

nesbitt engineering, inc.

SERVING DEVELOPERS, INDUSTRY, BUSINESS AND GOVERNMENT BY PROVIDING PROVEN SOLUTIONS SINCE 1976

MORGAN COUNTY WATER DISTRICT

WATERLINE REPLACEMENT - PHASE 2
KY 191

MORGAN COUNTY, KENTUCKY

FUNDED BY:
KENTUCKY INFRASTRUCTURE AUTHORITY

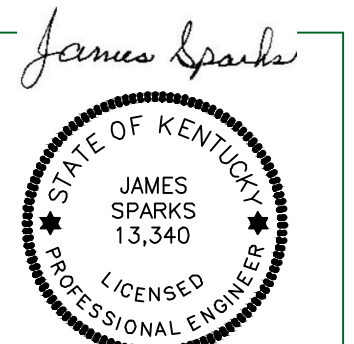
APRIL, 2022

BOARD OF DIRECTORS
ERIC CHRISTENSEN, PRESIDENT
CURTIS POITZ, VICE PRESIDENT
JIM ZWETZIG, SECRETARY/TREASURER
JOHN RUSCH, DIRECTOR
BRAD KEMBEL, DIRECTOR

James
Sparks

Digitally signed by James Sparks
DN: C=US, O=Nesbitt
Engineering, CN=James Sparks,
E=jsparks@nei-ky.com
Reason: I am the author of this
document
Location:
Date: 2024.05.07 14:53:15-04'00'
Foxit PDF Reader Version: 12.0.2

RECORD DRAWING



SHEET INDEX

SHEET INDEX

C-1	KEY 191	STA. 0+00 TO STA. 15+00
C-2	KEY 191	STA. 15+00 TO STA. 45+00
C-3	KEY 191	STA. 45+00 TO STA. 75+00
C-4	KEY 191	STA. 75+00 TO STA. 105+00
C-5	KEY 191	STA. 105+00 TO STA. 135+00
C-6	KEY 191	STA. 135+00 TO STA. 165+00
C-7	KEY 191	STA. 165+00 TO STA. 195+00
C-8	KEY 191	STA. 195+00 TO STA. 225+00
C-9	KEY 191	STA. 225+00 TO STA. 255+00
C-10	KEY 191	STA. 255+00 TO STA. 285+00
C-11	KEY 191	STA. 285+00 TO STA. 315+00
C-12	KEY 191	STA. 315+00 TO STA. 345+00
C-13	KEY 191	STA. 345+00 TO STA. 375+00
C-14	KEY 191	STA. 375+00 TO STA. 405+00
C-15	KEY 191	STA. 405+00 TO STA. 435+00
C-16	KEY 191	STA. 435+00 TO STA. 465+00
C-17	KEY 191	STA. 465+00 TO STA. 495+00
C-18	KEY 191	STA. 495+00 TO STA. 513.23 &
C-19	KEY 191	STA. 10+00 TO STA. 40+00
C-20	KEY 191	STA. 40+00 TO STA. 64+72
C-21	KEY 1000	STA. 0+00 TO STA. 25+00
C-22	KEY 1000	STA. 25+00 TO STA. 43+48
C-23	BRUSHY FK.	STA. 0+00 TO STA. 30+00
C-24	BRUSHY FK.	STA 30+00 TO STA. 55+40
C-25	WATER METER LOCATIONS KEY 191	
C-26	WATER METER LOCATIONS KEY 191	
C-27	WATER METER LOCATIONS KEY 191	
C-28	WATER METER LOCATIONS KEY 191	
C-29	WATER METER LOCATIONS KEY 191	
C-30	WATER METER LOCATIONS KEY 191	
C-31	WATER METER LOCATIONS KEY 191	
C-32	WATER METER LOCATIONS KEY 191	
C-33	WATER METER LOCATIONS KEY 191 & STONE COAL BR.	
C-34	WATER METER LOCATIONS STONE COAL BR.	
C-35	WATER METER LOCATIONS STONE COAL BR. & BAKER BR.	
C-36	WATER METER LOCATIONS BRUSHY FK.	
C-37	WATER METER LOCATIONS BRUSHY FK. & SPRING BR.	
D-1	STANDARD WATERLINE DETAILS	
D-2	CREEK CROSSING DETAILS	
D-3	EROSION CONTROL DETAILS	

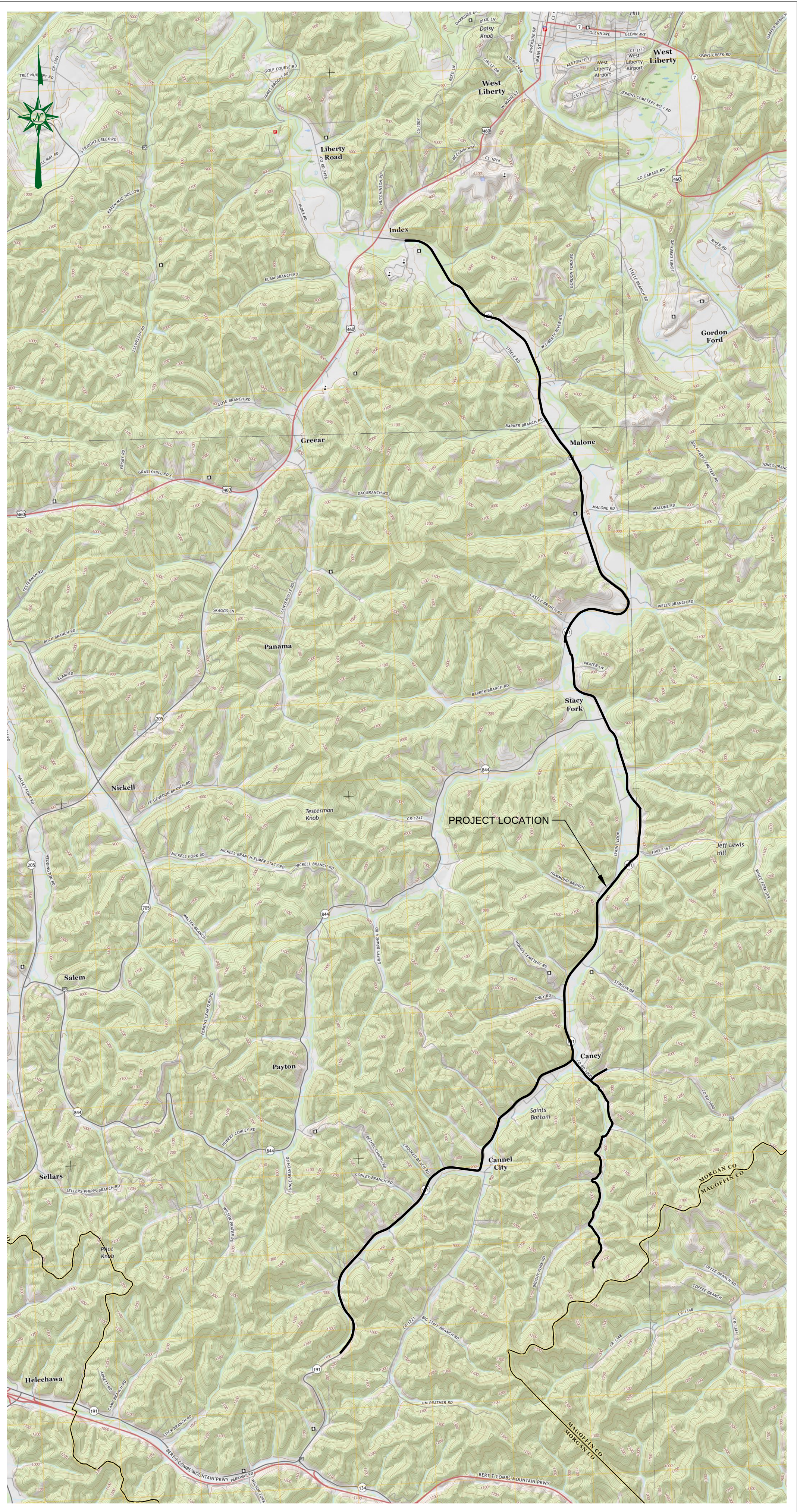


GENERAL NOTES:

- DIMENSIONS OF EXISTING STRUCTURES, EQUIPMENT, ETC. SHALL BE FIELD CONFIRMED BY THE CONTRACTOR. WHERE CRITICAL DIMENSIONS FOR INSTALLATION OF PROPOSED EQUIPMENT ARE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL CONFIRM THESE DIMENSIONS FOR ACTUAL EQUIPMENT FURNISHED. ALL KNOWN DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
- THE CONTRACTOR SHALL USE ALL POSSIBLE CARE DURING EXCAVATION ON THIS PROJECT SO AS NOT TO DISTURB ANY EXISTING UTILITY WHETHER SHOWN ON PLANS OR NOT. ANY UTILITY DISTURBED OR DAMAGED BY THE CONTRACTOR DURING HIS CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
- THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION ACTIVITY TO THE AREA WITHIN EXISTING EASEMENTS AND CONSTRUCTION LIMITS, UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER.
- THE CONTRACTOR WILL BE SOLELY LIABLE FOR ANY WORK HE PERFORMS OUTSIDE OF LEGAL EASEMENTS OR CONSTRUCTION LIMITS.
- THE CONTRACTOR MUST CONTACT ALL UTILITY OWNERS AND HAVE THEM FIELD LOCATE THEIR EXISTING LINES PRIOR TO ANY CONSTRUCTION ACTIVITY.
- EFFORTS HAVE BEEN MADE TO INDICATE ACCURATE LOCATIONS OF SOME EXISTING STRUCTURES, PIPING AND UTILITIES. HOWEVER THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND OTHER EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN INFORMATION DEPICTED BY THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS WHICH WOULD SIGNIFICANTLY ALTER THE DESIGN INTENT OF THE CONSTRUCTION DRAWINGS PRIOR TO COMMENCING HIS CONSTRUCTION OPERATIONS. DIMENSIONS OF EXISTING STRUCTURES AND/OR SITE RESTRICTIONS ARE APPROXIMATE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND CONFIRM ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES AND TOPOGRAPHY IN THE FIELD NECESSARY FOR HIS CONSTRUCTION OPERATION.
- THE CONTRACTOR SHALL USE ALL POSSIBLE CARE DURING EXCAVATION ON THIS PROJECT SO AS NOT TO DISTURB OR DAMAGE ANY EXISTING UTILITY OR STRUCTURE NOT SCHEDULED FOR DEMOLITION WHETHER DEPICTED OR NOT IN THE CONSTRUCTION DRAWINGS. ANY DAMAGE TO THE AFORE MENTIONED ITEMS CAUSED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO BEING DAMAGED.
- THE CONTRACTOR SHALL CONTACT AND OBTAIN THE PERMISSION OF EXISTING UTILITY OWNERS 48 HOURS (MIN.) PRIOR TO ANY CONSTRUCTION ACTIVITY INTERRUPTING OPERATION OF SAID UTILITY.
- UNLESS OTHERWISE NOTED, ALL BURIED PIPES SHALL HAVE 36" (MIN.) COVER AS MEASURED FROM FINISHED GRADE TO THE OUTSIDE SURFACE OF THE PIPE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK ALL APPLICABLE DRAWINGS AND THE APPROPRIATE SPECIFICATIONS AS A UNIT. ANY OMISSIONS, DELETIONS, OR CONFLICTS ARISING AS A RESULT OF FAILURE TO INCORPORATE ALL DRAWINGS AND SPECIFICATIONS WHICH APPLY SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER.

CONSTRUCTION ON STATE RIGHT-OF-WAY NOTES:

- WATER MAIN/SEWER LINES TO BE CONSTRUCTED WITHIN THE KENTUCKY TRANSPORTATION CABINET RIGHT-OF-WAY:** TRENCHES SHALL BE OF A DEPTH SUFFICIENT TO PROVIDE A MINIMUM COVER OF 42" FROM THE EXISTING GROUND SURFACE TO THE TOP OF THE PIPE AND BE LOCATED APPROXIMATELY AS SHOWN UNLESS OTHERWISE NOTED. VALVES AND HYDRANTS SHALL BE LOCATED AT THE BACK OF DITCH, MINIMUM. SEE INDIVIDUAL SHEETS FOR DETAILS.
- ALL BORES UNDER STATE HIGHWAYS RIGHT-OF-WAY:** SHALL BE A MINIMUM OF 36" DEPTH UNDER BOTTOM OF DITCH LINE TO TOP OF THE PROPOSED BORE AND/OR CASING PIPE ON BOTH SIDES OF THE HIGHWAY.
- ROCK BLASTING:** THERE SHALL BE NO BLASTING WITHIN STATE RIGHT-OF-WAY WITHOUT WRITTEN CONSENT FROM THE KENTUCKY TRANSPORTATION CABINET.
- PROTECTION OF EXISTING PAVING:** CARE SHALL BE TAKEN BY THE CONTRACTOR TO AVOID CRACKING OR BREAKING THE BITUMINOUS PAVING. ALL DAMAGE TO THE EXISTING PAVING CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. PAVING PROTECTION SHALL BE ACCOMPLISHED BY THE USE OF RUBBER AND STREET PADDED MACHINERY OR OTHER APPROVED EQUIPMENT WELL SUITED FOR THIS TYPE OF CONSTRUCTION.
- BANK AND DITCH PROTECTION EXCAVATION:** DURING CONSTRUCTION, ALL EMBANKMENTS, REFILLS AND EXCAVATIONS SHALL BE KEPT SHAPED AND DRAINED BY THE CONTRACTOR. DITCHES AND DRAINS ALONG THE HIGHWAYS SHALL BE MAINTAINED IN SUCH A MANNER AS TO DRAIN EFFECTIVELY AT ALL TIMES.
- PRIVATE ENTRANCE ROAD:** ALL ROADWAYS AND DRIVEWAYS WITHIN THE WORK LIMITS OF STATE RIGHT-OF-WAYS SHALL BE REFILLED TO THE NATURAL SURFACE OF THE GROUND WITH APPROVED MATERIAL. THE MATERIAL SHALL BE PLACED AND COMPACTED TO A SMOOTHNESS SUITABLE FOR TRAFFIC. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR MAINTAINING THESE ROADWAYS UNTIL THE RESTORATION IS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOTE THAT ALL PRIVATE BUSINESSES AND RESIDENCES ALONG THE ROUTE OF THE PROPOSED WATER MAIN/SEWER LINE CONSTRUCTION MUST HAVE ACCESS TO THEIR PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
- PROTECTION OF EXISTING DRAINAGE CULVERTS:** ALL LOCATIONS WHERE THE PROPOSED WATER MAIN/SEWER LINE IS PARALLEL WITH OR CROSSING AN EXISTING STORM SEWER, THE COST OF RELAYING EXISTING CULVERT PIPES OR THE EXTRA DEPTH REQUIRED TO AVOID THE EXISTING CULVERT IS CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND IS NOT A PAY ITEM.
- SOME EXISTING UTILITIES HAVE NOT BEEN SHOWN:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE REPRESENTATIVES OF THE VARIOUS UTILITIES WHEN WORKING NEAR ANY EXISTING UTILITY. NO ADDITIONAL PAYMENT TO THE CONTRACTOR WILL BE MADE FOR EXTRA DEPTH REQUIRED TO AVOID ANY EXISTING UTILITY.



VICINITY MAP



CALL THE KENTUCKY ONE CALL BEFORE DIGGING:
KENTUCKY UNDERGROUND PROTECTION, INC. 1-800-752-6007 OR
LOG ONTO WEB SITE: KENTUCKY811.ORG

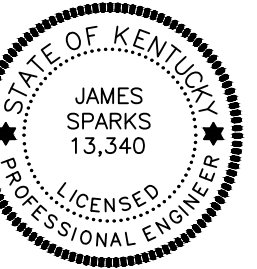
A FEDERAL LAW NOW IN EFFECT STATES THAT ANY PERSON WHO ENGAGES IN EXCAVATION ACTIVITIES WITHOUT FIRST USING AN AVAILABLE ONE-CALL NOTIFICATION SYSTEM TO DETERMINE LOCATIONS OF UNDERGROUND FACILITIES; OR WITHOUT HEEDING LOCATION INFORMATION OR MARKINGS AND SUBSEQUENTLY DAMAGES A PIPELINE FACILITY SHALL BE SUBJECT TO A FINE, IMPRISONMENT, OR BOTH. THE LAW ALSO STATES THAT OSHA MAY BE NOTIFIED OF ANY ACCIDENT CAUSED BY AN EXCAVATOR.

NATIONAL ONE-CALL REFERRAL NUMBER 1-800-258-0808



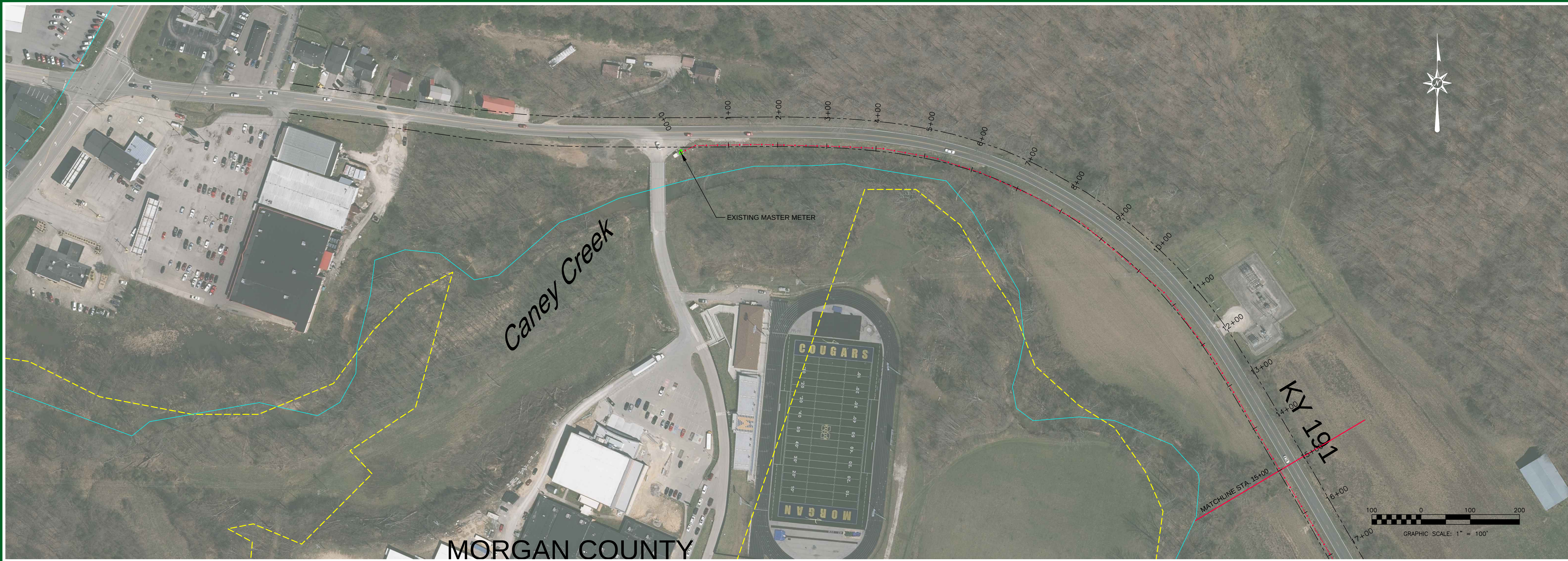
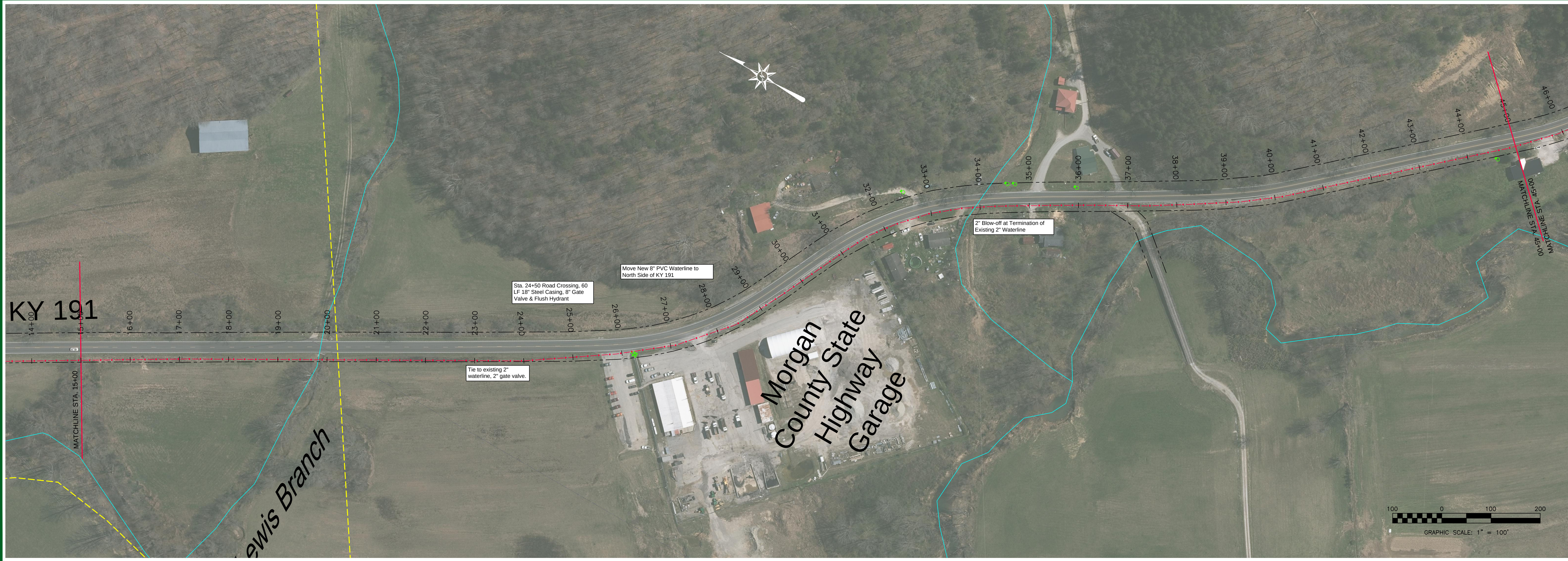
nesbitt engineering, inc.

