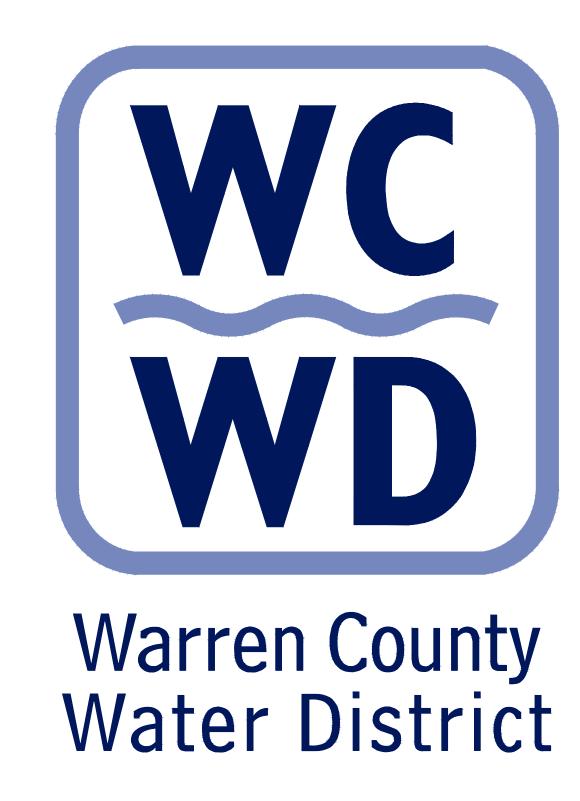
MORGANTOWN ROAD AREA IMPROVEMENTS - CONTRACT 1



PROJECT VICINITY MAP (N.T.S.)

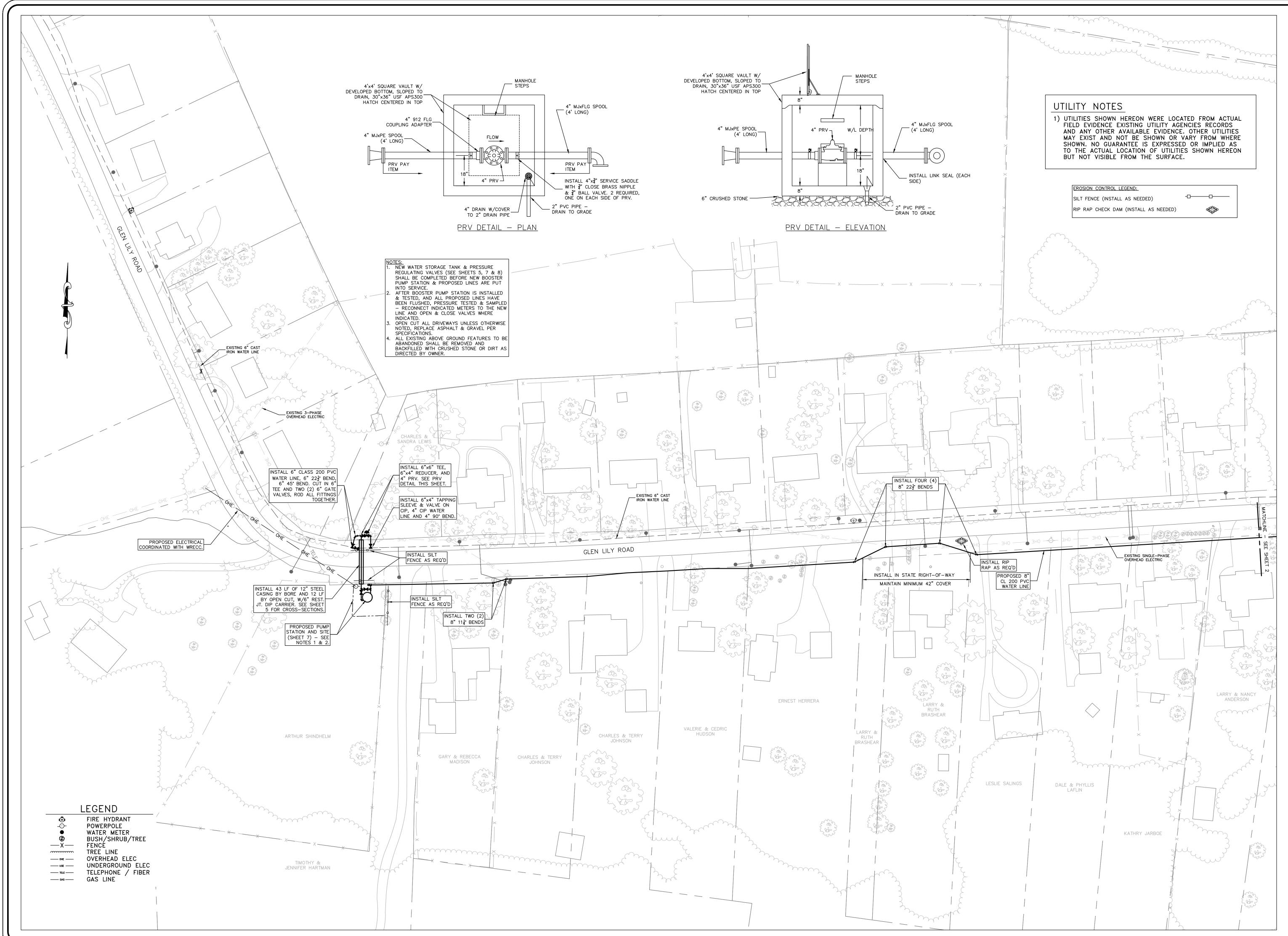




INDEX OF DRAWINGS

DESCRIPTION
GLEN LILY ROAD STA. 0+00 TO STA. 11+10 (8" LINE) 6" CONNECTION WITH 4" PRV
GLEN LILY ROAD STA. 11+10 TO STA. 26+85
GLEN LILY ROAD STA. 26+85 TO STA. END
W. VILLA DRIVE STA. 0+00 TO END
HIGHWAY & ROAD CROSSINGS CROSS-SECTIONS
2" PRV LOCATIONS SITES & DETAILS
BOOSTER PUMP STATION SITE & DETAILS
WATER STORAGE TANK SITE PLAN
WATER STORAGE TANK DETAILS
WATER DETAIL SHEET
EROSION CONTROL DETAIL SHEET

523 US Hwy 31-W Bypass / P.O. Box 10180 Bowling Green, KY 42102-4780 TEL 270.842.0052 FAX 270.842.8360 www.warrenwater.com



arren County ater District



MORGANTOWN RD. AREA IMPROVEMENTS
GLEN LILY ROAD
STA. 0+00 TO STA. 11+10 & 6" CONNECTION W/ PRO IFCT #346992

SCALE: 1"=25'

DATE: 12/19/19

PROJECT #: 346992

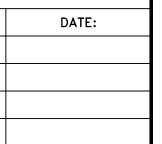
DESIGNED: JNL

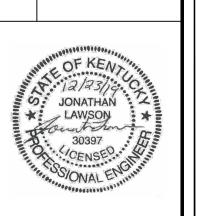
DRAWN: JNL

CHECKED: RJL

REVISIONS:

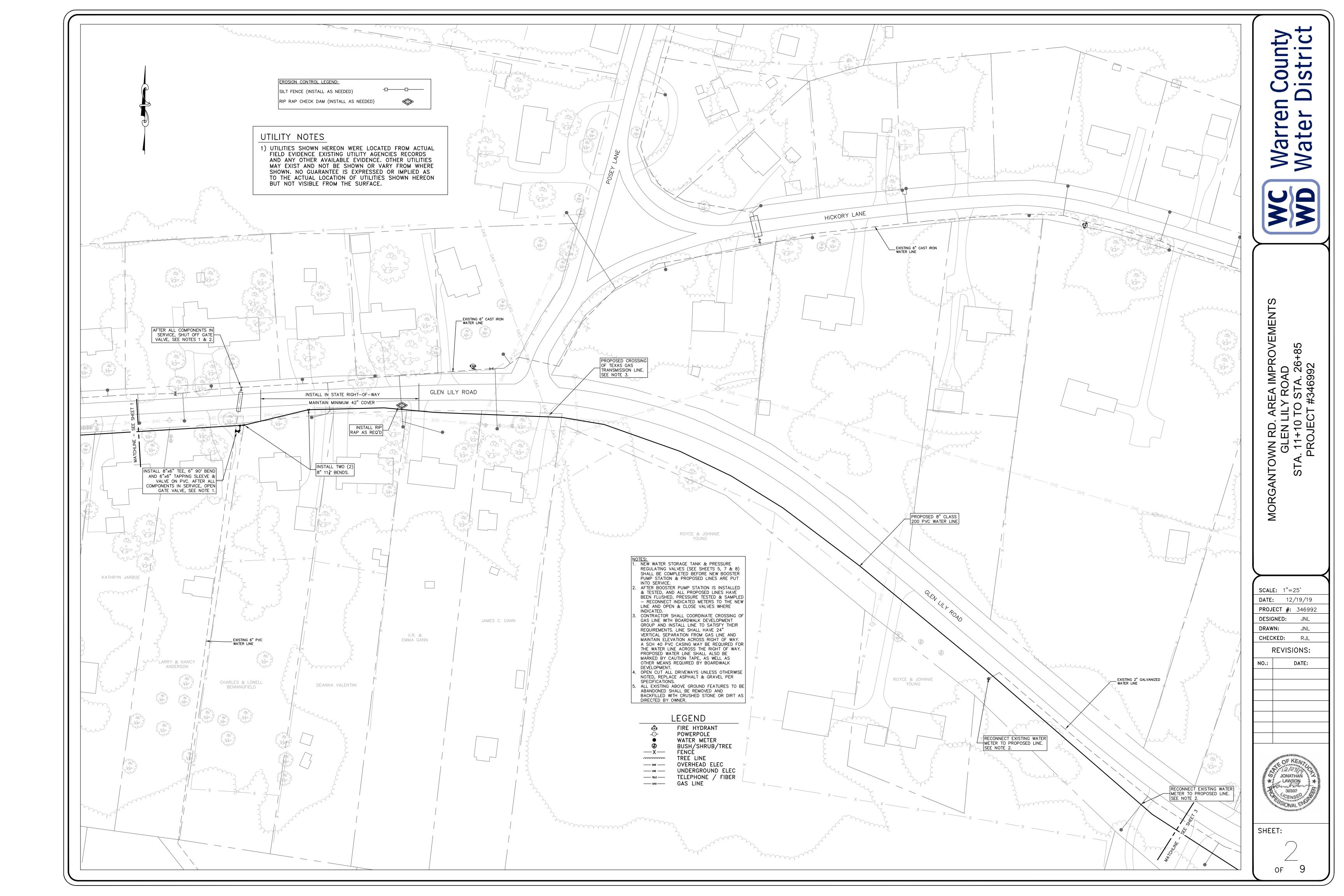
NO.: DATE:

