIN CONSTRUCTION. THIS SHALL BE ACCOMPLISHED WITHING THE PUBLIC ROAD RIGHT OF WAY AND TEMPORARY AND PERMANENT WATER LINE EASEMENTS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL UTILIZE STEEL PLATES; INSTALL TEMPORARY CRUSHED STONE ACCESS ROAD, PROVIDE FLAGGERS, AND IMPLEMENT OTHER MEASURES AS DEEMED NECESSARY TO MAINTAIN ACCESS.
3. PERMISSION TO USE PRIVATE PROPERTY OUTSIDE THE PUBLIC RIGHT OF WAY AND EASEMENTS FOR ACCESS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SHEET NOTES:

- ① MILL AND PAVE FULL WIDTH FROM CURB TO CURB. (APPROX. 2,700 SQ.YD.)
- ② REPLACE CONCRETE CURB AND GUTTER AS NECESSARY FOR 36" WM INSTALLATION. INCIDENTAL TO THE PROJECT.
- ③ PLACE ALL ANODES ON NORTH SIDE OF PIPE.
- ④ ELECTRIC VAULT AND CONDUITS TO BE REMOVED FROM WATER MAIN EASEMENT PRIOR TO THE START OF THE WATER MAIN PROJECT.

BMP KEYNOTES:

- ⑨ SILT FENCE NO. 5. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
- ⑩ INLET PROTECTION NO. 4. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.4, SHEET 25.
- ⑪ INLET PROTECTION NO. 5. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.4, SHEET 25.
- ⑫ CONSTRUCTION EXIT NO. 2. INSTALL CONSTRUCTION EXIT PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-18, SHEET 25.



RECORD DRAWINGS



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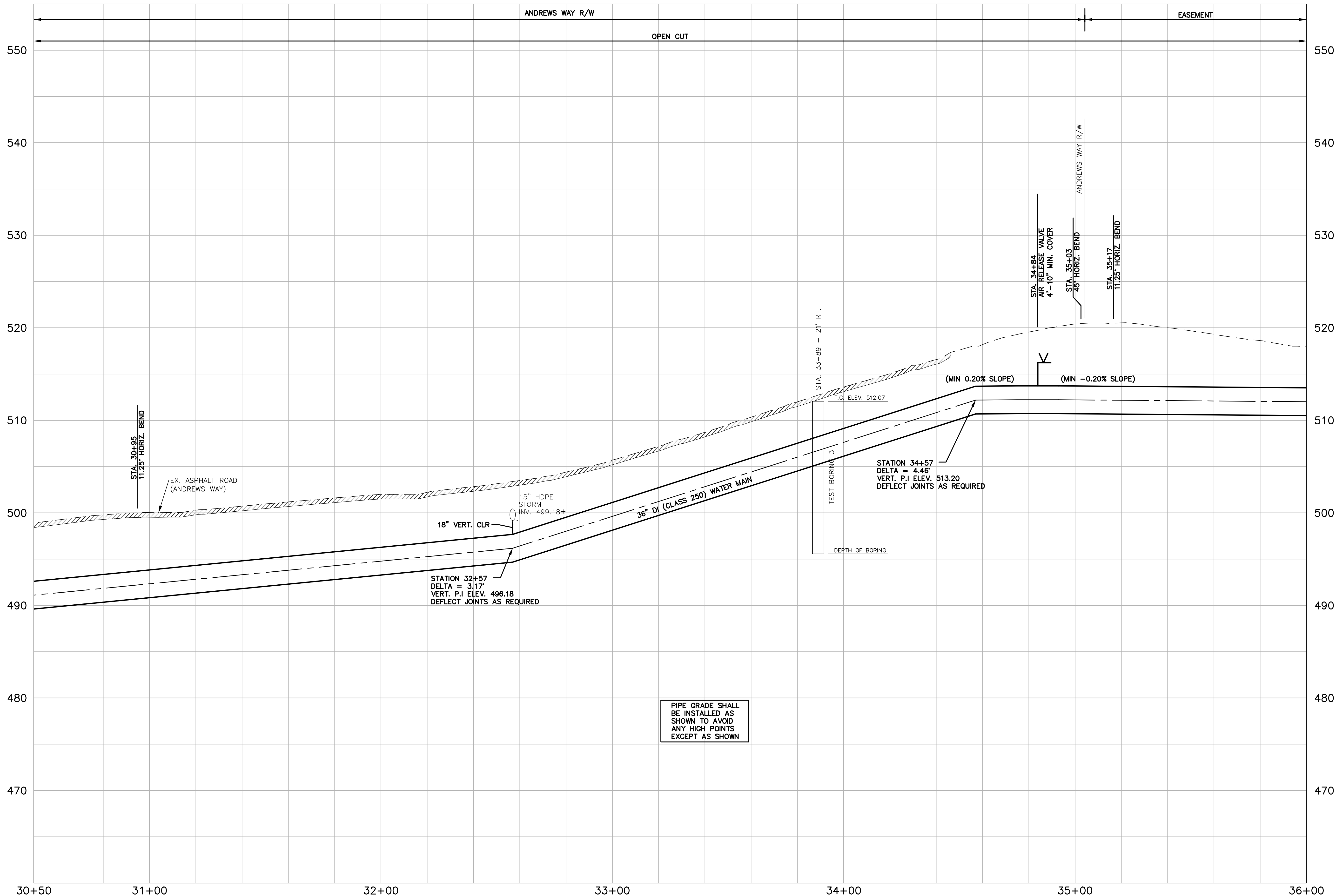
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LICKING RIVER CROSSING
PLAN
STA 30+50 TO 36+00

0 1" = 20'

FILENAME	Base.dwg	SHEET	12
SCALE	1" = 20'		



PIPE GRADE SHALL
BE INSTALLED AS
SHOWN TO AVOID
ANY HIGH POINTS
EXCEPT AS SHOWN



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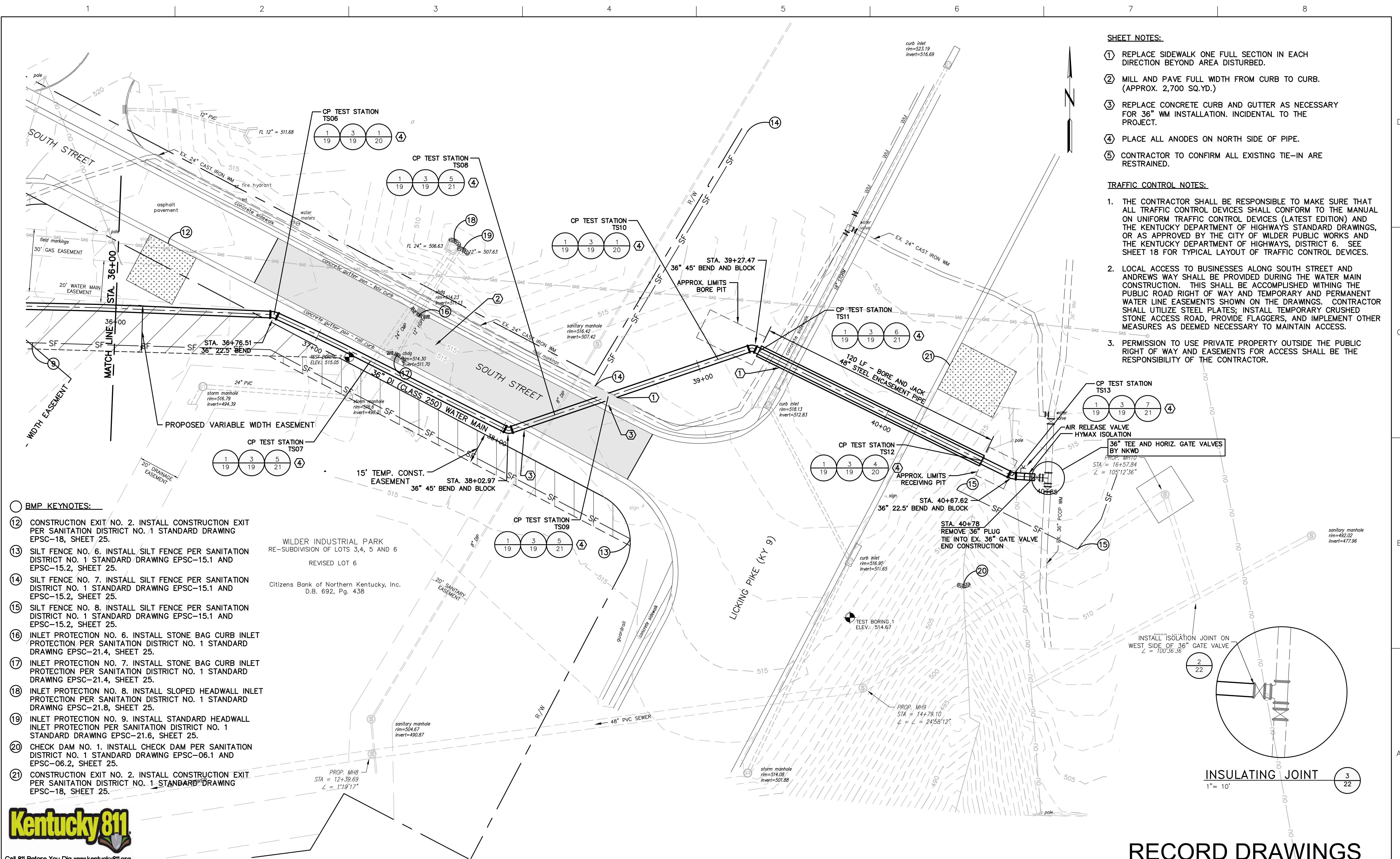
RECORD DRAWINGS

LICKING RIVER CROSSING

PROFILE
STA 30+50 TO 36+00

SCALE: H:1"=20' V:1"=5'

FILENAME: Base.dwg
SHEET: **13**

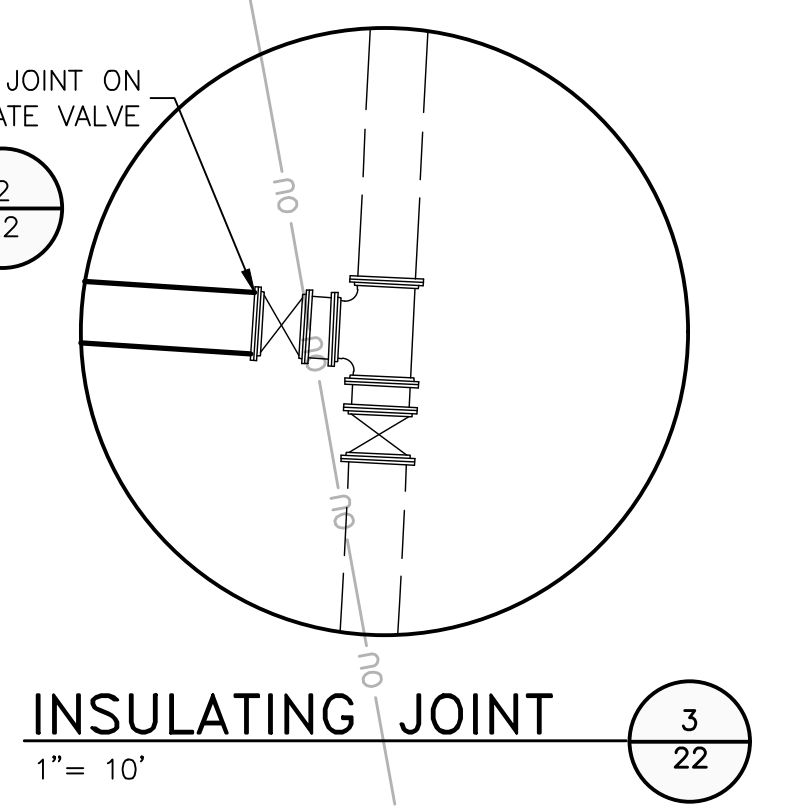


- SHEET NOTES:**
- REPLACE SIDEWALK ONE FULL SECTION IN EACH DIRECTION BEYOND AREA DISTURBED.
 - MILL AND PAVE FULL WIDTH FROM CURB TO CURB. (APPROX. 2,700 SQ.YD.)
 - REPLACE CONCRETE CURB AND GUTTER AS NECESSARY FOR 36" WM INSTALLATION. INCIDENTAL TO THE PROJECT.
 - PLACE ALL ANODES ON NORTH SIDE OF PIPE.
 - CONTRACTOR TO CONFIRM ALL EXISTING TIE-IN ARE RESTRAINED.

- TRAFFIC CONTROL NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS, OR AS APPROVED BY THE CITY OF WILDER PUBLIC WORKS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS, DISTRICT 6. SEE SHEET 18 FOR TYPICAL LAYOUT OF TRAFFIC CONTROL DEVICES.
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- BMP KEYNOTES:**
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 - SILT FENCE NO. 6. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
 - SILT FENCE NO. 7. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
 - SILT FENCE NO. 8. INSTALL SILT FENCE PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-15.1 AND EPSC-15.2, SHEET 25.
 - INLET PROTECTION NO. 6. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.4, SHEET 25.
 - INLET PROTECTION NO. 7. INSTALL STONE BAG CURB INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.4, SHEET 25.
 - INLET PROTECTION NO. 8. INSTALL SLOPED HEADWALL INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.8, SHEET 25.
 - INLET PROTECTION NO. 9. INSTALL STANDARD HEADWALL INLET PROTECTION PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-21.6, SHEET 25.
 - CHECK DAM NO. 1. INSTALL CHECK DAM PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-06.1 AND EPSC-06.2, SHEET 25.
 - CONSTRUCTION EXIT NO. 2. INSTALL CONSTRUCTION EXIT PER SANITATION DISTRICT NO. 1 STANDARD DRAWING EPSC-18, SHEET 25.

WILDER INDUSTRIAL PARK
RE-SUBDIVISION OF LOTS 3, 4, 5 AND 6
REVISED LOT 6
Citizens Bank of Northern Kentucky, Inc.
D.B. 692, Pg. 438



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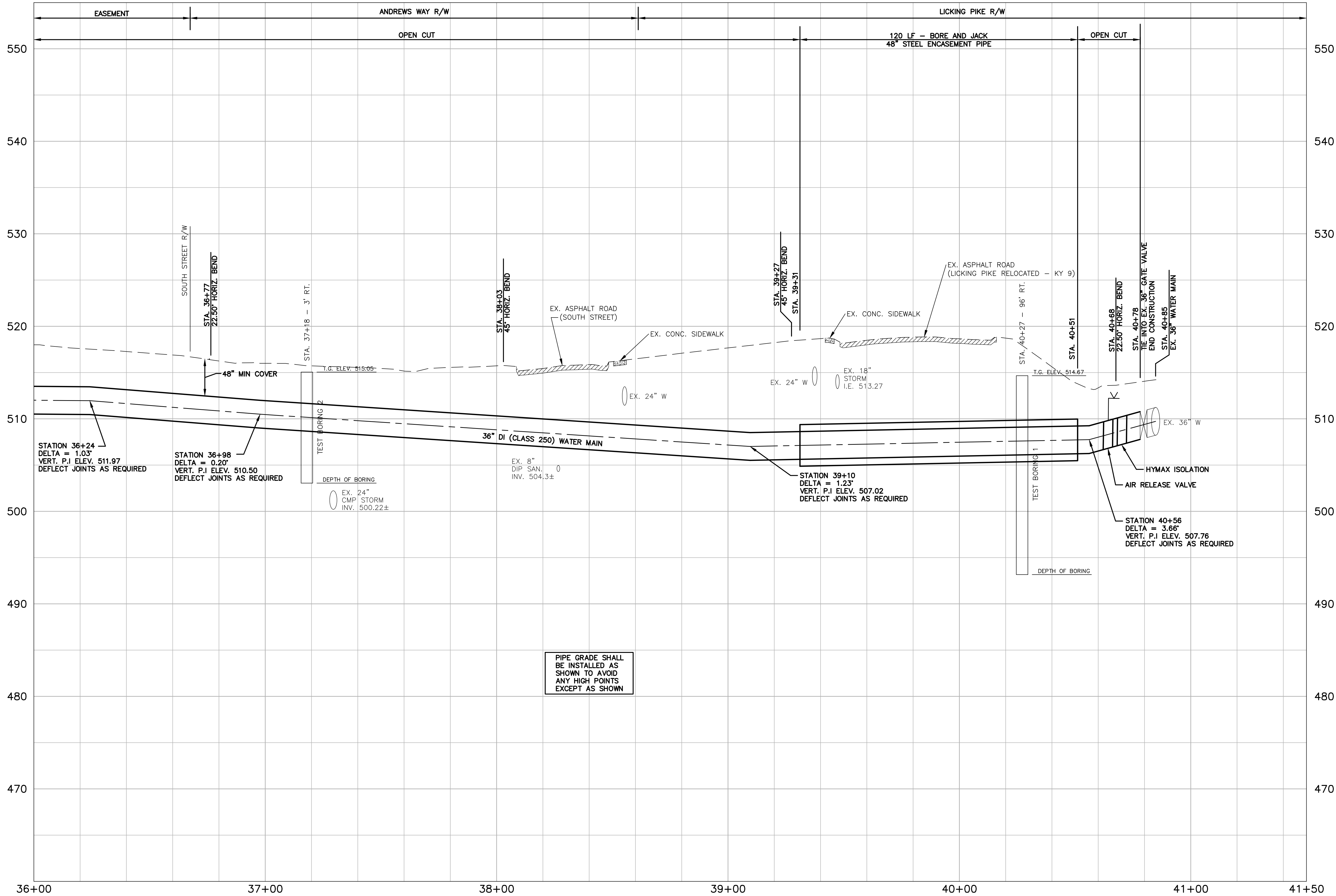
LICKING RIVER CROSSING

PLAN
STA 36+00 TO 40+85

SCALE: 1" = 20'