227 N. Upper Street
Lexington, Kentucky
40507-1016
Tel (859) 233-3111
Fax (859) 259-2717



James Sparks

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: MORGAN COUNTY WATER DISTRICT 119-02 WATERLINE REPLACEMENT PROJECT PHASE 2, C-02 CONSTRUCTION RECORD DRAWINGS WATERLINE LAYOUT REVISED.DWG



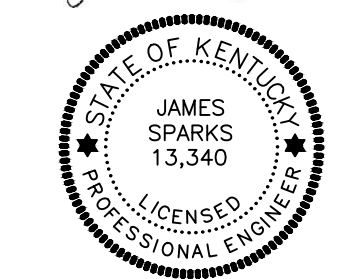
nesbitt engineering, inc.

providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

Drawn by: JCW Date: 2-14-22

Scale: 1" = 100'



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

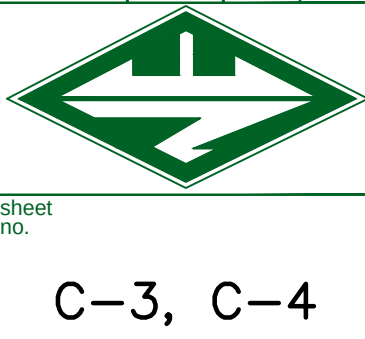
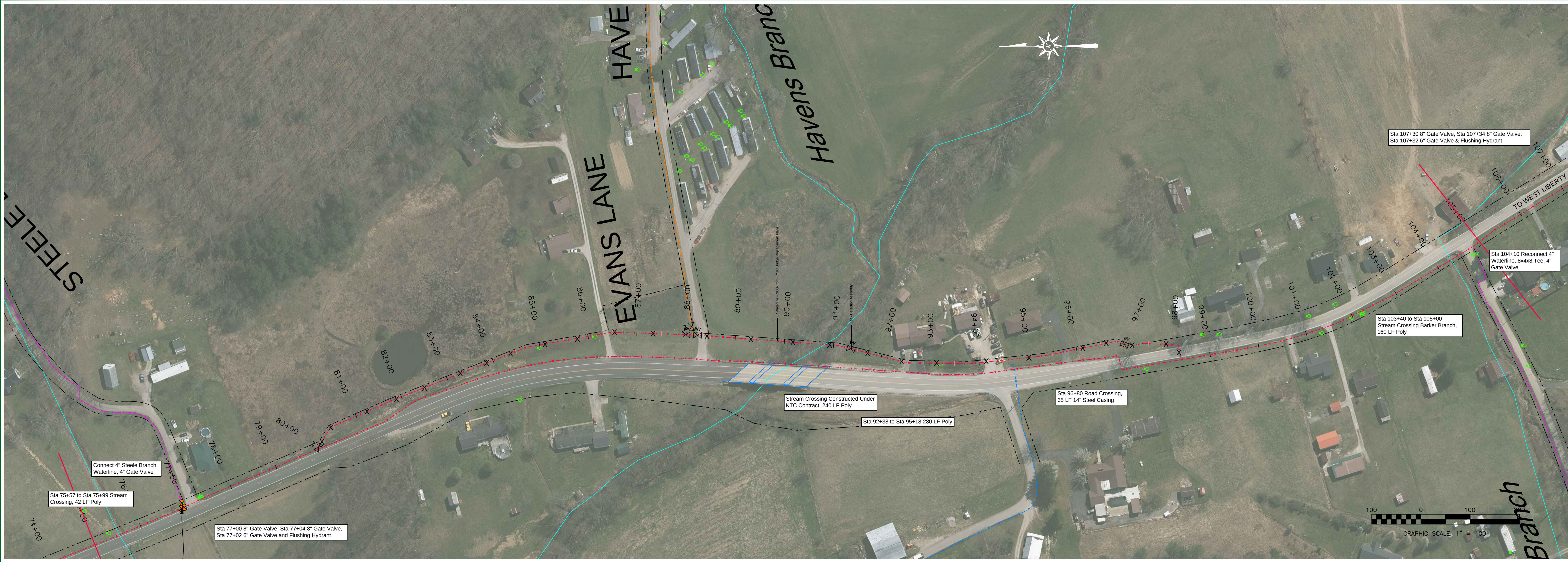
PROPOSED 8" WATERLINE

STA. 0+00 TO STA. 45+00

REVISION:

RECORD DRAWING

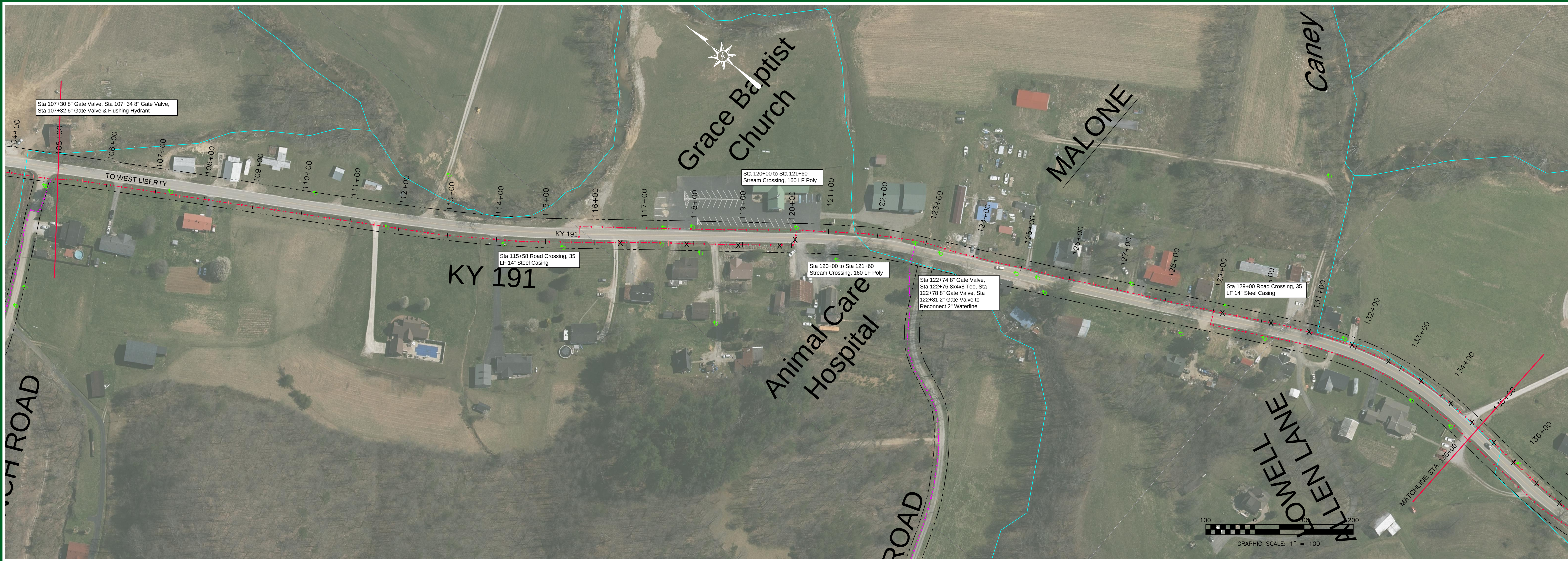
LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT\119-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



nesbitt engineering, inc. providing proven solutions since 1976		MORGAN COUNTY WATER DISTRICT 1009 HWY 172, WEST LIBERTY, KY		RECORD DRAWING
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2		KY 191		
Drawn by: JCW	1191.02	Scale: 1" = 100'	STA. 45+00 TO 105+00	
Date: 2-14-22				

James Sparks
STATE OF KENTUCKY
JAMES SPARKS
13,340
LICENSED PROFESSIONAL ENGINEER

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: MORGAN COUNTY WATER DISTRICT 119-02 WATERLINE REPLACEMENT PROJECT PHASE 2, C-6 CONSTRUCTION RECORD DRAWINGS WATERLINE LAYOUT REVISIONS



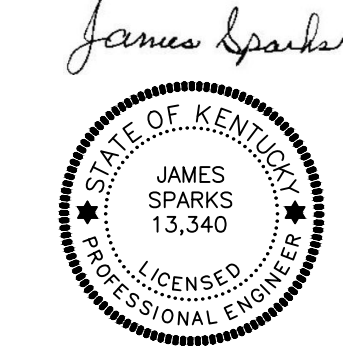
nesbitt engineering, inc.

providing proven solutions since 1976

sheet no. KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by: JCW

date: 2-14-22



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

PROPOSED 8" WATERLINE

STA.. 105+00 TO STA. 165+00

REVISIONS

RECORD DRAWING

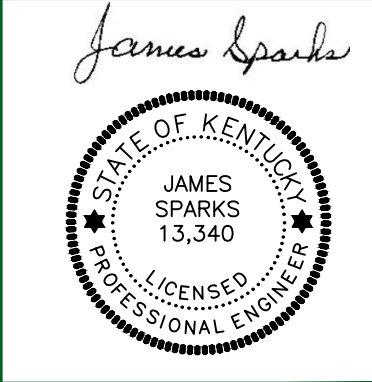
C-5, C-6

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\119-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT RECORD.DWG



nesbitt engineering, inc.
providing proven solutions since 1976

PROJECT: KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2
DRAWN BY: JCW
DATE: 2-14-22
SCALE: 1" = 100'



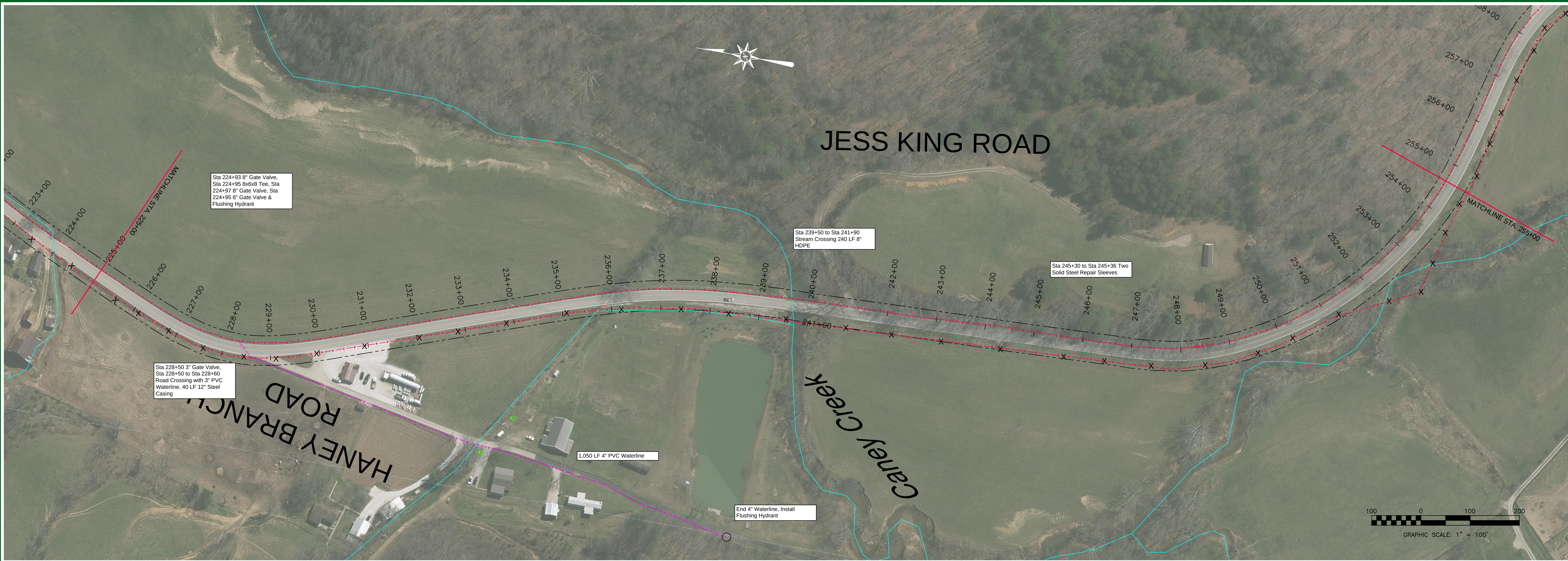
MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY 191
PROPOSED 8" WATERLINE
STA. 165+00 TO STA. 225+00

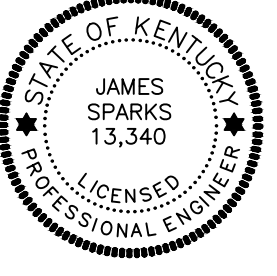
REVISION:

RECORD DRAWING

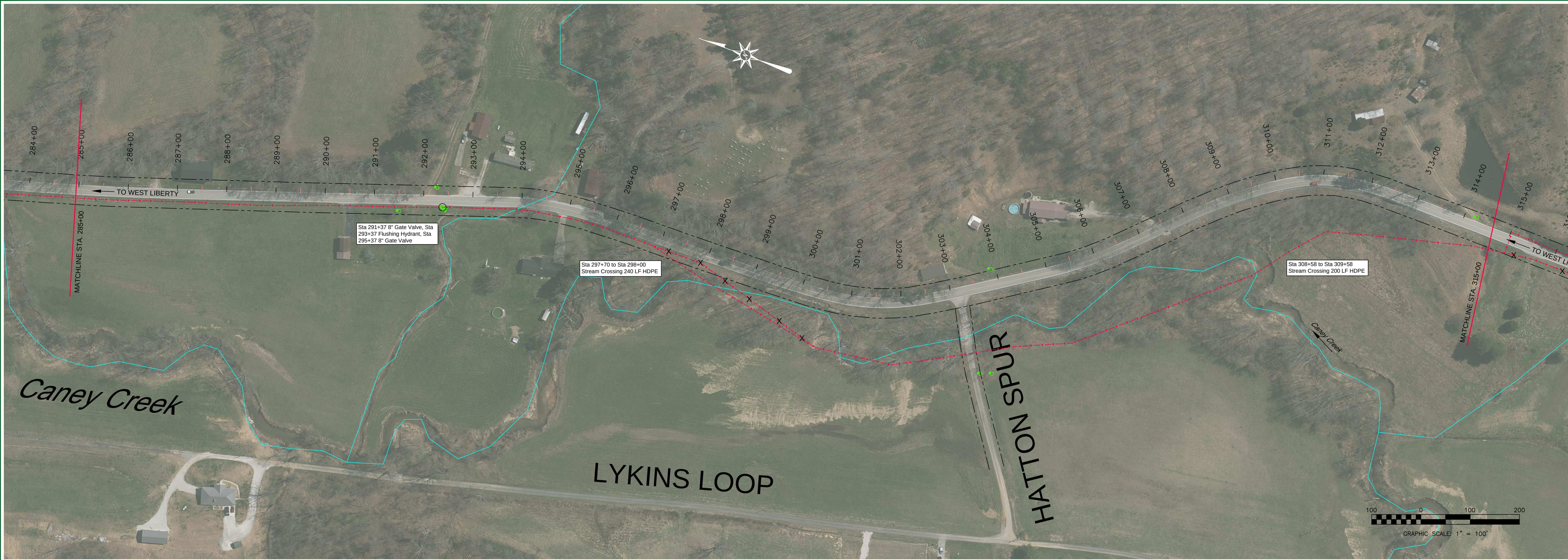
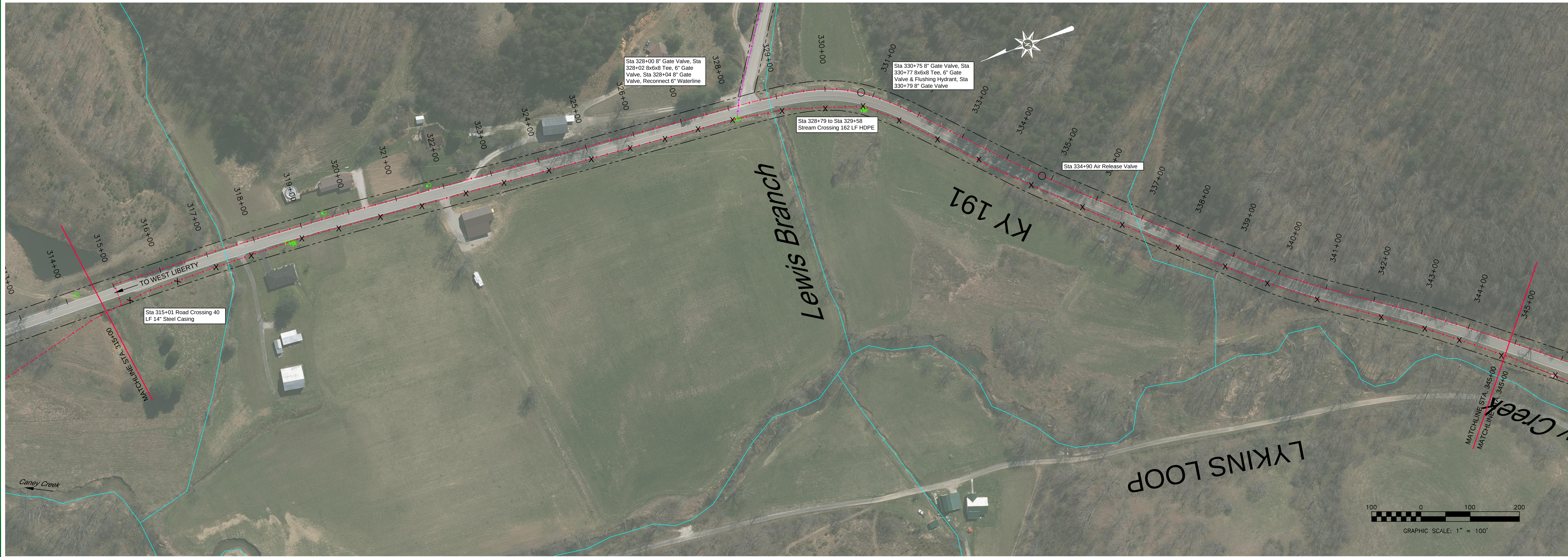
Sheet No. C-7, C-8

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT 119-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



 sheet no.	MORGAN COUNTY WATER DISTRICT 1009 HWY 172, WEST LIBERTY, KY KY 191 PROPOSED 8" WATERLINE STA. 225+00 TO STA. 285+00		RECORD DRAWING
	James Sparks 		
	MORGAN COUNTY WATER DISTRICT - PHASE 2 KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2 Scale: 1" = 100' Drawn by: JCW Date: 2-14-22		

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: L:\MORGAN COUNTY WATER DISTRICT 119-192 WATERLINE REPLACEMENT PROJECT PHASE 2\1-02 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT RECORD.DWG



nesbitt engineering, inc.

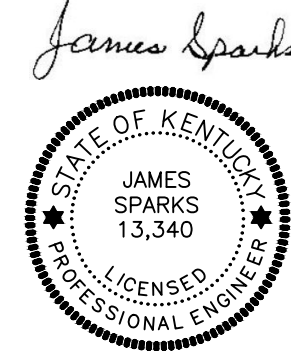
providing proven solutions since 1976

Sheet No. C-11, C-12

Project: KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

Drawn by: JCW Date: 2-14-22

Scale: 1" = 100'



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

PROPOSED 8" WATERLINE

STA. 285+00 TO STA. 345+00

REVISION:

RECORD DRAWING

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT 1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT RECORD.DWG



sheet
no.

C-15, C-16

nesbitt engineering, inc.

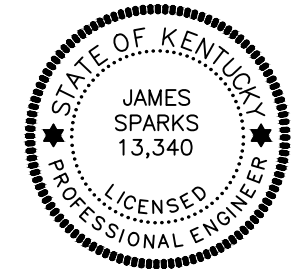
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT - PHASE 2

1191.02

scale: 1" = 100'

date: 2-14-22



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

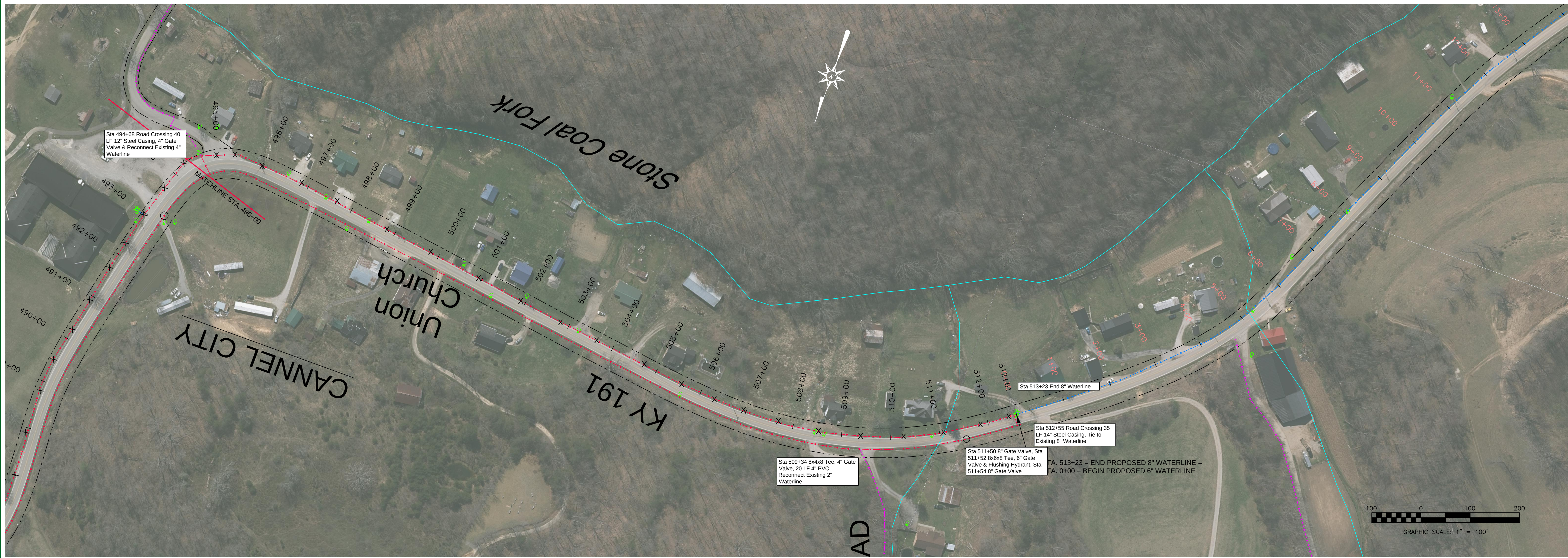
PROPOSED 8" WATERLINE

STA. 405+00 TO STA. 465+00

REVISION:

RECORD DRAWING

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT 119-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-02 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



nesbitt engineering, inc.

providing proven solutions since 1976

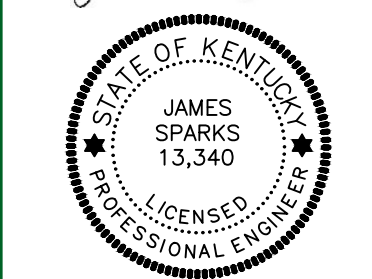
MORGAN COUNTY WATER DISTRICT 119-02 WATERLINE REPLACEMENT PROJECT - PHASE 2

Drawn by: JCW

Date: 11/9/02

Scale: 1" = 100'

Sheet No. 2-14-22



James Sparks

MORGAN COUNTY WATER DISTRICT 119-02 WEST LIBERTY, KY

KY 191

PROPOSED 8" WATERLINE

STA. 465+00 TO STA. 513+23

REVISION:

RECORD DRAWING

C-17 , C-18

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT\119-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



nesbitt engineering, inc.