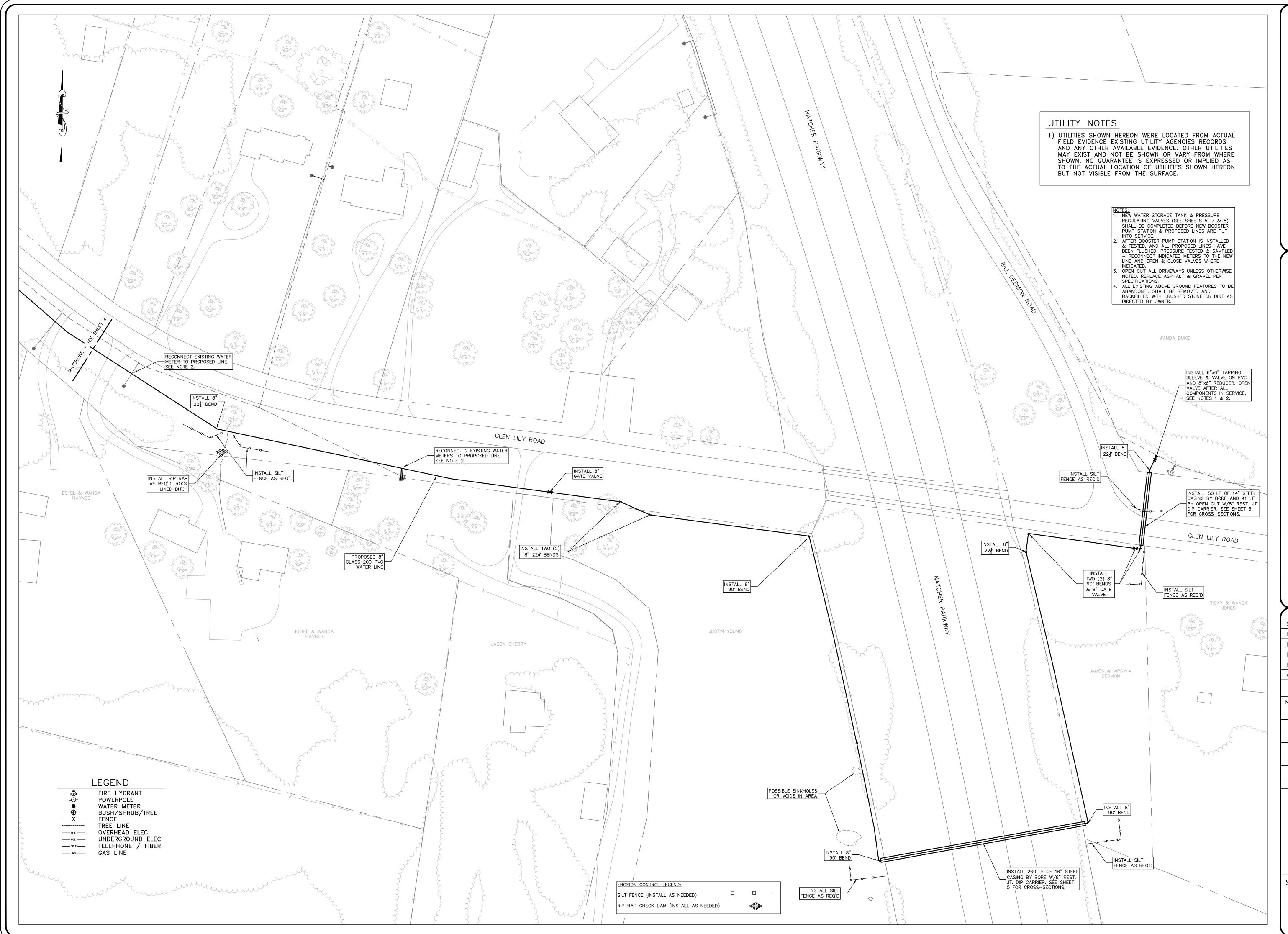




SHEET:

OF





Warren County Water District



REA IMPROVEMENTS
Y ROAD
TO END

SCALE: 1"=25'

DATE: 12/19/19

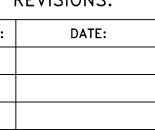
PROJECT #: 346992

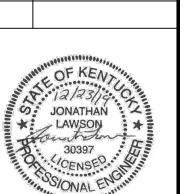
DESIGNED: JNL

DRAWN: JNL

CHECKED: RJL

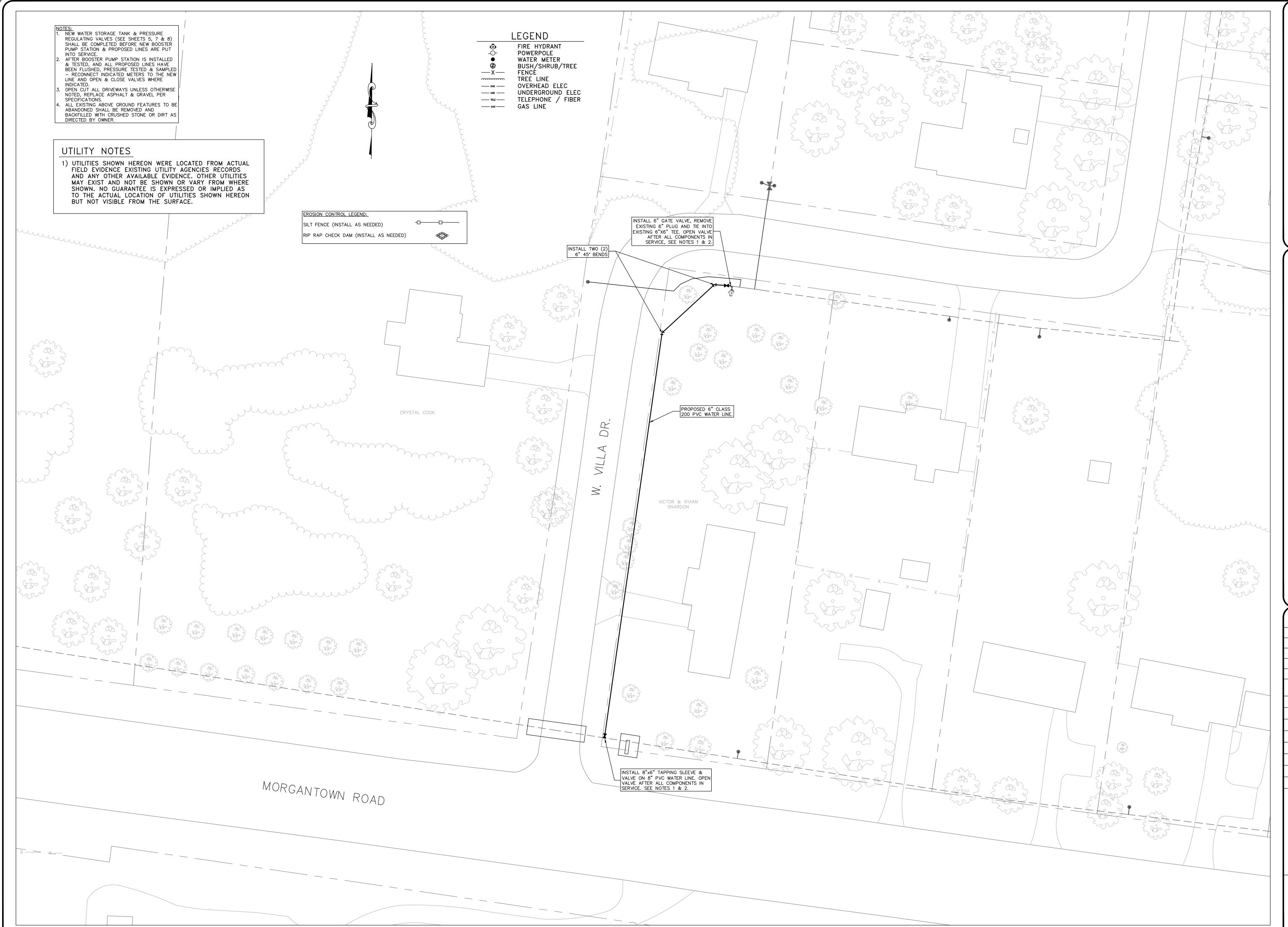
REVISIONS:





SHEET:

OF



Varren County Vater District



SCALE: 1"=25'

DATE: 12/19/19

PROJECT #: 346992

DESIGNED: JNL

DRAWN: JNL

DESIGNED: JNL

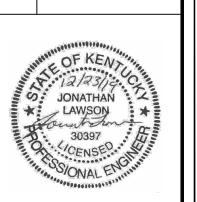
DRAWN: JNL

CHECKED: RJL

REVISIONS:

NO.: DATE:

O.: DATE:



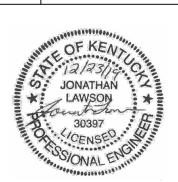
SHEET:

OF S

TOP OF CASING AND / OR PIPE
ACROSS STATE RIGHT-OF-WAY.