FILENAME: Base.dwg

SHEET: 14



PIPE GRADE SHALL BE INSTALLED AS SHOWN TO AVOID ANY HIGH POINTS EXCEPT AS SHOWN

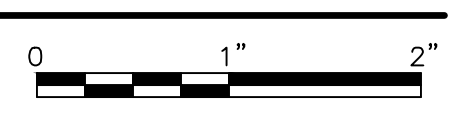


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RECORD DRAWINGS

LICKING RIVER CROSSING

PROFILE STA 36+00 TO 40+85



FILENAME: Base.dwg
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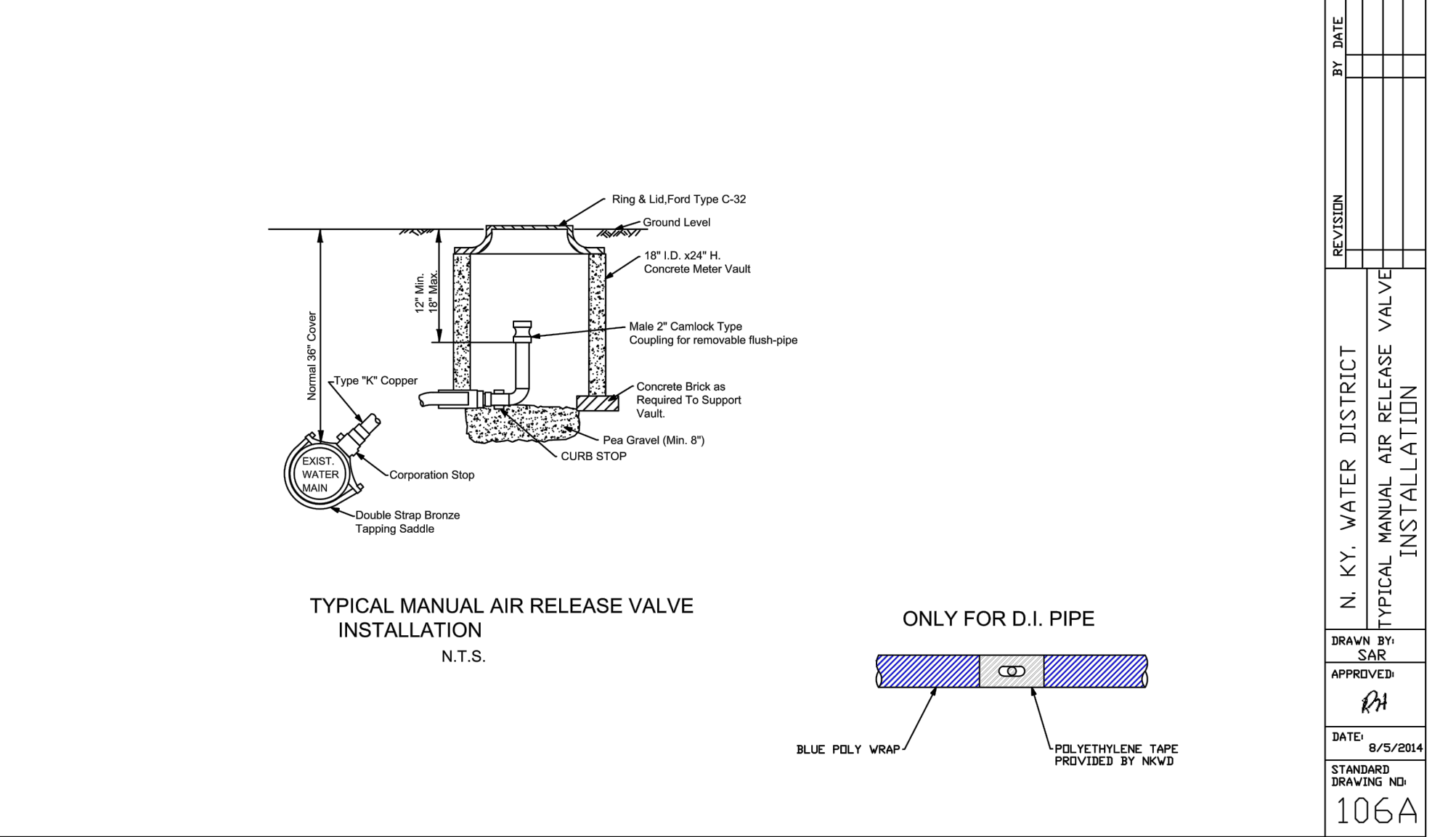
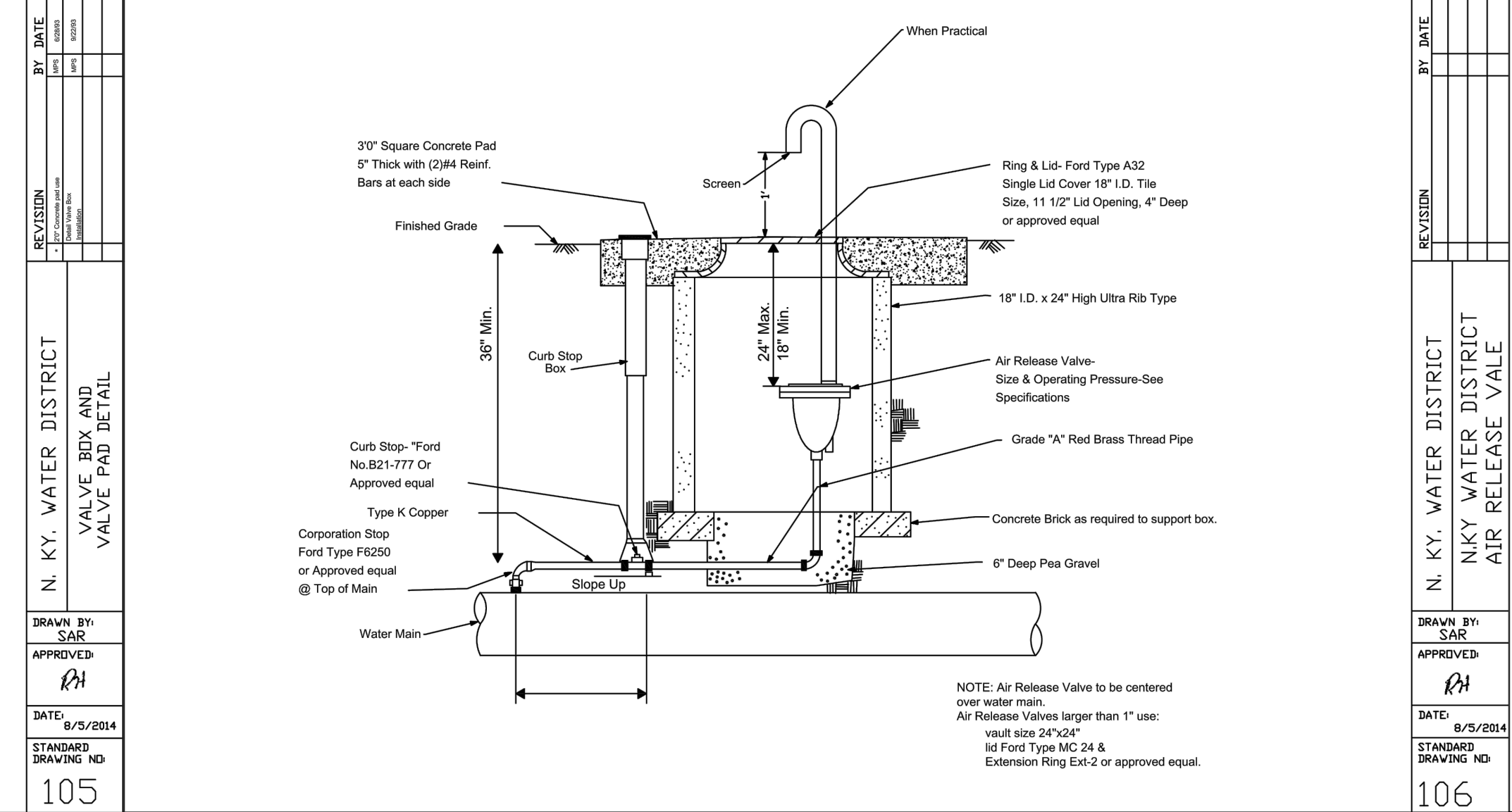
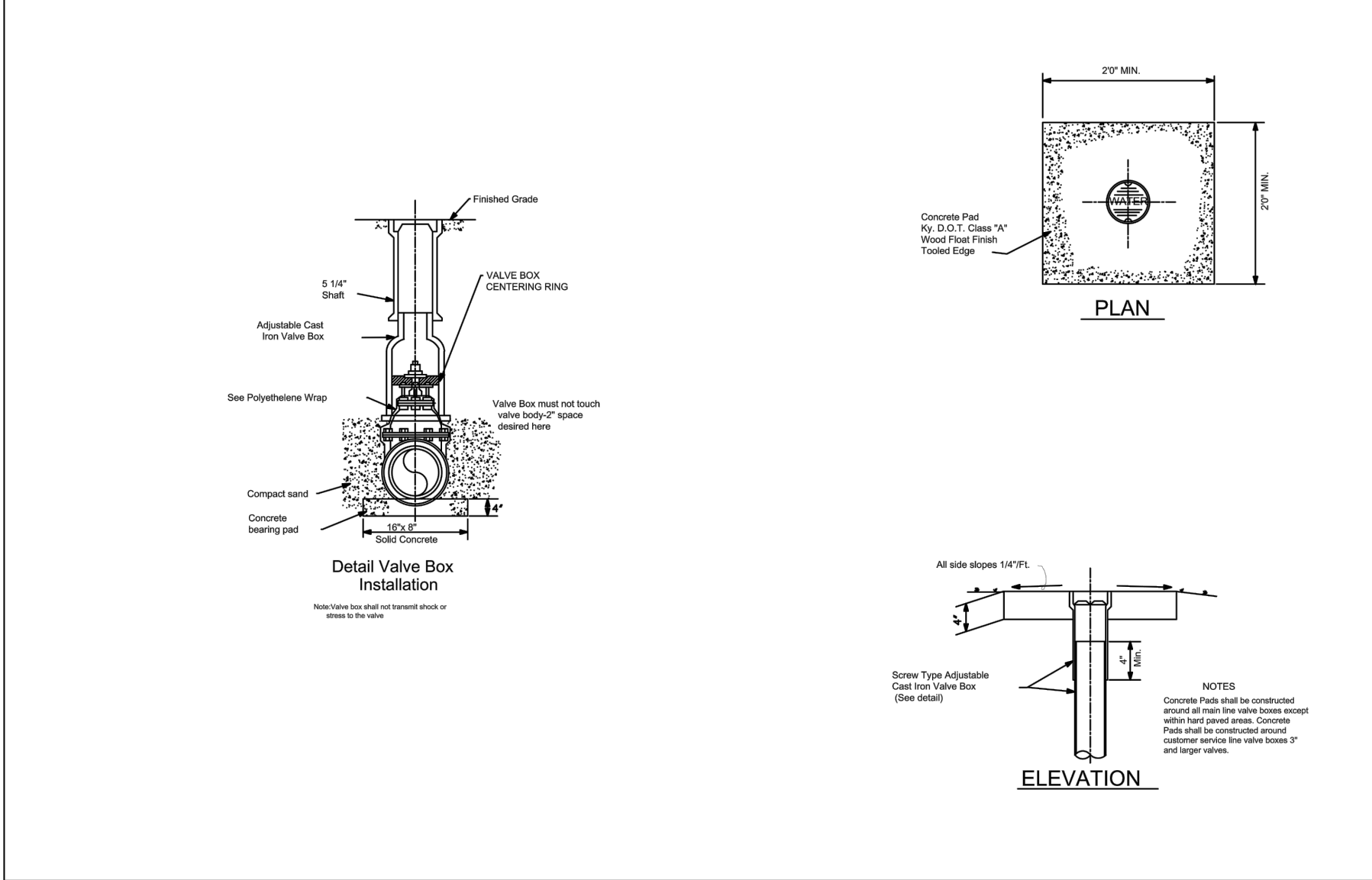
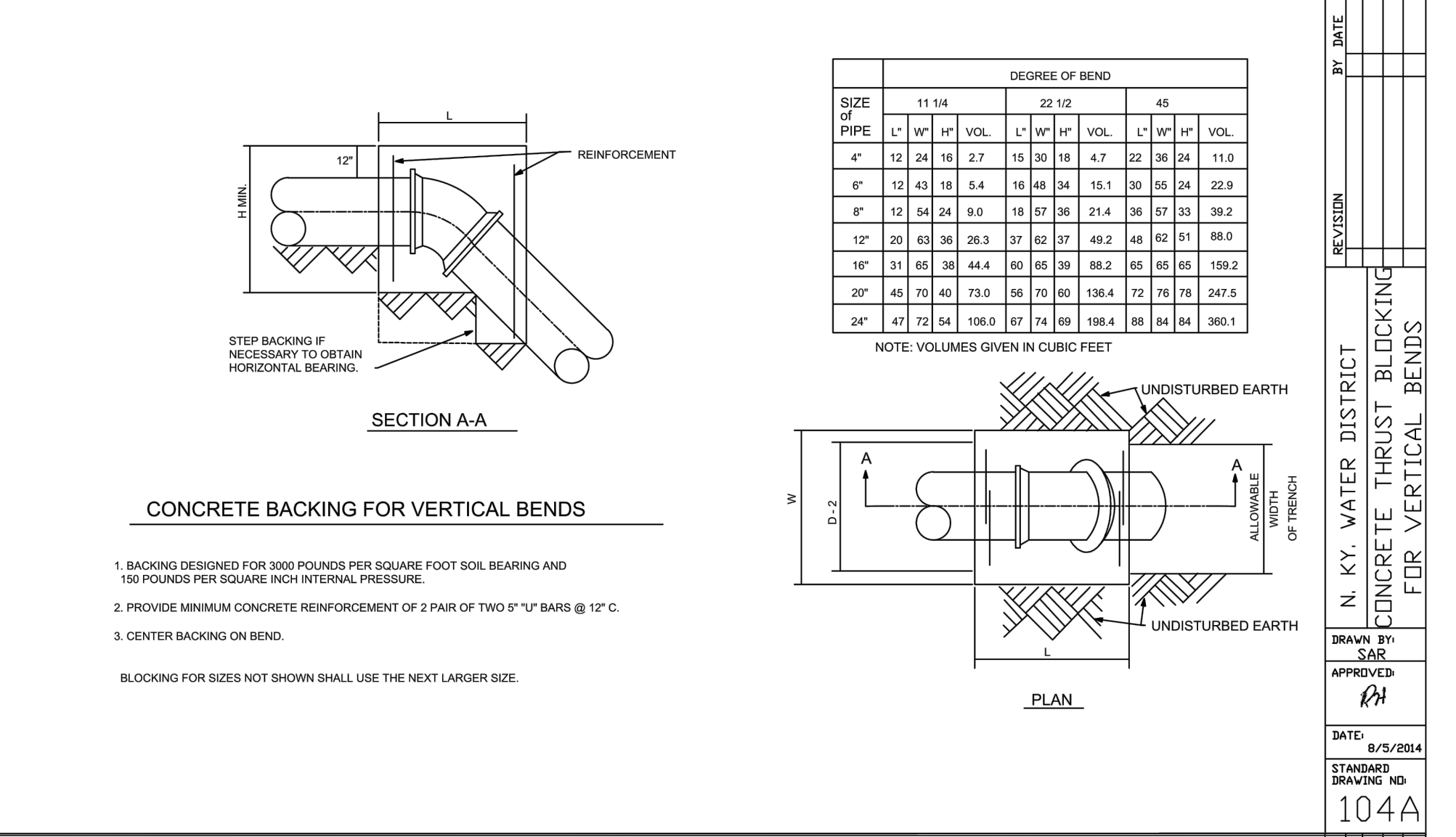
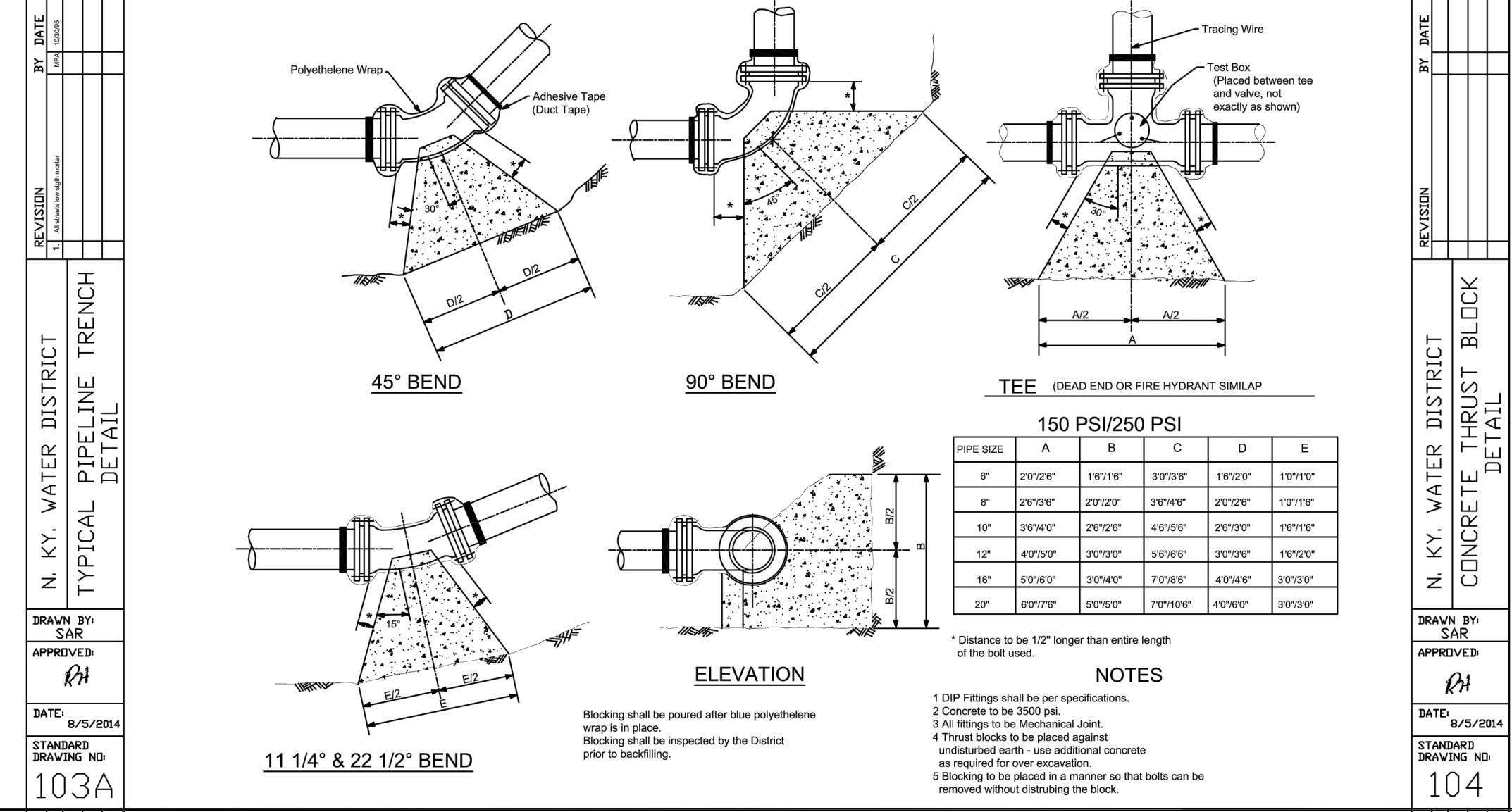
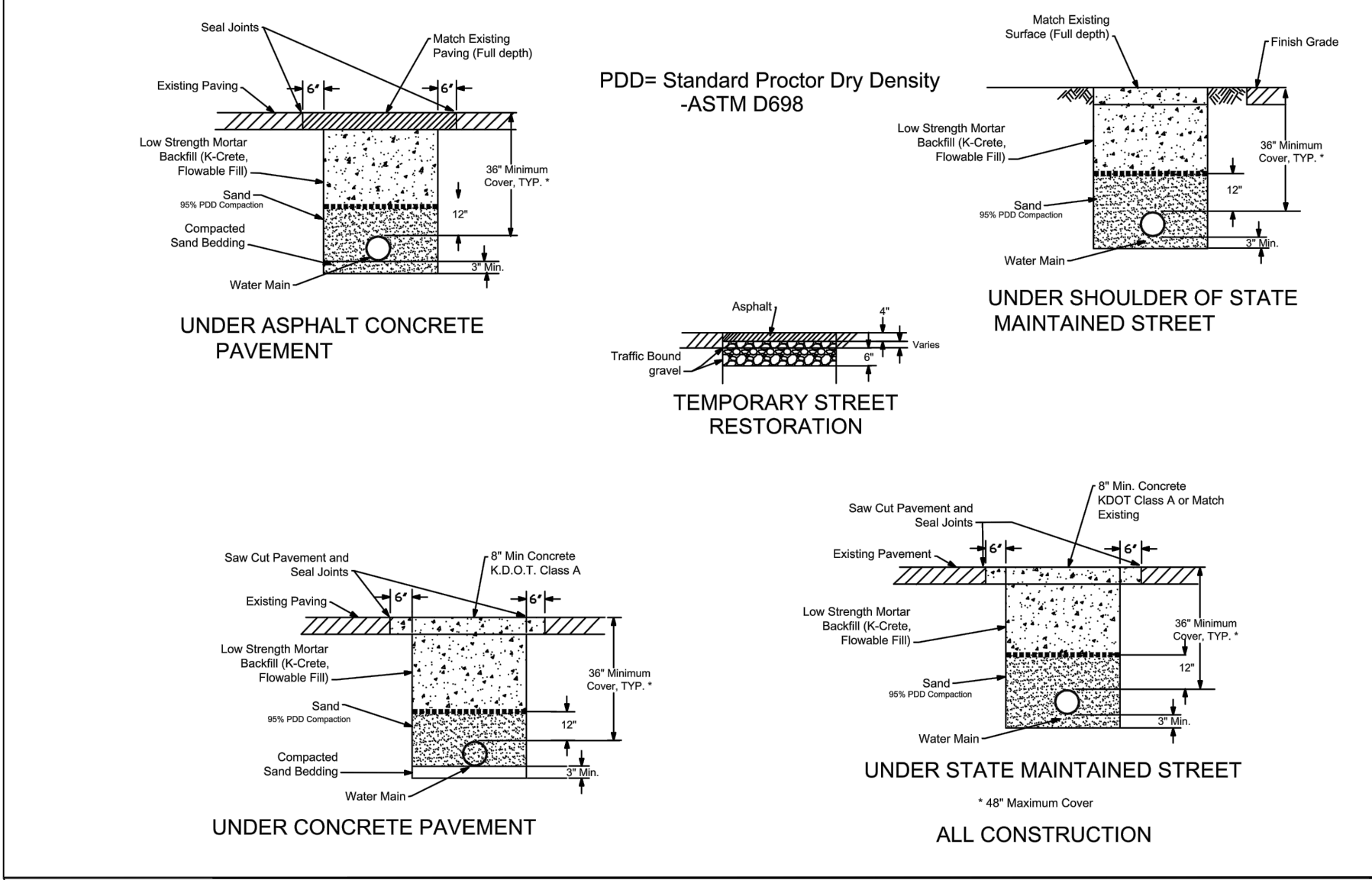
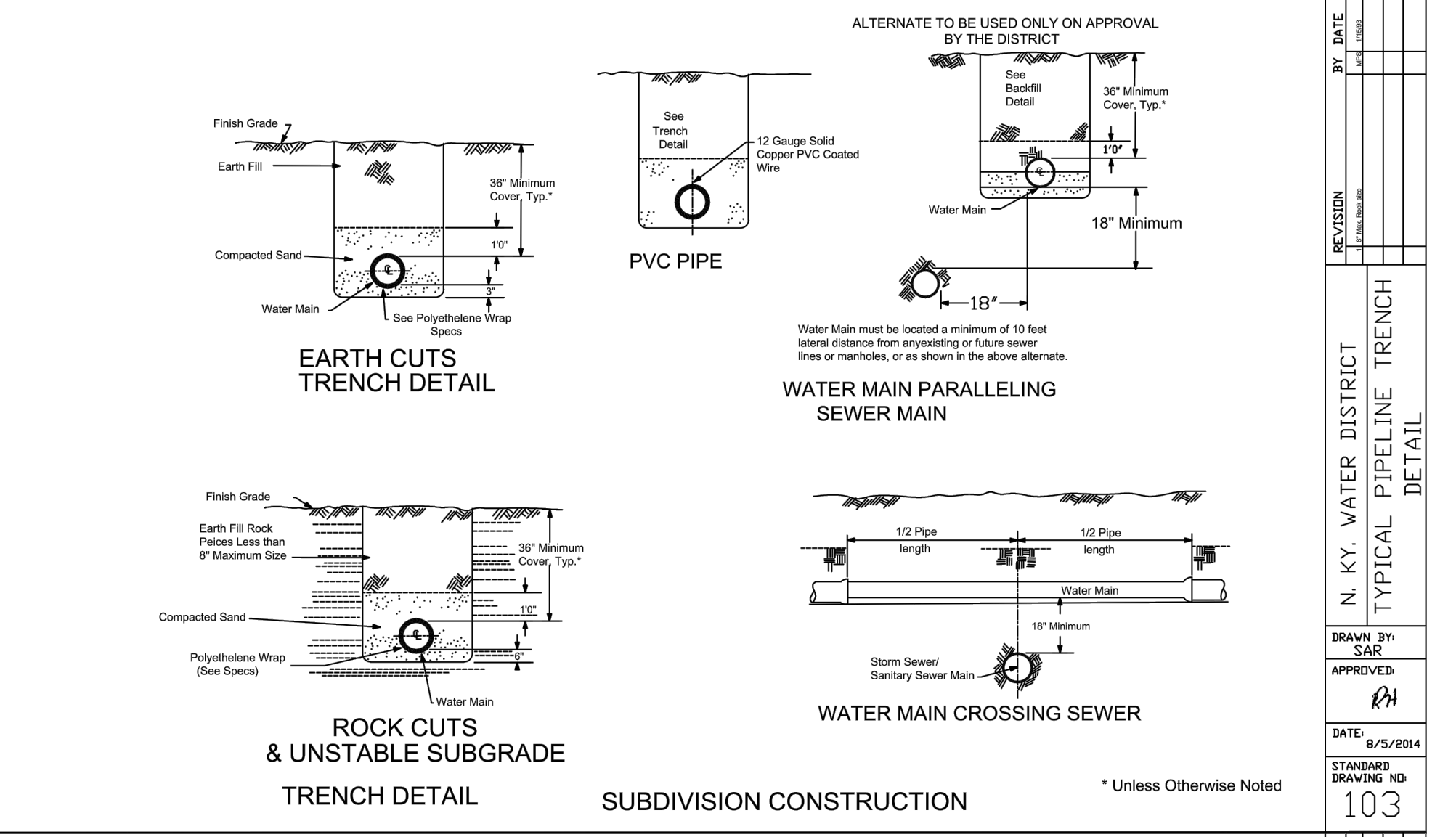
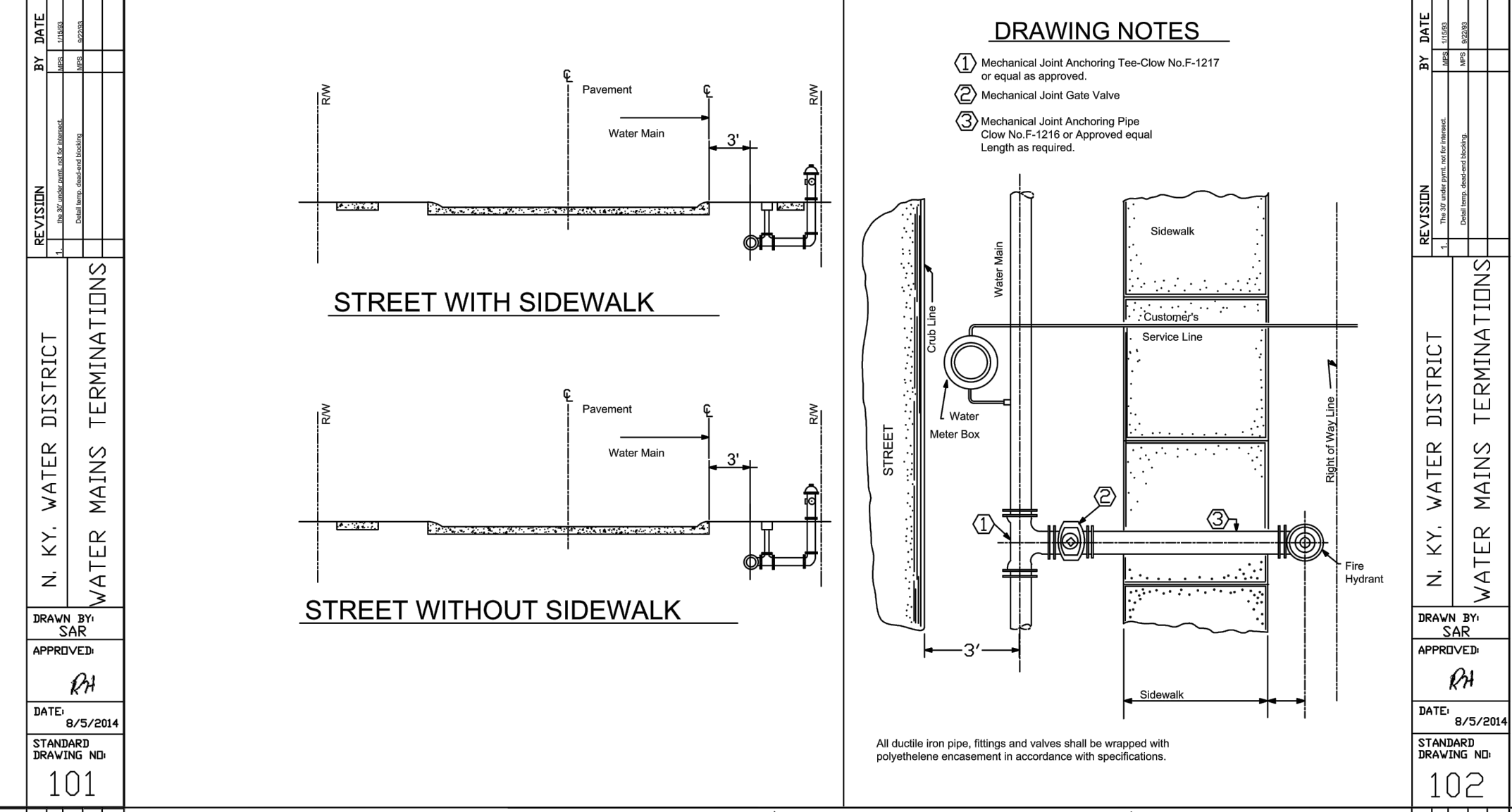
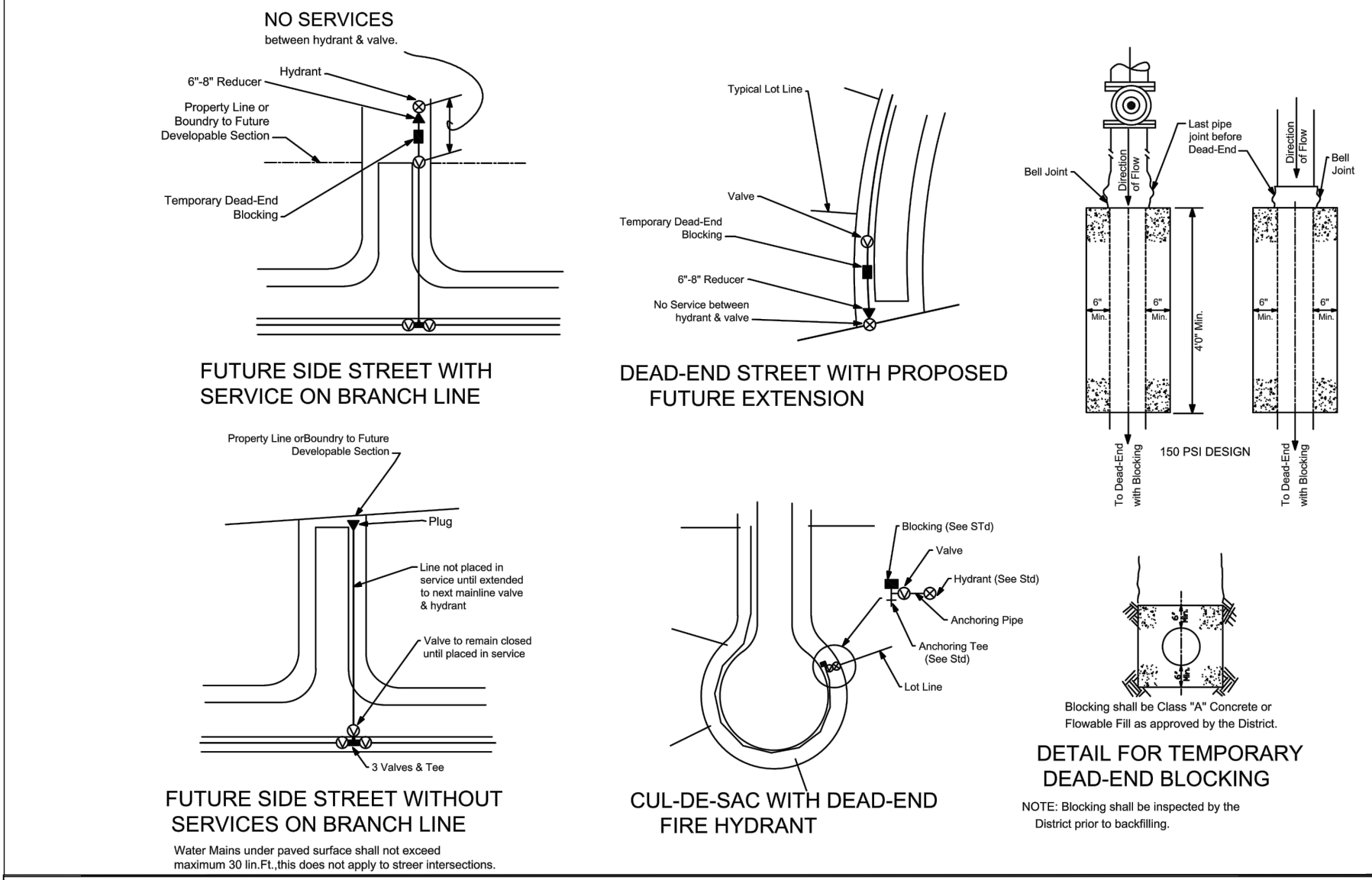
SHEET 15



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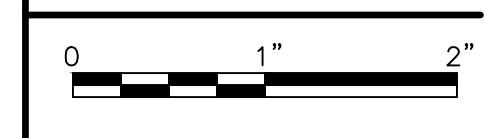
LICKING RIVER CROSSING
NKWD - STANDARD DETAILS