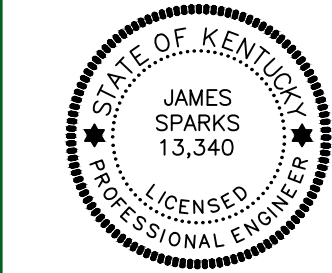
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by: JCW

scale: 1" = 100'

date: 2-14-22



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

PROPOSED 6" WATERLINE

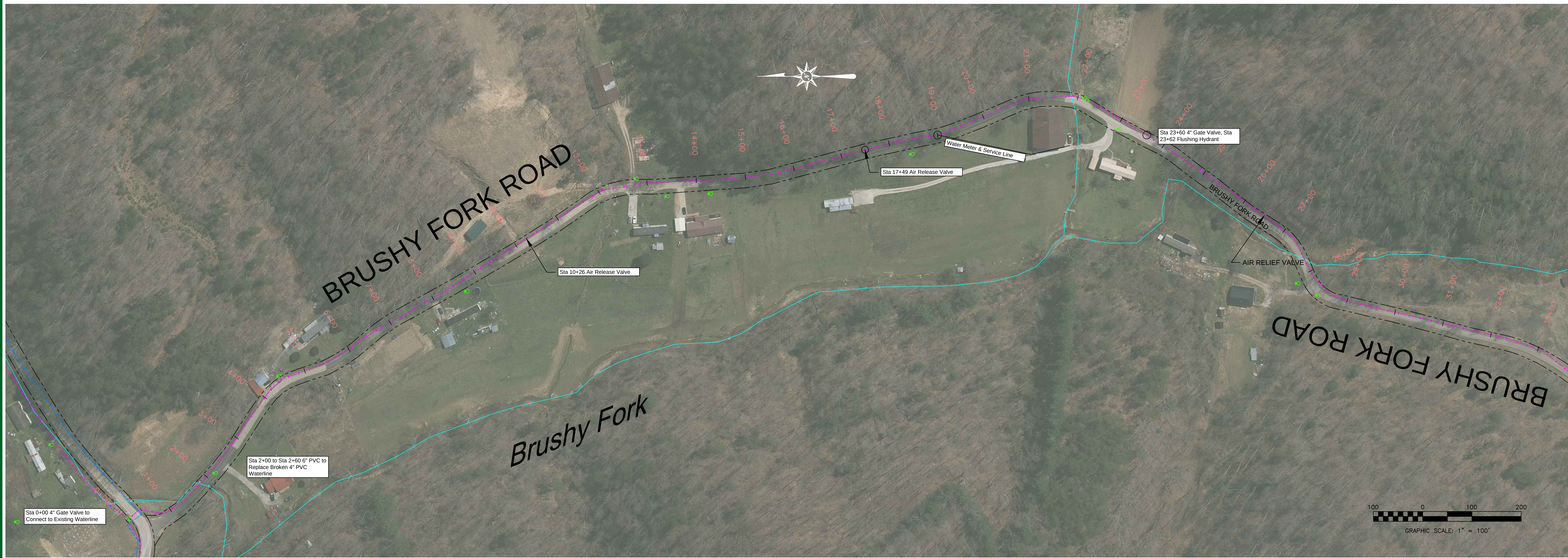
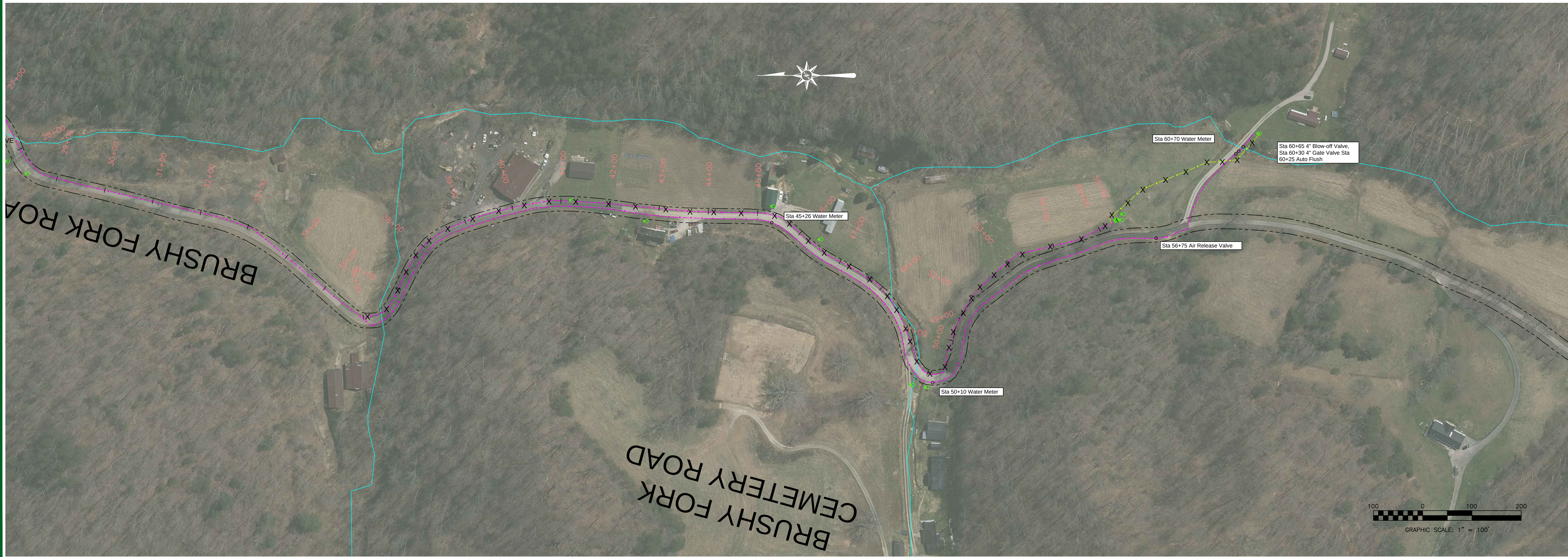
STA. 40+00 TO STA. 64+72

REVISION:

sheet
no.

C-20

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: F:\MORGAN COUNTY WATER DISTRICT 119-192 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION RECORD DRAWINGS\WATERLINE LAYOUT RECORD.DWG



sheet
no.

C-23, C-24

nesbitt engineering, inc.

providing proven solutions since 1976

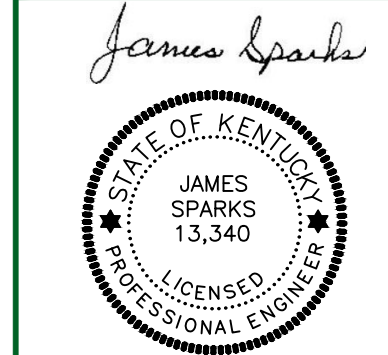
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by: JCW

date: 2-14-22

job no.: 1191.02

scale: 1" = 100'



MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

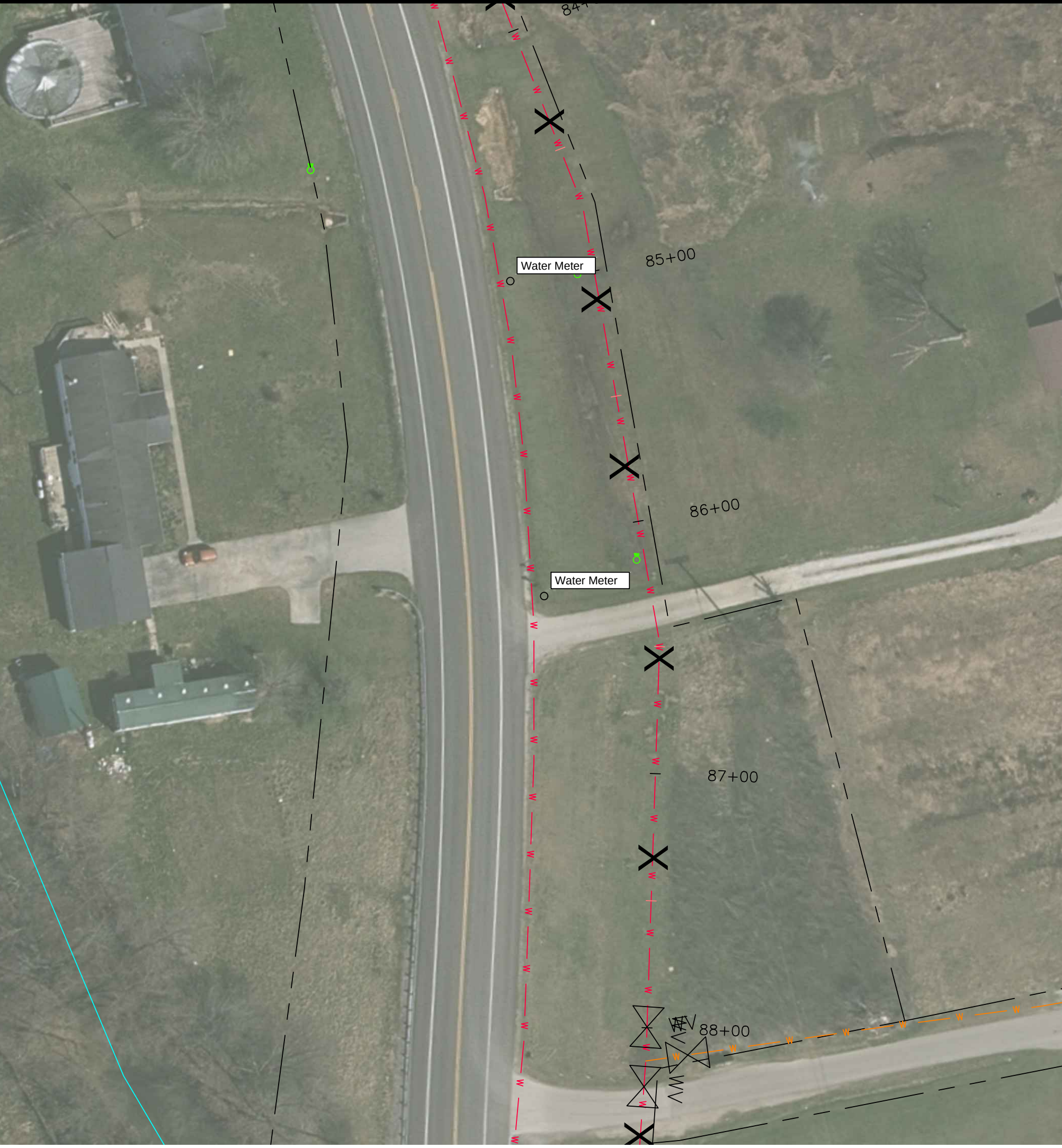
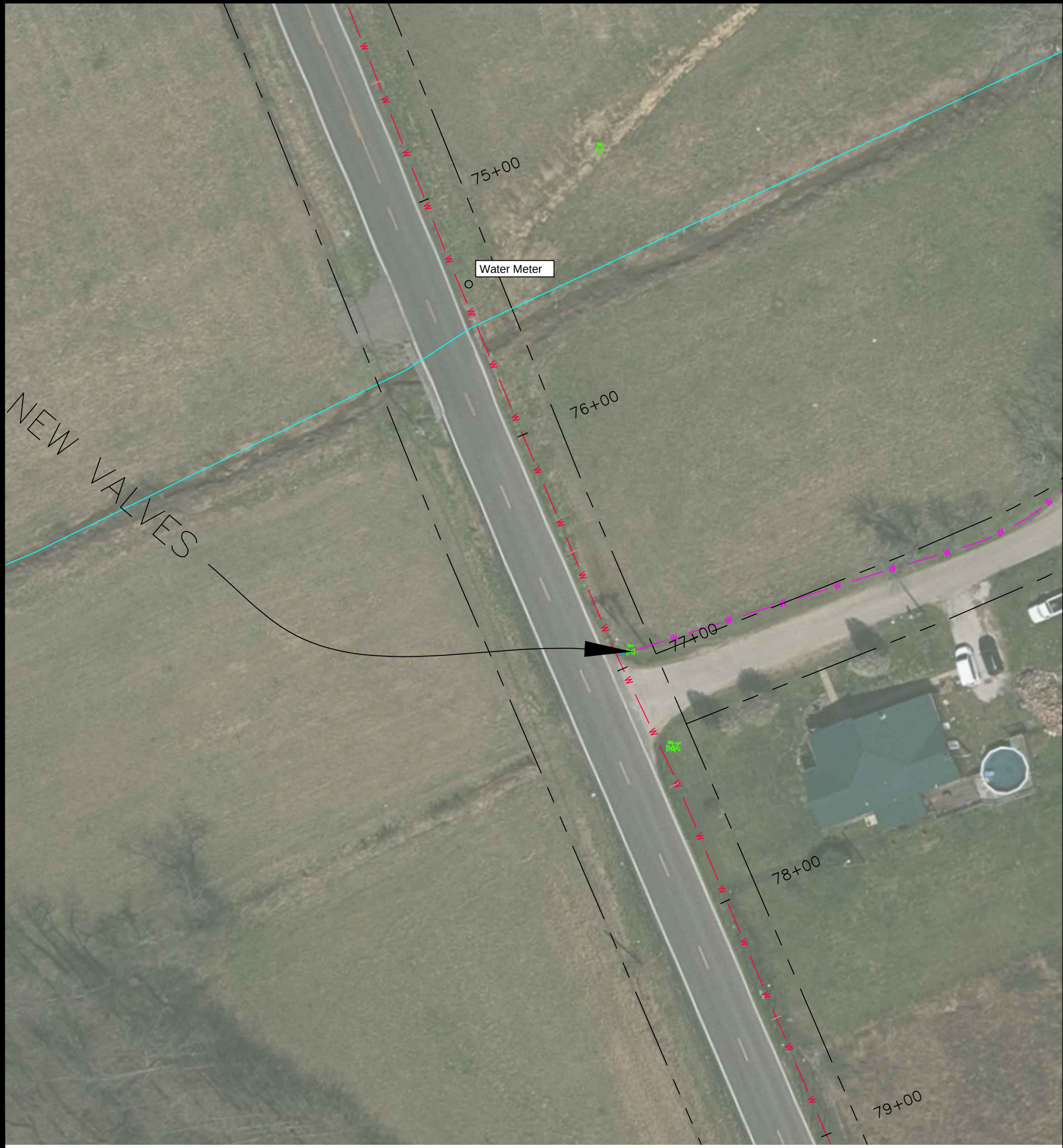
BRUSHY FORK ROAD
PROPOSED 4" WATERLINE

STA. 0+00 TO STA. 60+70

REVISION:

RECORD DRAWING

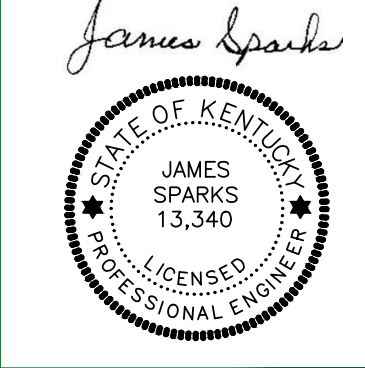
LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1191-02 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



sheet
no.

nesbitt engineering, inc.
providing proven solutions since 1975

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2
drawn by: JCW
date: 2-14-22
scale: 1" = 40'



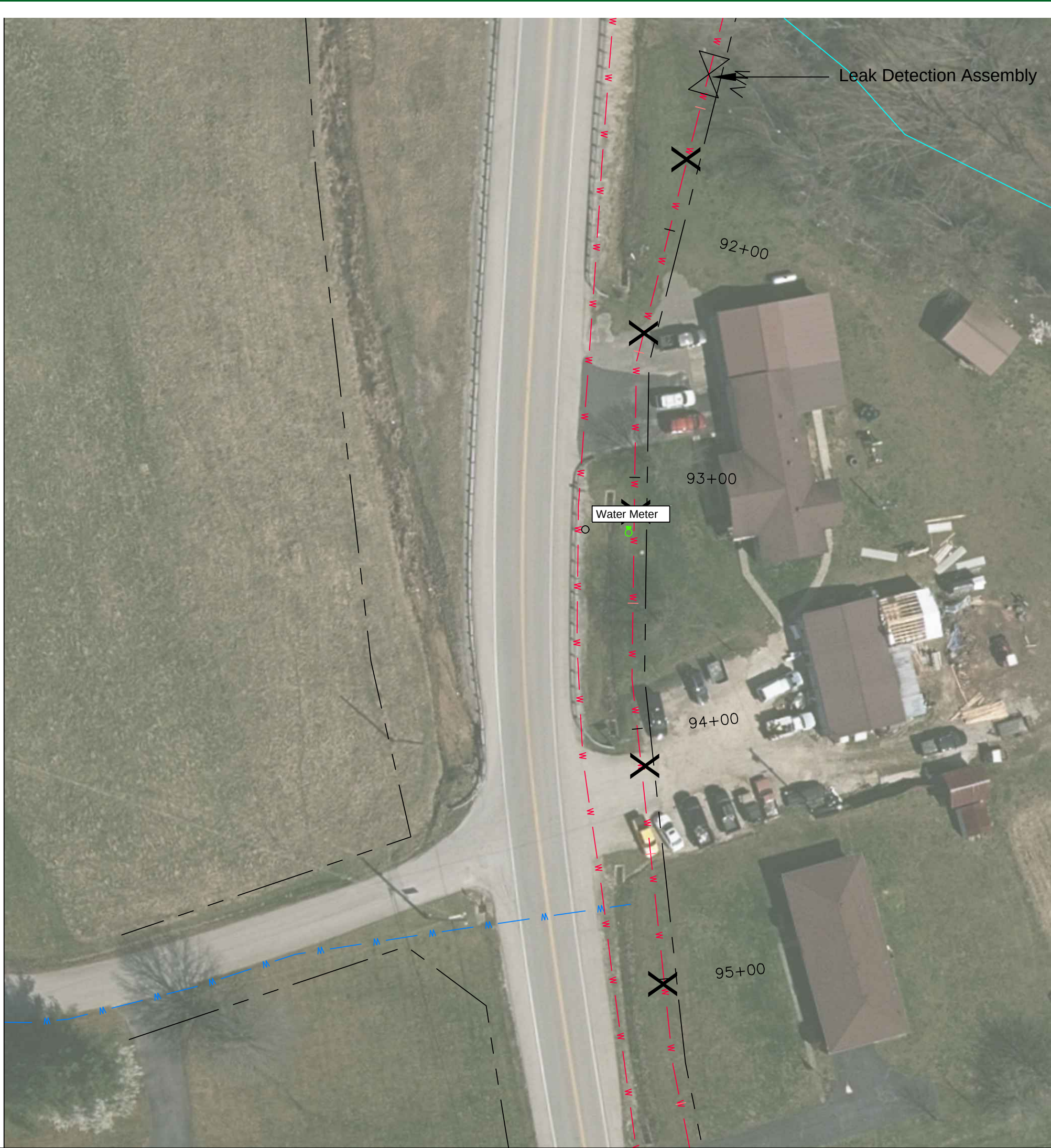
MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY 191
PROPOSED 8" WATERLINE
WATER METER LOCATIONS

REVISIONS:

RECORD DRAWING

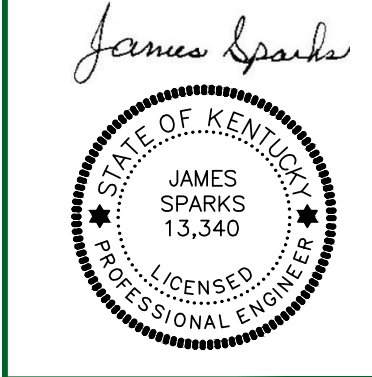
C-35

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



Sheet No. C-36

nesbitt engineering, inc. providing proven solutions since 1976			
MORGAN COUNTY WATER DISTRICT KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2			
Drawn by: JCW	Job No.: 11191.02	Scale: 1" = 40'	
Date: 2-14-22			



MORGAN COUNTY WATER DISTRICT 1009 HWY 172, WEST LIBERTY, KY	
KY 191	
PROPOSED 8" WATERLINE	
WATER METER LOCATIONS	

REVISIONS:

RECORD DRAWING



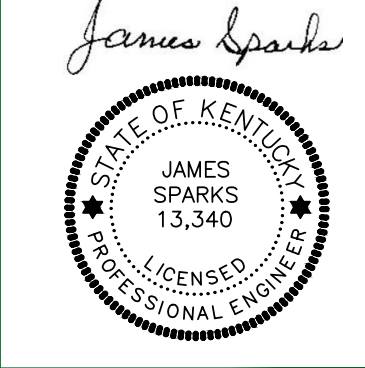
LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



sheet
no.

nesbitt engineering, inc.
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT	
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2	
drawn by:	JCW
date:	2-14-22
job no.:	1191.02
scale:	1" = 40'