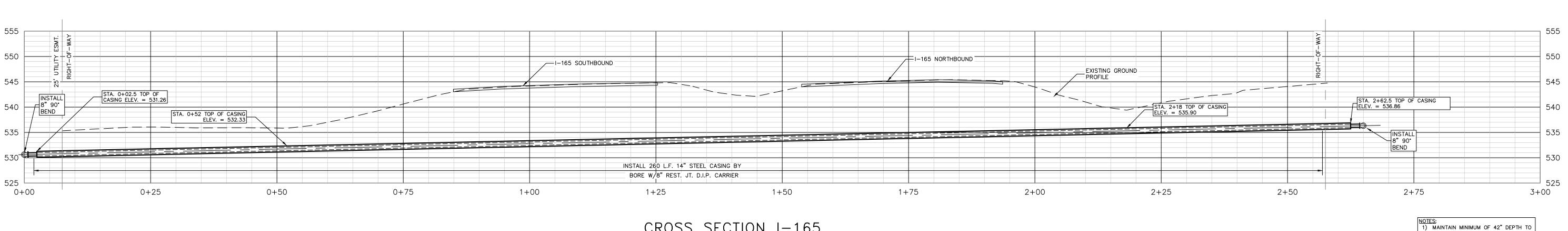
2) NO CONSTRUCTION ACTIVITY
PERMITTED ON STATE RIGHT-OF-WAY
FOR CONTROLLED ACCESS HIGHWAYS.

REVISIONS: DATE:



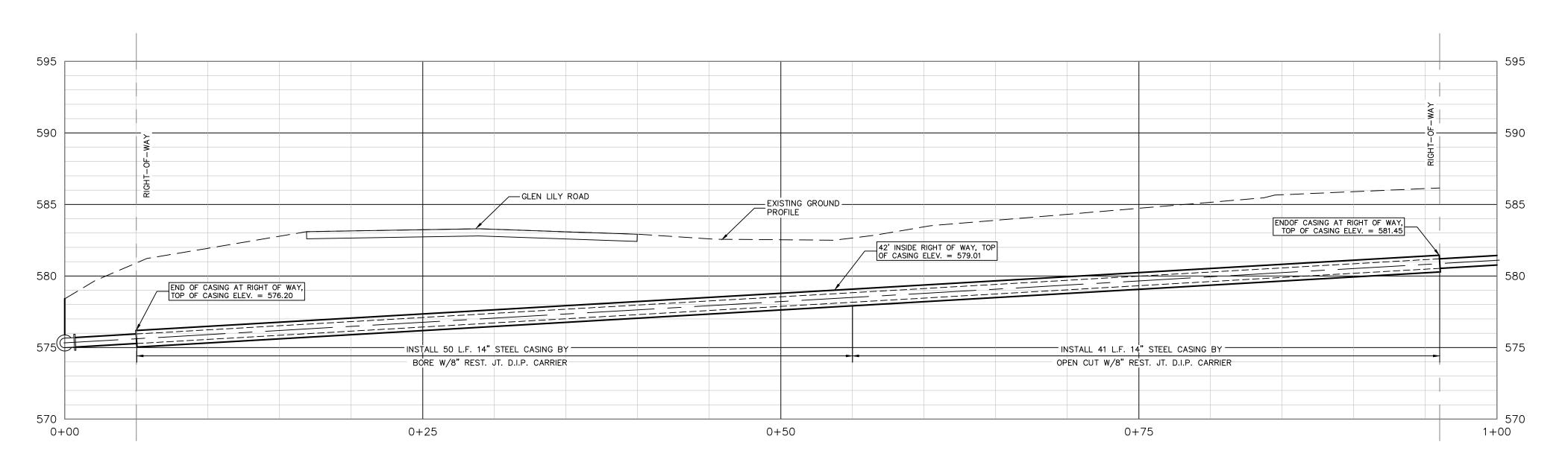
SHEET:

OF

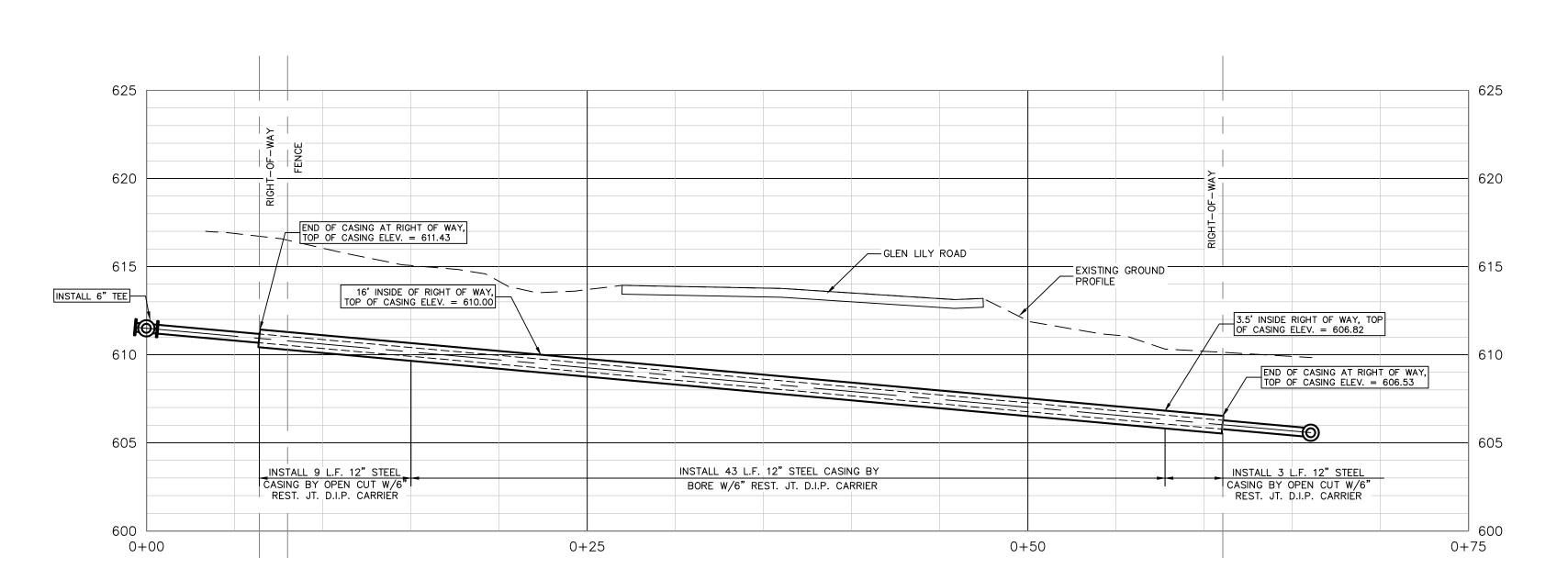


CROSS SECTION I-165





CROSS SECTION GLEN LILY RD. @ BILL DEDMON RD. (SCALE 1"=5', SEE SHEET 3 FOR PLAN VIEW)



CROSS SECTION GLEN LILY RD. @ PUMP STATION (SCALE 1"=5', SEE SHEET 1 FOR PLAN VIEW)