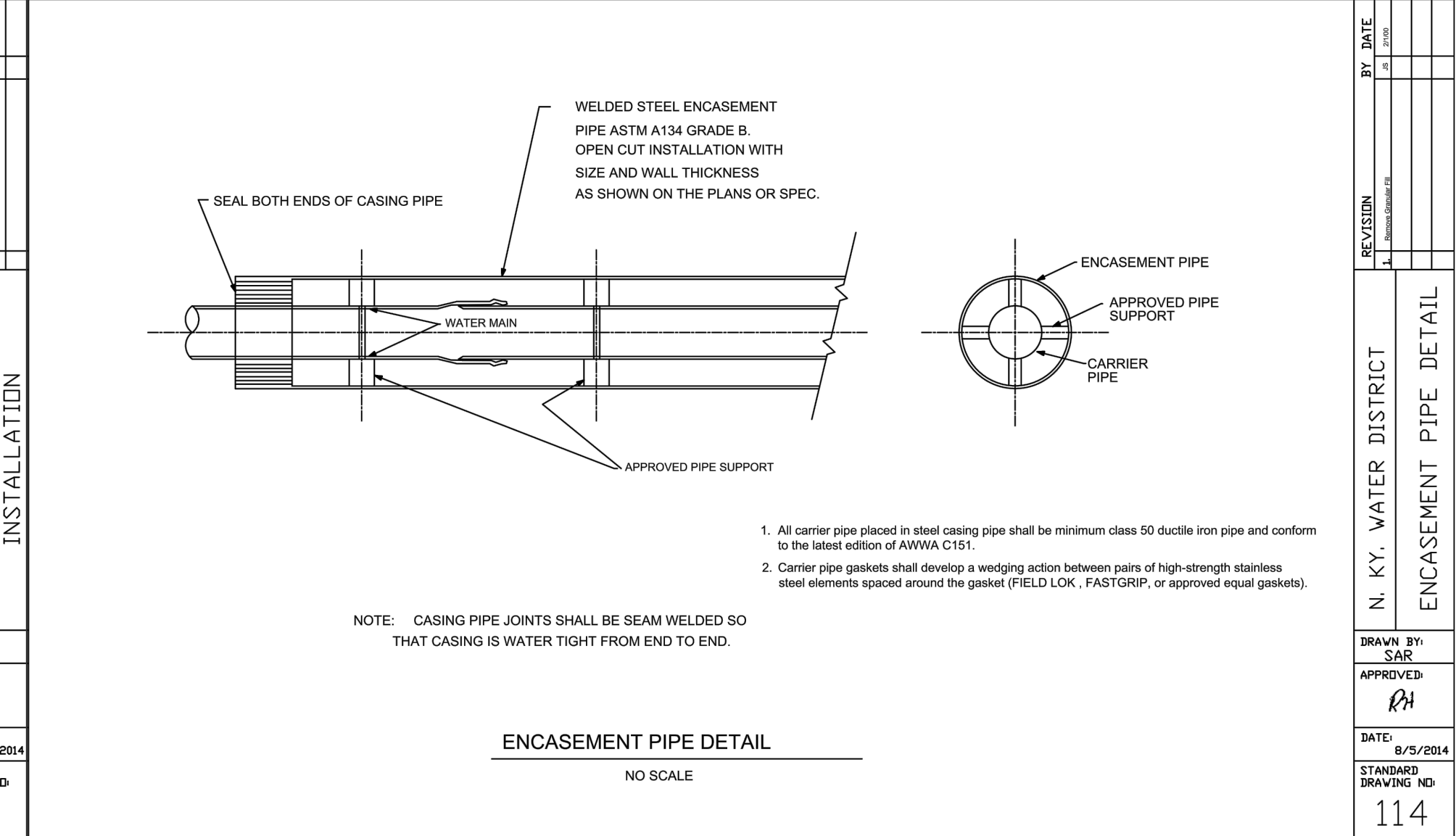
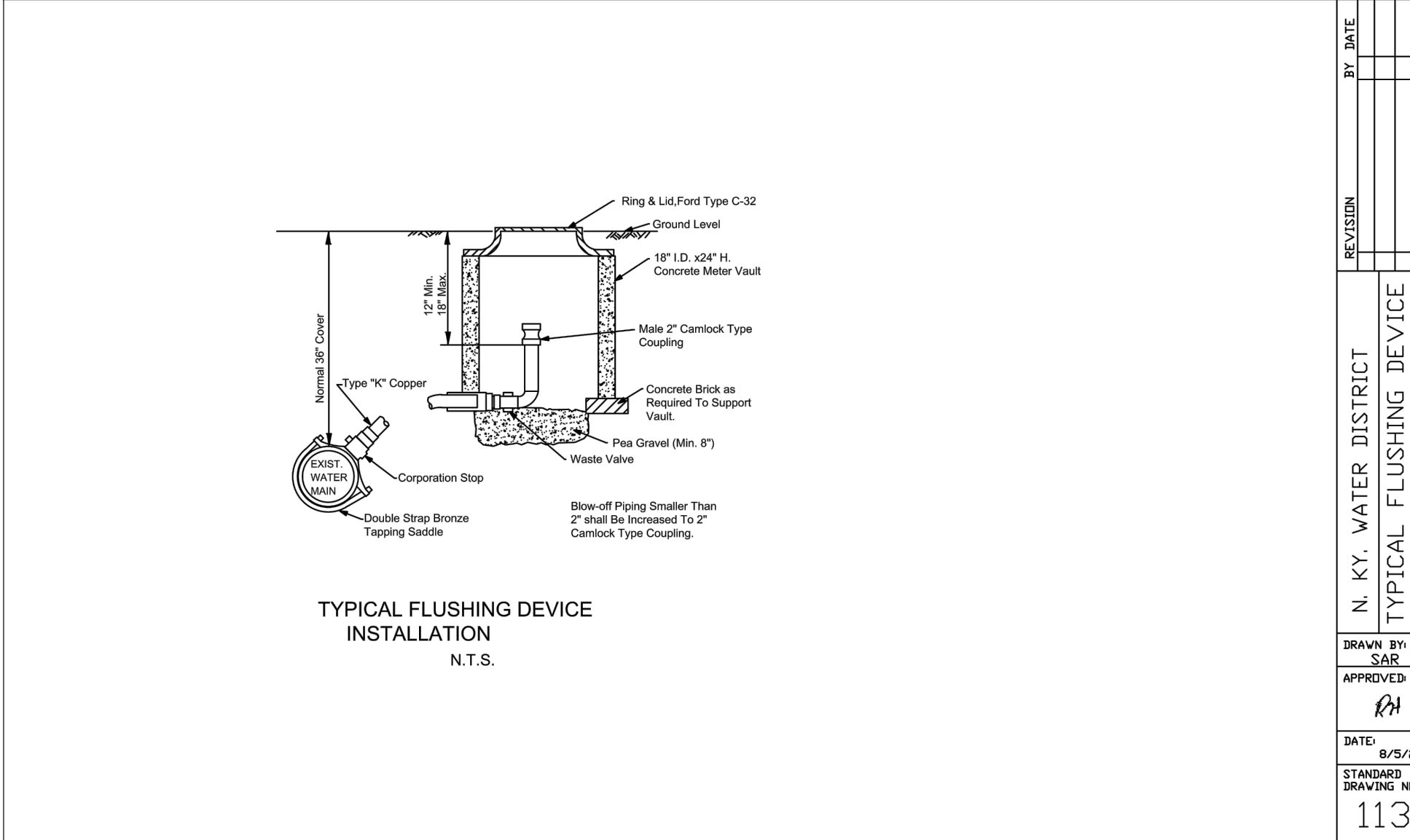
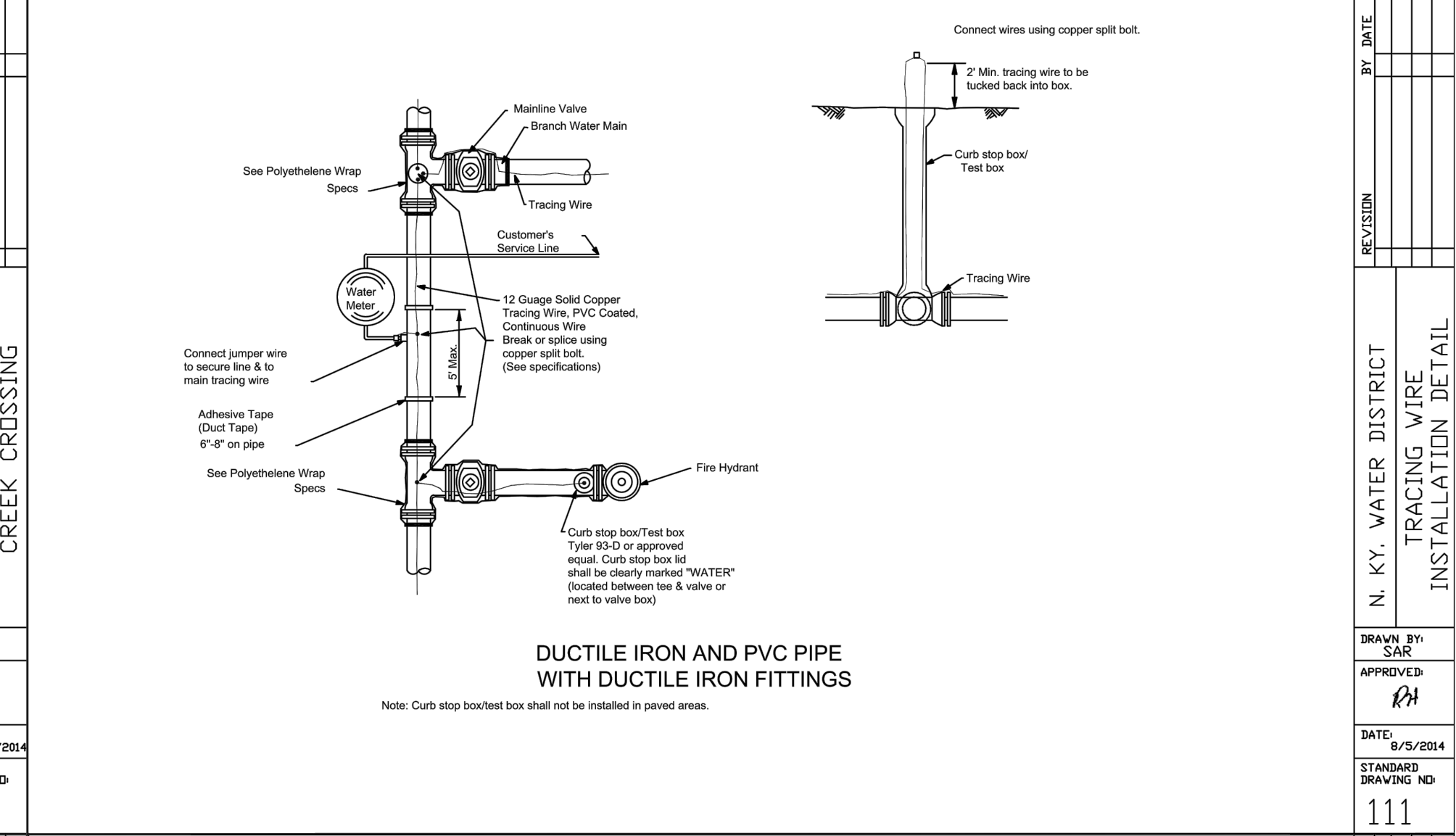
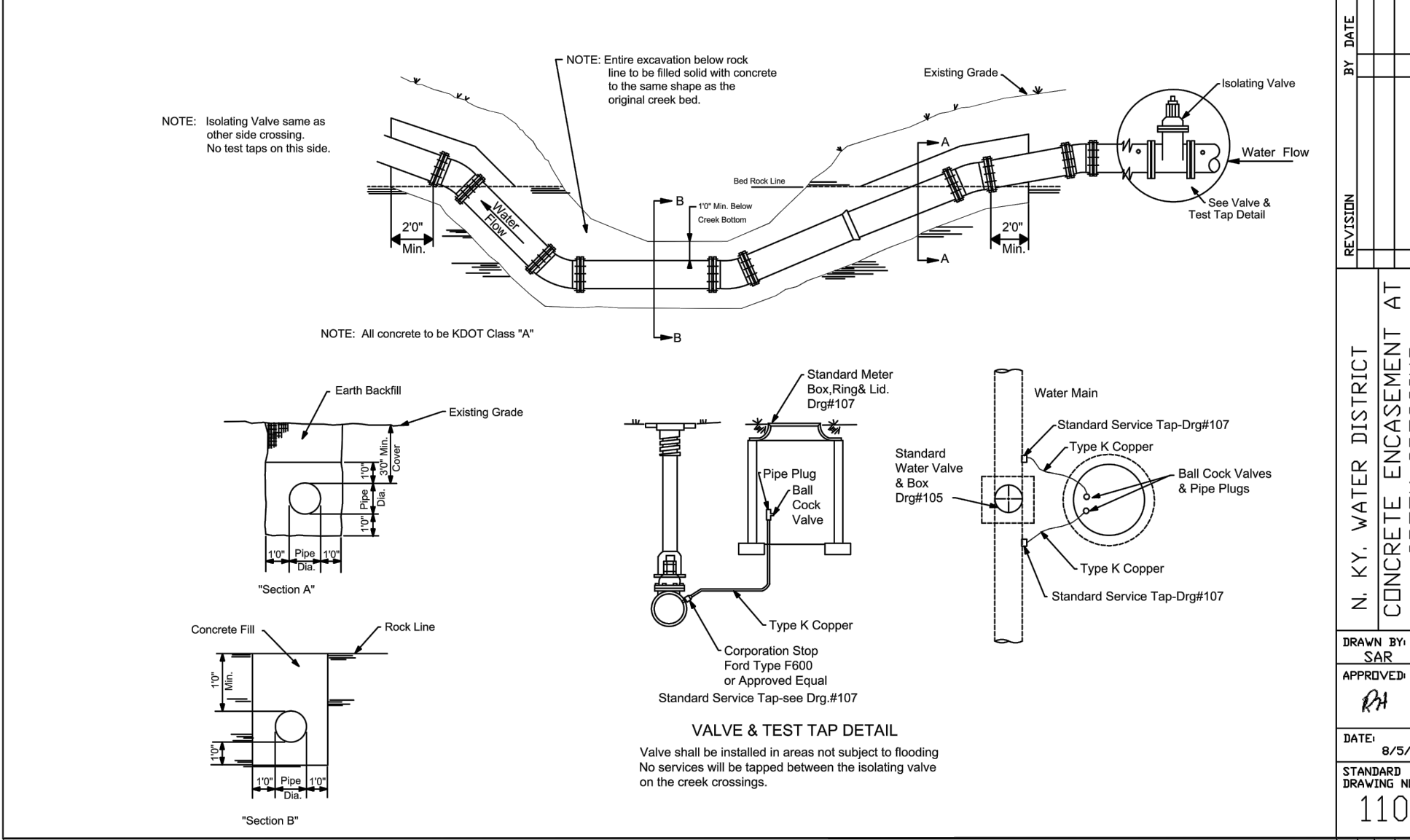
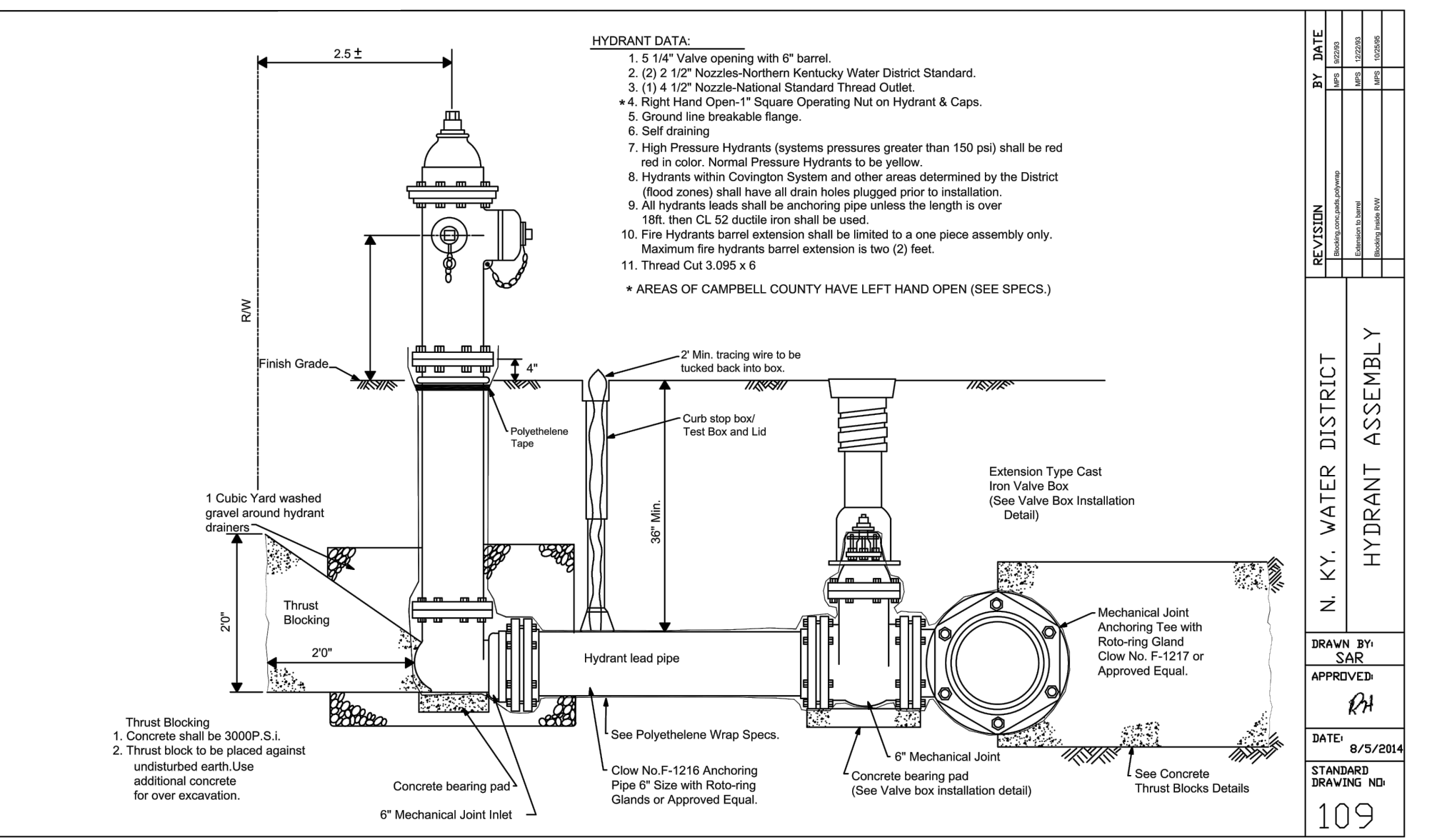
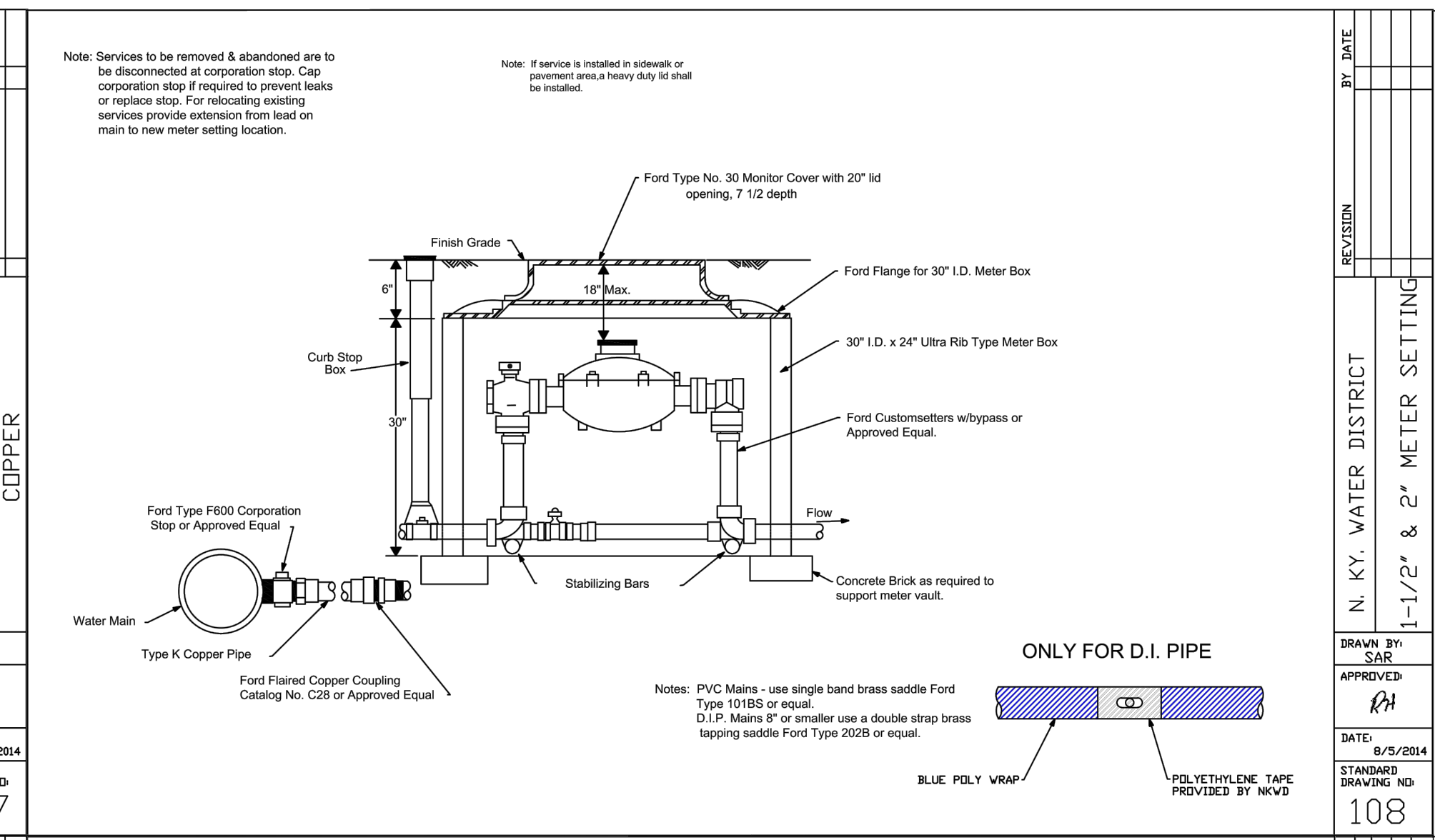
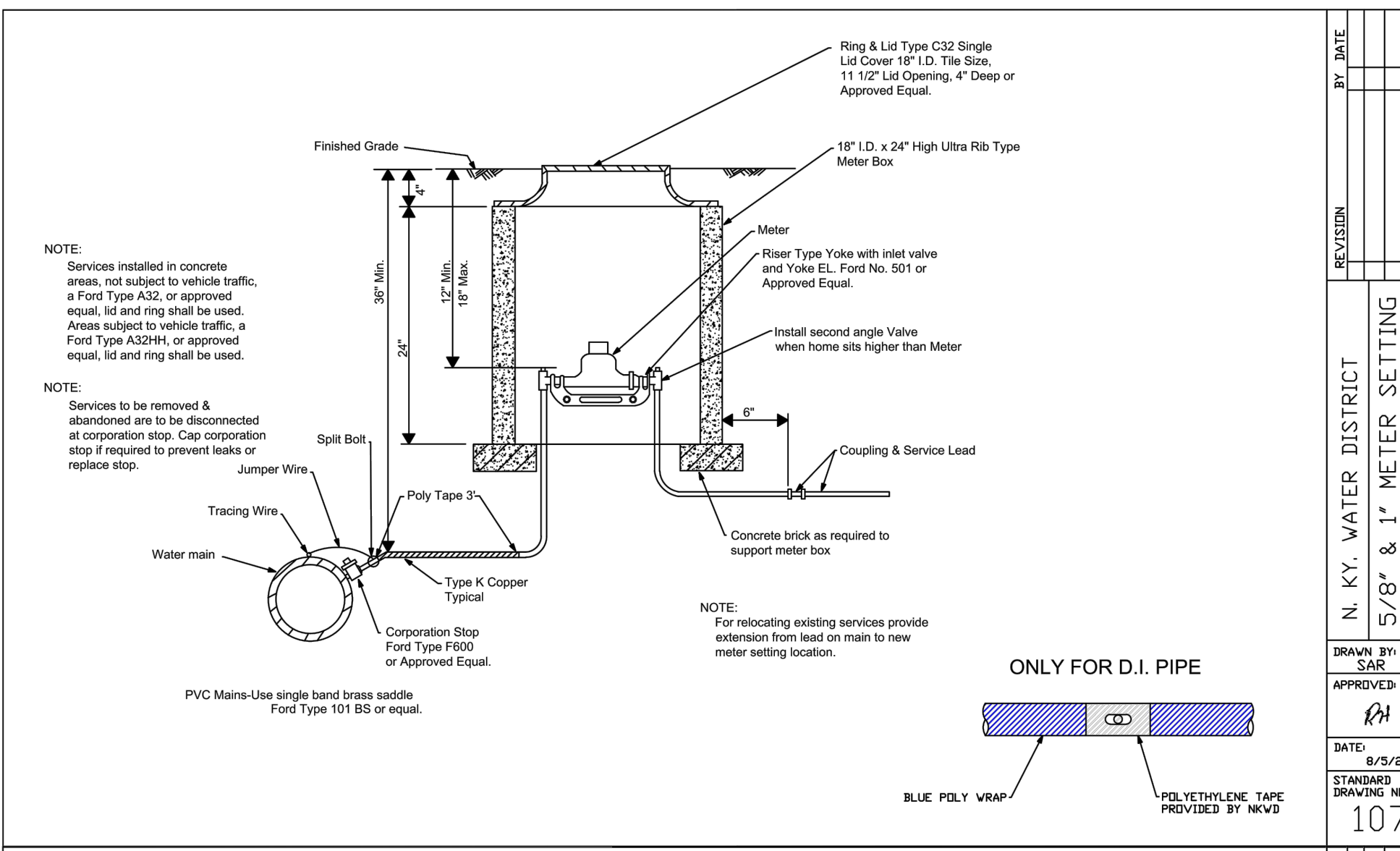
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FILENAME: 00C-16.dwg
SCALE: NTS
SHEET: 16