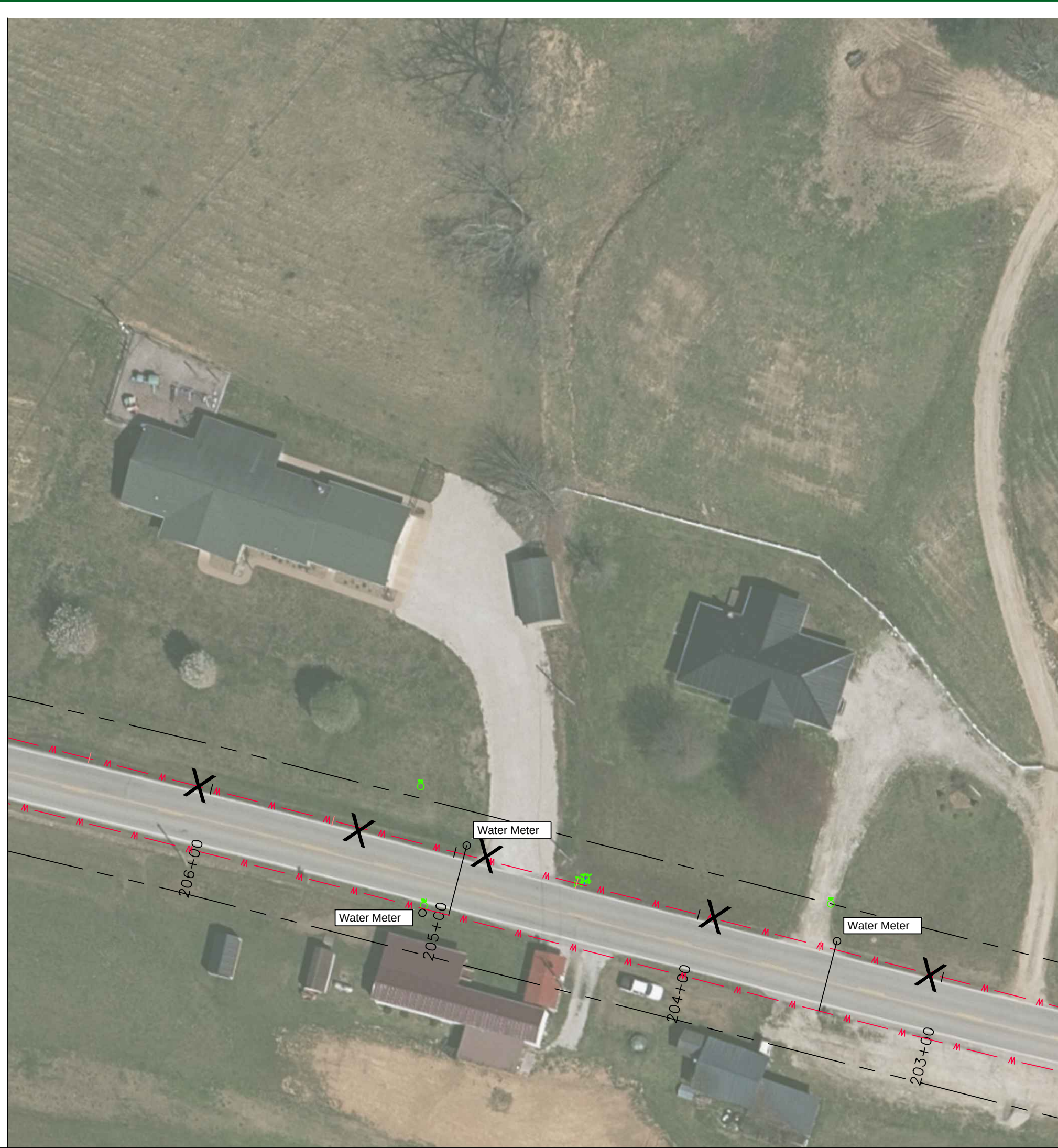


MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY
KY 191
PROPOSED 8" WATERLINE
WATER METER LOCATIONS

RECORD DRAWING

C-37

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



nesbitt engineering, inc.

providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT

1009 HWY 172, WEST LIBERTY, KY 191

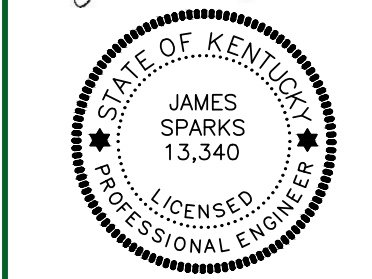
PROPOSED 8" WATERLINE

WATER METER LOCATIONS

drawn by: JCW

date: 2-14-22

scale: 1" = 40'



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY
191
PROPOSED 8" WATERLINE
WATER METER LOCATIONS

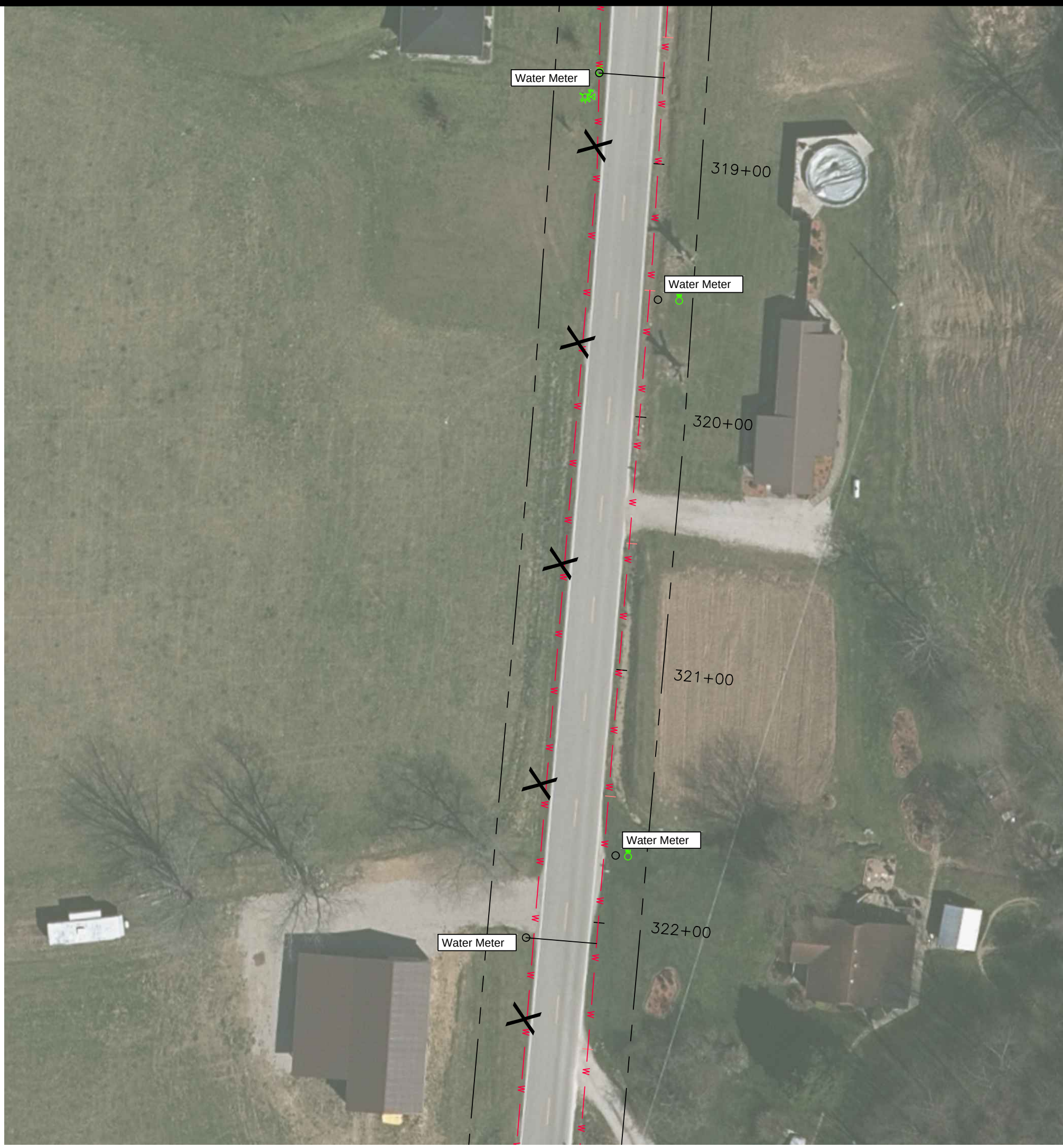
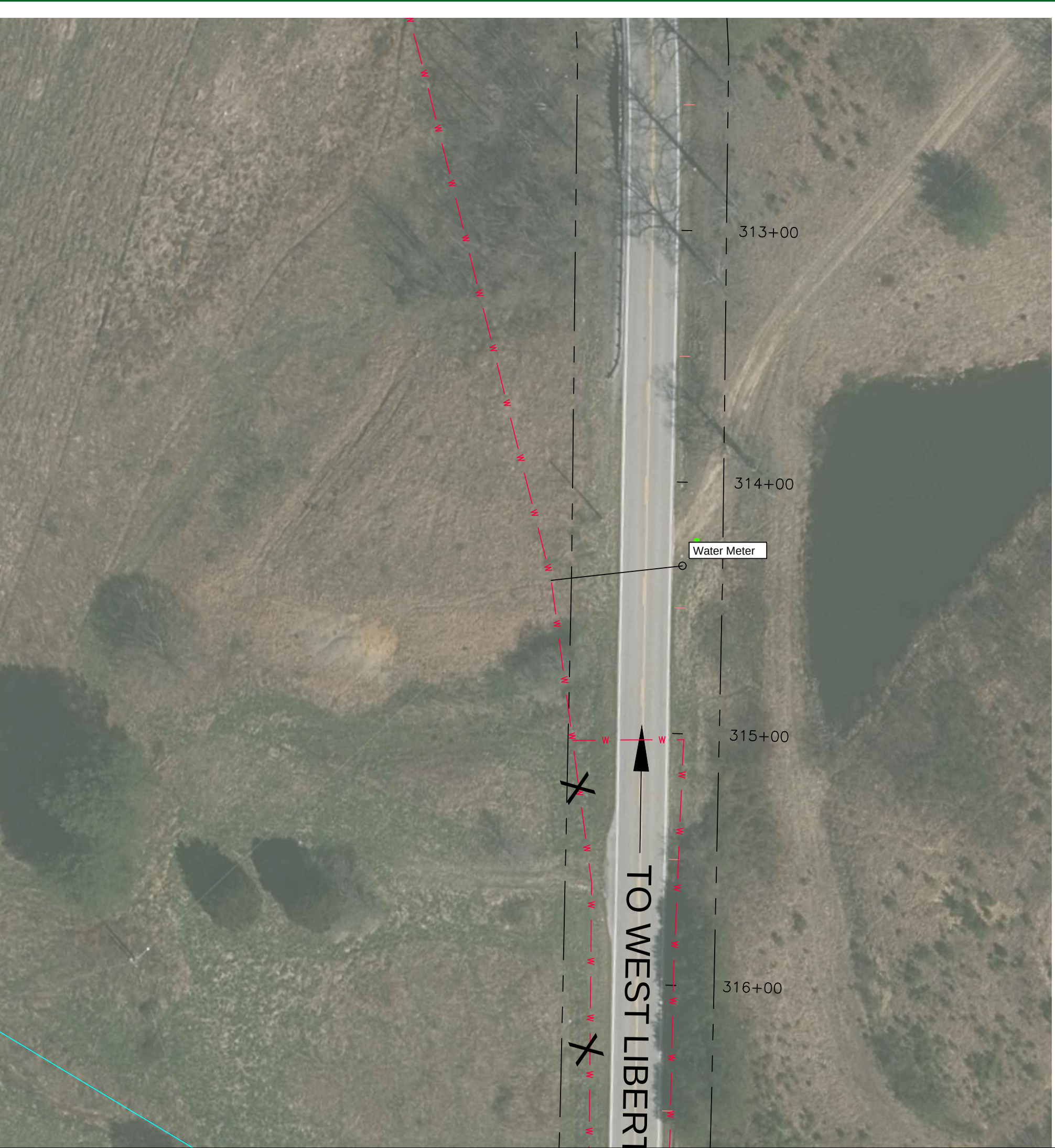
FIGURE:

RECORD DRAWING

sheet
no.

C-38

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



sheet
no.

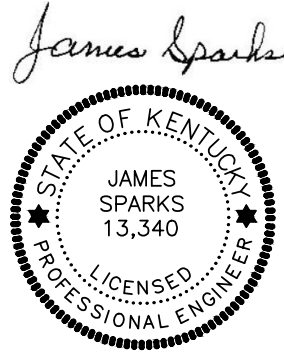
C-39

nesbitt engineering, inc.
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by: JCW
date: 11/91/02

scale: 1" = 40'



MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

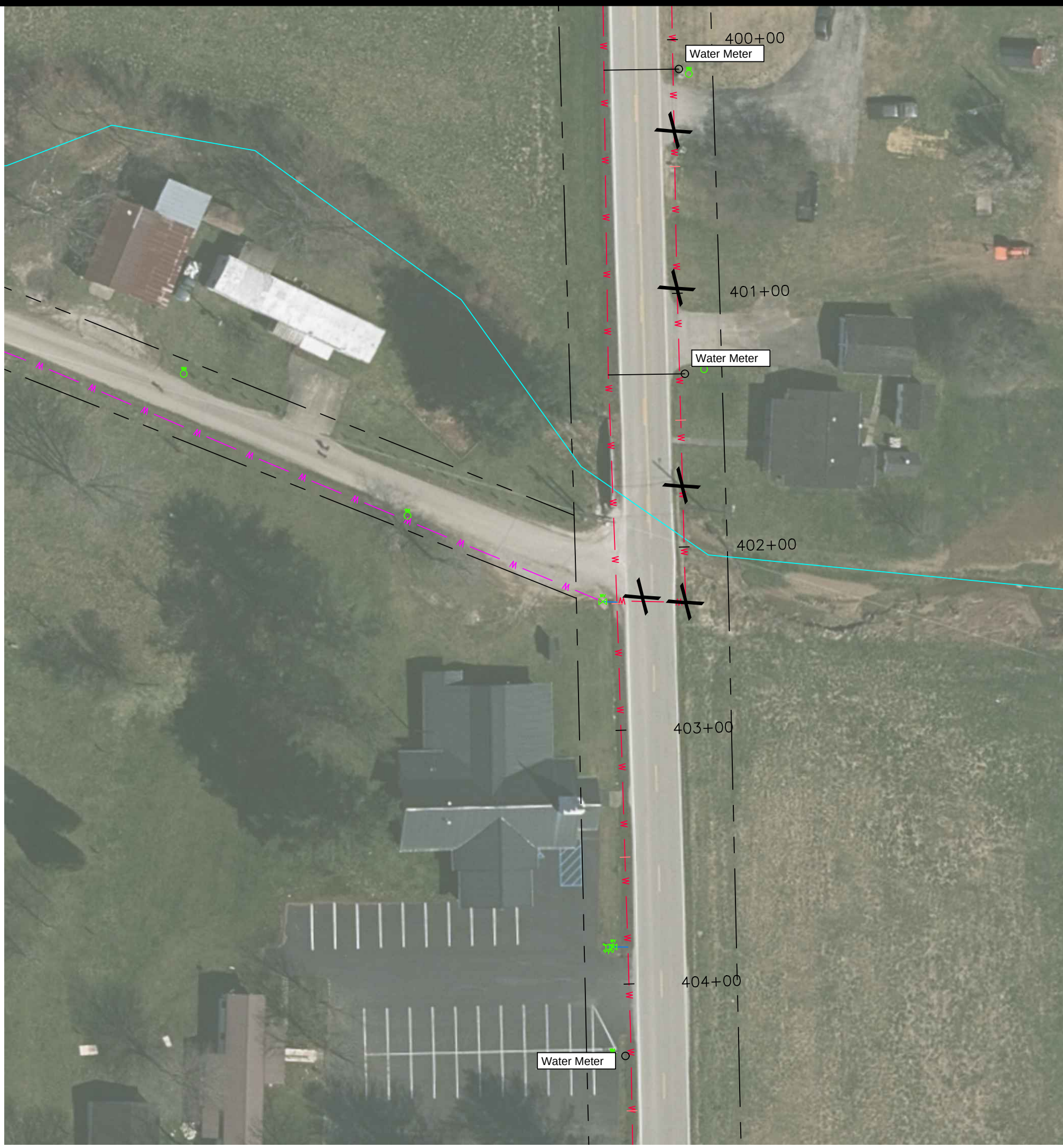
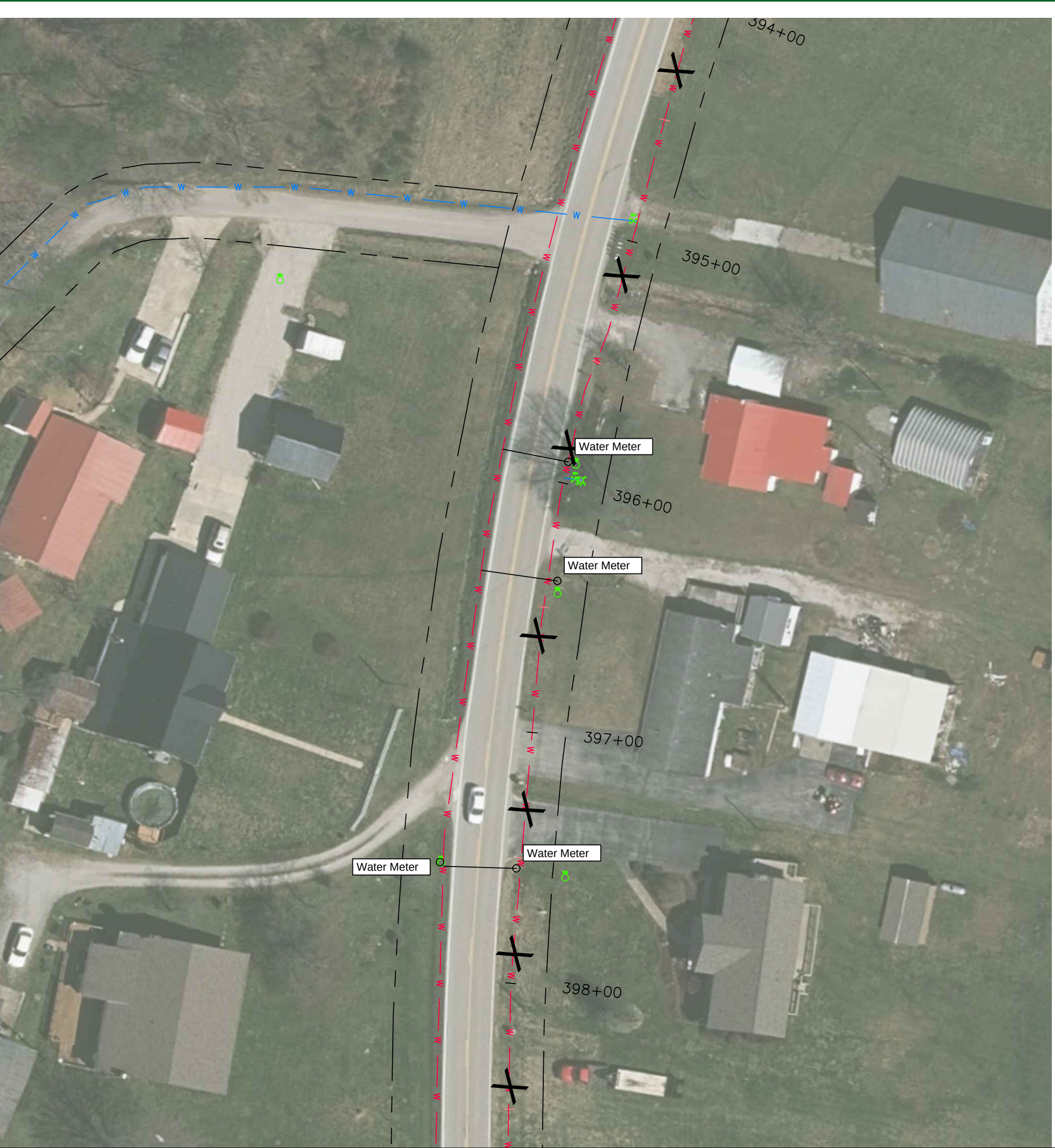
PROPOSED 8" WATERLINE

WATER METER LOCATIONS

REVISIONS:

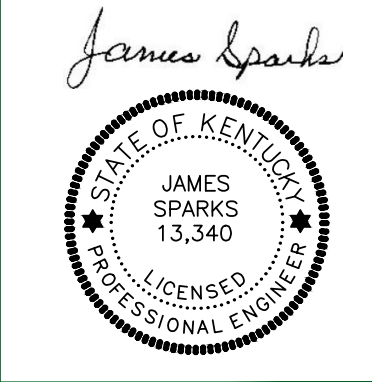
RECORD DRAWING

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\108 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



sheet
no.

nesbitt engineering, inc.
providing proven solutions since 1976
MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2
drawn by: JCW
date: 2-14-22
job no.: 1191.02
scale: 1" = 40'