LEGEND

FENCÉ

TREE LINE

GAS LINE

FIRE HYDRANT

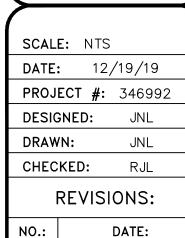
BUSH/SHRUB/TREE

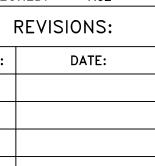
UNDERGROUND ELEC

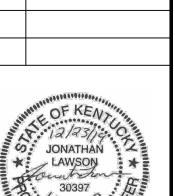
TELEPHONE / FIBER

OVERHEAD ELEC

POWERPOLE WATER METER

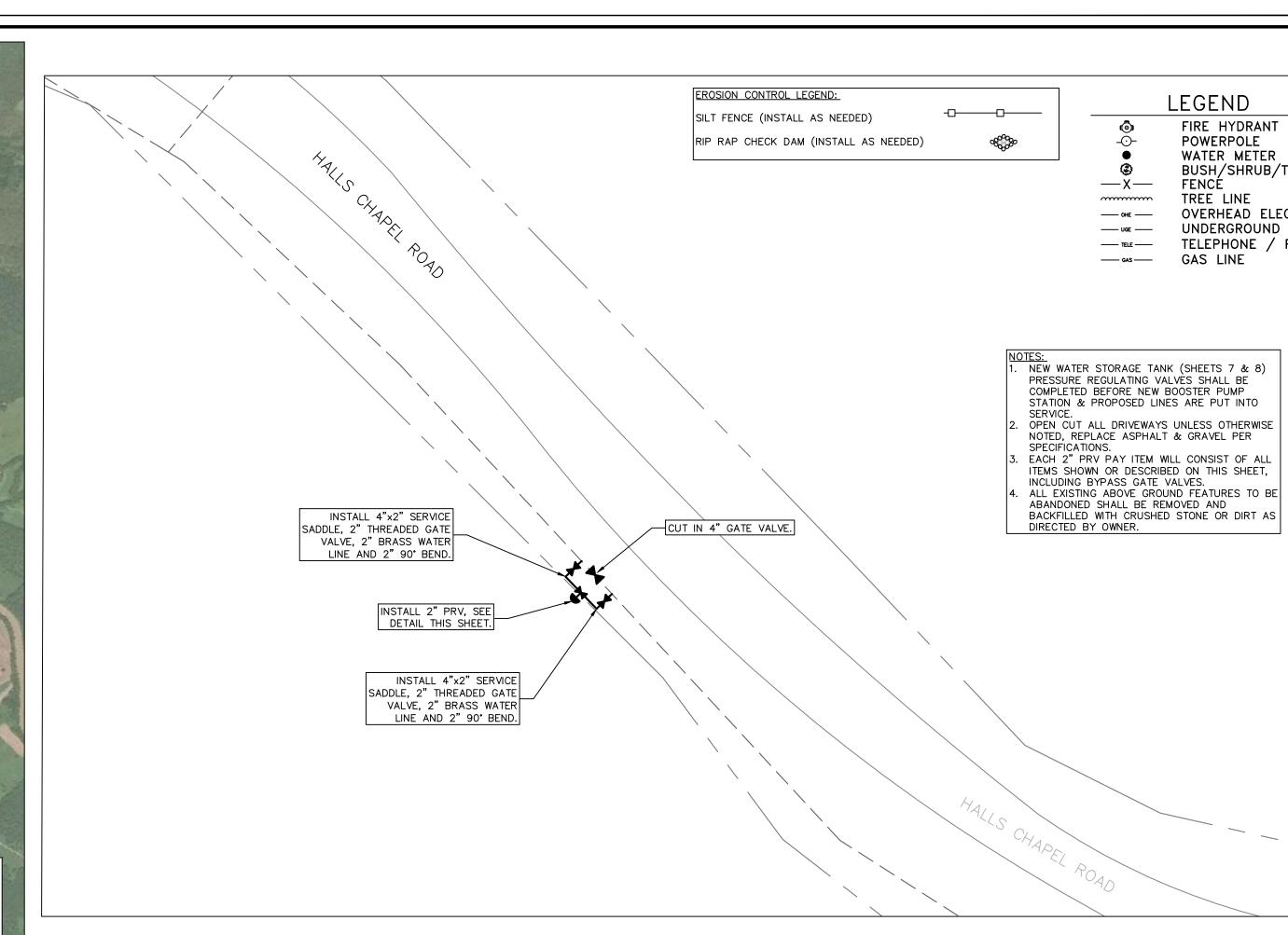




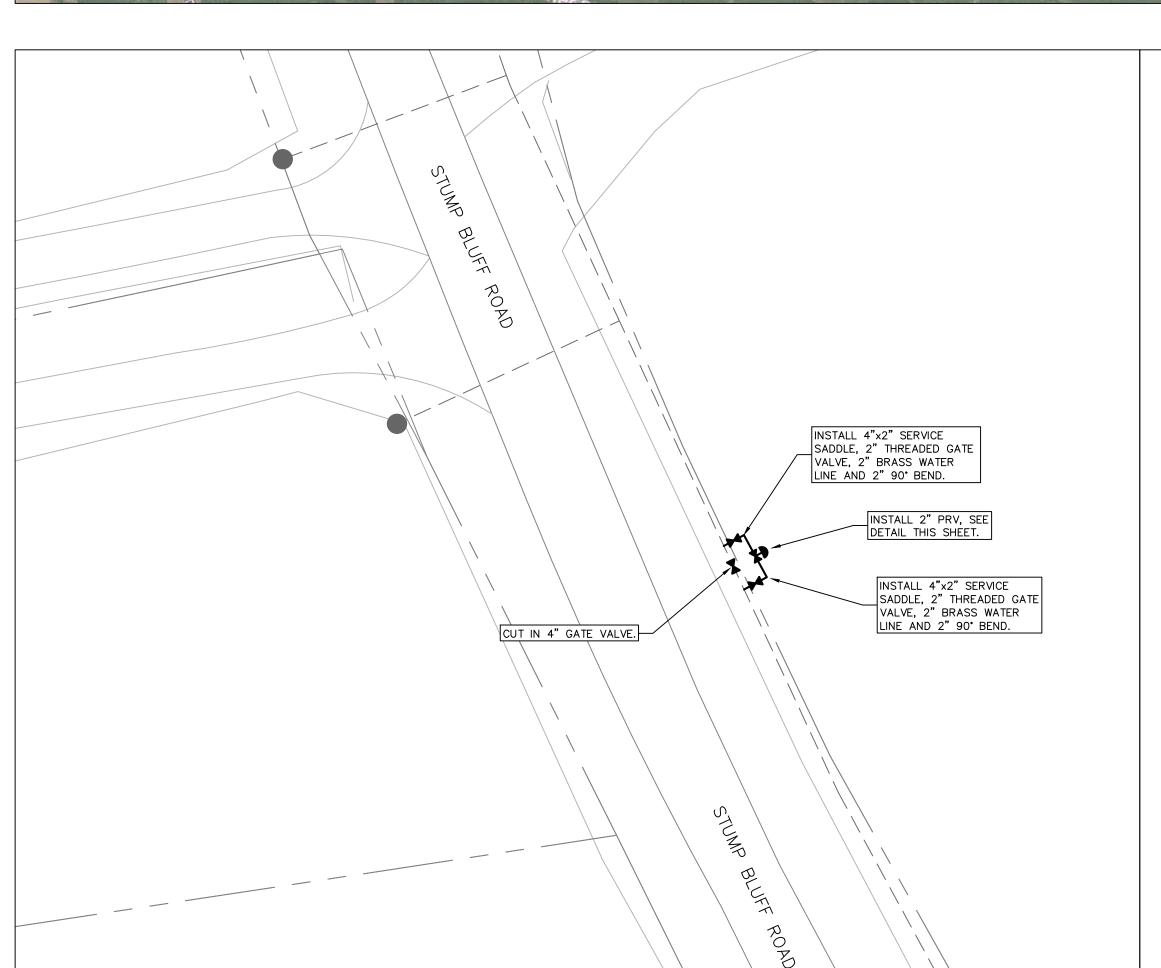


SHEET:

OF



PROPOSED HALLS CHAPEL ROAD PRV (LAT: 37.083272°, LONG: -86.522235°)



<u>PRV LOCATION OVERVIEW MAP</u>

PROPOSED HALLS CHAPEL RD PRV SITE

PROPOSED JENKINS RD PRV SITE

1) UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE

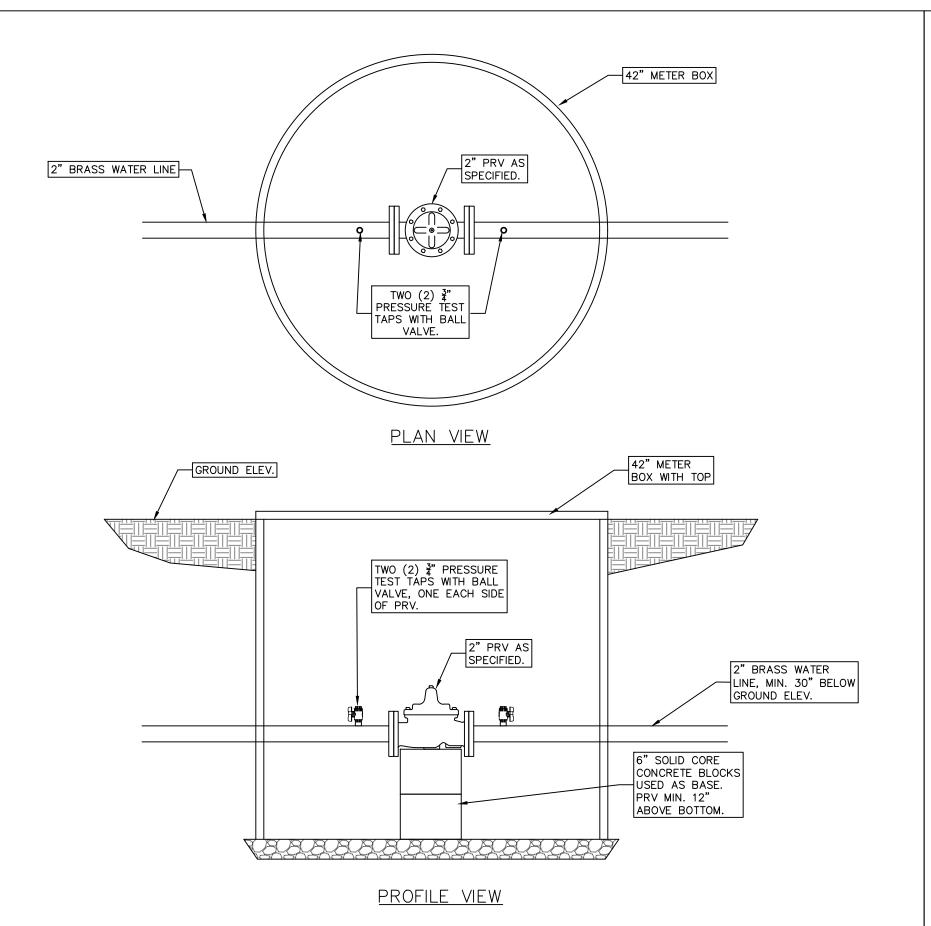
SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS

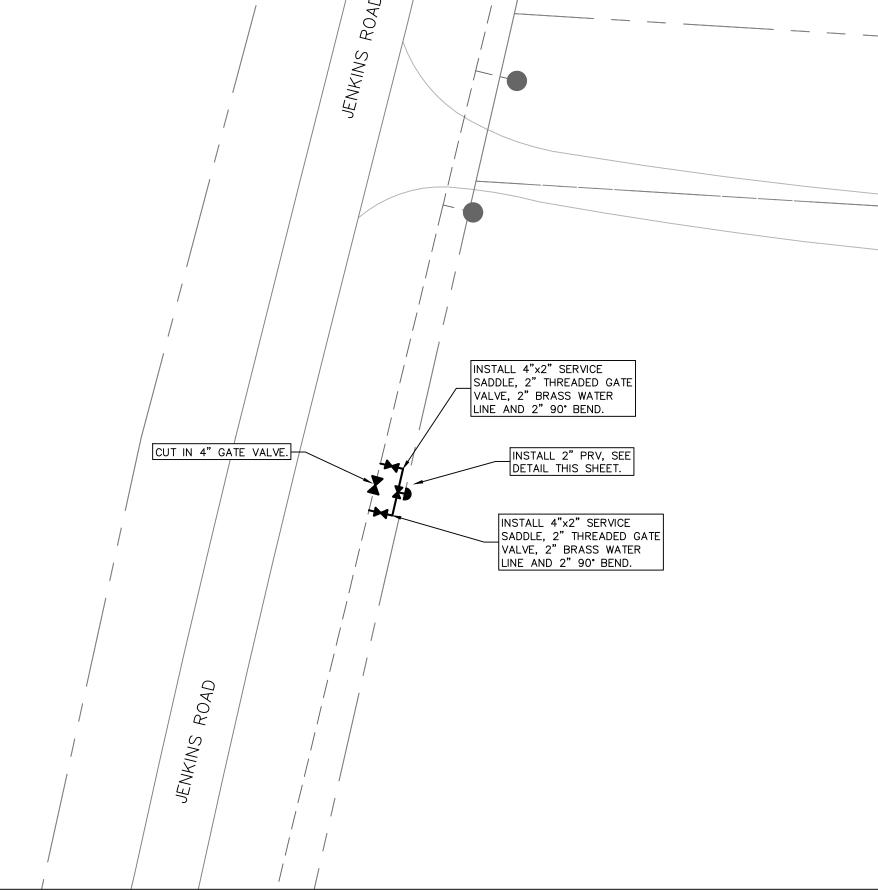
BUT NOT VISIBLE FROM THE SURFACE.

TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON

UTILITY NOTES

PROPOSED STUMP BLUFF RD PRV SITE



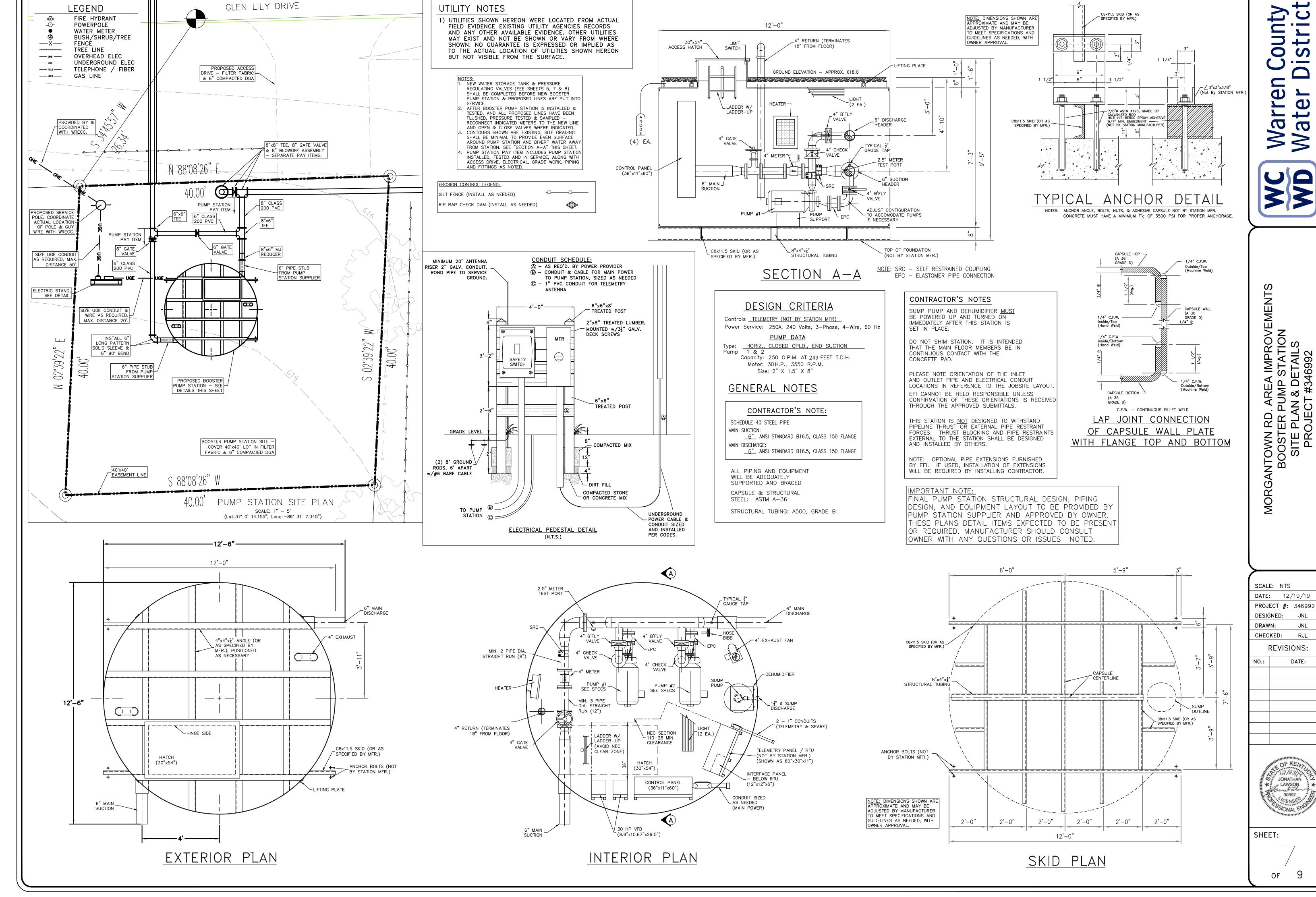


PROPOSED JENKINS ROAD PRV

(LAT: 37.058075°, LONG: -86.520047°)

PROPOSED STUMP BLUFF ROAD PRV (LAT: 37.083584°, LONG: -86.552062°)

<u>PROPOSED 2" PRV DETAILS</u>





PROJECT #: 346992



ELECTRICAL DETAILS

SITE PLAN NOTES:

1. ALL PIPING WHERE NOTED, VALVE VAULT, FENCE,

UNDER CONTRACT 1

COMMUNICATIONS BUILDING, SPLASH PADS, FINISH GRADING, SEEDING & SEWING, AND ELECTRICAL

WORK SHOWN ON THIS SHEET SHALL BE PERFORMED

ALL OTHER WORK SHOWN ON THIS SHEET SHALL BE

NOTE: USE ROMAC GRIP RINGS ON ALL

FITTINGS SHOWN IN

2" PVC VAULT DRAIN,

SLOPE 1% MINIMUM

TO SPLASH PAD-

EROSION CONTROL LEGEND:

SILT FENCE (INSTALL AS NEEDED)

RIP RAP CHECK DAM (INSTALL AS NEEDED)

&C)

200.00' S 83°24'30" W

COMMUNICATIONS BUILDING & ELECTRICAL (N.T.S.)

6" GATE VALVE

VALVE VAULT DETAILS

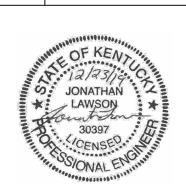
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RGANT WATE

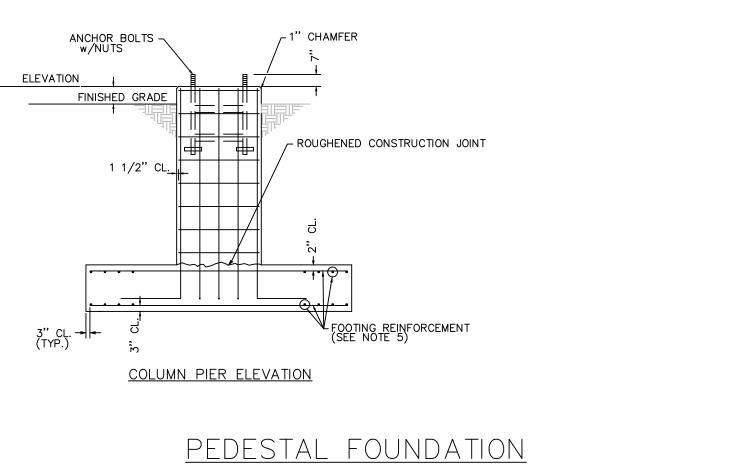
SCALE: N.T.S. **DATE:** 12/19/19 **PROJECT #:** 346992 DESIGNED: DRAWN: JNL CHECKED: JNL **REVISIONS:**

DATE:



SHEET:

OF

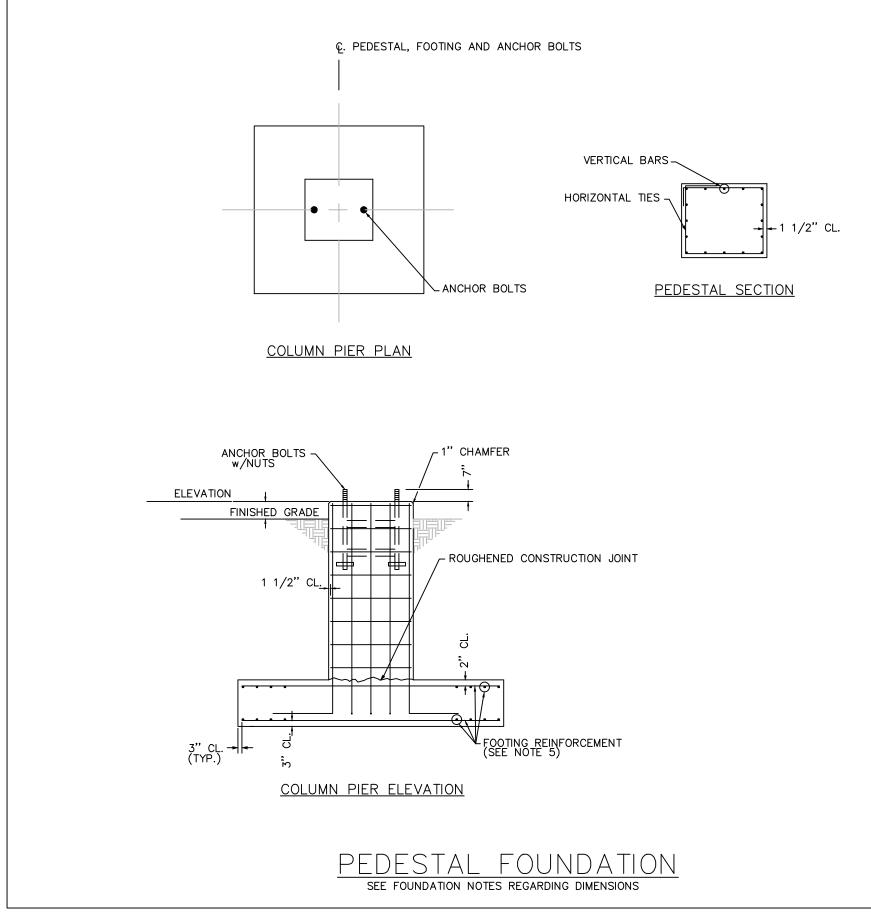


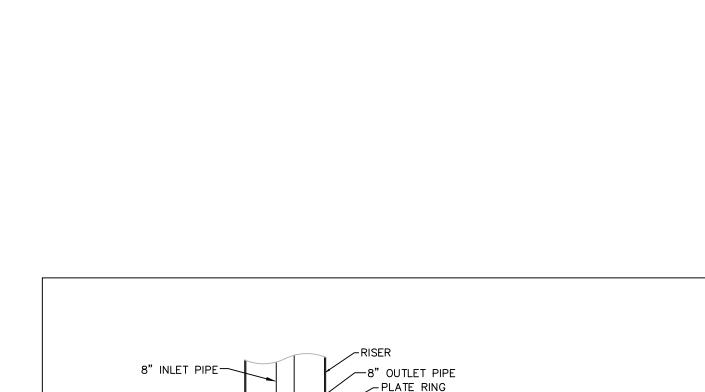
FOUNDATION NOTES: 1) FOUNDATION DESIGN WILL BE THE RESPONSIBILITY OF THE TANK CONTRACTOR.

- 2) PEDESTAL AND FOOTING DIMENSIONS AND CONCRETE REINFORCEMENT SHALL BE DETERMINED BY THE TANK CONTRACTOR. 3) FOUNDATION CONSTRUCTION SHALL COMPLY WITH AWWA D100-96, A.C.I. 318-99, A.C.I. 301-96 AND APPLICABLE SECTIONS
- 4) CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 PSI @ 28 DAYS.

OF THE PROJECT SPECIFICATIONS AND THE PROJECT SOILS REPORT.

- 5) REINFORCEMENT SHALL CONFORM TO A.S.T.M. A615 GR. 60.
- 6) CONSTRUCTION JOINTS SHALL BE ROUGHENED ACROSS ENTIRE FACE WITH 1/4" MINIMUM DEPTH INDENTATIONS.
- 7) THE TOP OF CONCRETE FOR ALL PIERS INCLUDING THE CENTER PIER SHALL BE LEVEL AND SHALL BE THE SAME ELEVATION (UNLESS OTHERWISE NOTED BY A SPECIFIED ELEV.) WITH A MAXIMUM DIFFERENTAL OF (+-) 1/4".
- 8) ANCHOR BOLTS SHALL BE PLACED WITHIN (+-) 1/8" OF THE PLAN DIMENSIONS AT THE TOP OF THE CONCRETE, PLUMB WITHIN 1/4" IN 12" AND EXTEND WITHIN 1/2" OF THE SPECIFIED PROJECTION ABOVE THE TOP OF THE FOUNDATION.
- 9) CENTER PIER FOUNDATION DIMENSIONS AND CONCRETE REINFORCEMENT REQUIREMENTS SHALL BE DETERMINED BY TANK CONTRACTOR.





24" PRESSURE-VACUUM _VENT- FLANGED &

(8) 鴇" DIA. HOLES - FOR 3"x12" S.S. BOLTS w/NUTS

ROOF VENT FLANGE

(N.T.S.)

SCREENED PER

SPECIFICATIONS

/+1/8" RUBBER GASKET

VENT DETAILS

PLAN VIEW DETAIL -

THRUST BLOCKING

GENERAL NOTES:

1) ACCESSORIES SHOWN ON ELEVATION DRAWING ARE ROTATED FOR CLARITY AND MAY NOT MATCH ACTUAL PROPOSED LAYOUT.

4) STERILIZE TANK IN ACCORDANCE WITH AWWA C652-92 AND

5) NUMBER OF TOWER LEGS PER MANUFACTURER'S STANDARD DESIGN.

PROJECT SPECIFICATIONS.

(2) FLANGE RINGS,

(8) 18" DIA. HOLES FOR ¾"x1½" S.S. BOLTS

1"x241"1.D.x34"0.D.

PIPING SECTION AS NOTED ON PLANS.

TANK NOTES:

2) ALL HANDRAILS, PLATFORM LANDINGS, WALKWAYS, LADDERS, AND SAFETY CLIMB DEVICES SHALL CONFORM WITH CURRENT OSHA STANDARDS.

3) SEE PROJECT SPECIFICATIONS FOR SHOP AND FIELD PAINT REQUIREMENTS.

6) ALL ITEMS ON THIS SHEET ARE PART OF CONTRACT 2, EXCEPT OVERFLOW

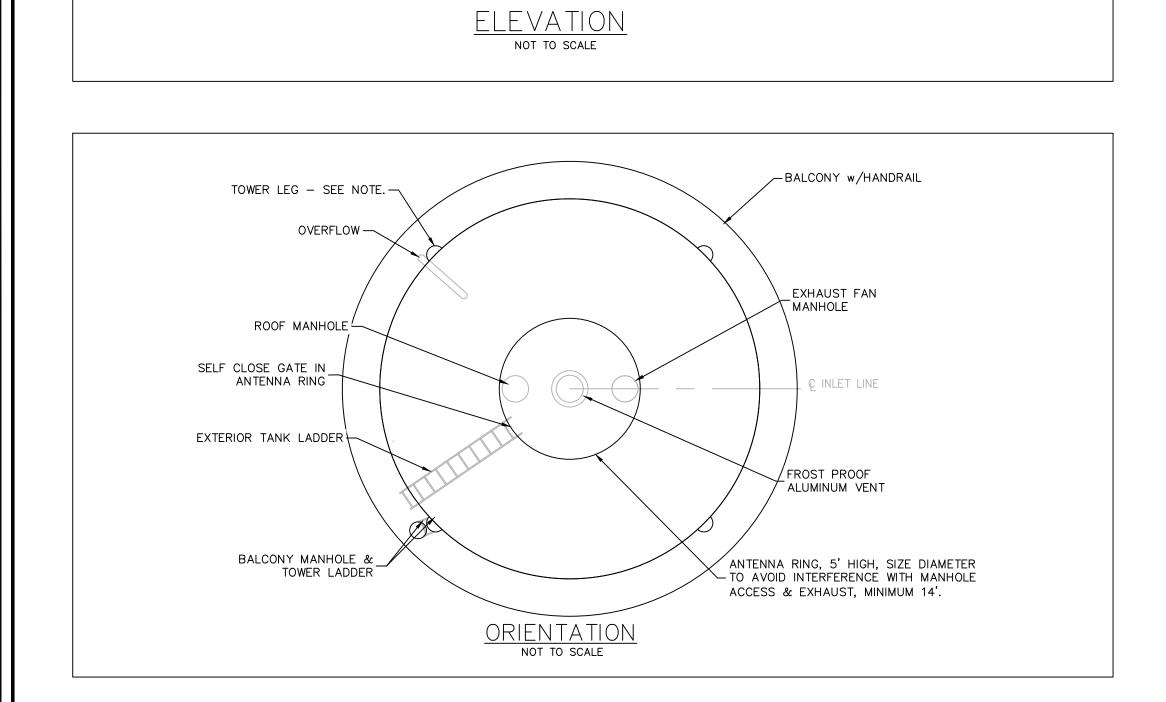
WIND LOAD: 120 MPH (Ultimate) SNOW LOAD: SEE SPECIFICATIONS SEISMIC ZONE: SEE SPECIFICATIONS

LADDER RUNGS: ASTM A706

24" ROOF VENT & FINIAL

STEEL PLATE: ASTM A283 GR. C / A36 STRUCTURAL STEEL SHAPES: ASTM A36 BRACE RODS AND STAY RODS: ASTM A36

TANK AND TOWER SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH AWWA D100-96 AND PROJECT SPECIFICATIONS.



─ RISER MANHOLE

TANK DIAMETER = 36

ALUMINUM VENT

- ROOF MANHOLE

ROOF LADDER (NO SAFETY DEVICE)

- TOWER LEG - SEE NOTE.

— INSIDE TANK LADDER – SEE NOTE

— BALCONY w/HANDRAIL

TOWER LADDER w/OSHA COMPLIANT SAFETY CABLE

STAINLESS STEEL UNI—STRUT — MOUNTED FULL HEIGHT ON LEFT SIDE OF LADDER STAND—OFF.

► STAY RODS

- SECURITY

← Ç FIRST RUNG

_ SEE PEDESTAL FOUNDATION DETAILS.

ANTENNA RING, 5' HIGH, SIZE

INTERFERENCE WITH MANHOLE

ACCESS & EXHAUST, MINIMUM 14'.