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RECORD DRAWINGS

LICKING RIVER CROSSING
NKWD - STANDARD DETAILS

0	1	2
SCALE NTS		
FILENAME	00C-17.dwg	SHEET
		17



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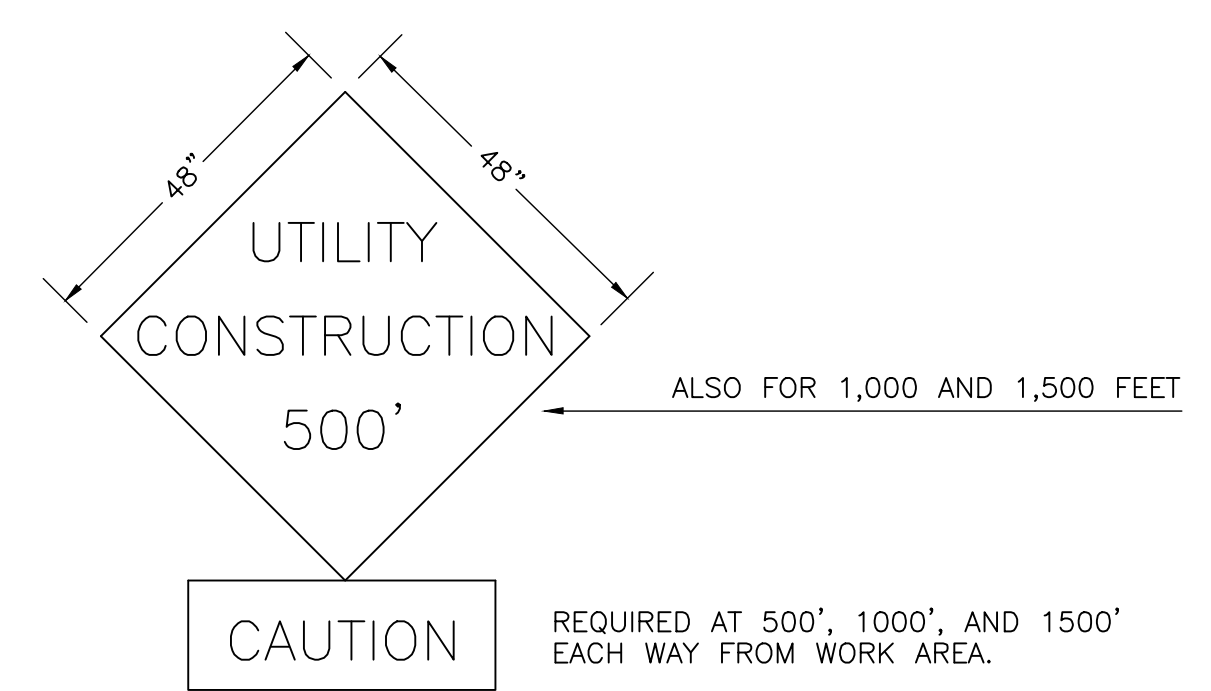
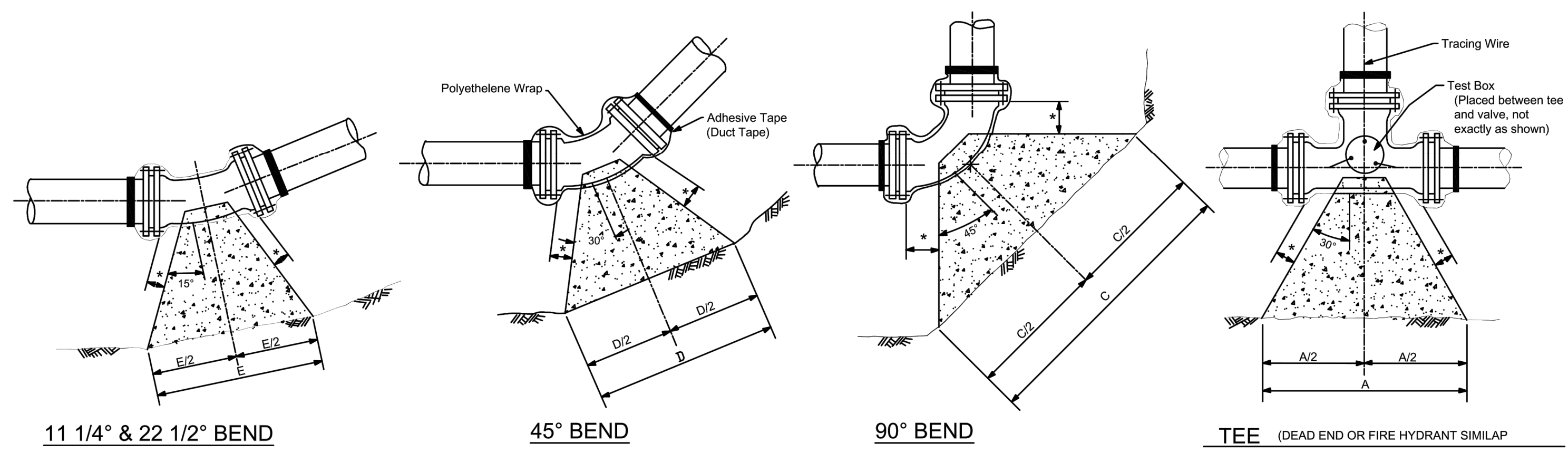
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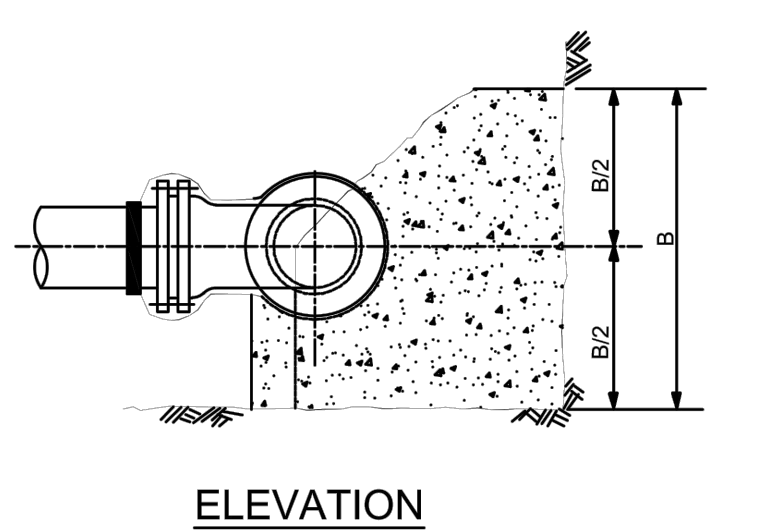
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WARNING SIGNS

1. TREES ON STATE RIGHT-OF-WAY ARE NOT TO BE DAMAGED BY THIS INSTALLATION. NO TREE TRIMMING OR REMOVAL IS AUTHORIZED BY THIS PERMIT.
2. ALL DISTURBED PORTIONS OF THE STATE RIGHT-OF-WAY TO BE RESTORED TO ORIGINAL CONDITION BY SEEDING AND MULCHING IN ACCORDANCE WITH KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS.
3. ALL SIGNS AND CONTROL OF TRAFFIC TO BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



ELEVATION

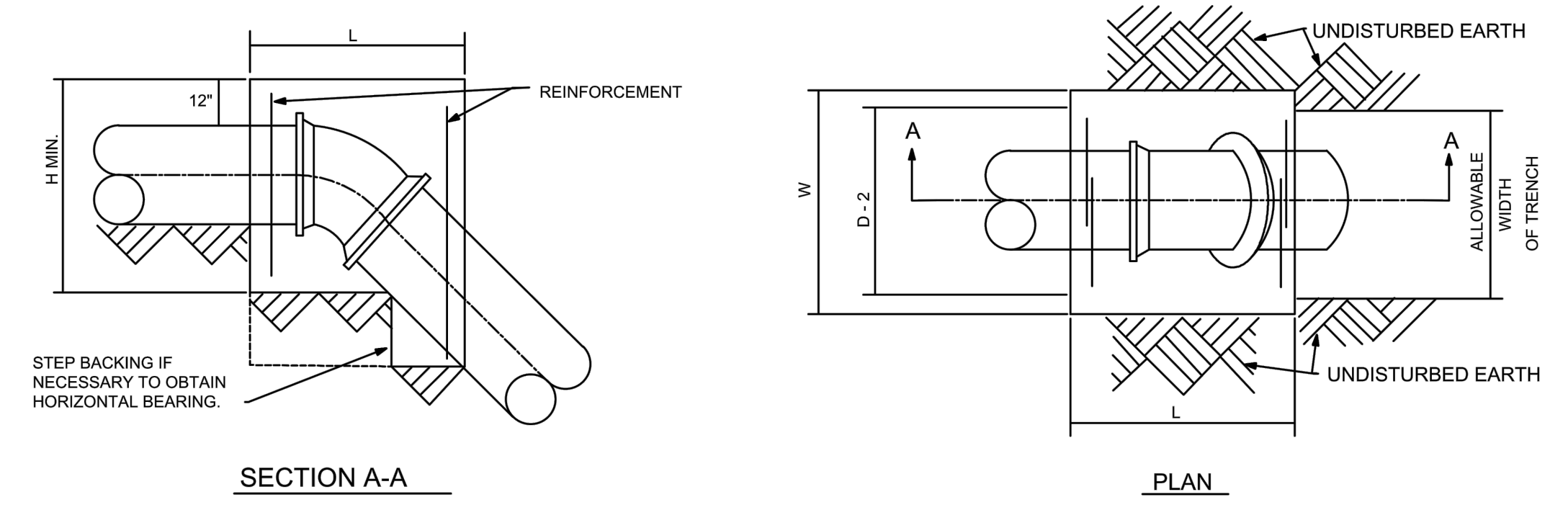
PIPE SIZE	DEGREE OF BEND									
	11.25°		22.5°		45°		90°		TEE	
	B	E	B	E	B	D	B	C	B	A
36"	4'-0"	5'-8"	5'-0"	9'-0"	7'-0"	12'-8"	NA	NA	8'-0"	14'-6"
	VOL. (FT ³)		VOL. (FT ³)		VOL. (FT ³)		VOL. (FT ³)		VOL. (FT ³)	
	102.4		204.7		399.4		NA		522.2	

* DISTANCE TO BE 1/2" LONGER THAN THE ENTIRE LENGTH OF THE BOLT USED.

NOTES

1. DIP FITTINGS SHALL BE PER SPECIFICATIONS.
2. CONCRETE TO BE 3500 PSI.
3. CONCRETE NORMAL WEIGHT SHALL BE 150 LB/FT³.
4. THRUST BLOCKS TO BE PLACED AGAINST UNDISTURBED EARTH - USE ADDITIONAL CONCRETE AS REQUIRED FOR OVER EXCAVATION.
5. BLOCKING TO BE PLACED IN MANNER SO THAT BOLTS CAN BE REMOVED WITHOUT DISTURBING THE BLOCK.
6. BLOCKING SHALL BE POURED AFTER BLUE POLYETHYLENE WRAP IS IN PLACE.
7. BLOCKING SHALL BE INSPECTED BY THE DISTRICT PRIOR TO BACKFILLING.

CONCRETE THRUST BEARING BLOCK

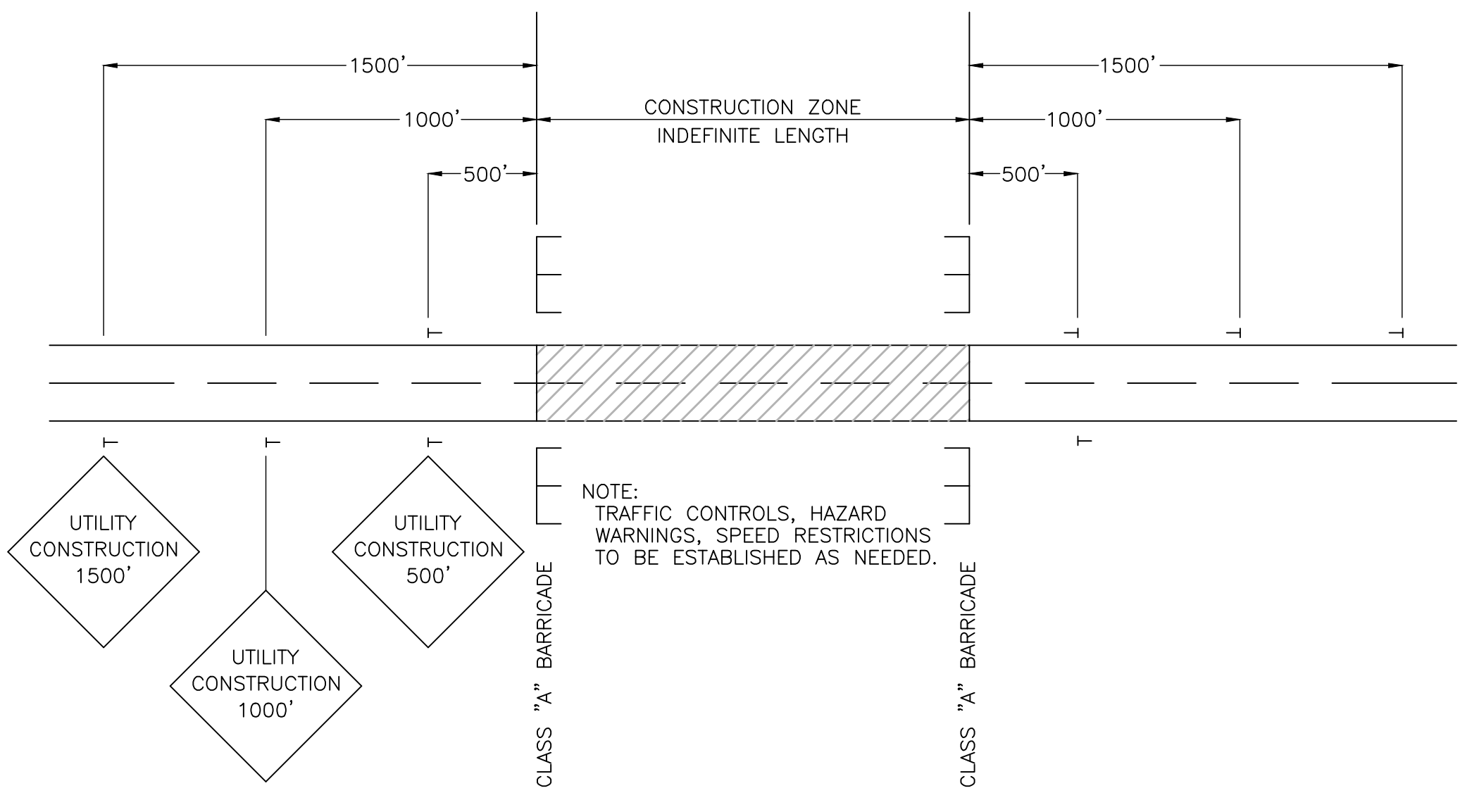


CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.
 2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.
 3. CENTER BACKING ON BEND.
- BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE OF PIPE	DEGREE OF BEND			
	L"	W"	H"	VOL.
36"	134	77	63	376.2

NOTE: VOLUMES GIVEN IN CUBIC FEET



LOCATION OF TRAFFIC CONTROL DEVICES

CONCRETE GRAVITY BLOCK - VERTICAL DOWN BEND

RECORD DRAWINGS



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02	03/04/2021	KDOW SUBMITTAL
01	08/03/2020	REVIEW SET

PROJECT MANAGER	ROSS L. GUFFEY
DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

RECORD DRAWING

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HDR ENGINEERING, INC.
DATE 11-10-23 BY ROSS L. GUFFEY

NOTE: THE ORIGINAL CONSTRUCTION DRAWING WITH ISSUE DATE MAY 2022 HAD THE P.E. SEAL OF STATE OF KENTUCKY NUMBER 52153 AFFIXED.

LICKING RIVER CROSSING

STANDARD DETAILS

0 1" 2"

FILENAME 00C-18.dwg SHEET 18

SCALE NTS

GENERAL NOTES

1. ALL MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND TECHNICAL SPECIFICATIONS.
2. UNLESS OTHERWISE NOTED, DRAWINGS ARE NOT SHOWN TO SCALE.
3. ALL METALLIC PIPE SECTIONS TO BE PROTECTED MUST BE BONDED TOGETHER PER DETAILS IN THESE PLANS AND ASSOCIATED SPECIFICATIONS.
4. ALL BURIED METALLIC MECHANICAL JOINTS, I.E., VALVES, FLANGES OR COUPLINGS, EXCEPT INSULATING FLANGES, MUST BE BONDED PER DETAILS IN THESE PLANS AND WAX TAPED, PER AWWA C217 AND SPECIFICATIONS.
5. WRAP ALL METALLIC APPURTENANCES INSTALLED IN HDPE PIPE IN WAX TAPE PER AWWA C217.
6. ENSURE STEEL CASING PIPE IS NOT IN ELECTRICAL CONTACT WITH DUCTILE IRON WATER PIPE AFTER INSTALLATION IN FINAL CONDITION.
7. CONTRACTOR SHALL DOCUMENT ALL CHANGES FROM THESE DRAWINGS AND SUBMIT "AS-BUILT" DRAWINGS TO THE OWNERS REPRESENTATIVE PRIOR TO COMPLETION OF WORK.
8. CORROSION TEST STATIONS:
 - A. INSTALL TEST STATION BOXES AS SHOWN IN THE PLANS AND PERPENDICULAR TO THE TEST WIRE.
 - B. AVOID DRIVEWAYS AND INTERFERENCE WITH OTHER STRUCTURES. COORDINATE INSTALLATION OF TEST STATION CONDUIT WITH POSTS AND OTHER FIXTURES.
 - C. AVOID DAMAGE TO CONDUITS. INSTALL TEST STATION BOXES A MINIMUM OF 4 FEET FROM EDGE OF PAVEMENT OR BACK OF CURB.
 - D. PROVIDE 24" SLACK WIRE AT WELD TO PIPE.
 - E. PROVIDE 24" SLACK WIRE COILED IN TEST BOX.
 - F. PROVIDE 2 FOOT X 2 FOOT X 6 INCH THICK STEEL REINFORCED CONCRETE PAD AROUND TEST BOX AT UNPAVED SITES, USE NO. 4 REBAR IN PAD.
 - G. IDENTIFY TEST LEADS WITH HEAT SHRINK SLEEVE.
 - H. INSTALL PLASTIC WARNING TAPE ALONG ENTIRE HORIZONTAL RUN OF WIRES, USE 6 INCH WIDE 4 MIL THICK INERT PLASTIC TAPE PRINTED WITH "CAUTION CATHODIC PROTECTION CABLE BELOW" OR EQUIVALENT.
 - I. PLACE ALL HORIZONTAL AND VERTICAL WIRE RUNS IN SCHEDULE 80 PVC CONDUIT WITH SOLVENT WELDED JOINTS AT A MINIMUM OF 2 FEET BELOW FINISHED GRADE. CONDUIT NOT SHOWN IN ALL DETAILS FOR CLARITY.
 - J. DO NOT EXCEED THE BOUNDS OF AVAILABLE RIGHT-OF-WAY.
 - K. DO NOT CONNECT SHUNT BETWEEN PIPE AND ANODES DURING CONSTRUCTION. SHUNT TO BE CONNECTED AFTER THE FREE-CORRODING POTENTIALS HAVE BEEN RECORDED BY THE CONTRACTOR'S CORROSION ENGINEER DURING FILED TESTING.
 - L. INSTALL REFERENCE ELECTRODE AND COUPON 18 INCHES BELOW PIPE.
 - M. INSTALL REFERENCE ELECTRODE AND COUPON NO MORE THAN 6 INCHES APART FROM ONE ANOTHER.
 - N. NO WIRE SPLICES ARE PERMITTED.
 - O. WIRE CONNECTIONS TO PIPE SHALL BE MADE BY PIN BRAZING PROCESS AS DESCRIBED IN THESE PLANS AND ASSOCIATED SPECIFICATION.
 - P. ATTACH 1 WIRE PER ATTACHMENT POINT. ALL WELDS MUST BE SEPARATED BY 6 INCH MINIMUM.
 - Q. COORDINATE AND OBTAIN APPROVAL FROM OWNER OF FOREIGN PIPELINES BEFORE WIRE ATTACHMENT TO FOREIGN LINES
9. ANODE INSTALLATION NOTES:
 - A. INSTALL ANODES VERTICALLY, ON 10 FOOT CENTERS, ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS.
 - B. ANODES TO BE INSTALLED 12 INCHES DEEPER THAN PIPE. ANODES CAN BE DIRECTLY UNDER PIPE OR PIPE TRENCH.
 - C. NUMBER OF ANODES AND TYPE VARIES. UNLESS OTHERWISE NOTED, ANODES MAY BE INSTALLED ON EITHER SIDE OF THE PIPE, A MINIMUM OF 2 FEET AND MAXIMUM OF 5 FEET FROM PIPE.
 - D. REMOVE PLASTIC BAGS FROM ANODES PRIOR TO INSTALLATION (LEAVE COTTON BAG IN PLACE AROUND ANODE).
 - E. DO NOT LIFT OR SUPPORT ANODES BY ANODE WIRES.
 - F. BACKFILL ANODES WITH CLEAN NATIVE SOIL IN 6 INCH LIFTS.
 - G. ANODE BACKFILL SHALL BE SCREENED AND FREE OF ROCKS LARGER THAN 2 INCHES IN DIAMETER.
 - H. NO SPLICES ARE PERMITTED IN ANODE LEAD WIRES.

TEST STATION	DETAIL / SHEET	STATIONING	ISOLATION JOINT MONITOR	# ANODES	COUPON	FOREIGN LINE MONITOR
01	3/20	10+20	YES	2	DUCTILE IRON	NA
02	1/20	11+70	NO	2	DUCTILE IRON	NA
03	2/20	23+61	NO	5	DUCTILE IRON	NA
04	2/20	29+30	NO	5	DUCTILE IRON	NA
05	2/20	35+00	NO	5	DUCTILE IRON	NA
06	1/20	36+76	NO	2	DUCTILE IRON	NA
07	5/21	37+30	NO	2	DUCTILE IRON	24" CMP
08	5/21	38+25	NO	2	DUCTILE IRON	8" DIP
09	5/21	38+55	NO	2	DUCTILE IRON	24" CIP
10	1/20	39+10	NO	2	DUCTILE IRON	NA
11	6/21	39+31	NO	4	STEEL	24" CIP
12	4/20	40+51	NO	4	STEEL	NA
13	7/21	40+68	YES	5	DUCTILE IRON	NA

CATHODIC PROTECTION GENERAL NOTES 1
NTS

ABBREVIATIONS:

AWG	AMERICAN WIRE GAUGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CP	CATHODIC PROTECTION
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE
IJ	ISOLATION JOINT
NA	NOT APPLICABLE
NO (#)	NUMBER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PVC	POLYVINYL CHLORIDE
RHH	RUBBER INSULATED HIGH HEAT
RHW	RUBBER INSULATED, HEAT AND WATER RESISTANT
SCH	SCHEDULE
THWN	THERMOPLASTIC HEAT AND WATER RESISTANT NYLON
TYP	TYPICAL

CATHODIC PROTECTION ABBREVIATIONS 2
NTS

CATHODIC PROTECTION TEST STATION SCHEDULE 3
NTS

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CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

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HDR ENGINEERING, INC.
DATE 11-10-23 BY ROSS L. GUFFEY

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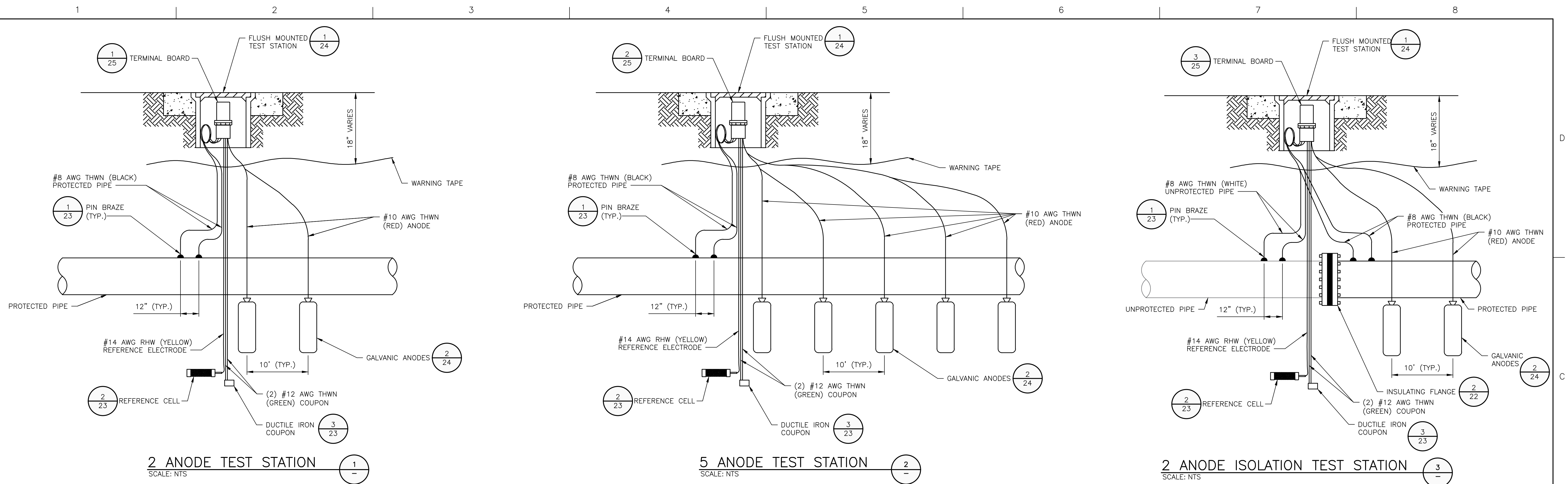


LICKING RIVER CROSSING

CATHODIC PROTECTION GENERAL NOTES, ABBREVIATIONS, AND SCHEDULE

0 1" 2"

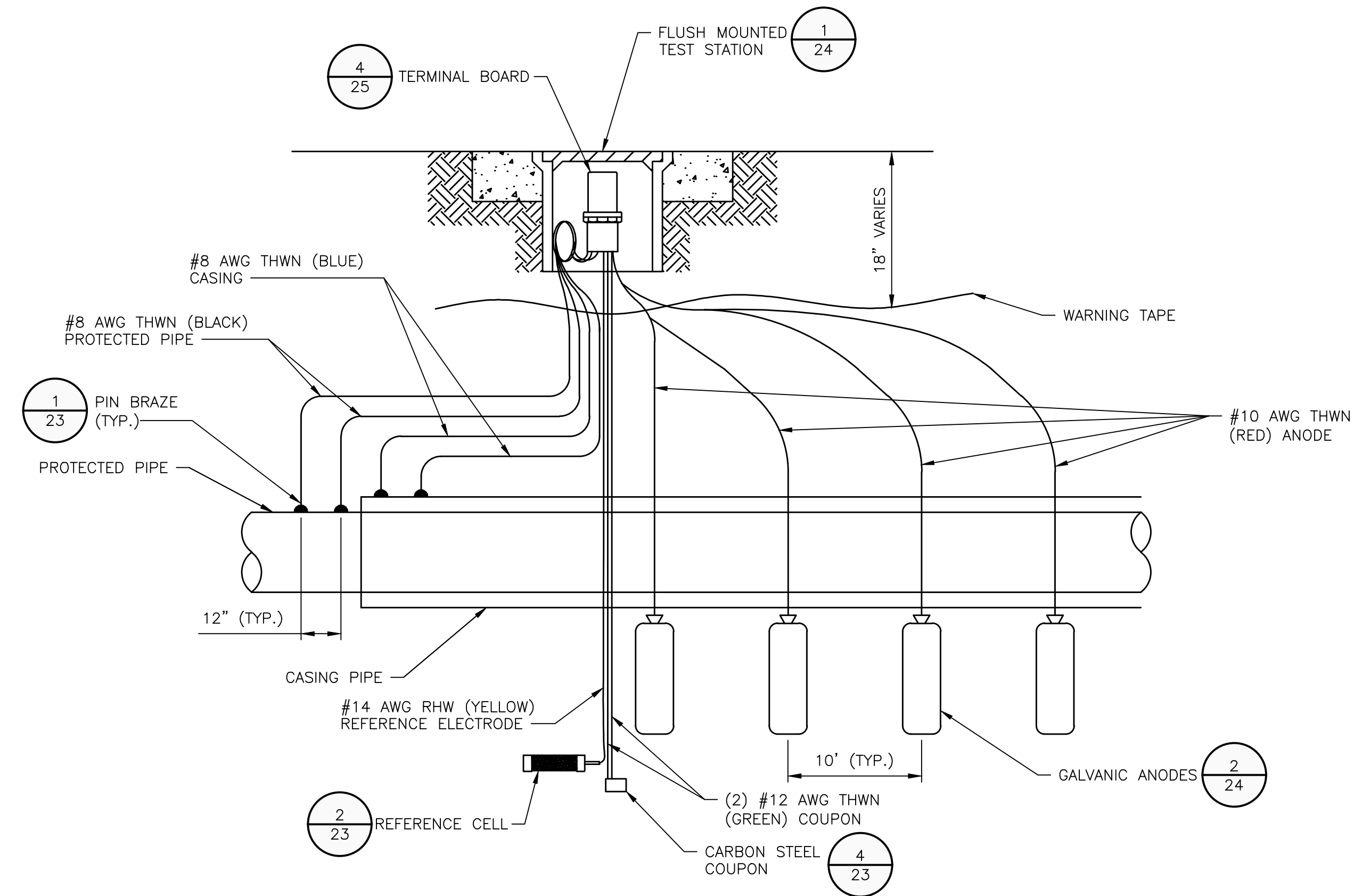
FILENAME	CP-DETAILS.dwg	SHEET
SCALE	NTS	19