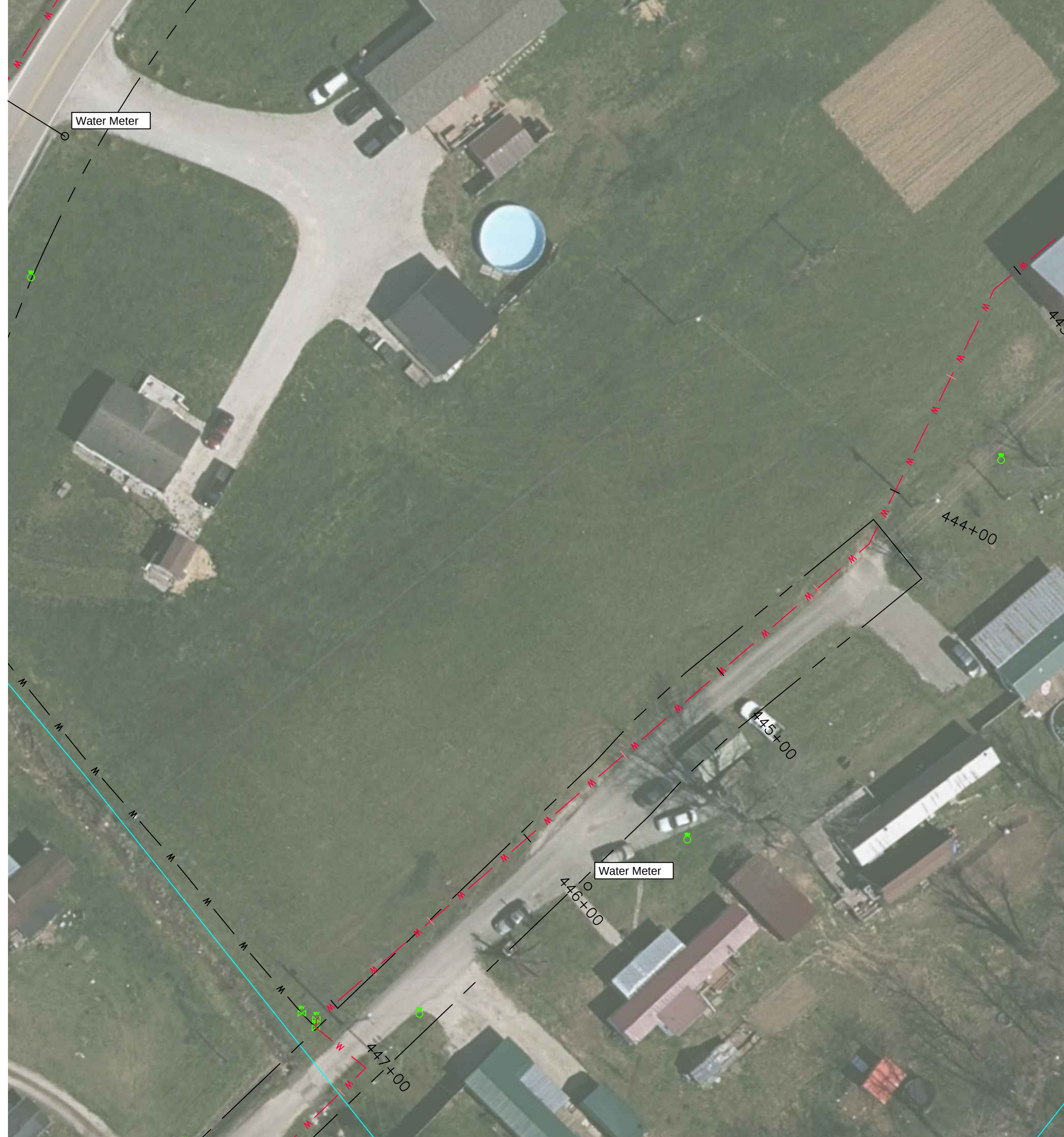
MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY
KY 191
PROPOSED 8" WATERLINE
WATER METER LOCATIONS

REVISIONS:

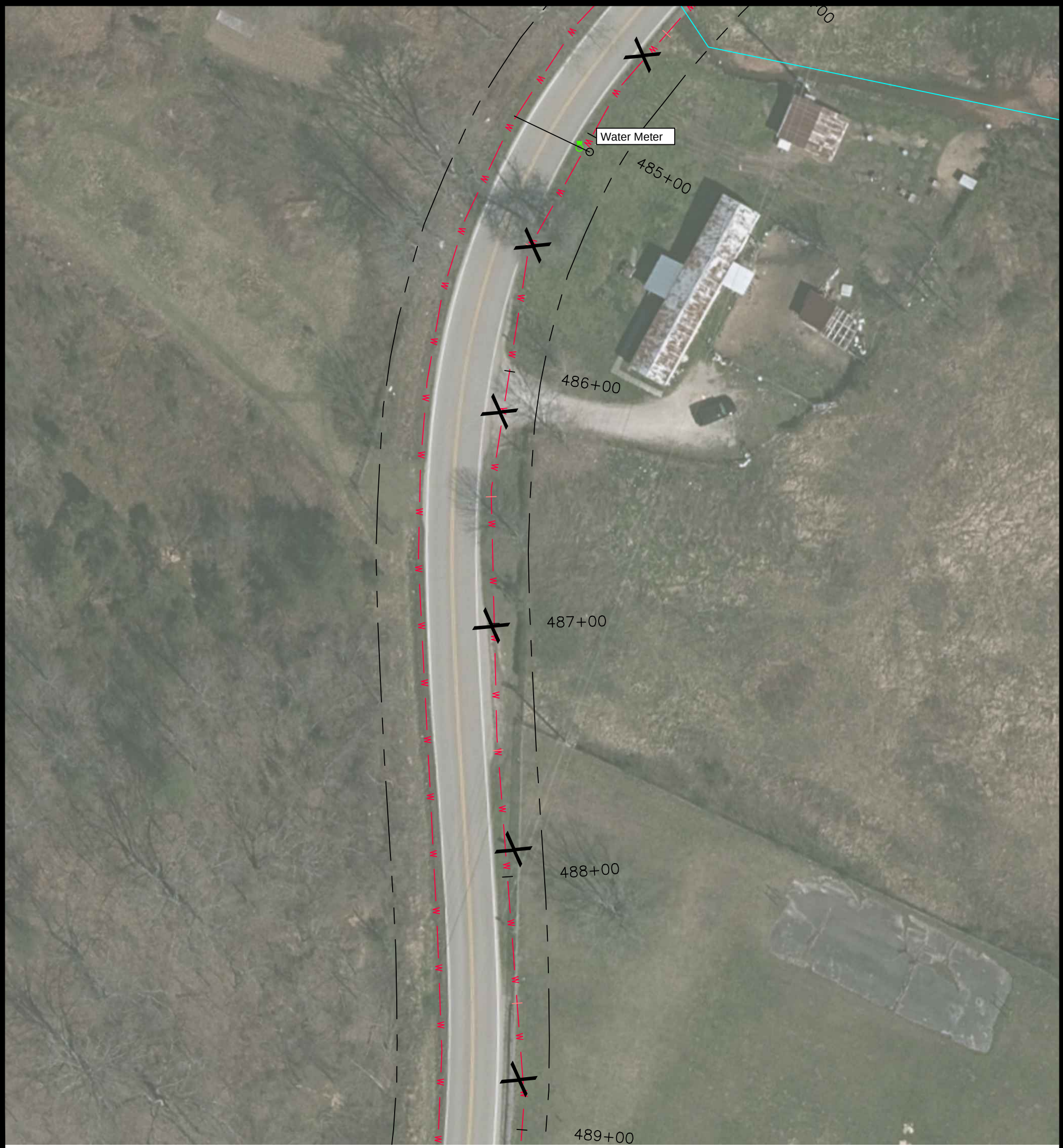
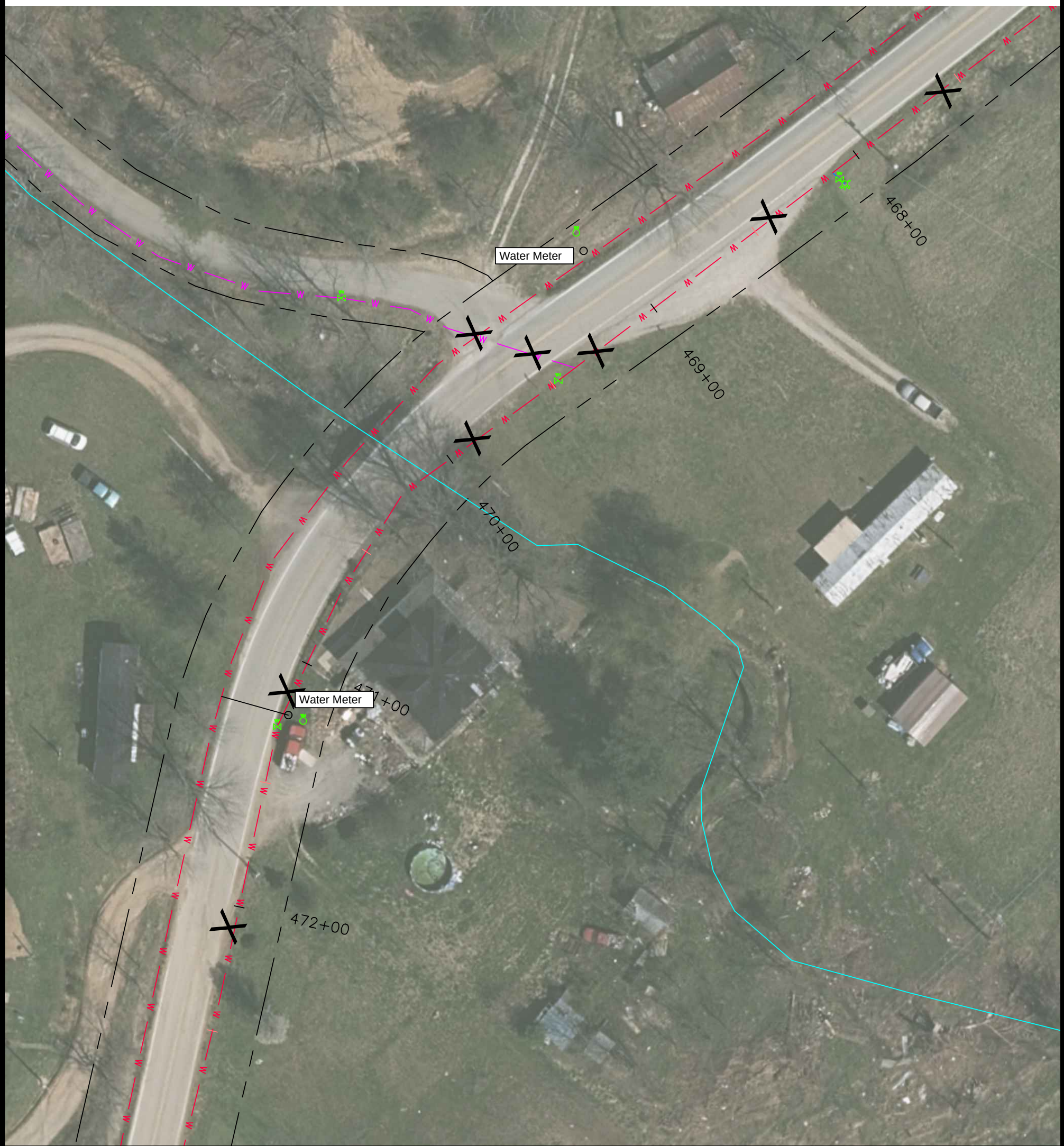
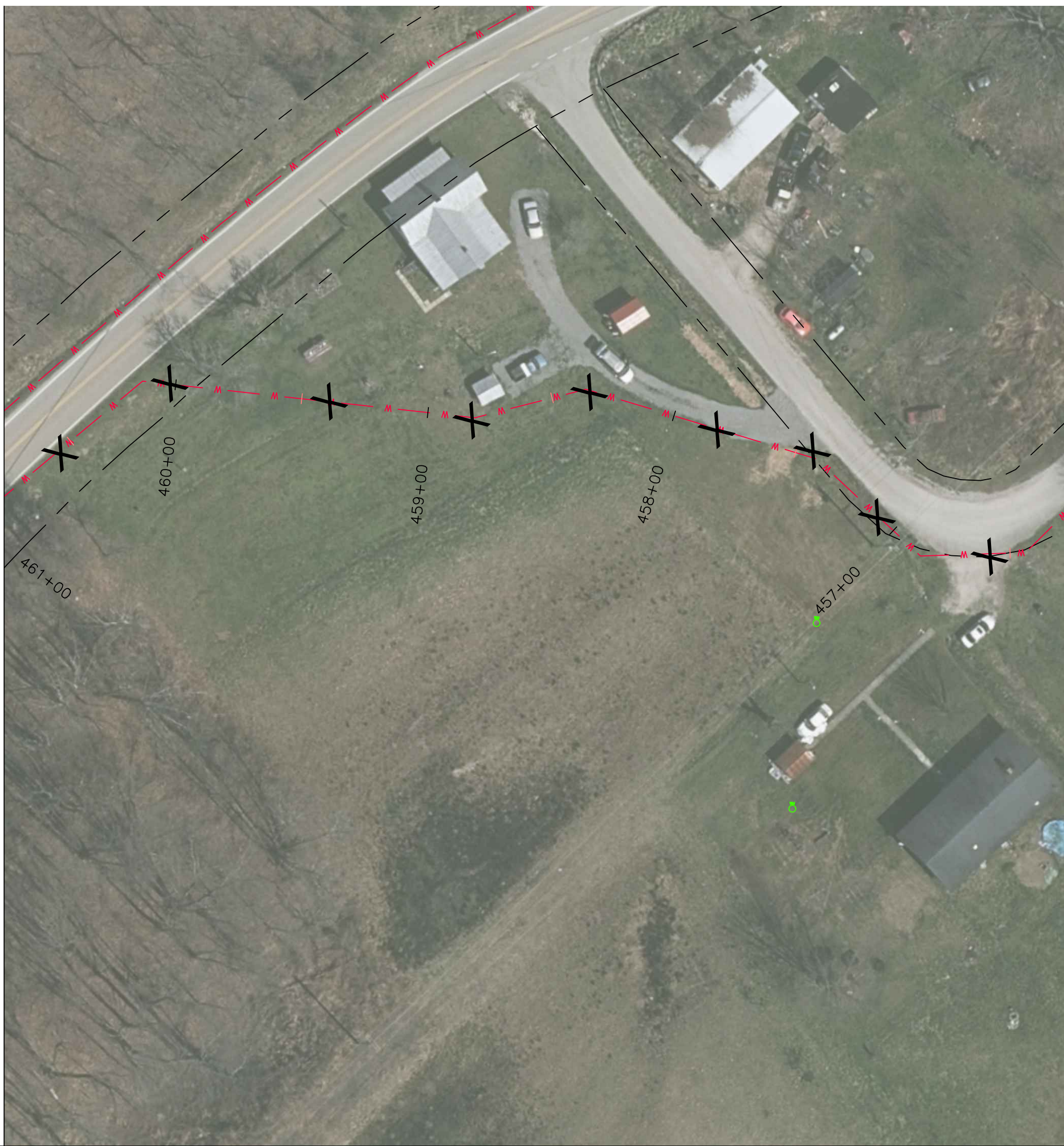
RECORD DRAWING

C-40

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1191-02 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



sheet
no.

C-42

nesbitt engineering, inc.

providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by

JCW

job no.

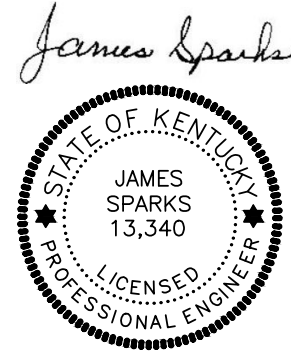
1191.02

scale:

1" = 40'

date:

2-14-22



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

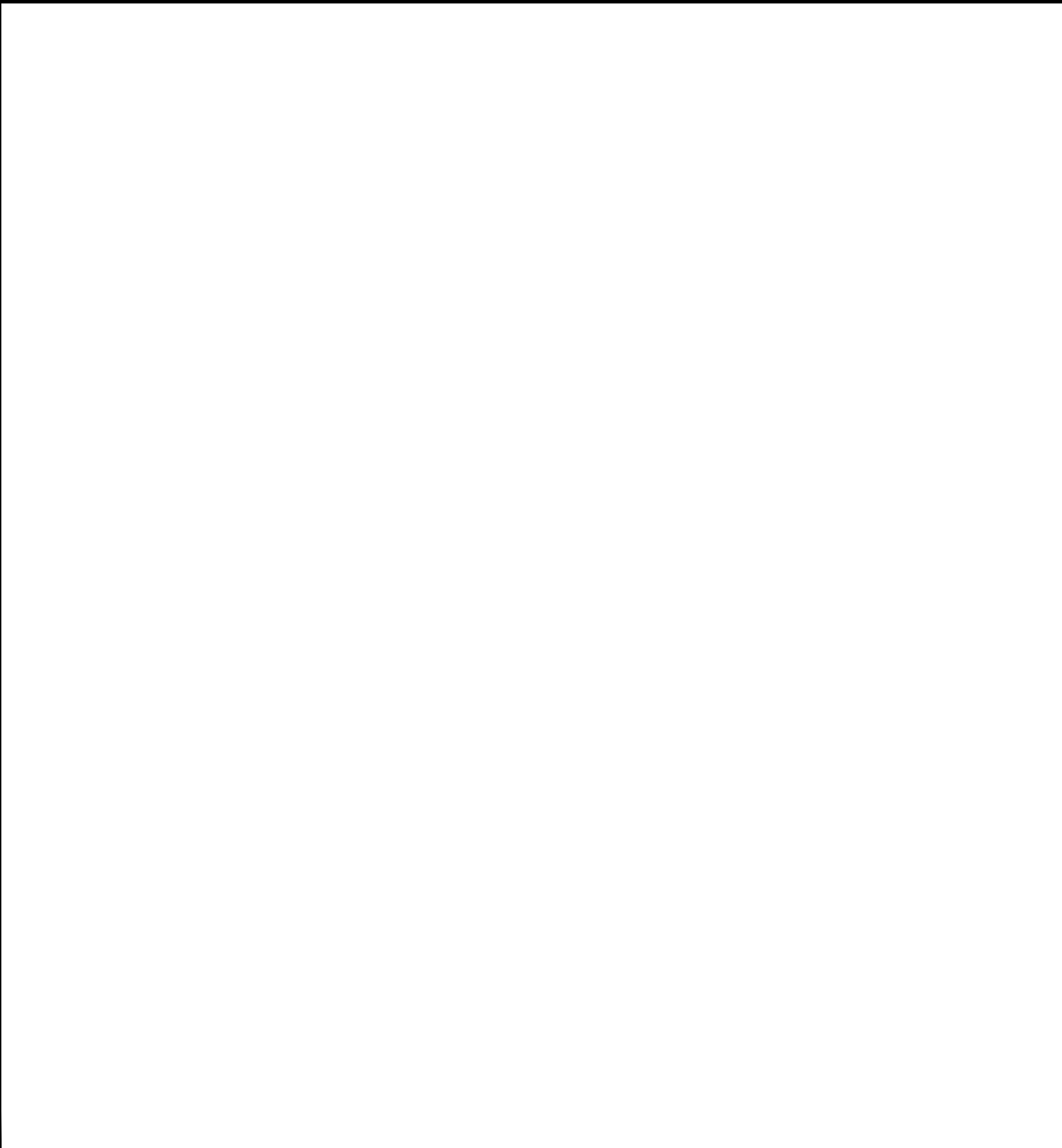
PROPOSED 8" WATERLINE

WATER METER LOCATIONS

REVISIONS:

RECORD DRAWING

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-08 CONSTRUCTION\RECORD DRAWINGS\WATERLINE LAYOUT REVISED.DWG



1" = 40'



nesbitt engineering, inc.

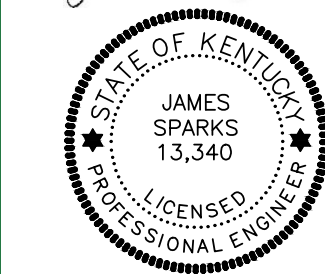
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
KY HWY 191 WATERLINE REPLACEMENT PROJECT - PHASE 2

drawn by: JCW

date: 2-14-22

scale: 1" = 40'



James Sparks

MORGAN COUNTY WATER DISTRICT
1009 HWY 172, WEST LIBERTY, KY

KY 191

PROPOSED 8" WATERLINE

WATER METER LOCATIONS

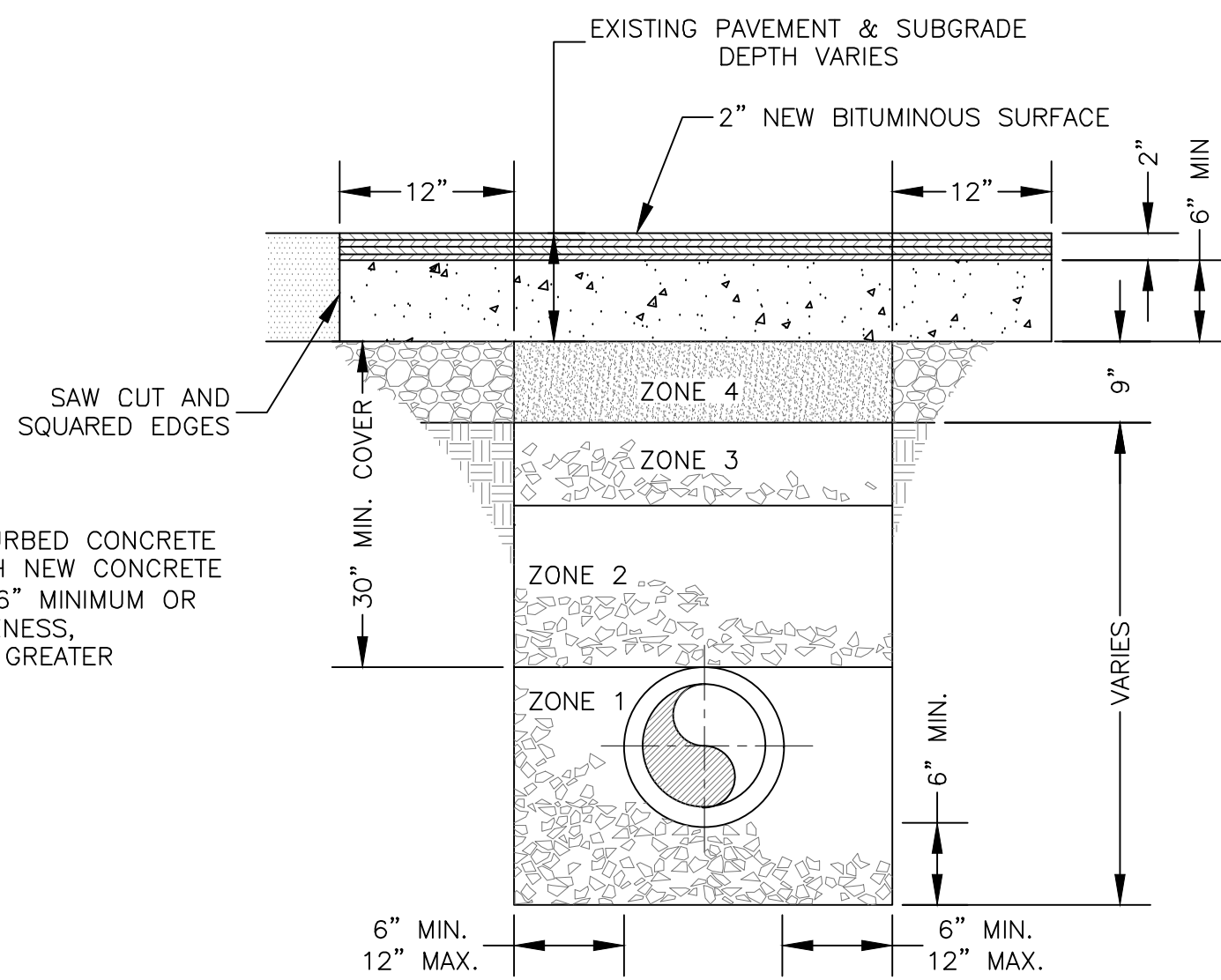
RECORD DRAWING

sheet
no.