DIAMETER TO AVOID

EXHAUST FAN MANHOLE -

INLET = 890'

OVERFLOW —

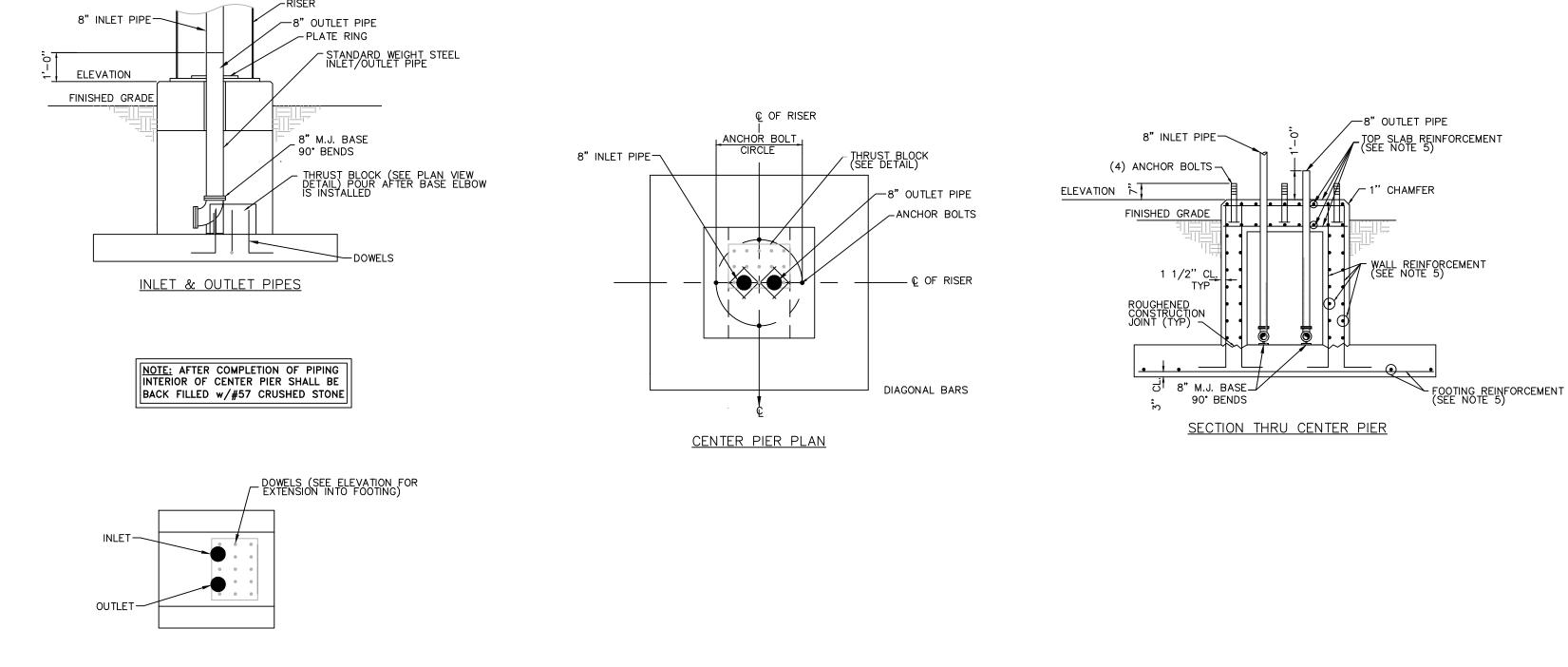
L.W.L. = 871.75

CONTRACT 1, SEE TANK SITE PLAN

ELEVATION = 769'

5'ø RISER.

SEE CENTER PIER FOUNDATION DETAILS.

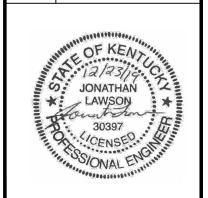


CENTER PIER FOUNDATION

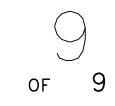
SEE FOUNDATION NOTES REGARDING DIMENSIONS



SCALE: N.T.S. **DATE:** 12/19/19 **PROJECT #:** 346992 DESIGNED: DRAWN: JNL CHECKED: RJL **REVISIONS:** DATE:



SHEET:



SIDE VIEW

TYPICAL SECTION

- SIDE OF TRENCH

SIDE OF TRENCH

66

31

52

*ALL DIMENSIONS ARE IN INCHES

CONCRETE DEADMAN

<u>DETAIL</u>

_BOTTOM OF TRENCH

0

ate

REVISIONS: DATE:

JONATHAŃ LAWSON 30397

DRAWING:

1.) METER BOX DIA. FOR ¾ SERVICE SHALL BE 15" OR 18" FOR LOCATIONS WITH & WITHOUT REGULATORS RESPECTIVELY. ALL 1" SERVICES SHALL USE 20" DIA. BOX. 2.) WHERE A REGULATOR IS REQUIRED IT SHALL BE WILKINS 34-600DM-HR. FOR $\frac{3}{4}$ SERVICE, REGULATOR SHALL BE INSTALLED IN MUELLER H-1404-012 TANDEM YOKE. FOR 1" SERVICE, REGULATOR SHALL BE CAST IRON METER BOX COVER. FORD
- METER BOX CO. TYPE A31, A32 OR A3 INSTALLED DOWNSTREAM FROM H-1404-2 YOKE OUTSIDE BOX ON 1"x6" BRASS (AS REQ'D.) -FINISHED GRADE (SEE SPECS) NOTE #1 3" OR 1" PLASTIC_ (AS SPECIFIED) YOKE, MUELLER H-1404-2 w/7" RISER, ALSO SEE NOTE #2 COMBINATION TAILPIECE WITH WATER LINE — INSIDE I.P. THREADS (MUELLER H-14222) - RUN BRASS NIPPLE OUTSIDE BOX COMPRESSION FITTING FOR

> TYPICAL METER SETTING FOR ¾" & 1" SERVICES

CORPORATION COCK (MUELLER _

H-134 SERVICE CLAMP

2-#4 BARS

ALL AROUND

18" MINIMUM

LAYING LENGTH

CONCRETE PAD TO BE PLACED AT ALL VALVES

MUELLER SO2124

FORD A-4 LID & COVER

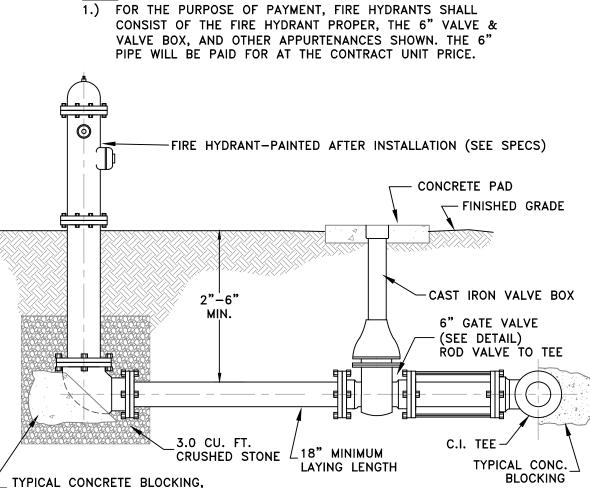
1"x 3/4 " BRASS 90" BEND-

METER BOX W/

H-15008) AND MUELLER SERIES

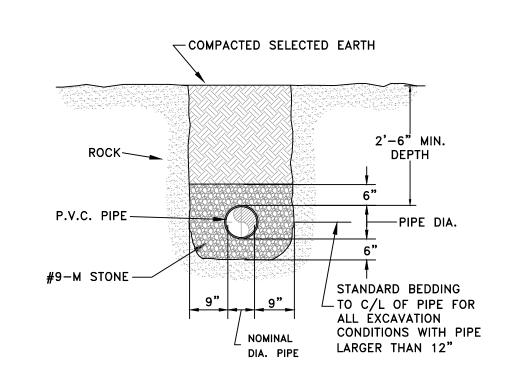
PLASTIC SERVICE

(MUELLER H-14227)

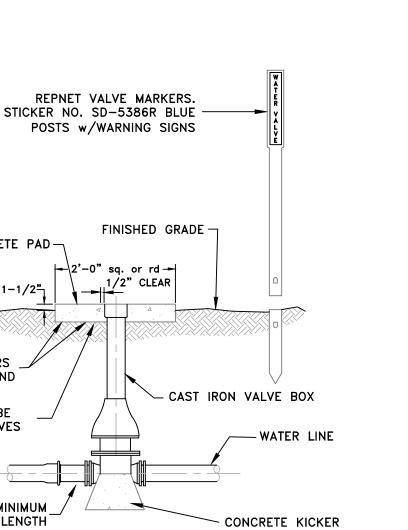


TYPICAL FIRE HYDRANT <u>SETTING</u>

LEAVE WEEPHOLE CLEAR



TYPICAL STONE ENVELOPE FOR LARGE PIPE OR ROCK **EXCAVATION** (MAY PAY QUANTITIES IN ROCK)