2 ANODE TEST STATION
SCALE: NTS

5 ANODE TEST STATION
SCALE: NTS

2 ANODE ISOLATION TEST STATION
SCALE: NTS



4 ANODE CASING TEST STATION
SCALE: NTS

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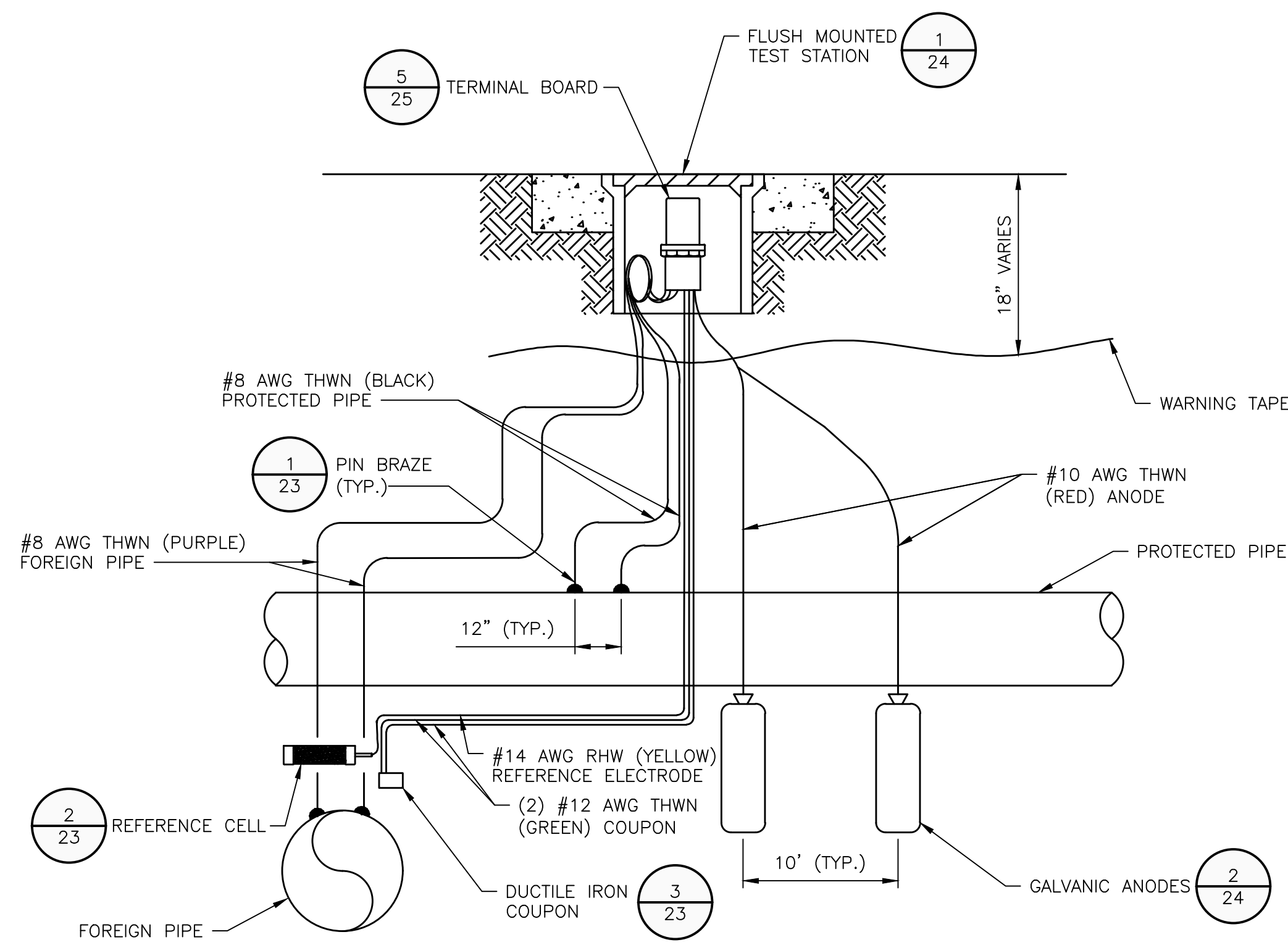
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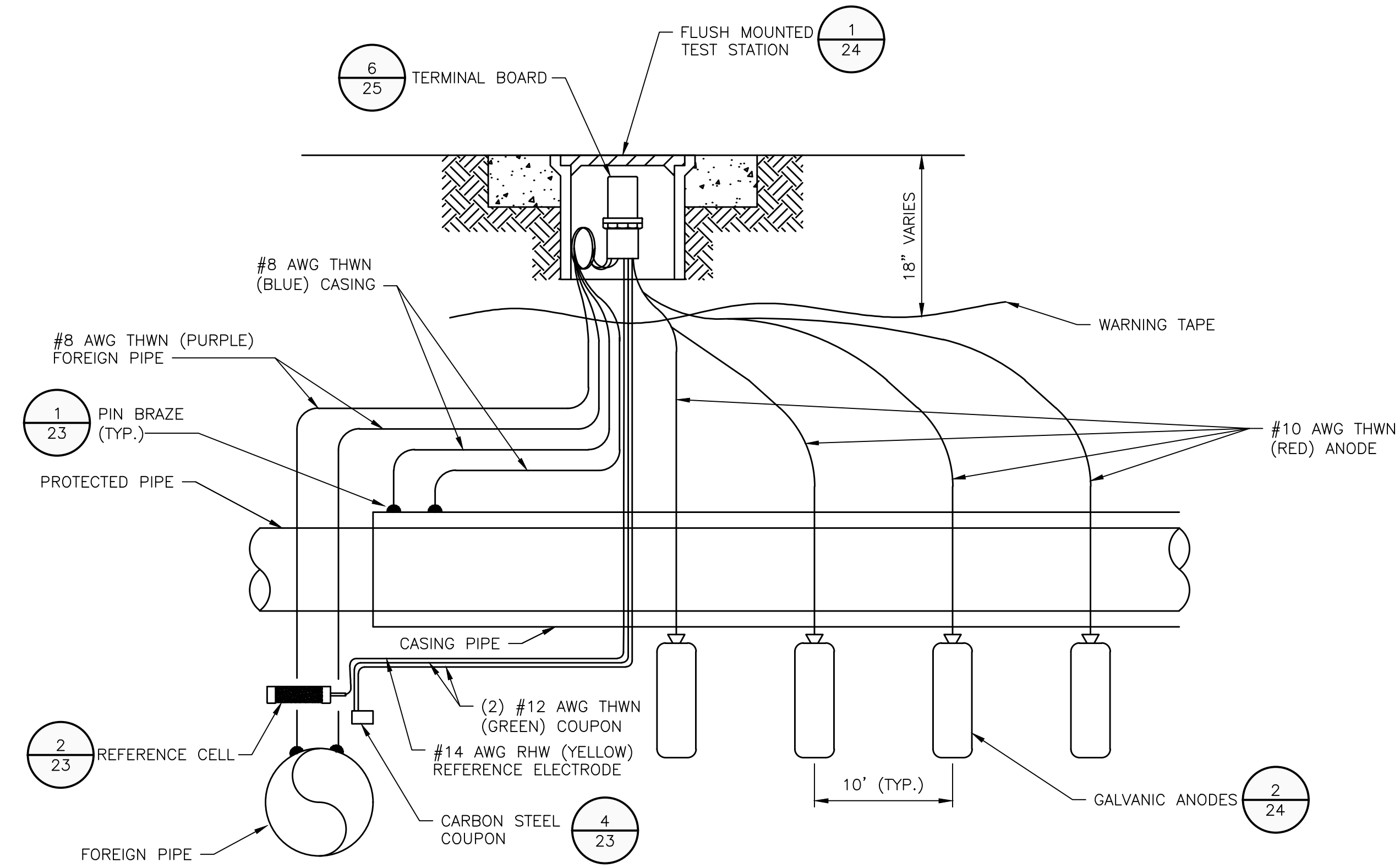
LICKING RIVER CROSSING
CATHODIC PROTECTION
DETAILS I

0 1 2"

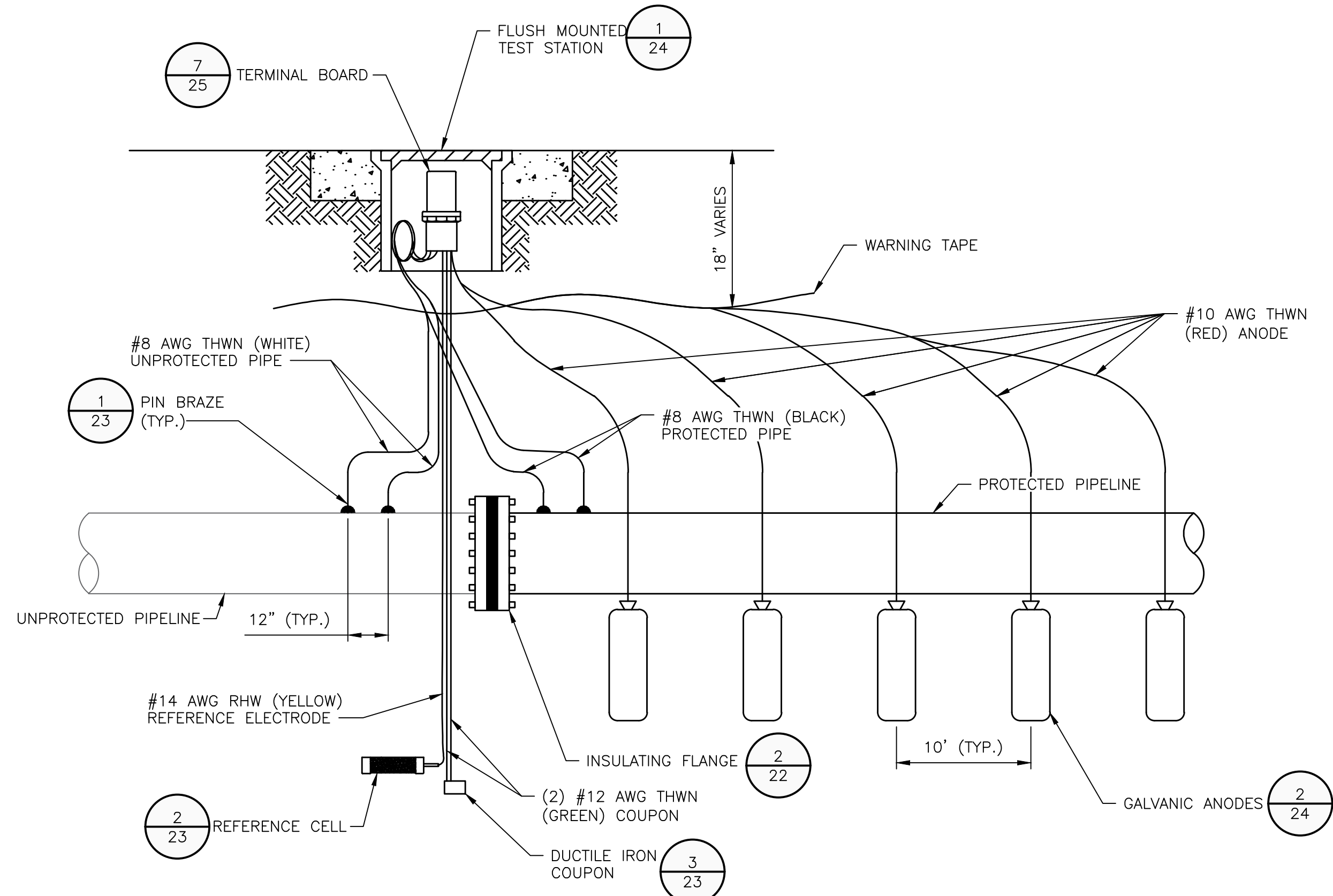
FILENAME: CP-DETAILS.dwg
SCALE: NTS
SHEET: 20



2 ANODE FOREIGN LINE MONITORING TEST STATION (5)
SCALE: NTS



4 ANODE CASING AND FOREIGN LINE MONITORING TEST STATION (6)
SCALE: NTS



5 ANODE ISOLATION TEST STATION (7)
SCALE: NTS

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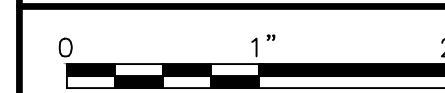
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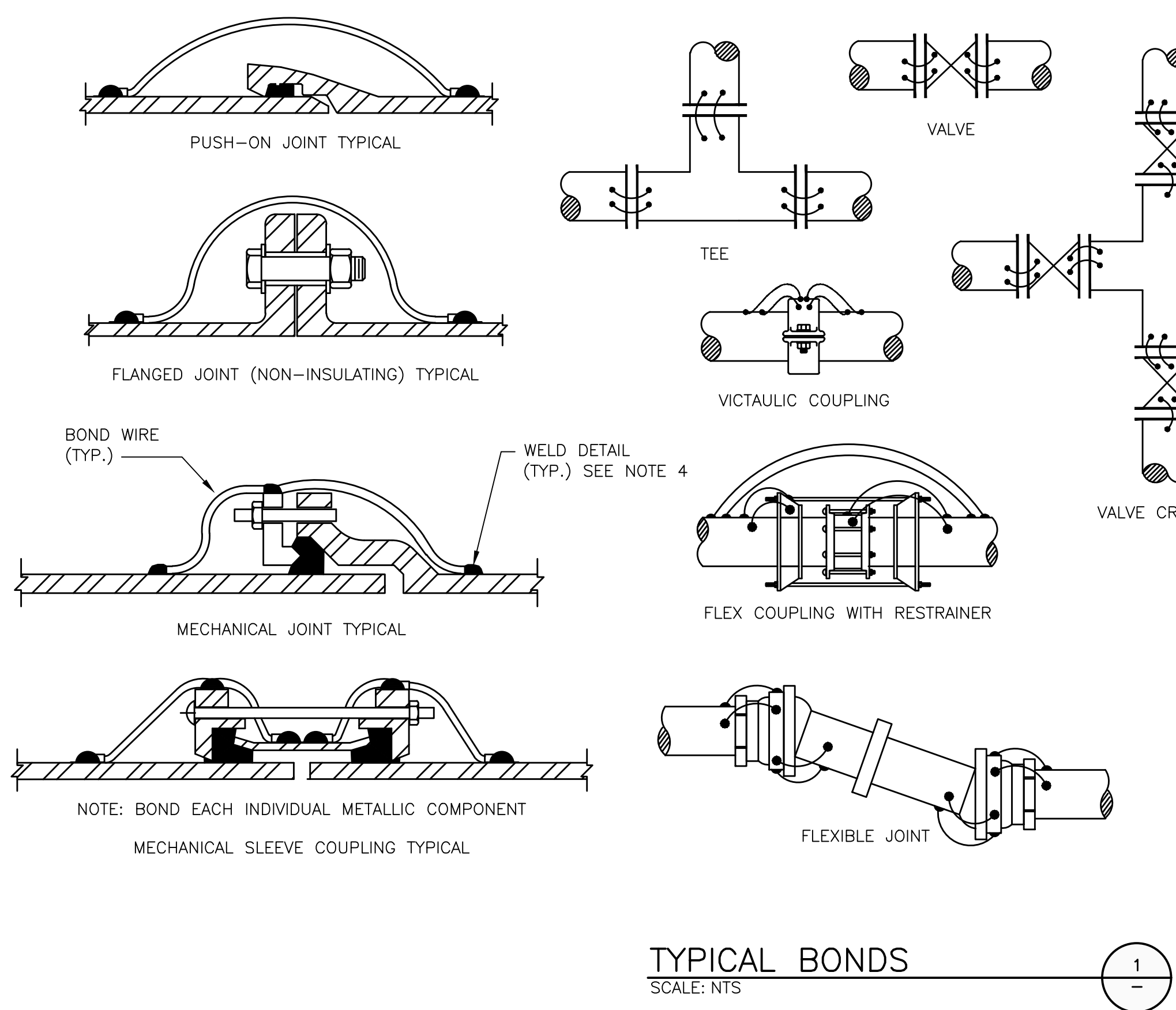
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LICKING RIVER CROSSING CATHODIC PROTECTION DETAILS II



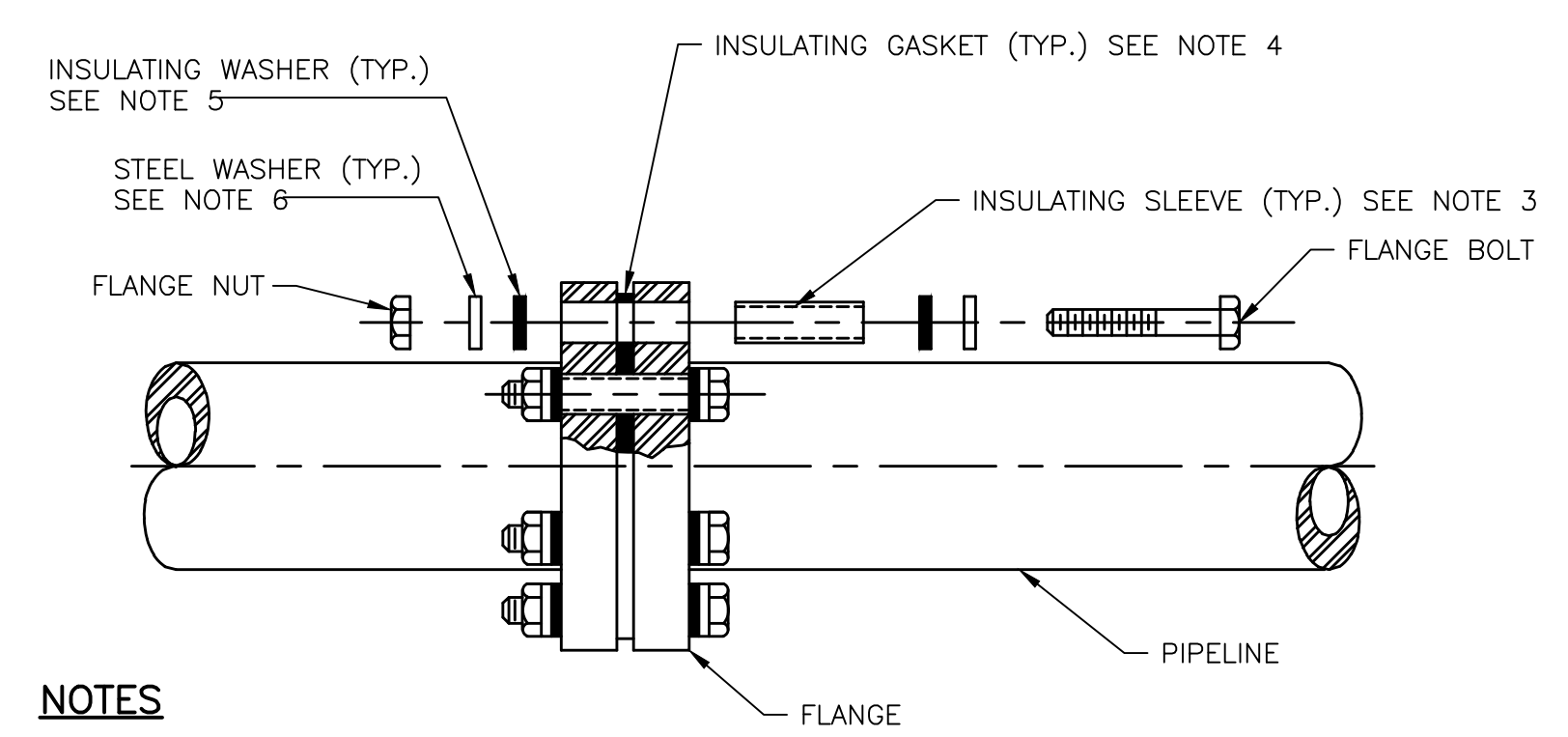
FILENAME	CP-DETAILS.dwg
SCALE	NTS

SHEET	21
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NOTES

1. ALL BOND WIRES SHALL BE STRD. COPPER WIRE W/HMWPE INSULATION, INSTALLED AT MIN. LENGTH.
2. TWO #8 AWG BOND WIRES ARE REQUIRED PER JOINT FOR PIPE DIAMETERS 16" AND SMALLER. THREE #4 AWG BOND WIRES ARE REQUIRED PER JOINT FOR PIPE DIAMETERS GREATER THAN 16".
3. BOND WIRES SHALL BE SPACED 6" APART MIN.
4. ALL WIRE CONNECTIONS SHALL BE MADE BY PIN BRAZE.
5. WAX TAPE ALL BURIED BOLTED FITTINGS PER AWWA C217.
6. NOT TO BE USED ON INSULATING FLANGE JOINTS.



NOTES

1. APPLY AN INTERNAL LINING TO THE PIPELINE AT INSULATING FLANGES FOR A DISTANCE OF 24 INCHES. THE COATING SHALL BE RAVEN AQUATAPOXY COATING AS MANUFACTURED BY RAVEN LININGS CORPORATION, OR APPROVED EQUAL.
2. MANUFACTURER SHALL BE PACIFIC SEAL, INC. (LINEBACKER), ADVANCED PRODUCTS & SYSTEMS, INC. (TROJAN), OR APPROVED EQUAL.
3. INSULATING SLEEVE SHALL BE FULL-LENGTH FIBERGLASS-REINFORCED EPOXY (NEMA G-10 GRADE).
4. INSULATING GASKET SHALL BE FULL-FACE TYPE E WITH ELASTIC SEALING ELEMENT.
5. INSULATING WASHERS SHALL BE FIBERGLASS REINFORCED (NEMA G-10 GRADE).
6. STEEL WASHERS SHALL BE CADMIUM OR ZINC PLATED, HOT-ROLLED STEEL, 1/8" THICK.
7. AFTER ASSEMBLY, TEST THE FLANGE TO ENSURE PROPER ELECTRICAL ISOLATION.
8. COAT THE FLANGE WITH WAX TAPE PER AWWA C217 AFTER SUCCESSFUL TESTING.

INSULATING FLANGE ASSEMBLY
SCALE: NTS

2

RECORD DRAWINGS



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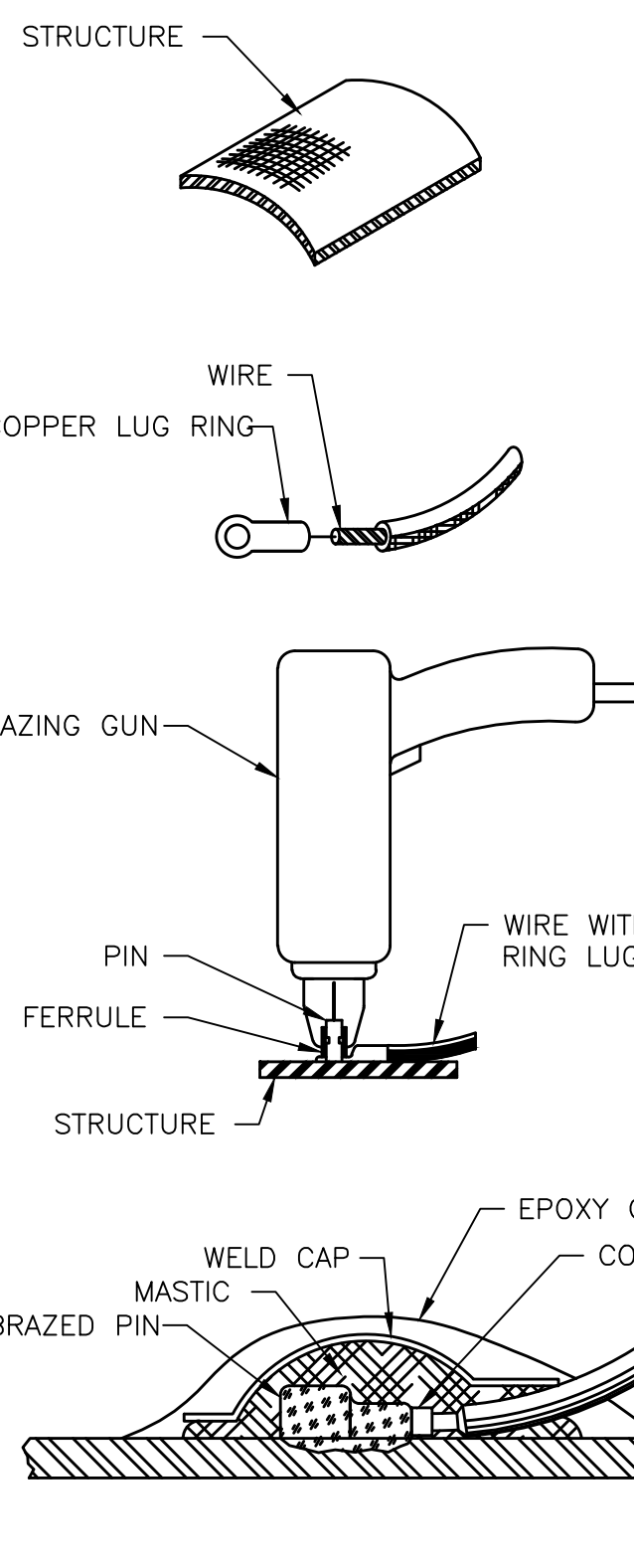
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LICKING RIVER CROSSING
CATHODIC PROTECTION
DETAILS III

0 1" 2"

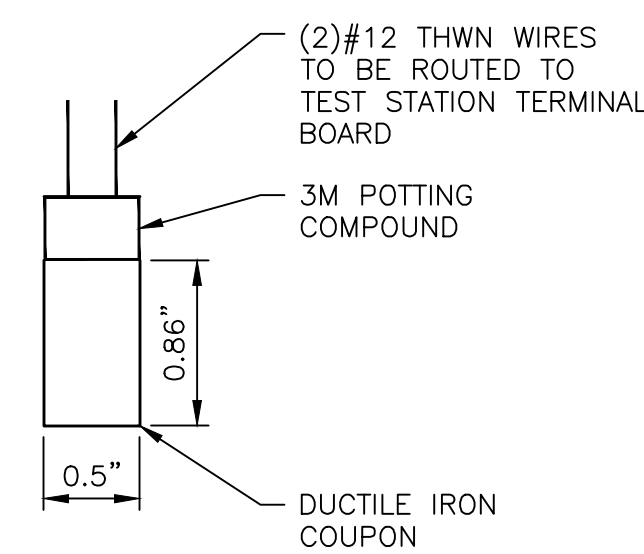
FILENAME	CP-DETAILS.dwg	SHEET	22
SCALE	NTS		



NOTES

1. DEGREASE AND CLEAN STRUCTURE TO BARE, BRIGHT METAL WITH MECHANICAL DEVICES.
2. STRIP WIRE INSULATION AND ATTACH FROM WIRE AND ATTACH A BAC M1 COMPRESSION TERMINAL OR APPROVED EQUAL.
3. LOAD THE BRAZING GUN WITH A DIRECT BRAZING PIN AND FERRULE.
4. BRAZE THE WIRES TO THE PIPE.
5. TEST BRAZE BY BREAKING OFF THE SHANK OF THE PLAIN PIN WITH A HAMMER.
6. COVER CONNECTION WITH MASTIC FILLED WELD CAP AND EPOXY COATING 100% SOLIDS BY VOLUME OVER WELD CAP AND ALL EXPOSED METAL.
7. ALL WELDS SHALL BE A MINIMUM OF 6" APART.
8. ALLOW WELD COATING TO CURE PER MANUF. RECOM. BEFORE BURIAL.
9. APPLY TC 7100 WET BOND EPOXY AS MANUFACTURED BY THE TAPECOAT COMPANY, OR SPLASH ZONE A-788 AS MANUFACTURED BY CARBOLINE TO ANY BARE METAL OUTSIDE WELD CAP.
10. WELD CAPS SHALL BE ROYSTON HANDY CAP IP AS MANUFACTURED BY ROYSTON LABORATORIES, INC., THERMOCAP PC WELD COVER AS MANUFACTURED BY THERMOWELD, OR APPROVED EQUAL.