C-43

LAST PLOTTED ON: 5/7/2024 8:11 SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\191-02 WATERLINE REPLACEMENT PROJECT PHASE 2A-03 DESIGN\02 WORK\STANDARD DETAILS WATER.DWG

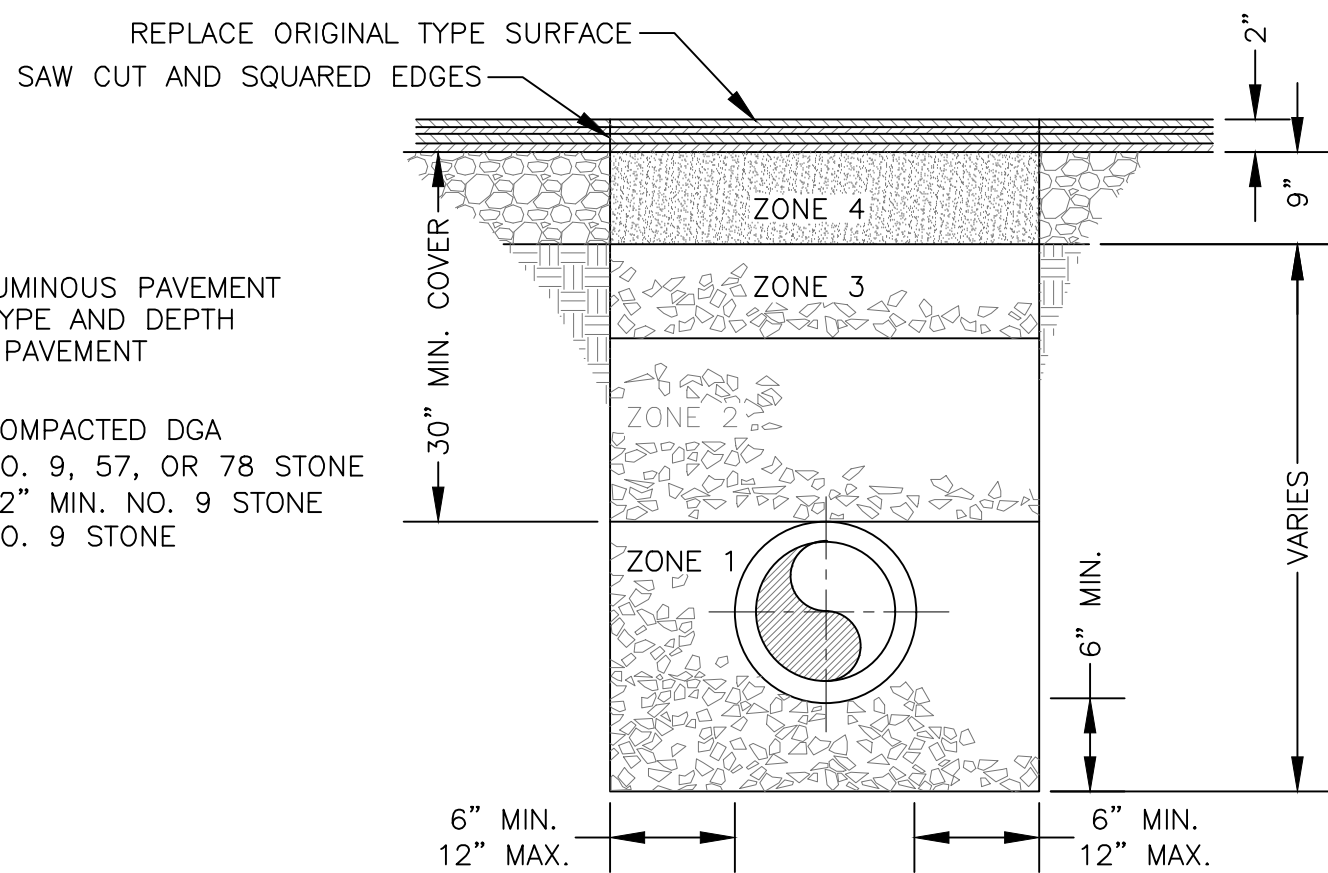
NOTE:
REPLACE DISTURBED CONCRETE PAVEMENT WITH NEW CONCRETE PAVEMENT AT 6" MINIMUM OR EXISTING THICKNESS, WHICHEVER IS GREATER



ORIGINAL BITUMINOUS SURFACING OVER 2"

NOTE:
REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND DEPTH AS EXISTING PAVEMENT

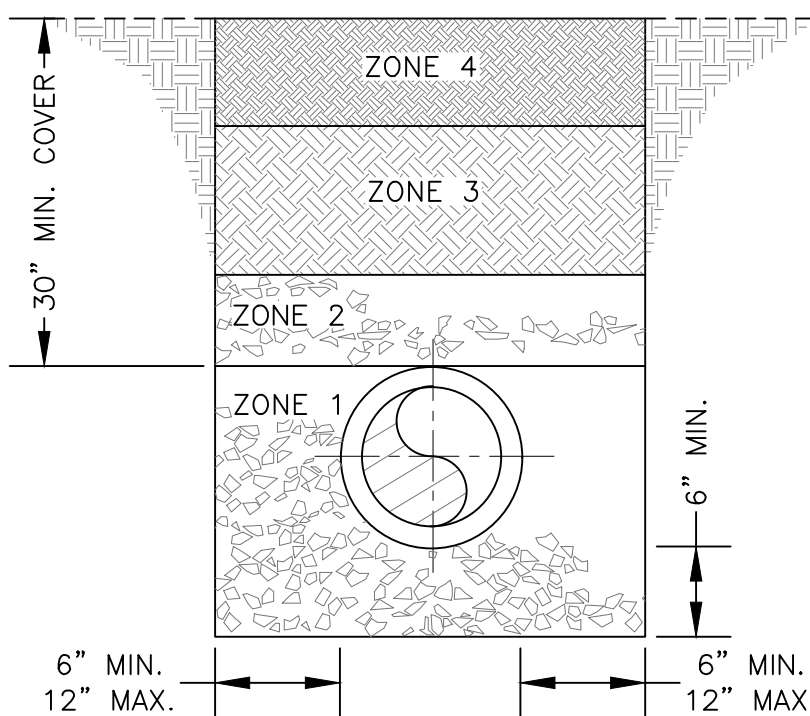
ZONE 4 - COMPACTED DGA
ZONE 3 - NO. 9, 57, OR 78 STONE
ZONE 2 - 12" MIN. NO. 9 STONE
ZONE 1 - NO. 9 STONE



ORIGINAL BITUMINOUS SURFACING 2" OR LESS AND TRAFFIC BOUND MACADAM

NOTES:

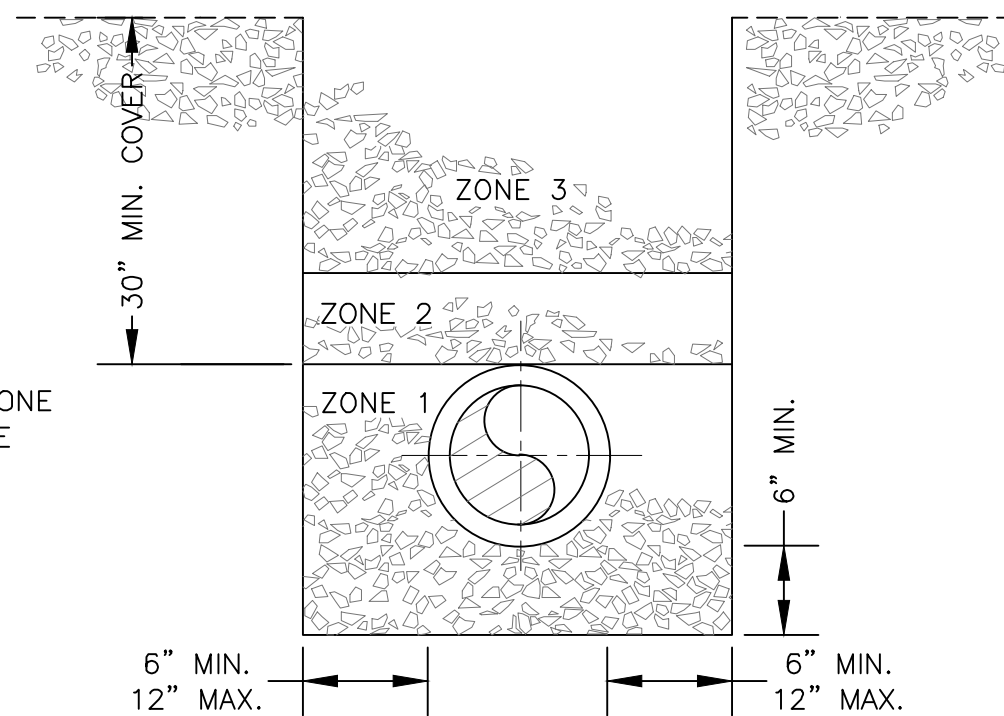
1. COVER UP TO AND INCLUDING ZONE 4 SHALL BE ESTABLISHED BEFORE TRENCH EXCAVATION.
2. ZONE 4 - 6" MIN. CONSOLIDATION EARTH BACKFILL INCLUDING TOPSOIL, NO ROCK ALLOWED.
3. ZONE 3 - CONSOLIDATED SOIL, (NO ROCK GREATER THAN 6" DIAMETER) NO. 9, 57 OR 78 STONE
4. ZONE 2 - FROM THE SPRINGLINE OF THE PIPE TO A DISTANCE 12 INCHES ABOVE THE PIPE, THE CONTRACTOR SHALL USE NO. 9 STONE.
5. ZONE 1 - BEDDING MATERIAL, IN EARTH OR ROCK EXCAVATION AREAS SHALL BE NO. 9 STONE.



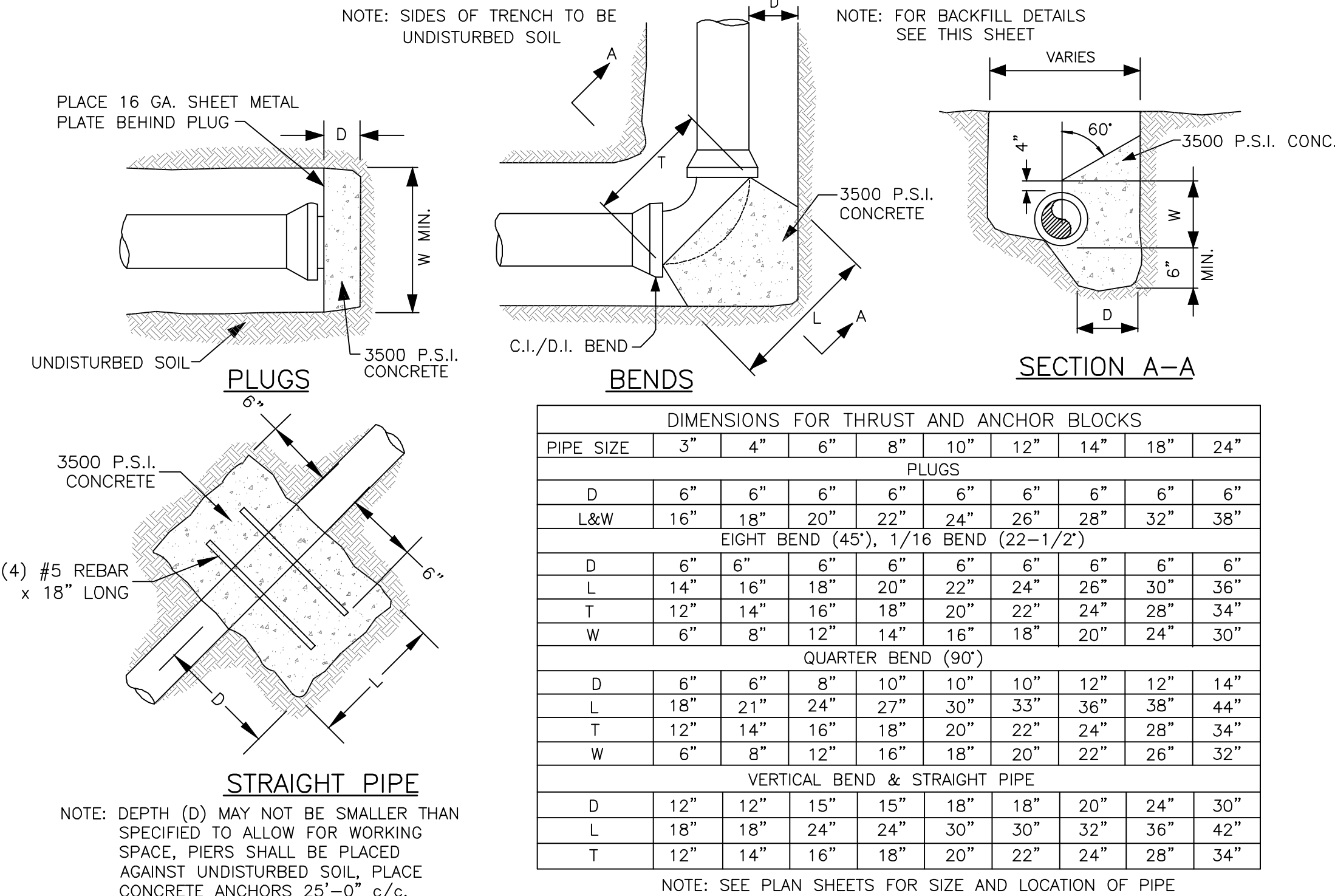
PIPE LAID IN ROCK OR EARTH TRENCH

NOTE:
COVER UP TO AND INCLUDING ZONE 3 SHALL BE ESTABLISHED BEFORE TRENCH EXCAVATION

ZONE 3 - NO. 9, 57, OR 78 STONE
ZONE 2 - 12" MIN. NO. 9 STONE
ZONE 1 - NO. 9 STONE

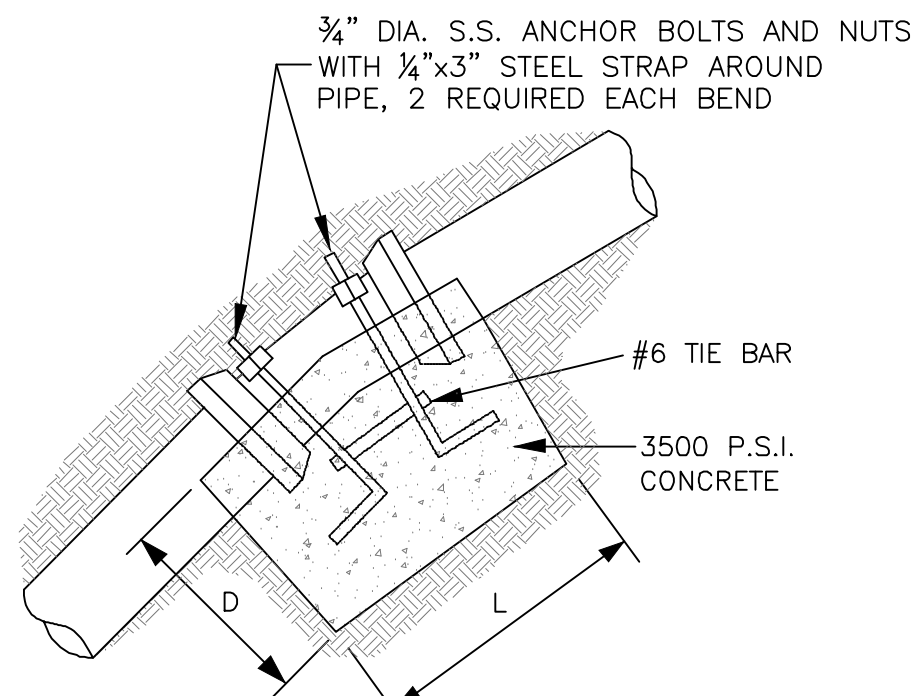


PIPE LAID UNDER GRAVEL DRIVE

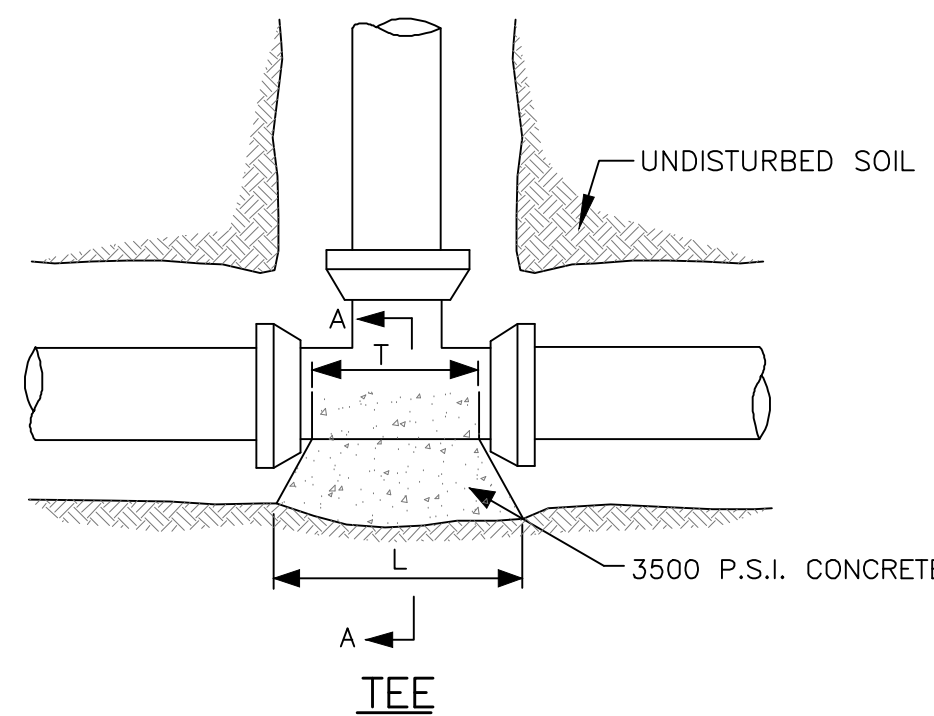


STRAIGHT PIPE

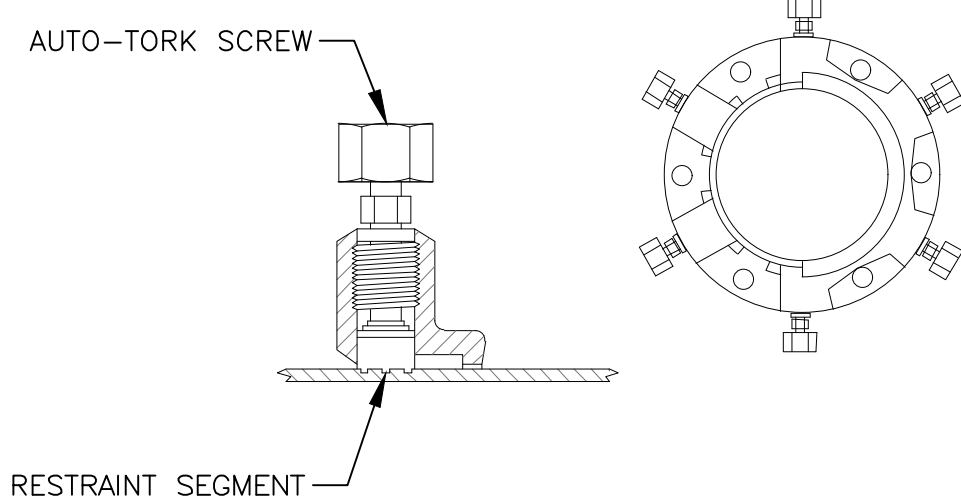
NOTE: DEPTH (D) MAY NOT BE SMALLER THAN SPECIFIED TO ALLOW FOR WORKING SPACE, PIERS SHALL BE PLACED AGAINST UNDISTURBED SOIL, PLACE CONCRETE ANCHORS 25'-0" c/c.