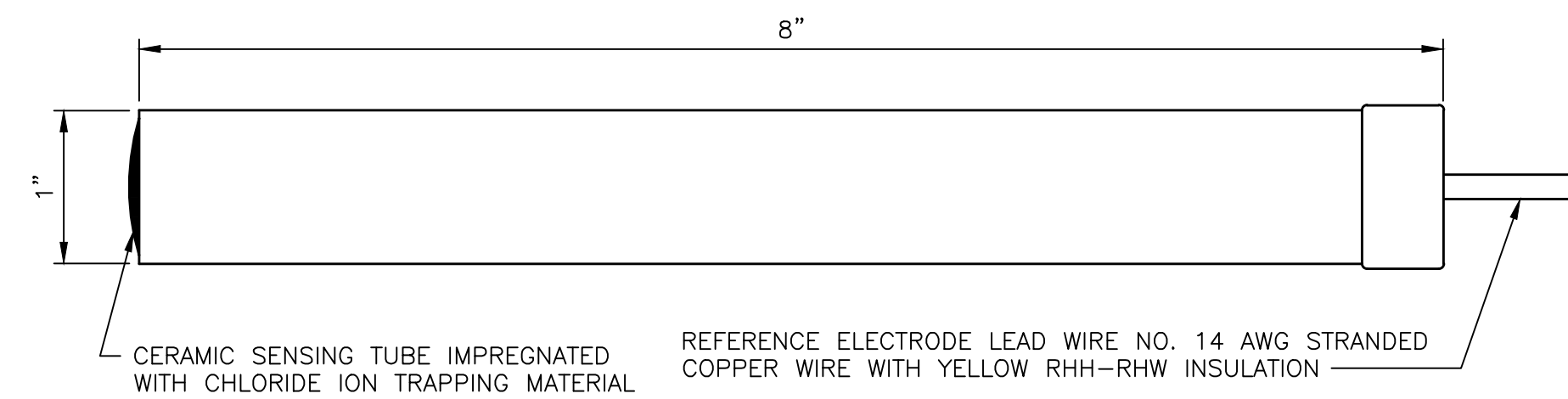
PIN BRAZING
SCALE: NTS



NOTES

1. COUPON SHALL BE MCMILLER PART COU200 OR APPROVED EQUAL.

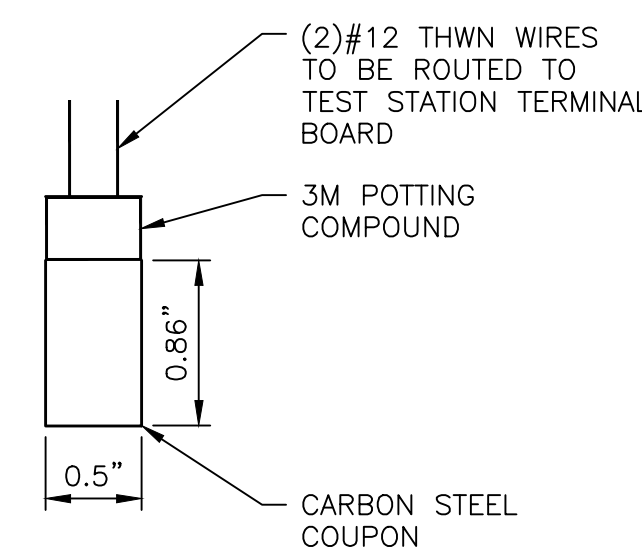
DUCTILE IRON COUPON
SCALE: NTS



NOTES

1. REFERENCE ELECTRODE SHALL BE STELTH 2 MODEL SRE-007-CUY BY BORIN MANUFACTURING OR STAPERM BY GMC CORROSION, OR APPROVED EQUAL.

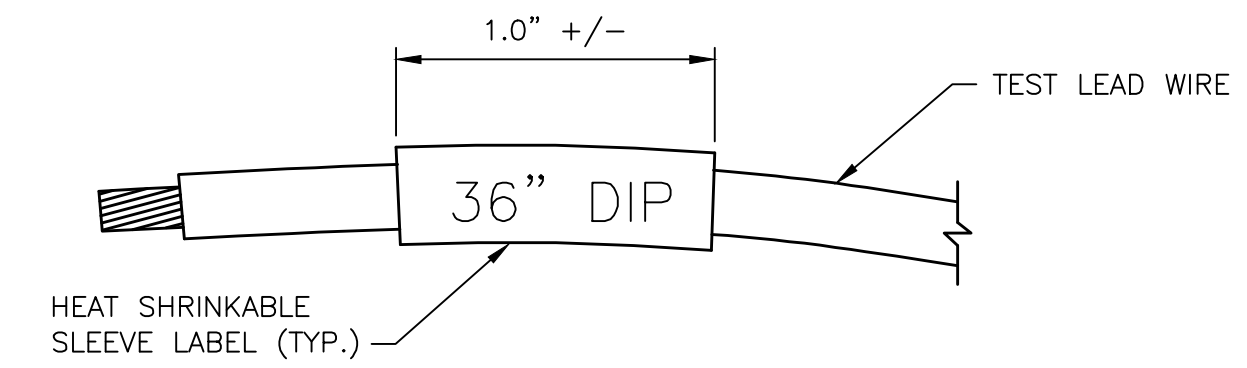
**COPPER SULFATE
REFERENCE ELECTRODE**
SCALE: NTS



NOTES

1. COUPON SHALL BE MCMILLER PART COU100 OR APPROVED EQUAL.

CARBON STEEL COUPON
SCALE: NTS



NOTES

1. FOR PIPE IDENTIFICATION, PRINT DIAMETER AND MATERIAL OF PIPELINE.
2. ANODE NUMBERS ARE BASED ON THE LOCATION OF THE ANODE RELATIVE TO PIPE STATIONING. IDENTIFY THE ANODE LOCATED AT THE LOWEST PIPE STATION AS "ANODE 1" AND INCREASE CONSECUTIVELY IN THE DIRECTION OF THE PIPE STATIONING.

HEAT SHRINK LABEL
SCALE: NTS

RECORD DRAWINGS

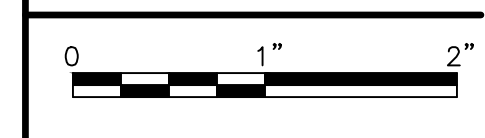


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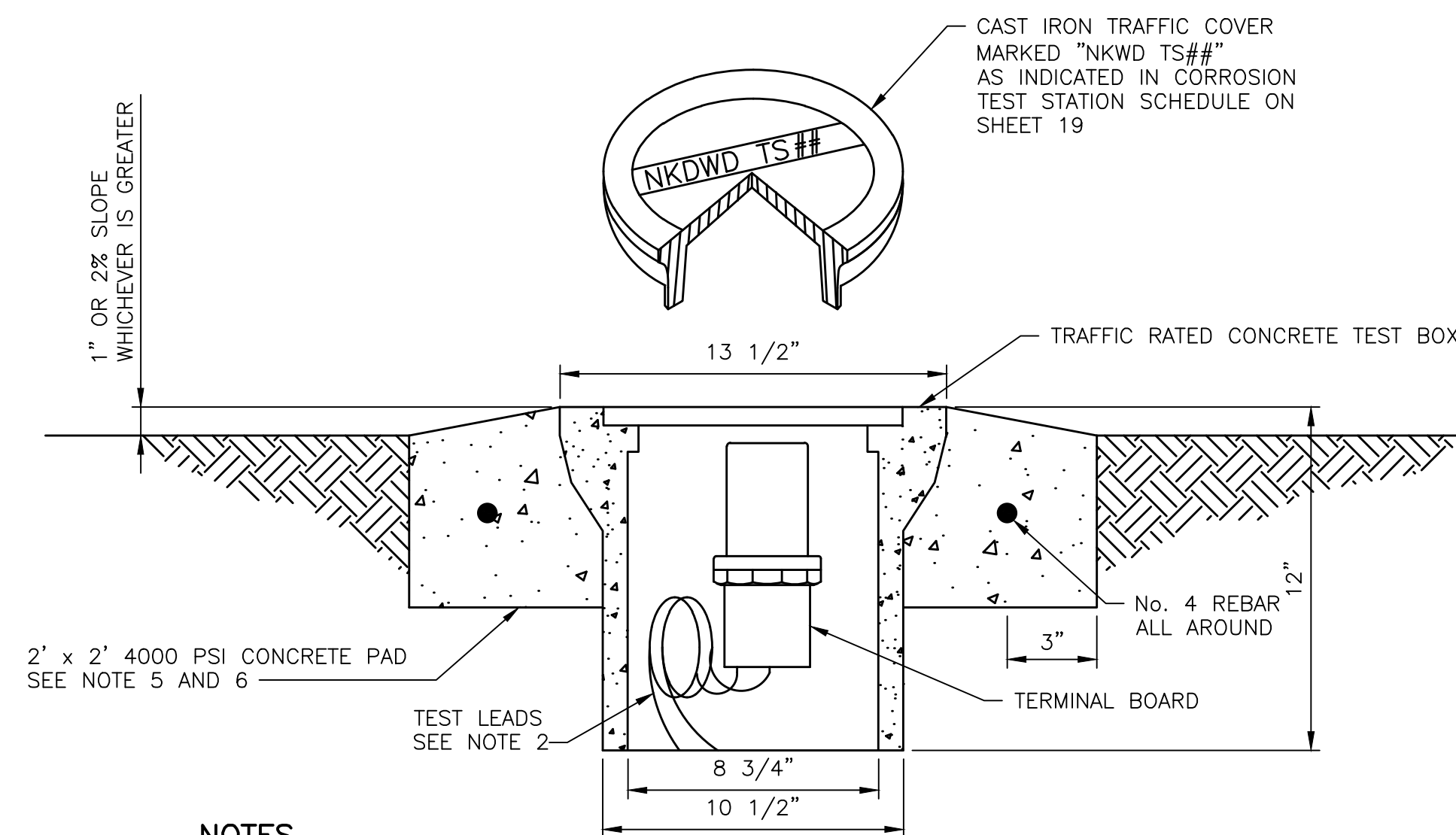
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CHECKED	RLG
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**LICKING RIVER CROSSING
CATHODIC PROTECTION
DETAILS IV**



FILENAME	CP-DETAILS.dwg	SHEET	23
SCALE	NTS		

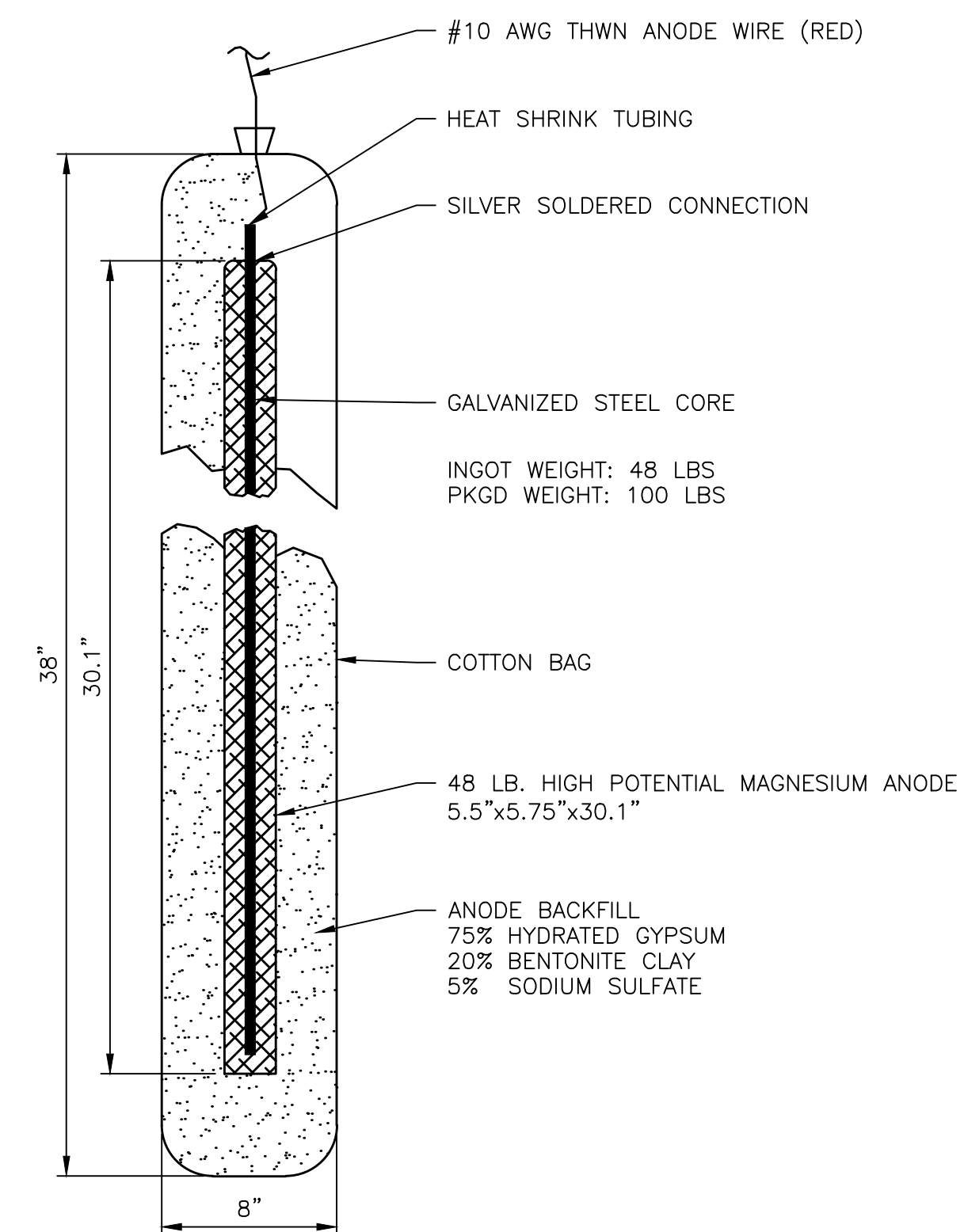
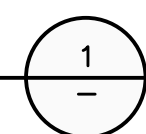


NOTES

1. CONCRETE BODY, TRAFFIC RATED — CHRISTY G5 OR EQUAL WITH VANDAL-RESISTANT HOLD DOWN SCREWS.
2. ALL WIRES SHALL HAVE 24" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL OR SAND IN TEST BOX.
4. TEST BOX TO BE FIELD LOCATED ±5' FROM LOCATION GIVEN ON PLAN SHEETS. DO NOT INSTALL TEST STATION IN TRAFFIC LANES OR PARKING STALLS.
5. PROVIDE 2' X 2' X 6" THICK STEEL REINFORCED CONCRETE PAD AROUND TEST BOX AT UNPAVED SITES.
6. PROVIDE SUFFICIENT SLOPING IN THE CONCRETE PAD OR SURROUNDING PAVEMENT TO PROVIDE DRAINAGE AWAY FROM THE CONCRETE TEST BOX.

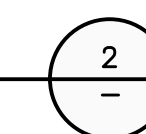
FLUSH MOUNTED TEST STATION

SCALE: NTS



48 LB HIGH POTENTIAL MAGNESIUM ANODE

SCALE: NTS



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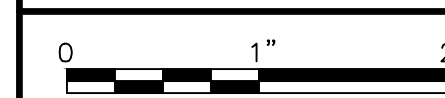
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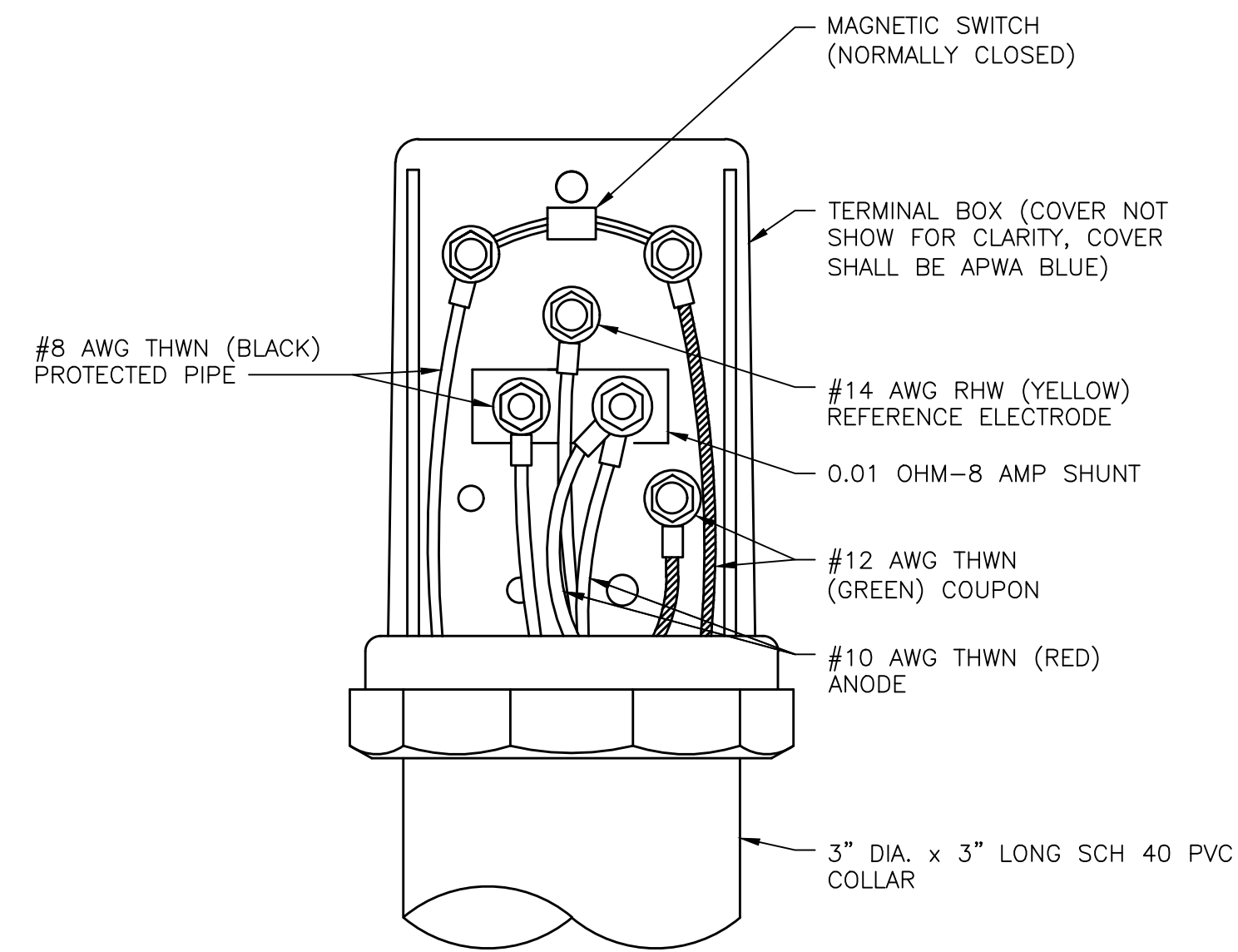
CATHODIC PROTECTION DETAILS V



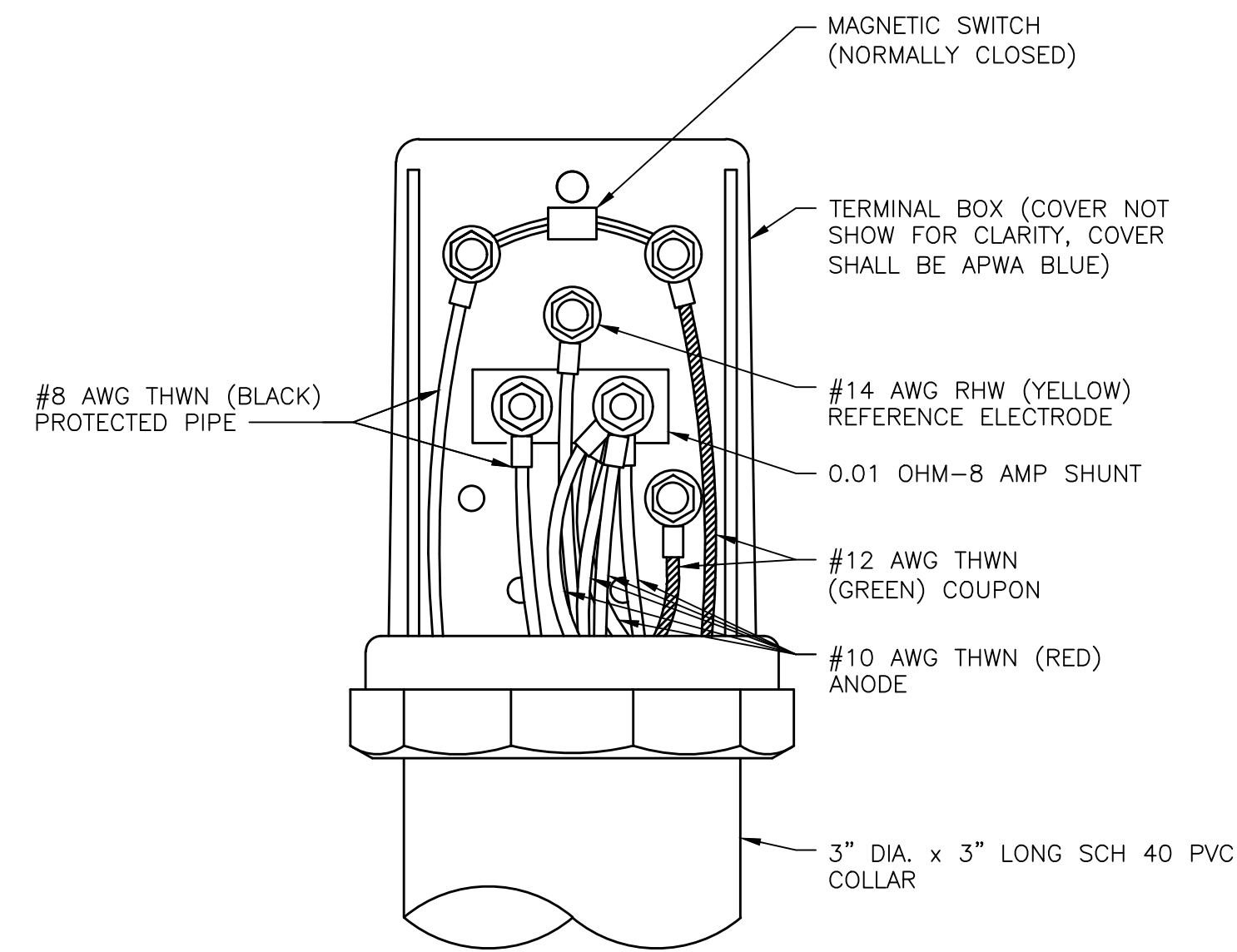
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SHEET