VERTICAL BENDS



CONCRETE ANCHOR BLOCKS



JOINT RESTRAINT

NOTES:

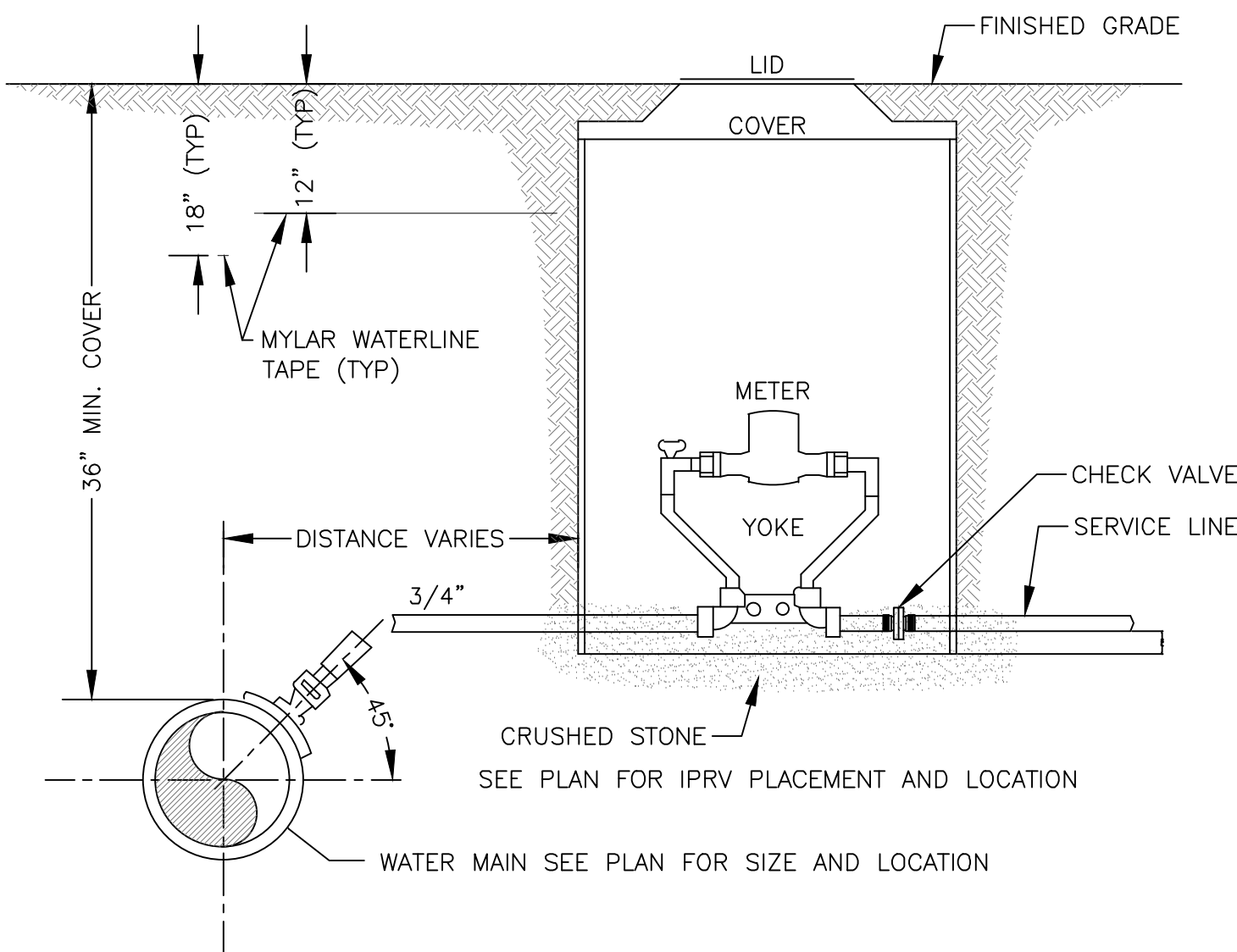
1. MECHANICAL JOINT RETAINER GLAND JOINT RESTRAINTS SHALL BE USED ALONG WITH CONCRETE ANCHOR BLOCKS AT ALL FITTINGS AS REQUIRED.
2. FITTINGS 4 INCHES IN DIAMETER AND GREATER SHALL BE MECHANICAL JOINT TYPE AND FIRMLY RESTRAINED TO PREVENT WATER PRESSURE FROM SPRINGING PIPE SIDEWARD OR UPWARD. THE MECHANICAL RESTRAINT SHALL BE SERIES 2000PV PRODUCED BY EBAA IRON, INC. OR EQUAL.

METER SETTING

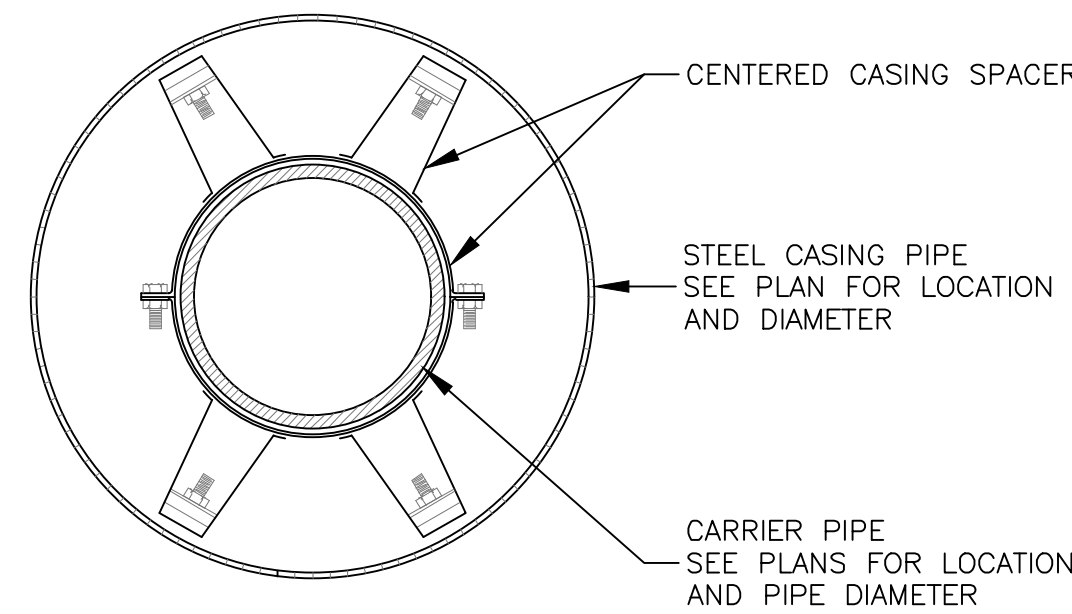
1. YOKE-5/8"x3/4" MUELLER H-1400 WITH METER STOP OR APPROVED EQUAL
2. METER BOX-18"x36" DEEP, MID-STATE PLASTICS, INC. ROUND METER BOX, B SERIES OR EQUAL.
3. COVER-18" FORD HDPE PMBC-3-BR LOCKING LID OR EQUAL.
4. METER-SEE SPECIFICATIONS.
5. INDIVIDUAL PRESSURE REDUCING VALVE (IPRV) WATTS MODEL 25AUB(2"), WILKENS MODEL 600 (3/4"-1") BOTH W/S.S. STRAINER, ADJUSTABLE PRESSURE RANGE 25-75 P.S.I., OUTLET PRESSURE SET AT 50 P.S.I. OR EQUAL.

TIE TO WATER MAIN

1. GROUND KEY CORPORATION STOP-MUELLER H-15000 (3/8"x3/4") OR EQUAL.
2. SERVICE SADDLE-BRONZE DOUBLE STRAP MUELLER H-16000 OR EQUAL.



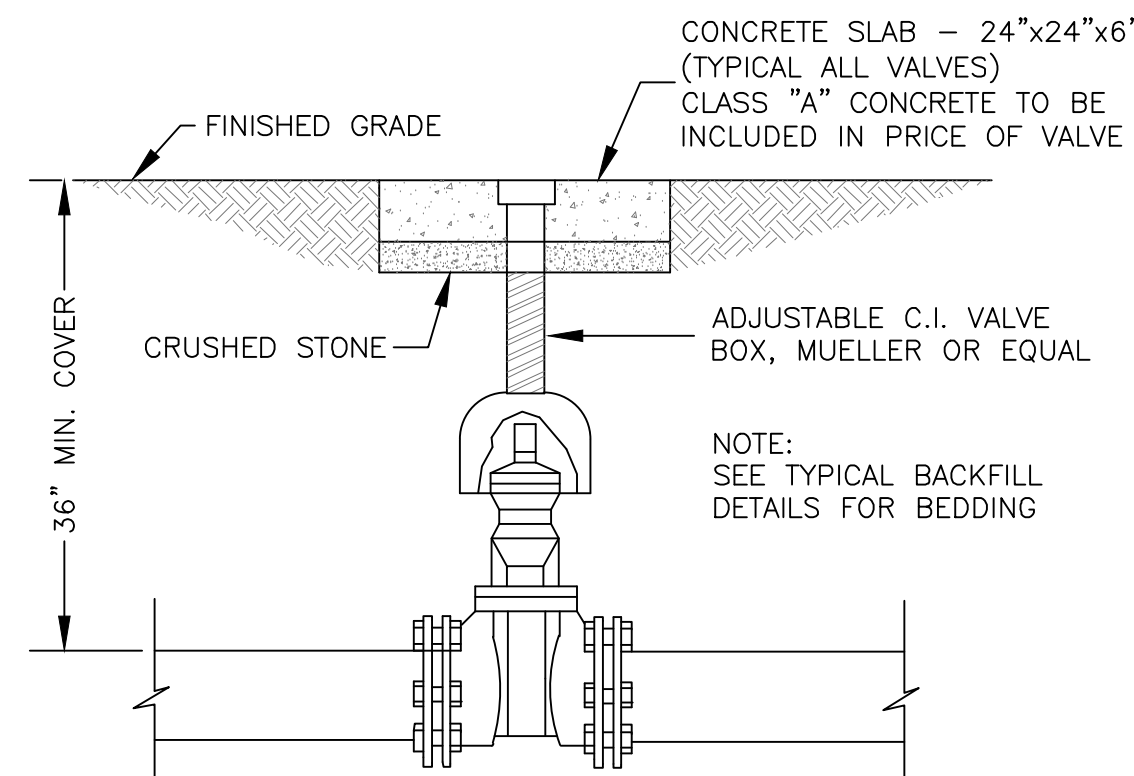
TYPICAL WATER METER ASSEMBLY



CASING SPACER DETAIL

NOTES:

1. CARRIER PIPE SHALL BE INSTALLED WITHIN CASING PIPE USING MODEL CI POLYETHYLENE CASING SPACERS AS MANUFACTURED BY ADVANCE PRODUCT & SYSTEMS, INC. OR EQUAL. SIZE AND SPACING PER MANUFACTURERS RECOMMENDATIONS.
2. END SEALS SHALL BE MODEL AC PULL-ON OR AW WRAP-AROUND END SEALS AS MANUFACTURED BY ADVANCE PRODUCT & SYSTEMS, INC. OR EQUAL.



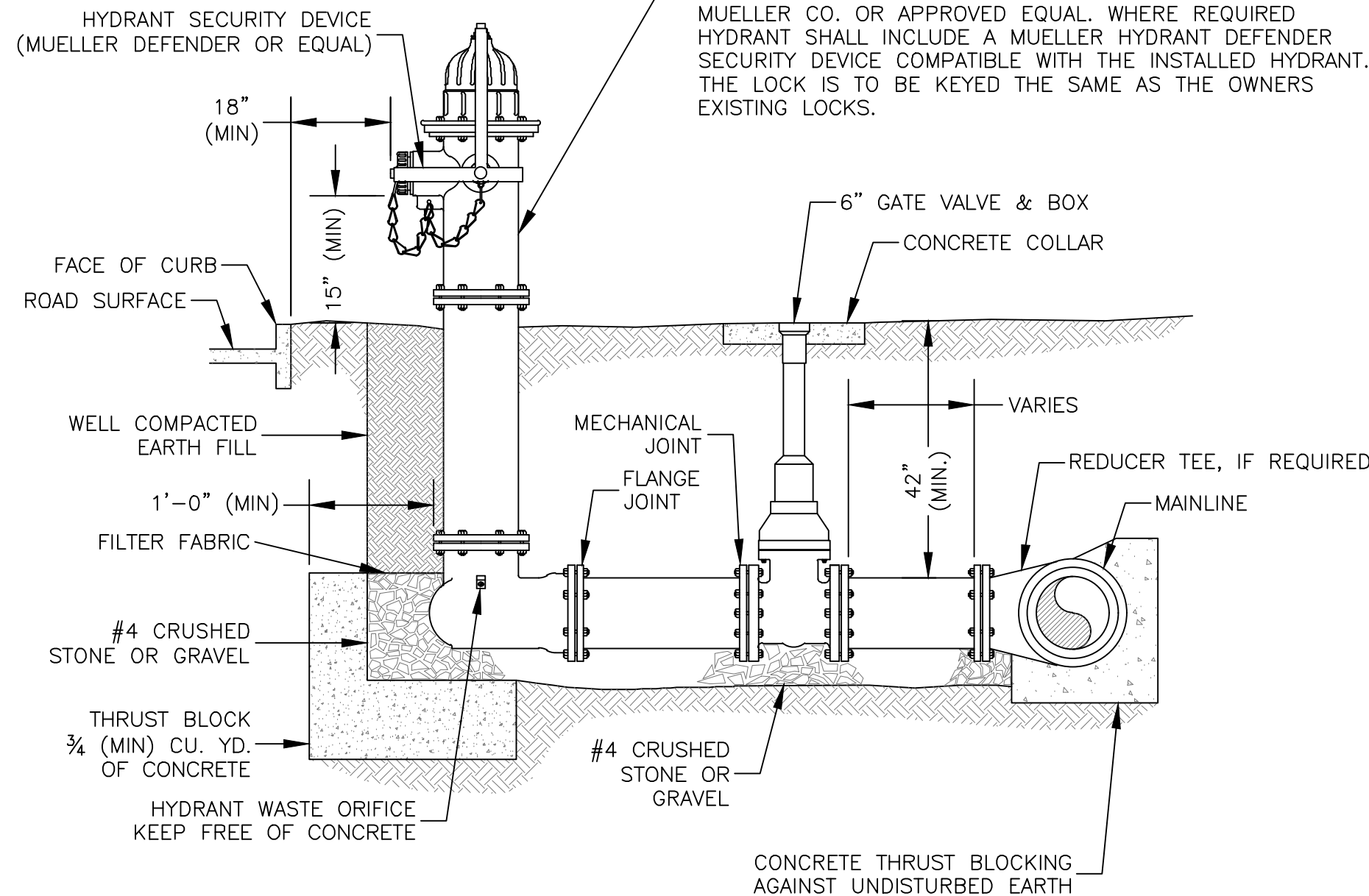
TYPICAL GATE VALVE ASSEMBLY

HYDRANT TYPE 1 - (2) 2 1/2" CONNECTIONS & (1) 4 1/2" CONNECTION
HYDRANT TYPE 2 - (2) 2 1/2" CONNECTIONS

NOTE: BEFORE FINAL INSPECTION

1. ENSURE ADEQUATE VOLUME OF OIL AS SHIPPED BY THE MANUFACTURER.
2. HYDRANT SHALL BE CLEANED, WIRE BRUSHED AND TOUCHED UP WITH "KROMIK PRIMER ENAMEL" OR EQUAL.
3. HYDRANT SHALL RECEIVE TWO FINISHING COATS OF SONNEBORN'S HYDRANT ENAMEL PAINT, COLOR TO MATCH EXISTING HYDRANTS OR AS SPECIFIED BY OWNER.
4. HYDRANT SECURITY DEVICE INSTALLED.

6" DRY BARREL HYDRANT TO BE COMPRESSION TYPE, CAST IRON BODY, FULL BRONZE MOUNTED 150 PSI TYPE 1 OR TYPE 2 CONNECTIONS WITH THREADS STANDARD TO OWNERS REQUIREMENTS. HYDRANTS SHALL MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF ANSI/AWWA C502 STANDARDS AND BE SUPER CENTURION 250 HYDRANTS AS MANUFACTURED BY MUELLER CO. OR APPROVED EQUAL. WHERE REQUIRED HYDRANT SHALL INCLUDE A MUELLER HYDRANT DEFENDER SECURITY DEVICE COMPATIBLE WITH THE INSTALLED HYDRANT. THE LOCK IS TO BE KEYPED THE SAME AS THE OWNERS EXISTING LOCKS.



FLUSHING HYDRANT ASSEMBLY, TYPE 1 & 2

RECORD DRAWING

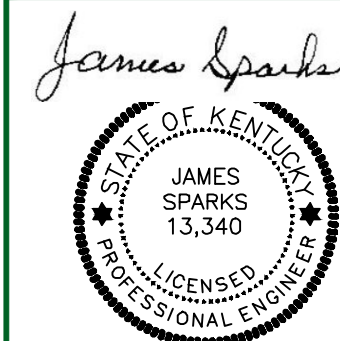
MORGAN COUNTY WATER DISTRICT

1009 HWY KY 172

WEST LIBERTY, KENTUCKY 41472

KY 191 WATERLINE REPLACEMENT

WATERLINE REPLACEMENT DETAILS



nesbitt engineering, inc.

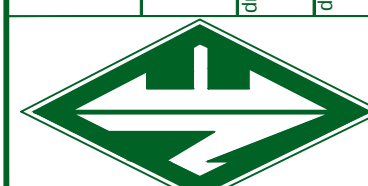
providing proven solutions since 1976

KY 191 WATERLINE REPLACEMENT

WATERLINE REPLACEMENT PROJECT PHASE 1

Drawn by: JHS

Scale: AS SHOWN

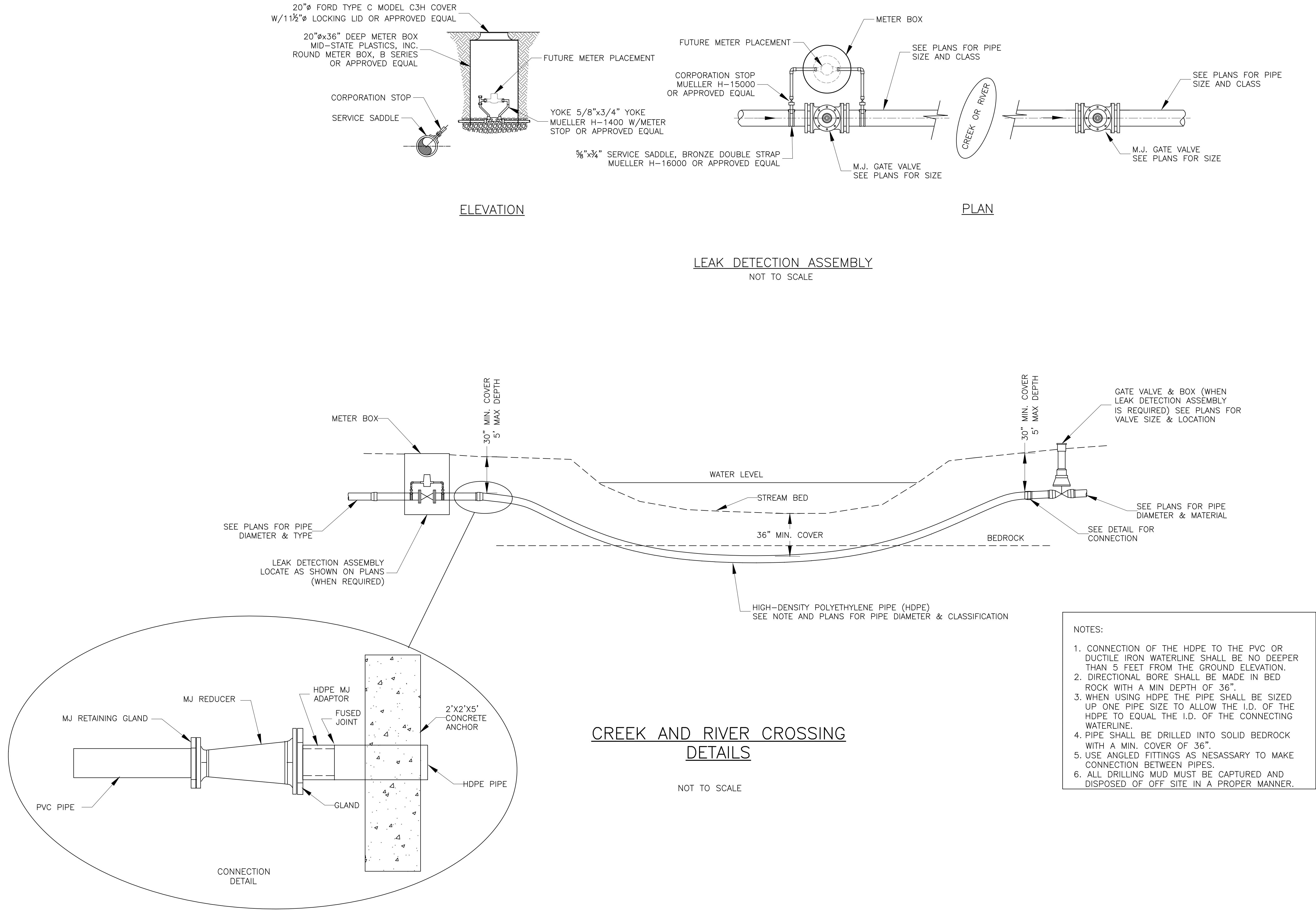


sheet no.

4-6-22

D-1

LAST PLOTTED ON: 5/7/2024 BY: SPARKS, JAMES H. DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\1191-02 WATERLINE REPLACEMENT PROJECT PHASE 2\1-02 DESIGN\02 WORK\0-2 00 CREEK X-RING.DWG



sheet no.

D-2

nesbitt engineering, inc.

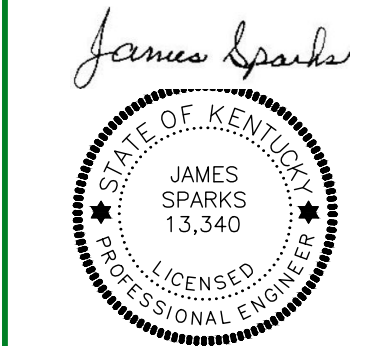
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
WATERLINE REPLACEMENT PROJECT PHASE 2

drawn by: JHS
date: 11/97.02.03
scale: AS SHOWN

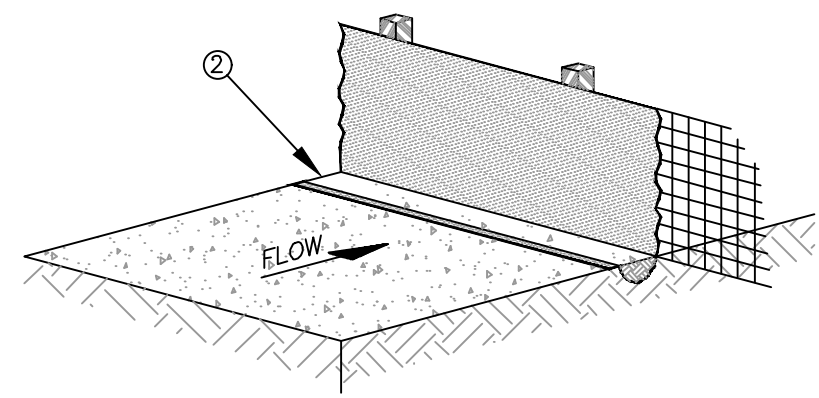
MORGAN COUNTY WATER DISTRICT
1009 HWY KY 172
WEST LIBERTY, KENTUCKY 41472
KY 191 WATERLINE REPLACEMENT

DIRECTIONAL DRILLING DETAIL

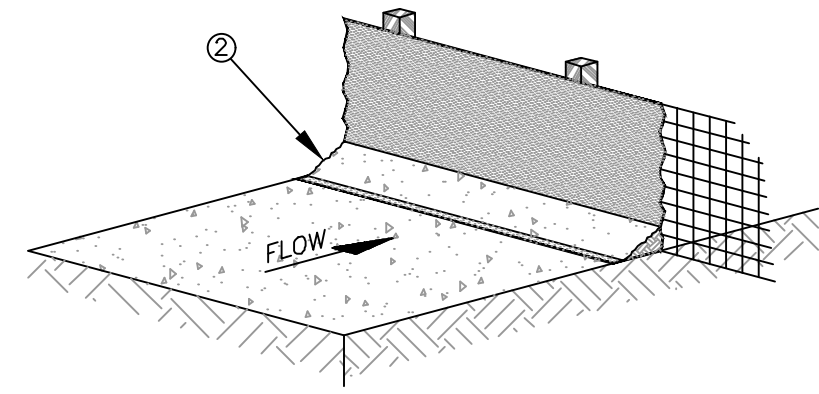


RECORD DRAWING

LAST PLOTTED ON: 6/7/2024
BY: SPARKS, JAMES H.
DRAWING FILE LOCATION: P:\MORGAN COUNTY WATER DISTRICT\181-102 WATERLINE REPLACEMENT PROJECT IMAGE\24-102 SEDIMENTATION WORK\EROSION CONTROL DETAILS.DWG



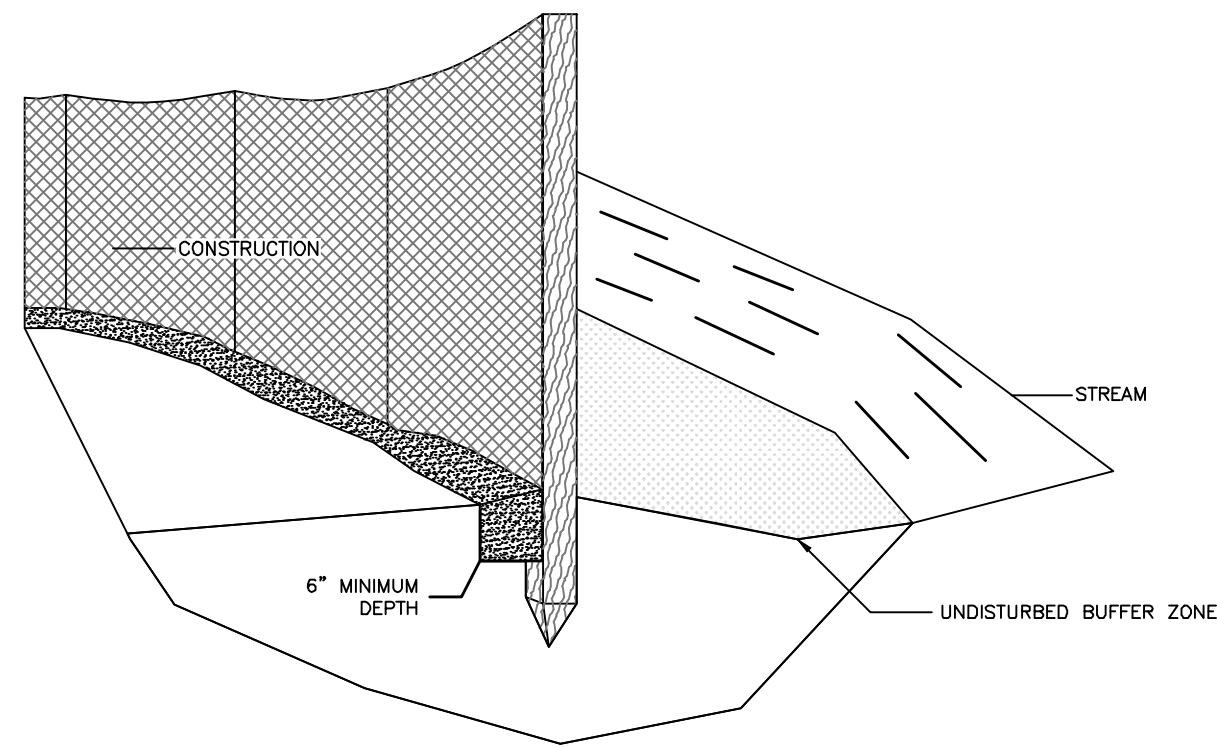
ALTERNATE 1



ALTERNATE 2

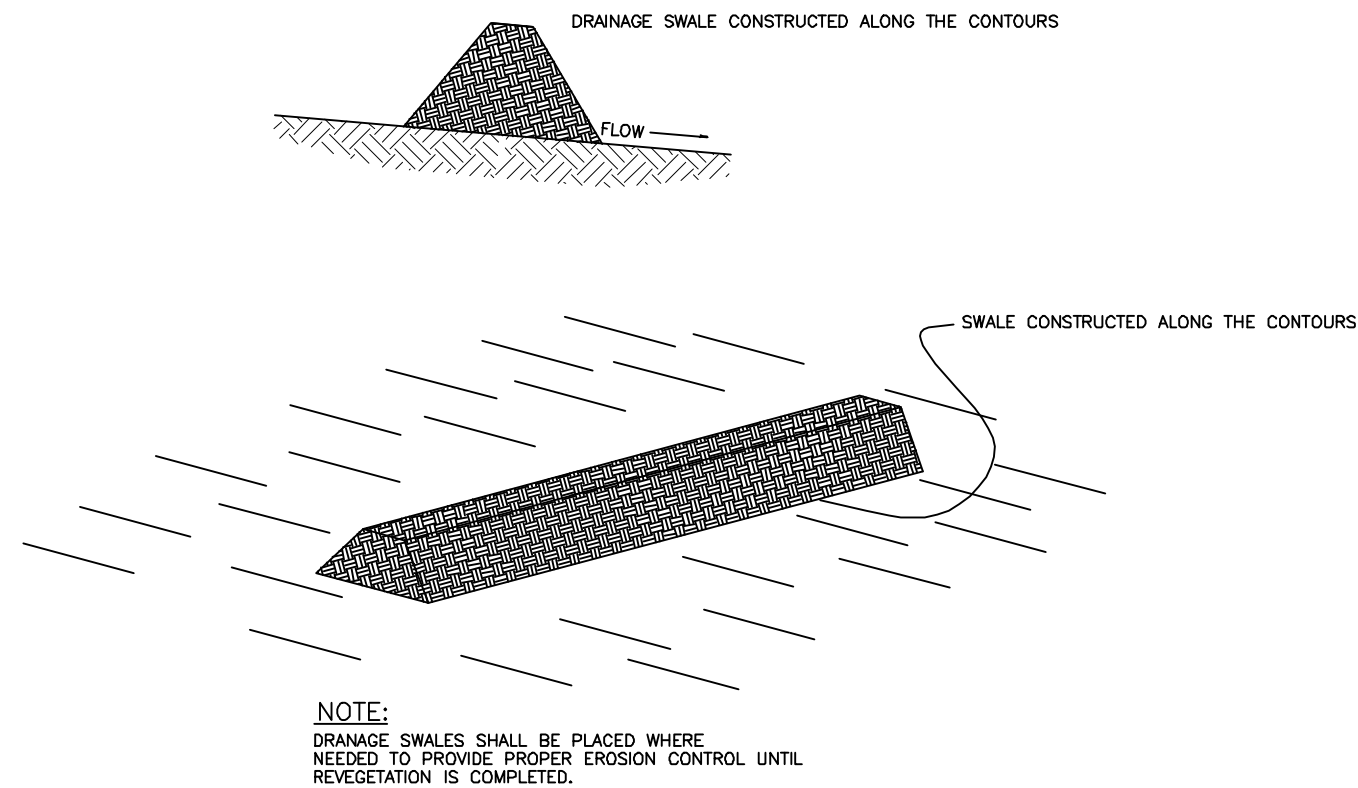
- NOTES
1. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 2. THE BOTTOM 12 INCHES OF FABRIC SHALL BE BURIED IN A 6 INCH TRENCH CUT INTO THE GROUND OR COVERED BY 6 INCHES OF FILL MATERIAL, TO PREVENT SEDIMENT ESCAPING UNDER FENCE. ALL EARTHWORK SHALL BE ON THE UPSTREAM SIDE OF FENCE.

SILT CHECK FENCE
SEDIMENTATION CONTROL
NOT TO SCALE

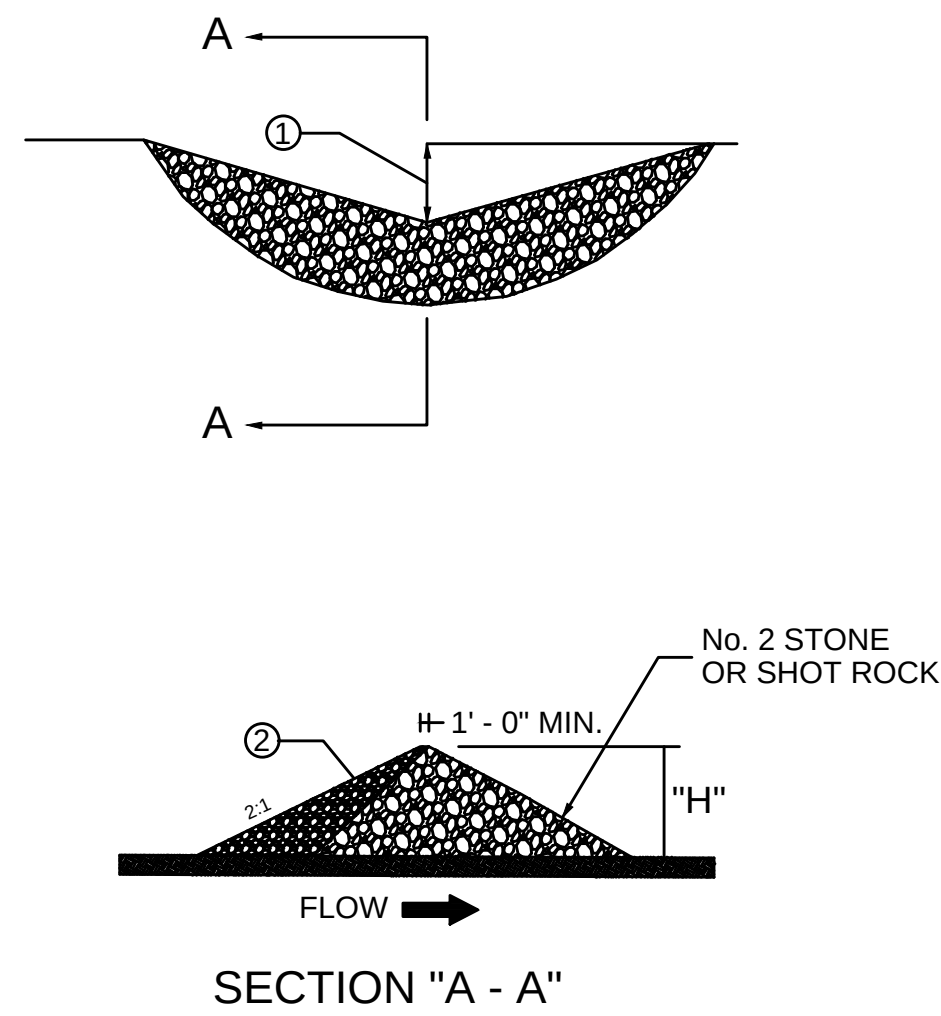


- NOTES
1. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE.
 2. STORMWATER PERMIT IS RESPONSIBILITY OF CONTRACTOR.

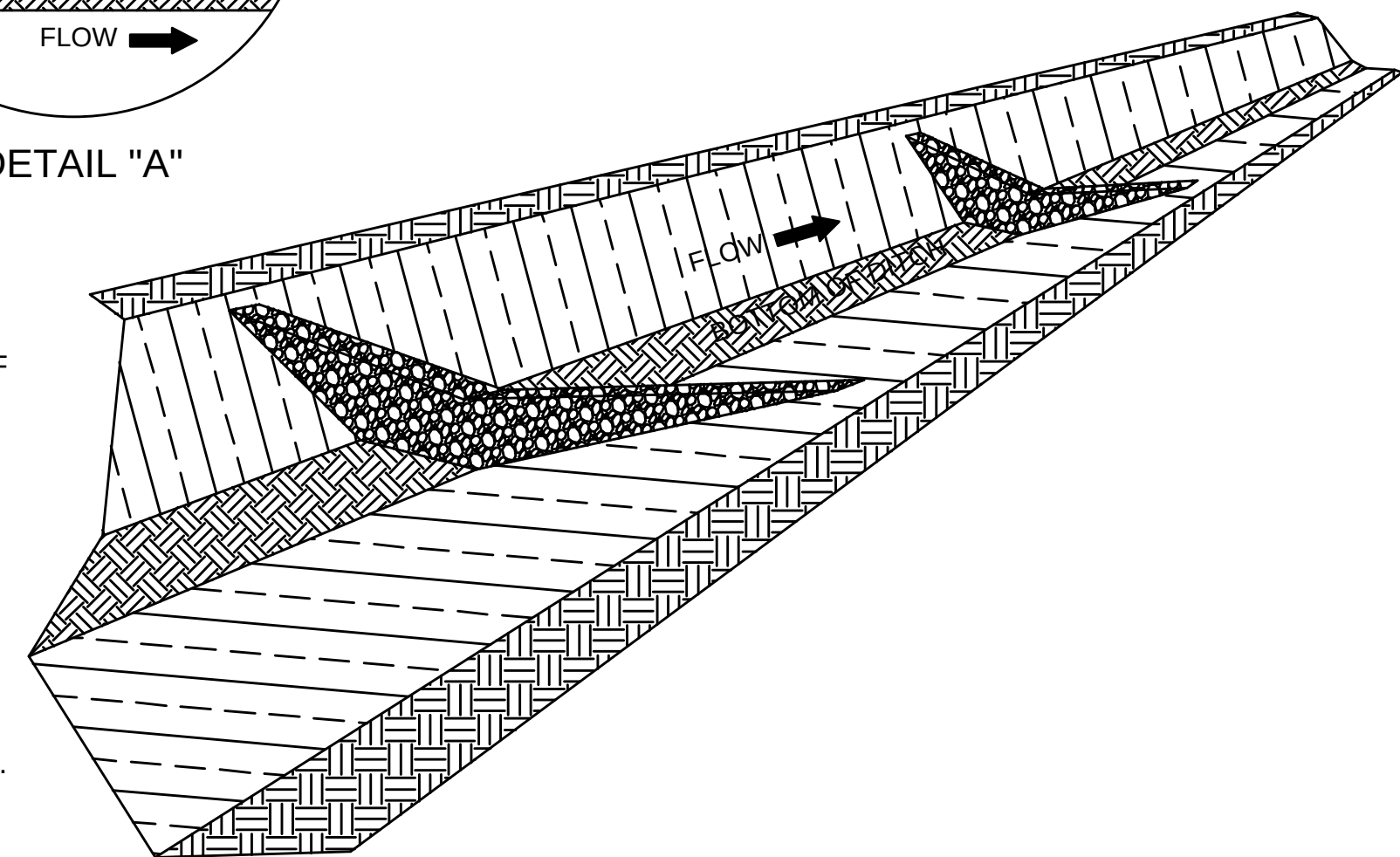
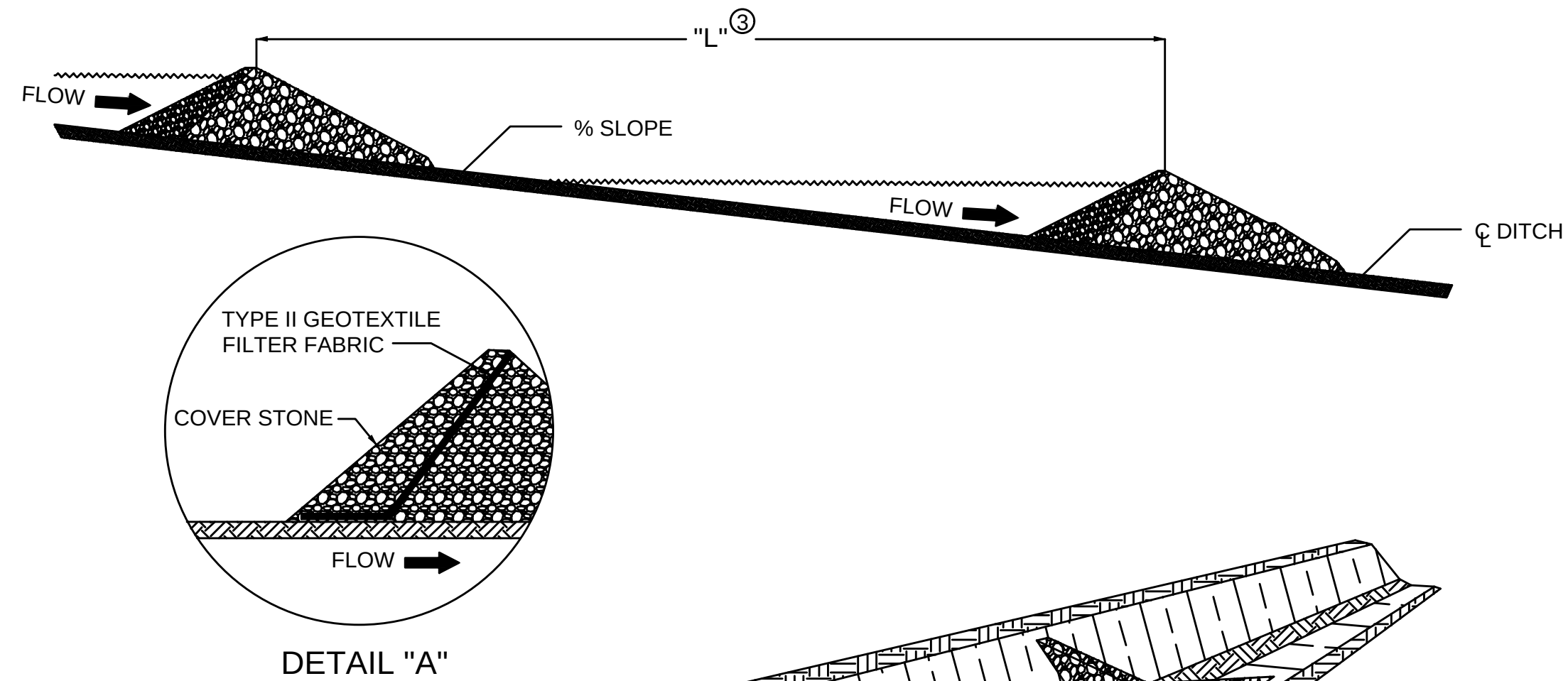
SILT CHECK FENCE
SEDIMENTATION CONTROL
NOT TO SCALE



DRAINAGE SWELL SILT CHECK
SEDIMENTATION CONTROL
NOT TO SCALE



- NOTES
1. MIDDLE OF SILT TRAP SHALL BE A MINIMUM OF 1' - 0" LOWER THAN SIDES SO FLOW WILL NOT BYPASS TRAP OR ERODE BANKS.
 2. UPSTREAM FACE OF SILT TRAP SHALL BE A FOUR INCH MIN. LAYER OF CRUSHED AGGREGATE HAVING 100% PASSING A 3" SIEVE AND NO MORE THAN 5% PASSING A NO. 8 SIEVE (SEE SECTION "A - A"). LINE UPSTREAM FACE WITH FILTER FABRIC UP TO BOTTOM OF THE V AND COVER FABRIC WITH STONE TO HOLD IN PLACE (SEE DETAIL "A").
 3. "L" = "H"/SLOPE OF DITCH
 4. SPACE SILT TRAPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 5. SILT TRAP TYPE B SHALL BE USED ON ALL SLOPES GREATER THAN 25.
 6. SILT TRAP TYPE B MAY BE USED ON ALL SLOPES LESS THAN 2%.



TYPE B SILT TRAP
NOT TO SCALE

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

The placement of temporary erosion control measures shall not be conducted in a manner that my result in disruption of flow in wetlands or streams. Typical erosion and sediment control methods are shown on the Typical Sediment Control Details drawing in this plan.

Natural vegetation should be retained, protected or supplemented to the maximum extent practical and vegetation not intended for removal should be adequately marked, fenced or flagged as necessary.

Areas such as sinkholes, streams, wetlands, stream buffers, highly erodible soils and steep slopes should be avoided to the greatest extent feasible. Mark, fence or flag areas that should be protected from construction activities such as clearing, grubbing, grading, mowing, staging activities, material storage and/or other related activities.

Limit site preparation of activities such as grading and clearing to where they are absolutely necessary and consistent with the plan and daily schedules of construction activities.

Prevent stormwater from entering areas and leaving areas of disturbed soil by using vegetated strips, diversion dikes and swales, filter berms, sediment traps and basins, check dams, stabilized construction entrances, and sit fences or filter tubes/wattles. Reduce the amount of sediment and water velocity produced from areas of disturbed soils by using vegetation, riprap, sod, seeding and mulching or blankets, as well as the use of structural measures including diversion, check dams, slope drains and storm drain protection.

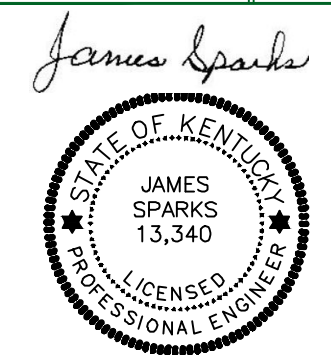
Stabilize soil with seeding and mulch as soon as possible after disturbance. Soil disturbed by construction activities should be stabilized within 14 days of ceasing construction activities. Erosion prevention measures such as erosion control mats/blankets, mulch, hydro applications, tracking, or soil binders shall be implemented on disturbed areas within 24 hours or as soon as practical after completion of disturbance/grading or following the end of activities. Final stabilization practices shall be initiated on any site where construction activities have been suspended for more than 180 days.

To the extent possible, construction managers should utilize natural or recyclable materials as temporary measures that can remain on-site after the completion of construction. One example is using mulch berms as opposed to silt fences, which must be removed and disposed after the completion of construction activities has occurred and vegetation has become well established.

RECORD DRAWING

MORGAN COUNTY WATER DISTRICT
1009 HWY KY 172
WEST LIBERTY, KENTUCKY 41472
KY 191 WATERLINE REPLACEMENT

WATERLINE REPLACEMENT



nesbitt engineering, inc.
providing proven solutions since 1976

MORGAN COUNTY WATER DISTRICT
WATERLINE REPLACEMENT PROJECT PHASE 2

AS SHOWN

DATE: 11/97.02.03

DRAWN BY: JHS

CHECKED BY: JHS

DATE: 4-6-22



sheet
no.

D-3