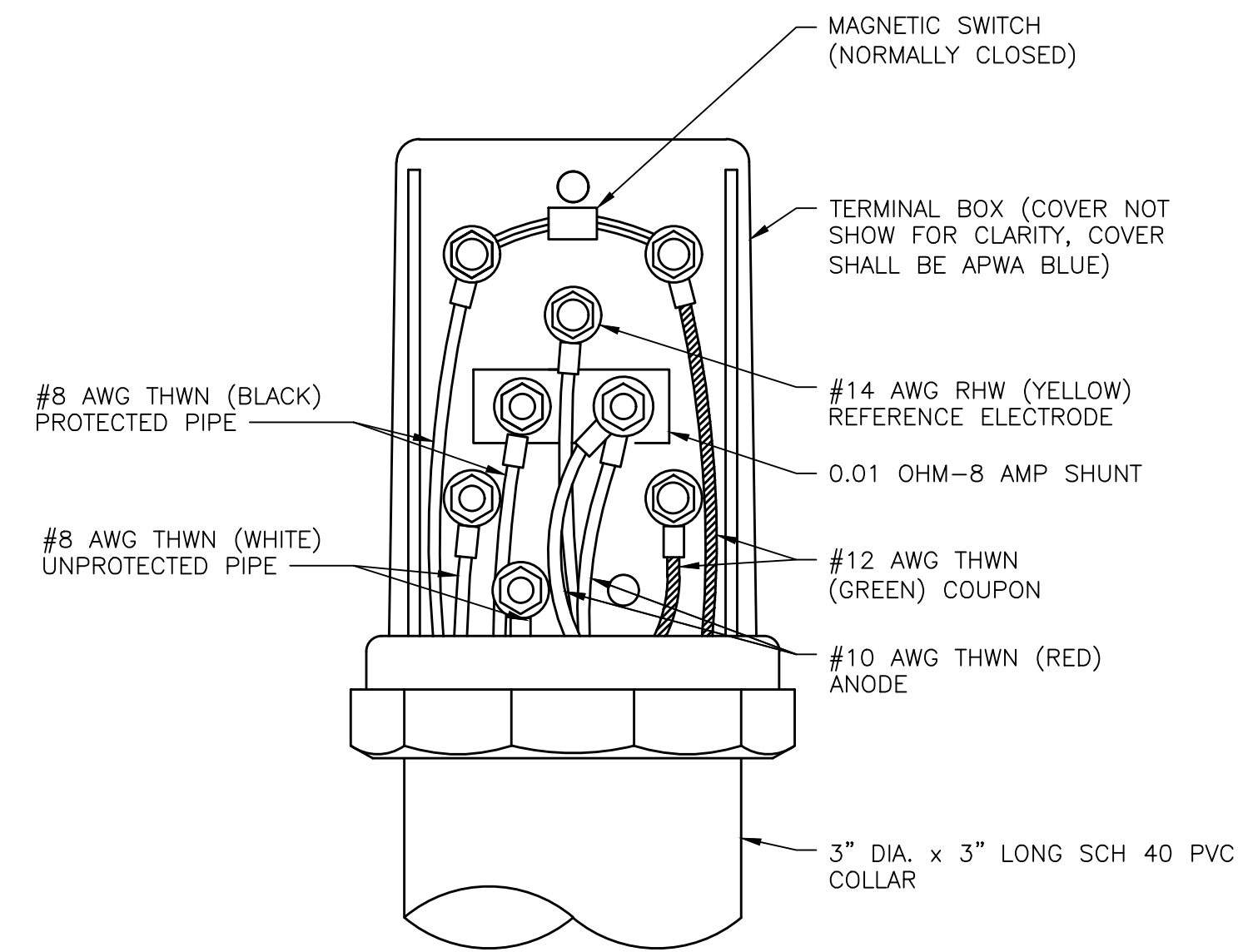
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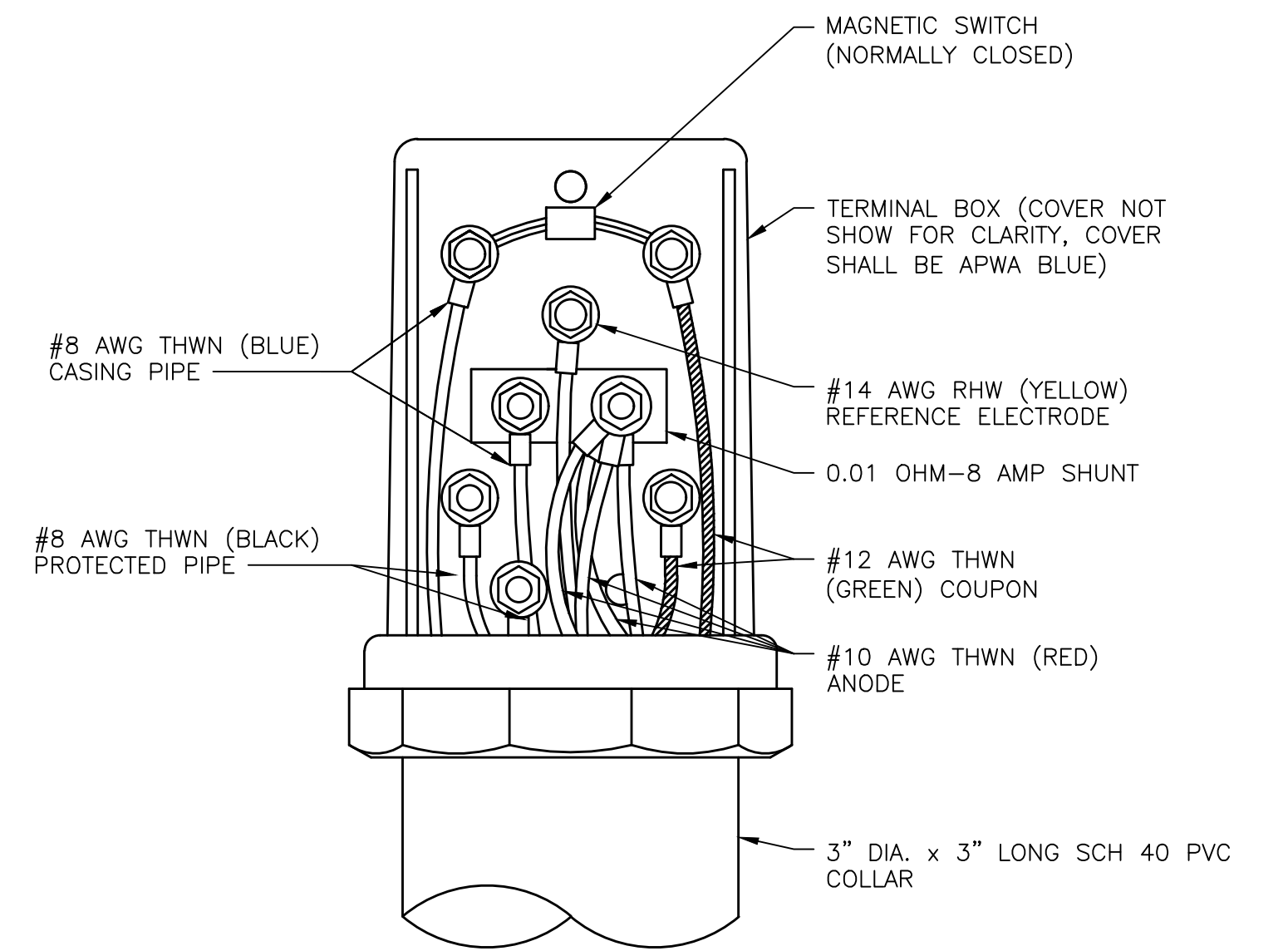
TERMINAL BOARD
2 ANODE TEST STATION
SCALE: NTS



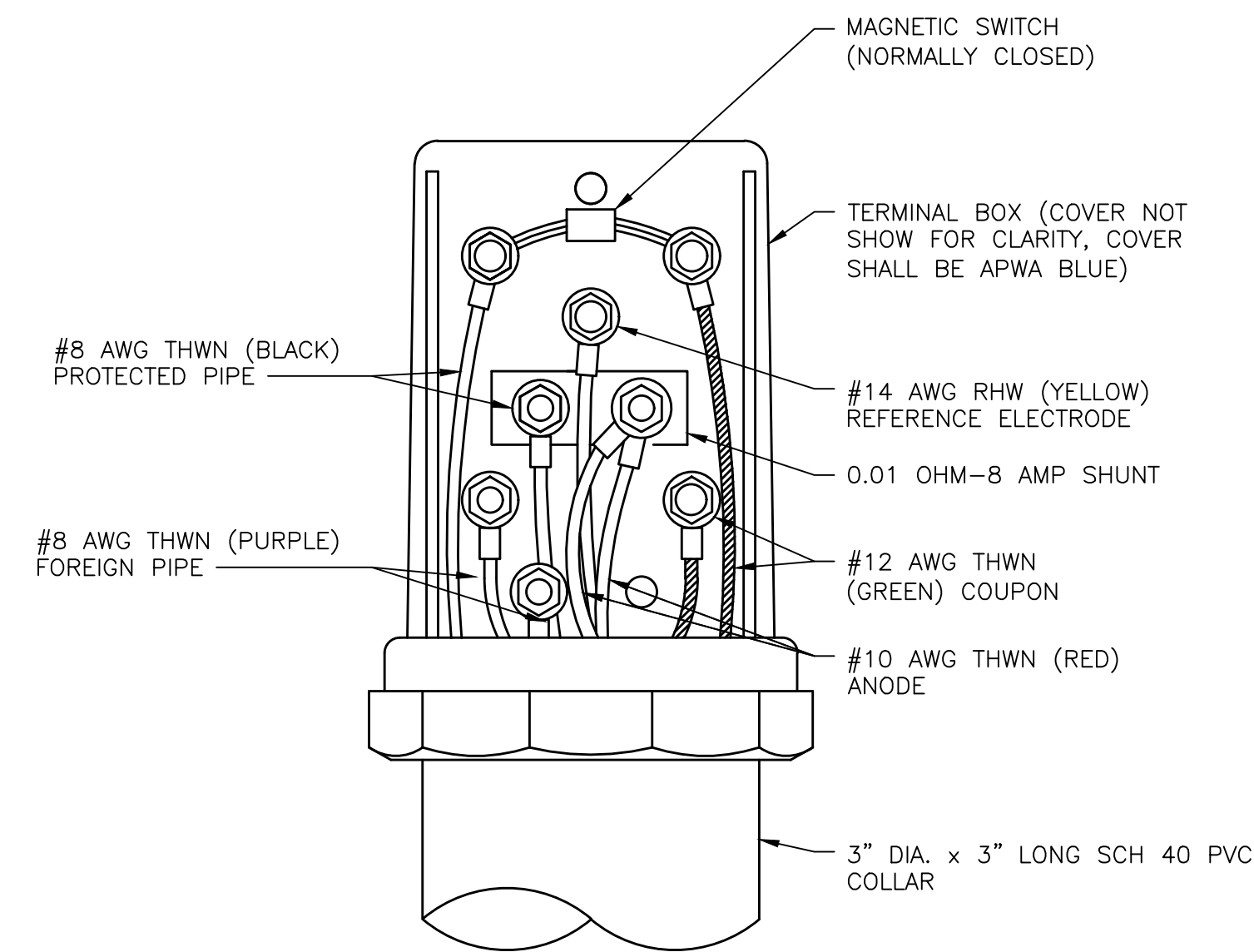
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5 ANODE TEST STATION
SCALE: NTS



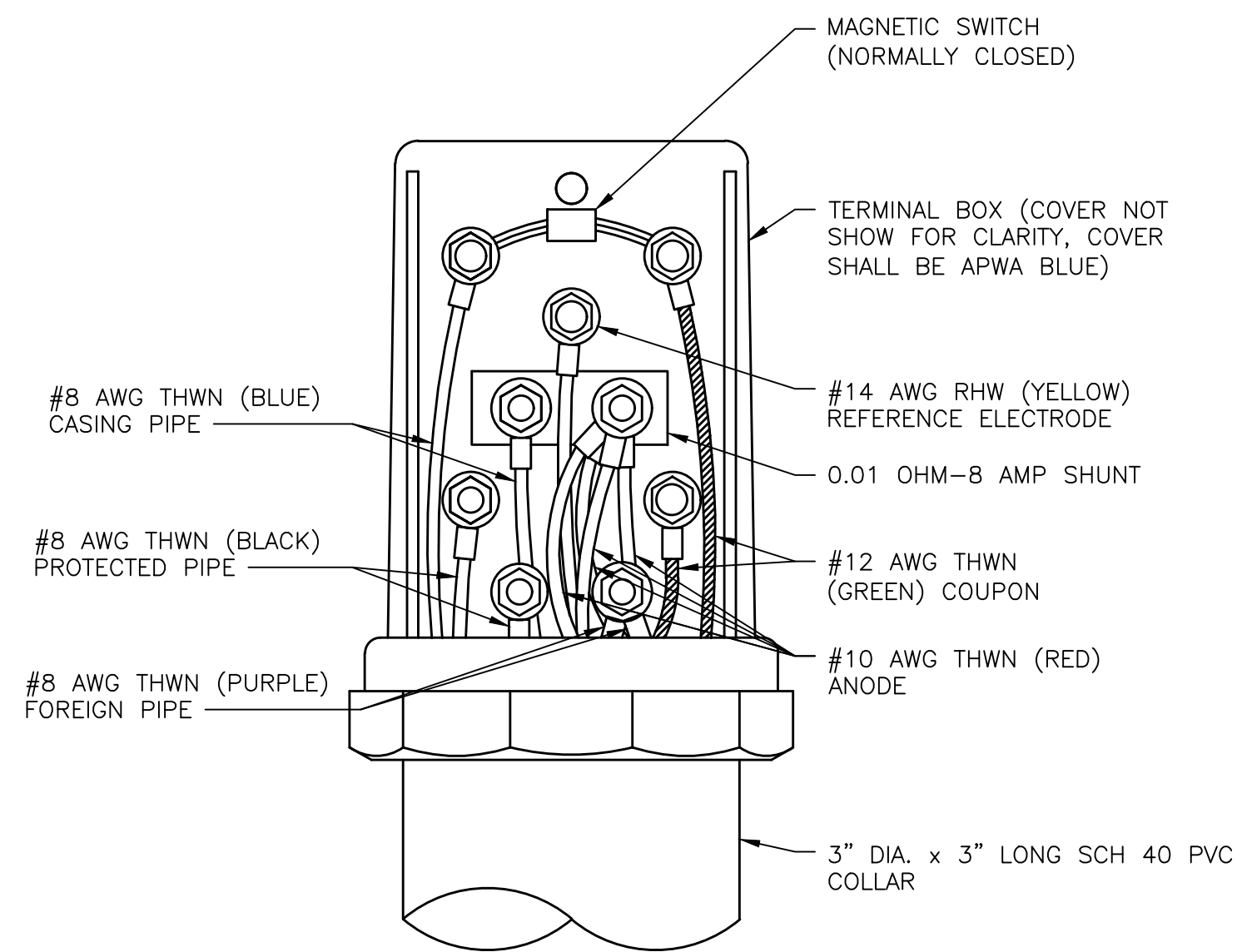
TERMINAL BOARD 2 ANODE
ISOLATION TEST STATION
SCALE: NTS



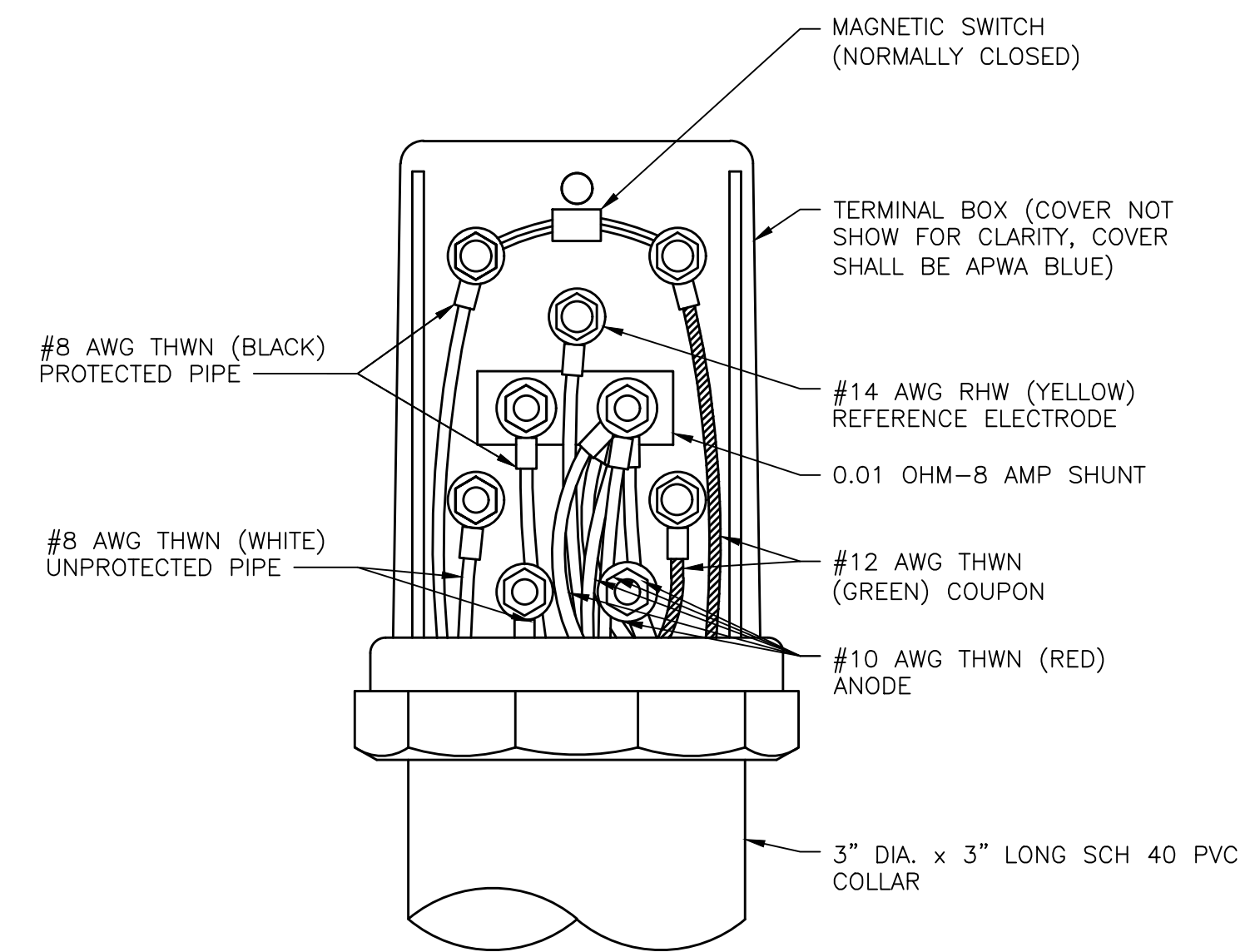
TERMINAL BOARD 4 ANODE
CASING TEST STATION
SCALE: NTS



TERMINAL BOARD 2 ANODE FOREIGN
LINE MONITORING TEST STATION
SCALE: NTS



TERMINAL BOARD 4 ANODE CASING
AND FOREIGN LINE TEST STATION
SCALE: NTS



TERMINAL BOARD 5 ANODE
ISOLATION TEST STATION
SCALE: NTS

NOTES

1. TERMINAL BOXES IN AT GRADE TEST STATIONS SHALL BE BIG FINK BY COTT MFG. OR MODEL T-3 BY TINKER AND RASOR OR APPROVED EQUAL.
2. SHUNTS IN AT GRADE TEST STATIONS SHALL BE YELLOW BY COTT MFG. OR YELLOW SHUNT BY TINKER AND RAZOR OR APPROVED EQUAL.
3. DO NOT CONNECT SHUNT BETWEEN PIPE AND ANODES DURING CONSTRUCTION. SHUNT TO BE CONNECTED BY CONTRACTOR'S CORROSION ENGINEER DURING FIELD TESTING.
4. MAGNETIC SWITCH ON TERMINAL BOARDS SHALL BE MODEL SM-ADJ AS MANUFACTURED BY ELECTROCHEMICAL DEVICES, INC.

RECORD DRAWINGS



ISSUE	DATE	DESCRIPTION
04	11/10/2023	RECORD DRAWINGS
03	05/12/2022	BID SET
02	03/04/2021	KDOW SUBMITTAL
01	08/03/2020	REVIEW SET

PROJECT MANAGER	ROSS L. GUFFEY
DESIGNED	KJB
DRAWN	SRS
CHECKED	RLG
QA / QC	MIKE HANSEN
PROJECT NUMBER	197474

RECORD DRAWING

THIS DRAWING HAS BEEN REVISED FROM THE ORIGINAL CONTRACT DRAWING BASED ON DATA SUPPLIED BY THE CONTRACTOR TO SHOW MAJOR CHANGES MADE DURING CONSTRUCTION. NO WARRANTY IS MADE FOR COMPLETE ACCURACY OF THIS DRAWING.

HDR ENGINEERING, INC.
DATE 11-10-23 BY ROSS L. GUFFEY

NOTE: THE ORIGINAL CONSTRUCTION DRAWING WITH ISSUE DATE MAY 2022 HAD THE P.E. SEAL OF STATE OF KENTUCKY NUMBER 52153 AFFIXED.

LICKING RIVER CROSSING

CATHODIC PROTECTION DETAILS VI

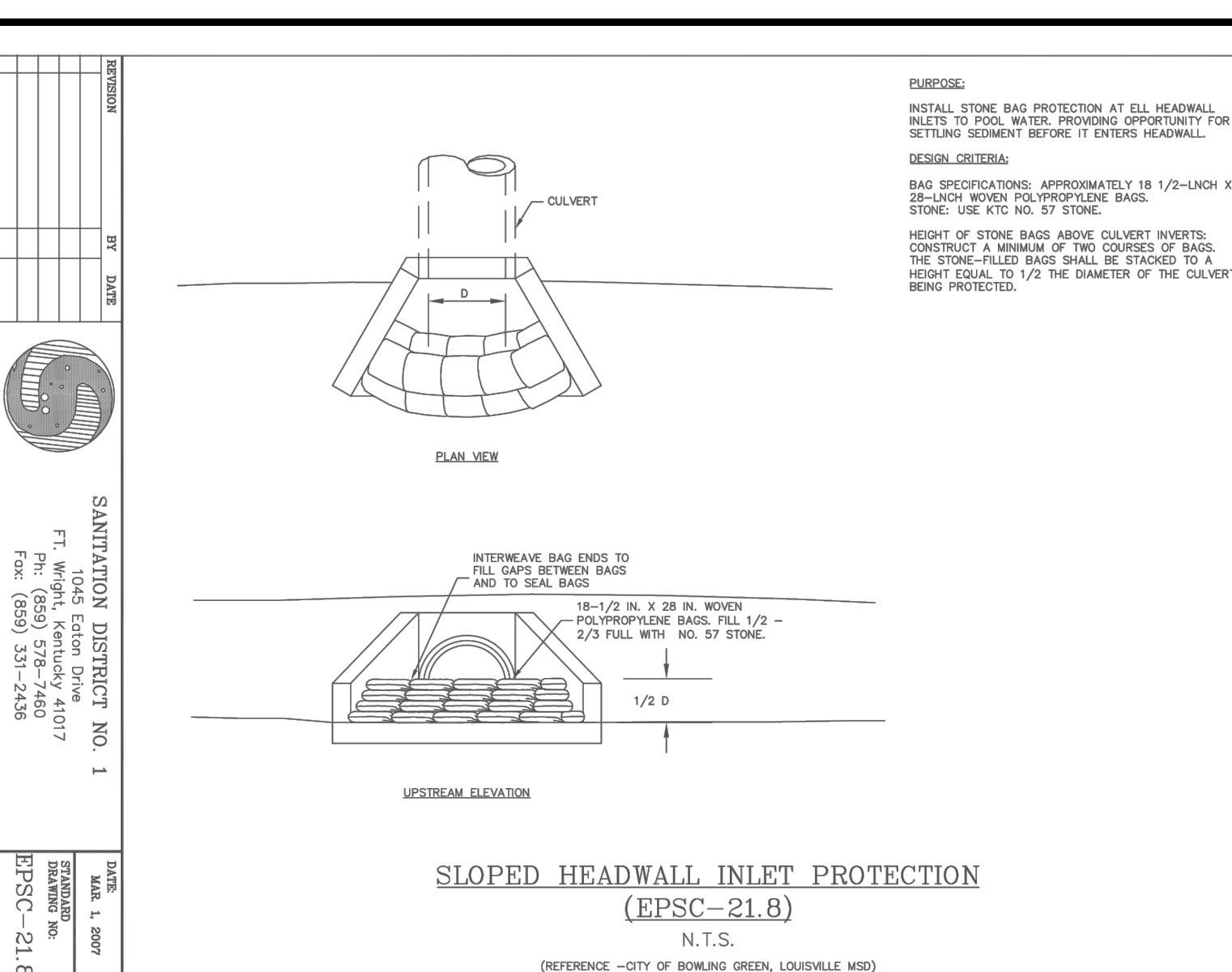
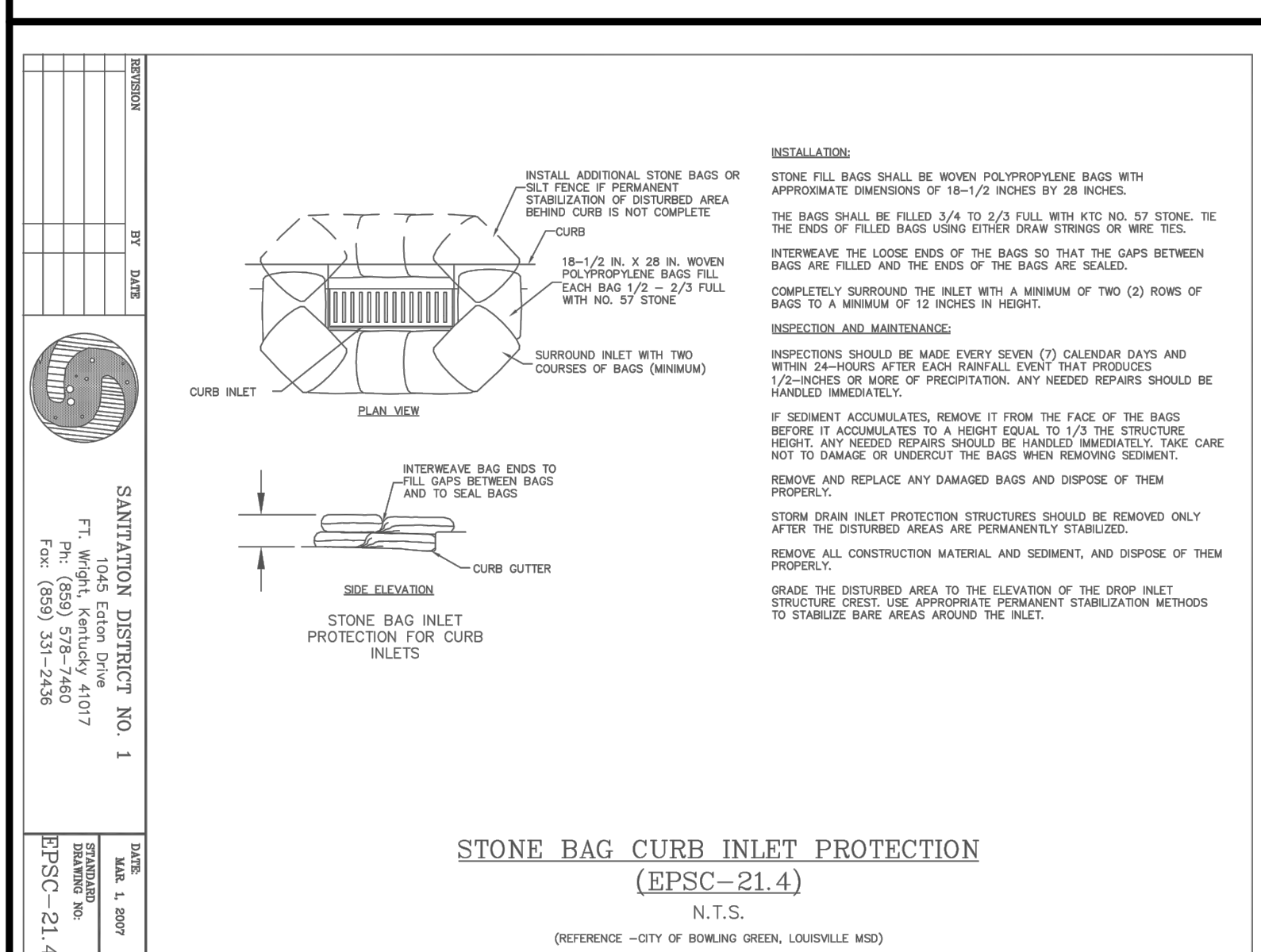
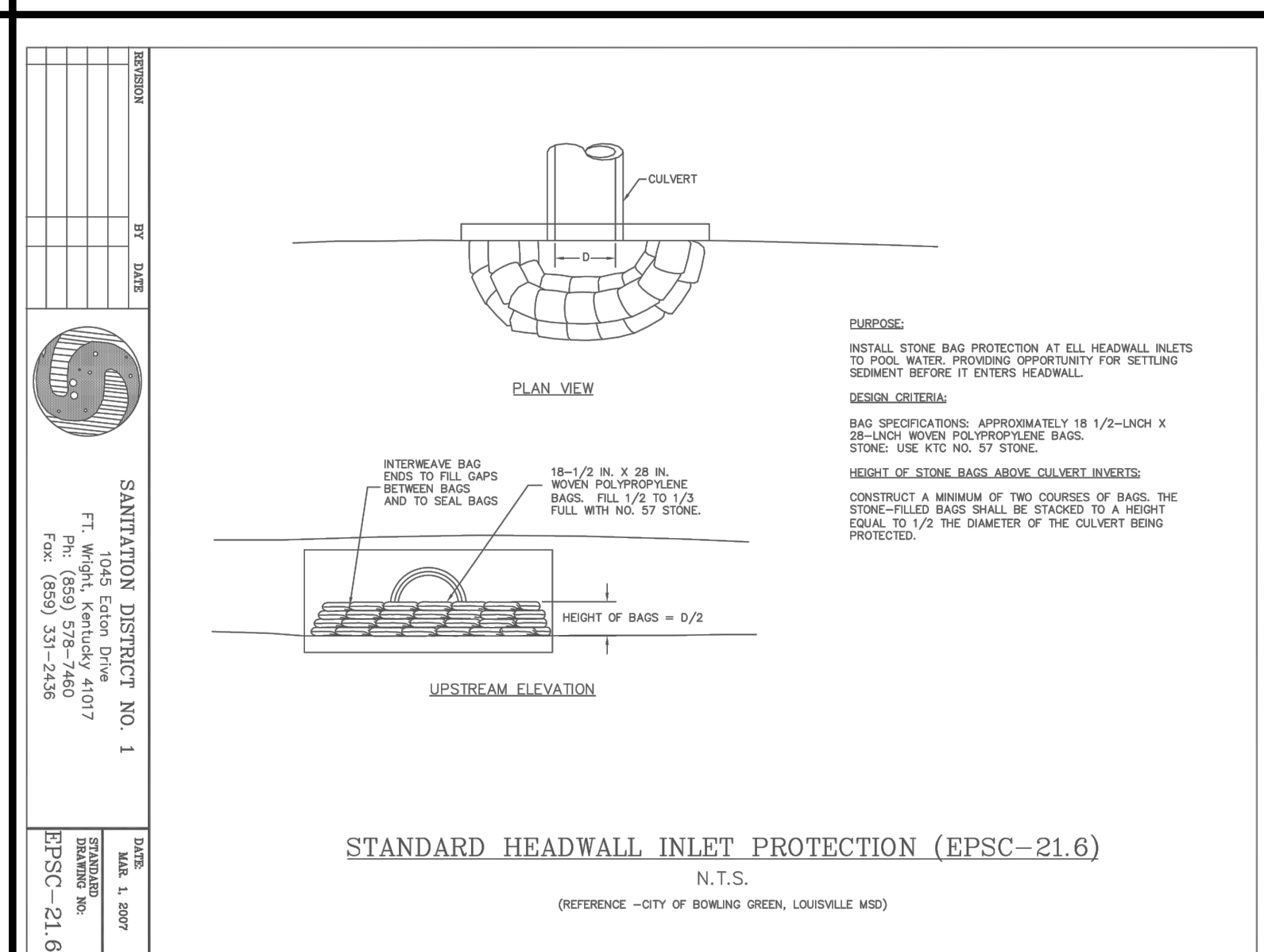
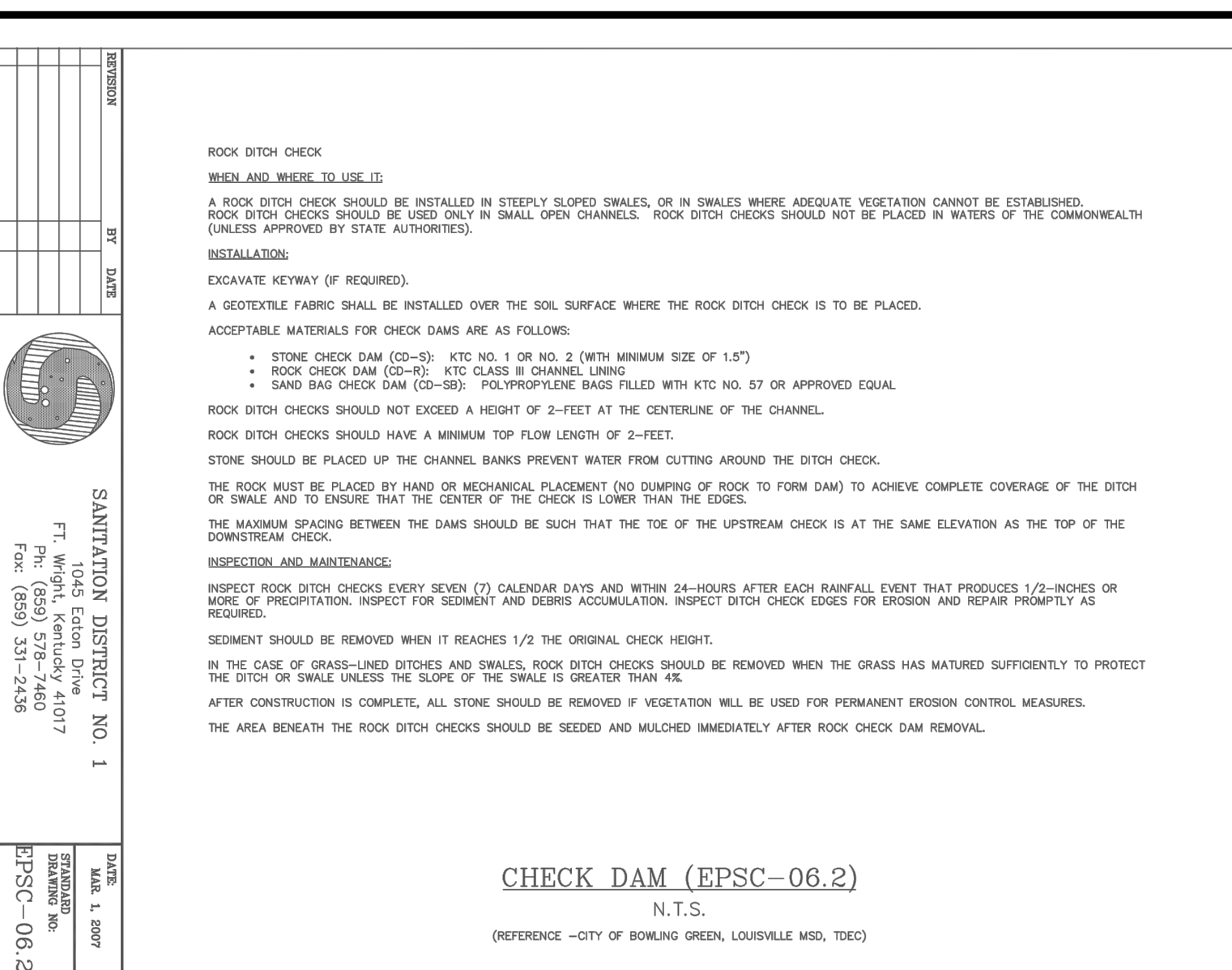
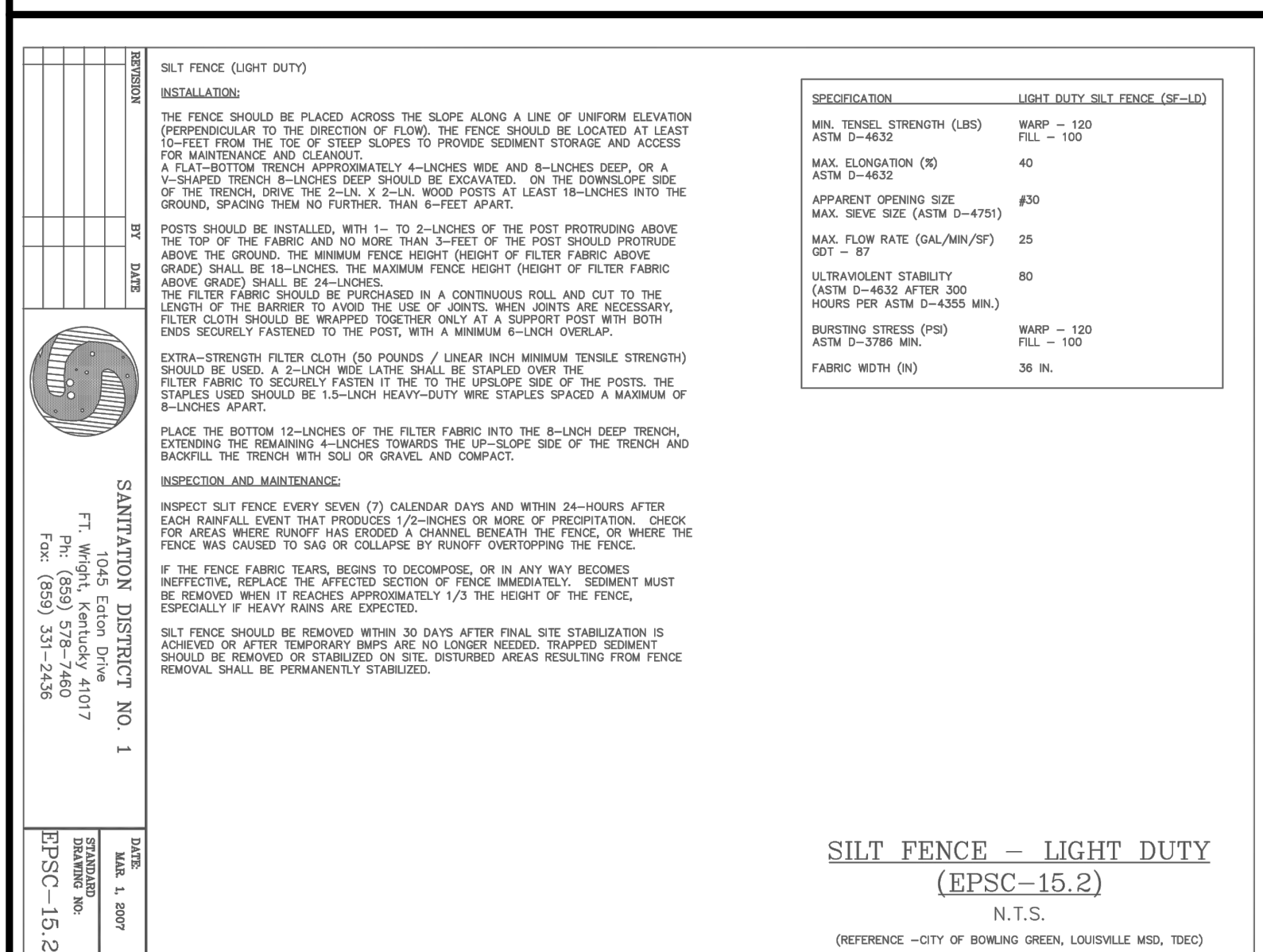
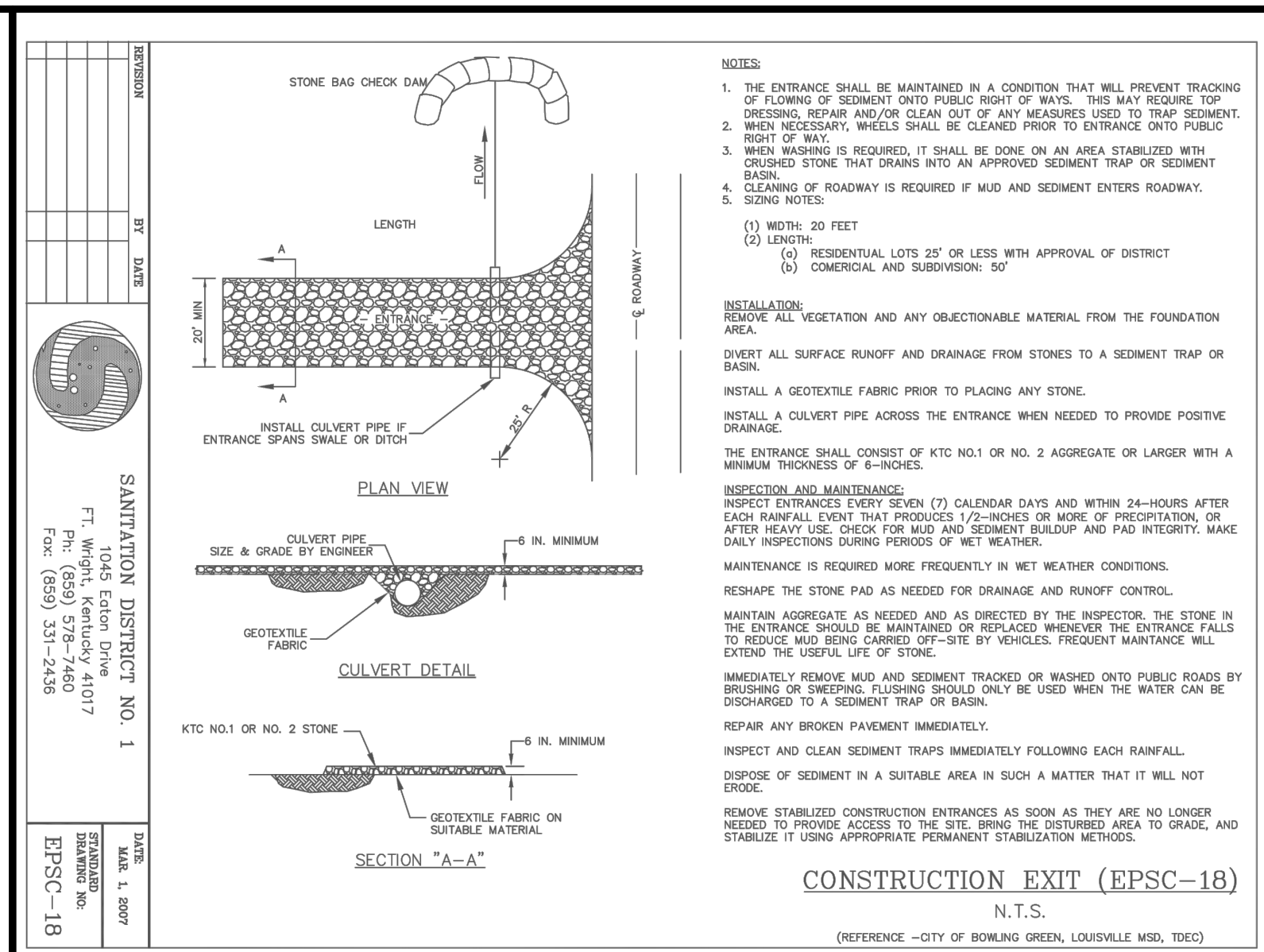
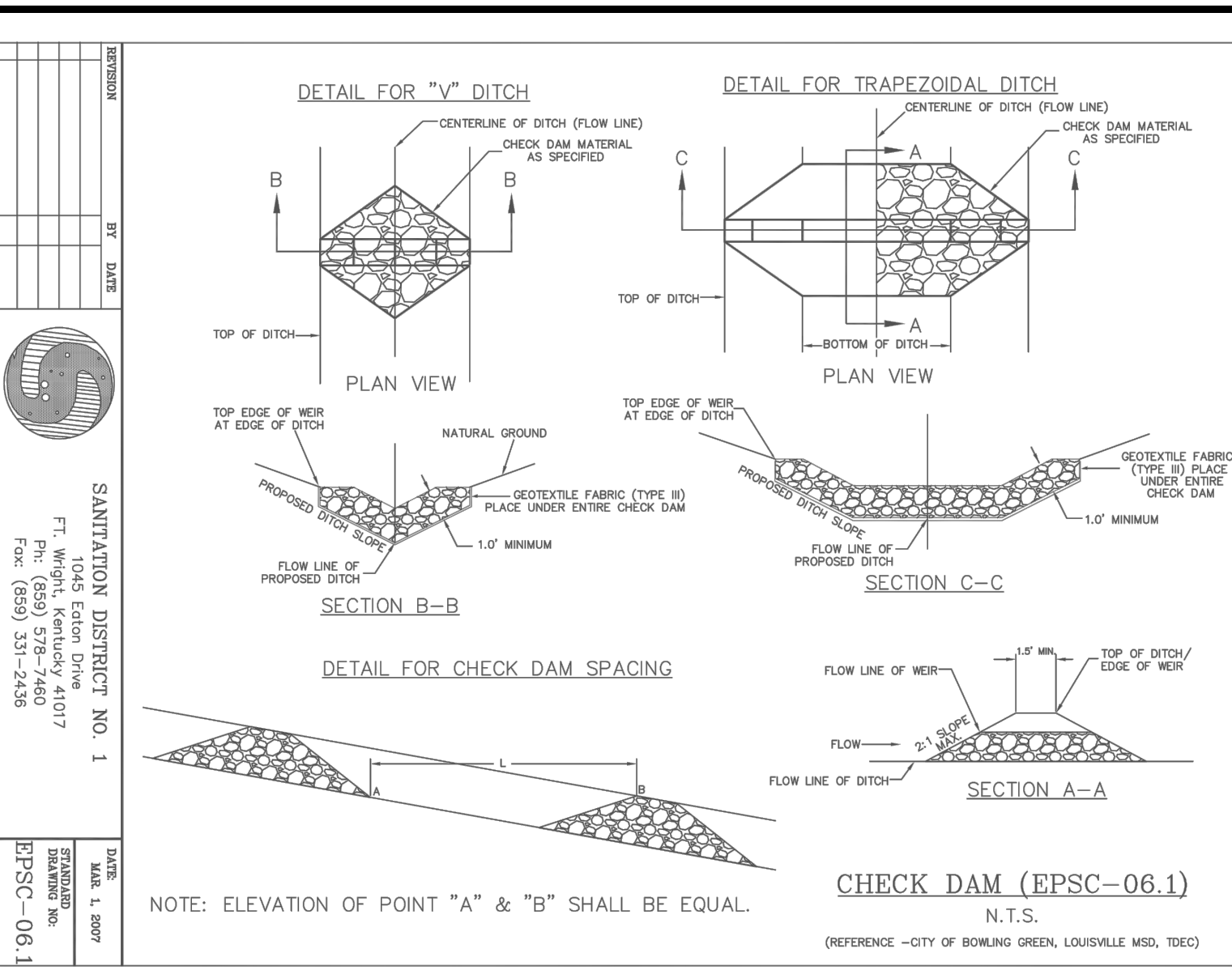
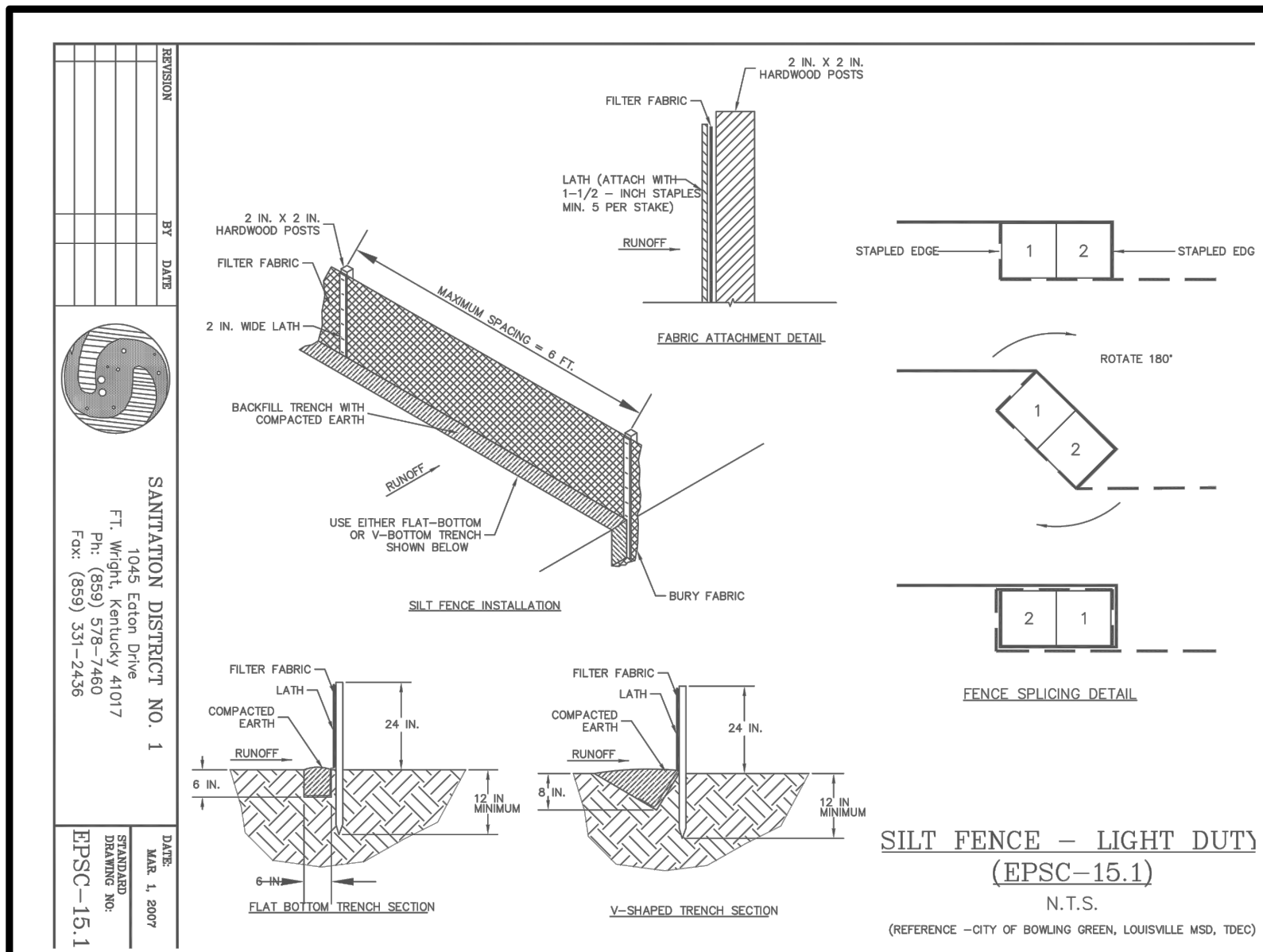
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FILENAME CP-DETAILS.dwg SHEET 25

SCALE NTS

GENERAL EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES. THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL GOVERN THE OVERALL EROSION CONTROL EFFORT. THE CONTRACTOR SHALL DESIGN AND IMPLEMENT SUCH ADDITIONAL MEASURES AS HE DEEMS NECESSARY TO EFFECTIVELY PREVENT EROSION AND SEDIMENTATION FROM OCCURRING. A COPY OF THIS PLAN AND ALL INSPECTION REPORTS SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY GOVERNING AUTHORITIES.
2. THE NOTICE OF INTENT WILL BE SUBMITTED BY THE CONTRACTOR. THE NOT (NOTICE OF TERMINATION) AND ALL OTHER PERMITS REQUIRED FOR EROSION AND SEDIMENT CONTROL MEASURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR (IF REQUIRED TO OBTAIN AND FILE). COPIES OF ALL PERMITS ARE TO BE PROVIDED TO THE DESIGN ENGINEER.
3. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PERMIT MUD OR DIRT TO BE DEPOSITED ON ANY STREET OR PRIVATE PROPERTY. ALL STREETS IN THE VICINITY OF THE WORK SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND, IF NECESSARY, CLEANED.
4. NO GRADING SHALL COMMENCE UNTIL THE INITIAL SOIL EROSION AND SEDIMENT CONTROL INSTALLATION (SILT FENCES AND CHECK DAMS AND INLET PROTECTION) IS INSTALLED. ANY REVISIONS OR CHANGES TO THE PLANS MUST BE APPROVED BY THE DESIGN ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT AND UNTIL PERMANENT VEGETATION IS PROPERLY ESTABLISHED IN ACCORDANCE WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE AND FINAL APPROVAL IS RECEIVED FROM THE OWNER.
6. SILT CHECKS SHALL COMPLY WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE UNLESS SPECIFIED OTHERWISE. CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE FOR USE ON THIS PROJECT.
7. AFTER EVERY RAIN IN EXCESS OF 0.5 INCHES, SILT CONTROL DEVICES ARE TO BE INSPECTED, CLEANED AND REPAIRED IF NECESSARY.
8. IF GRADING OCCURS DURING WINTER MONTHS, THE USE OF WINTER WHEAT OR OTHER RECOMMENDED SEED SHOULD BE USED IN ACCORDANCE WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE.
9. NO VEGETATION OR CONSTRUCTION DEBRIS SHALL BE BURIED ON SITE.
10. WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED, UNTIL SUCH TIME AS CONDITIONS PERMIT SEEDING.
11. ALL DISTURBED AREAS THAT REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN 21 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
12. ALL SEEDING TO BE INSTALLED IN ACCORDANCE WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE.
13. THE SITE SHALL HAVE GRAVELLED ROADS OR ACCESS DRIVES (IF NEEDED) TO PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO ROADWAYS. ANY SEDIMENT REACHING A ROADWAY SHALL BE REMOVED. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION BEFORE THE END OF EACH WORKDAY. CONSTRUCTION EXITS SHALL BE ROCKED PRIOR TO ANY OTHER SITE WORK. THE REMAINING VEHICULAR USE AREA AND CONSTRUCTION STAGING AREA SHALL BE ROCKED WITHIN TWO WEEKS OF OVERLOT TOPSOIL STRIPPING.



RECORD DRAWINGS



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LICKING RIVER CROSSING

EPSC DETAILS AND NOTES

0 1" 2"

FILENAME	BMP-26.dwg	SHEET	26
SCALE	NTS		