METER YOKE

METER BOX

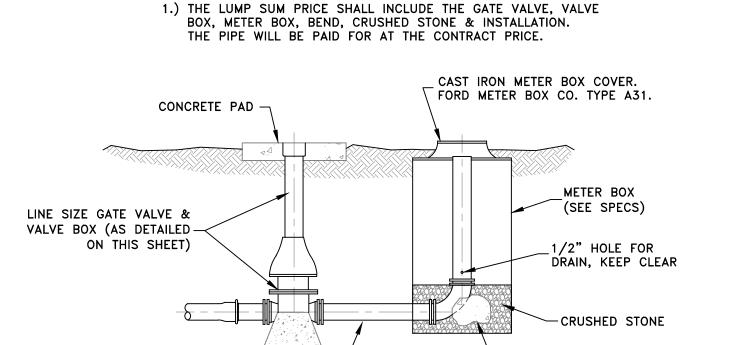
1" I.P. X P.E. ADAPTER

-1"SERVICE TUBING

LINE SIZE X 1" SERVICE

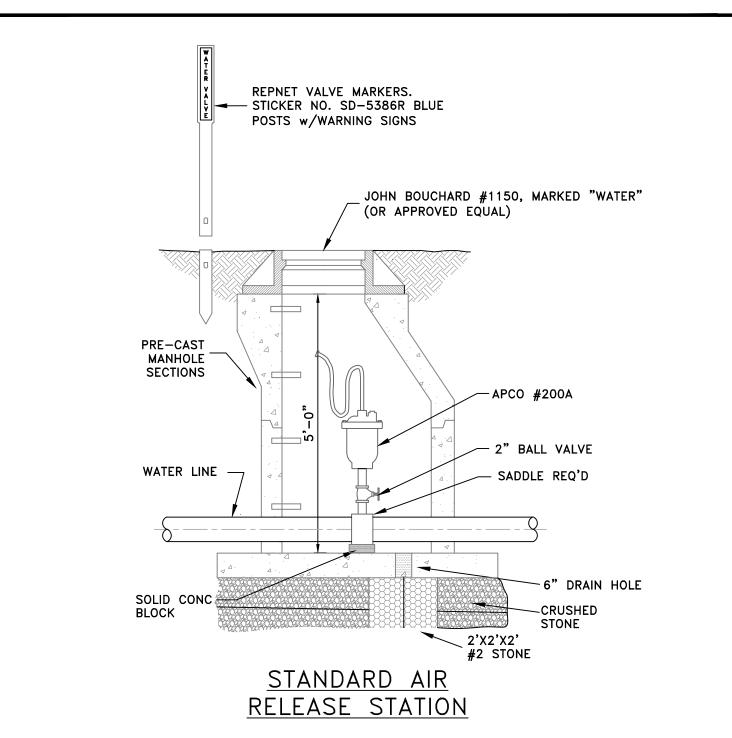
SADDLE & 1" CORP. STOP

TYPICAL LINE VALVE <u>SETTING</u>



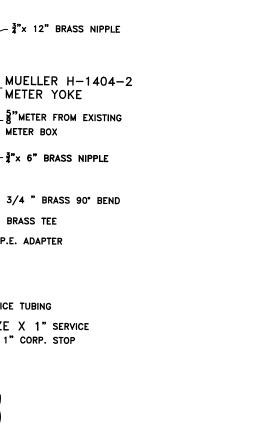
STANDARD DETAIL END OF LINE BLOW-OFF (SIDE OUTLET BLOWOFFS SHALL BE AS SHOWN, BUT LUMP SUM PRICE SHALL ALSO INCLUDE MAIN LINE TEE. GATE VALVE AND BLOWOFF PIPING SIZE SHALL

BE AS INDICATED IN THE DRAWINGS.)



1.) FROM POINTS "A" (CONCRETE PAVEMENT) THE DISTANCE TO NEAREST JOINT OR BREAK IN PAVEMENT MUST BE 6' OR MORE. IF LESS THAN 6', REMOVE PAVEMENT TO JOINT OR BREAK & REPLACE ENTIRE SLAB.

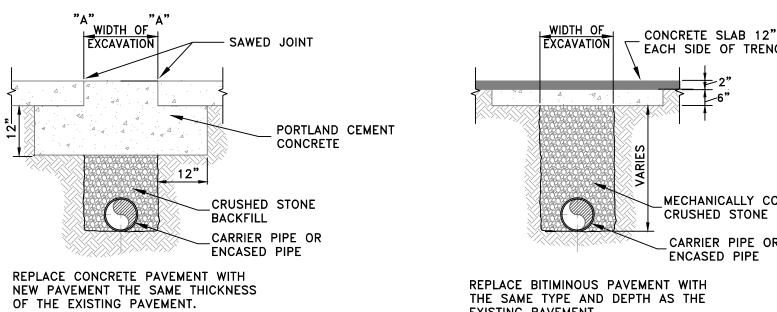
CONCRETE ANCHOR SEE THIS SHEET



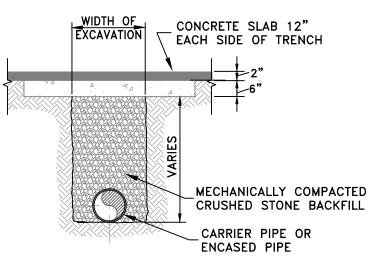
TYPICAL MULTIMETER SETTING (FOR THREE §" METERS IN 21" BOX)

ALL PIPING SHOWN INSIDE BOX SHALL BE BRASS WITH THE LENGTHS OF THE BRASS NIPPLES BETWEEN THE TEES AND 90° BENDS AS NEEDED TO MEET THE CENTERLINE MEASUREMENTS AS INDICATED.

1"x ¾" BRASS TEE



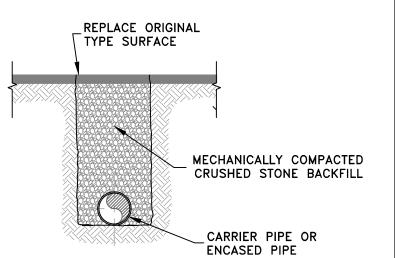
CONCRETE PAVEMENT



THE SAME TYPE AND DEPTH AS THE EXISTING PAVEMENT.

BITIMINOUS SURFACE > 2"

SURFACE RESTORATION (FOR CROSSING OF ALL STREETS & HIGHWAYS)



BITIMINOUS SURFACE < 2" (ALSO APPLIES TO ASPHALT DRIVEWAYS) SIDE OF_ TRENCH

TOP VIEW

┌SIDE OF TRENCH

TYPICAL ALL BENDS

<u>TEE</u>

CONCRETE DEADMAN

(SEE DETAIL)

SIDE OF TRENCH

ROMAC GRIP RINGS.

3.) CONCRETE TO BE POURED AGAINST UNDISTURBED EARTH. 4.) PLASTIC BARRIER SHALL BE PLACED

5.) ANCHOR BAR SHALL BE 5/8" MINIMUM DIAMETER.

THE KICKER TO EXTEND 6" INTO EACH SIDE OF THE TRENCH.

ENGINEER.

NOT	ES:
1.)	THE COST OF THE U-BOLTS, STRAPS &
-	ANCHOR BAR WILL BE ABSORBED INTO
	THE COST OF THE CONCRETE. NO
	SEPERATE PAYMENT WILL BE MADE.

SEPERATE PAYMENT WILL BE MADE.
2.) ALL VERTICAL BENDS SHALL INCLUDE

BETWEEN ALL CONCRETE AND PIPE AND/OR FITTINGS.

6.) BLOCKING FOR REDUCER SHALL BE AS THAT SHOWN FOR PLUGS, BUT THE "L" DIMENSION SHALL BE AS REQUIRED FOR

7.) RODDING FOR A CONCRETE DEADMAN SHALL BE AS FOLLOWS: ≤4" USE 2 RODS, 6"-10" USE 4 RODS & ≥12" PER

1	22 1/2° & 11 1/4° BENDS											
	SIZE	2	4	6	8	10	12	14	16	18	20	24
99	"D"	6	10	14	18	20	20	22	22	24	24	30
R	"L"	20	24	28	28	28	28	36	36	42	42	54
1	"W"	18	20	22	24	24	24	18	18	21	21	24
	"T"	12	14	16	18	18	18	38	38	40	40	44
105 4 DODG 6 4 40 ²¹ DDG												

TEES, PLUGS & BLOWOFFS | SIZE | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 30 "D" | 12 | 16 | 18 | 24 | 28 | 30 | 30 | 30 | 30 | 30 | 36 "L" | 12 | 16 | 18 | 24 | 28 | 30 | 60 | 60 | 72 | 72 | 84 | 102 | "W" | 14 | 16 | 18 | 18 | 22 | 24 | 28 | 28 | 32 | 32 | 40 | 51 "T" 10 10 12 12 12 12 38 38 40 40 44 52

VALVES 10" & LARGER

90° BENDS

| SIZE | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 30 "D" 6 8 8 10 12 14 22 22 24 24 30 30

"L" | 16 | 20 | 24 | 30 | 32 | 34 | 68 | 68 | 80 | 80 | 96 | 120 "W" 8 10 12 18 22 24 34 34 40 40 48 60

"T" 10 12 16 20 22 22 38 38 40 40 44 52

45° BENDS

| SIZE | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 30

"D" 6 6 8 10 12 12 22 22 24 24 30 30

"L" | 14 | 18 | 18 | 22 | 24 | 24 | 51 | 51 | 60 | 60 | 72 | 90

"W" 8 | 10 | 12 | 16 | 18 | 18 | 25 | 25 | 29 | 29 | 36 | 44

"T" 10 12 16 18 18 18 38 38 40 40 44 52

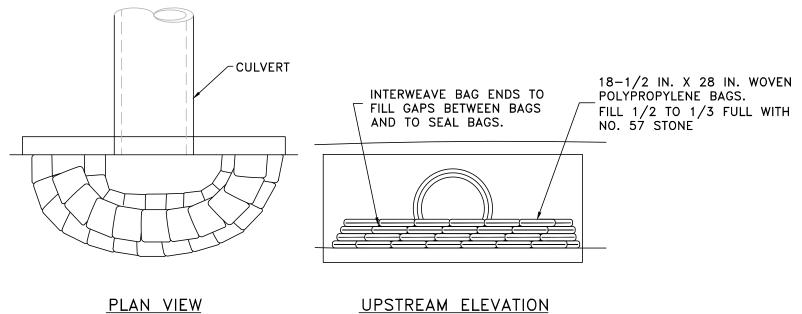
MINIMUM CONCRETE BLOCKING FOR PIPE & FITTINGS

TYPE SURFACE
MECHANICALLY COMPACTED CRUSHED STONE BACKFILL
CARRIER PIPE OR

PLAN VIEW

<u>UPSTREAM ELEVATION</u>

NO HEADWALL INLET PROTECTION



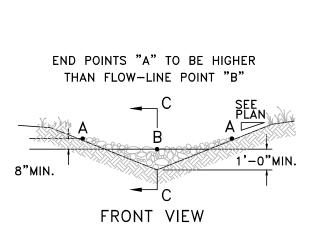
STRAIGHT HEADWALL INLET PROTECTION

PURPOSE:
INSTALL STONE BAG PROTECTION AT HEADWALL INLETS TO POOL WATER, PROVIDING OPPORTUNITY FOR SETTLING SEDIMENT BEFORE IT ENTERS HEADWALL.

CONSTRUCTION:

BAG SPECIFICATIONS: APPROXIMATELY 18 1/2-INCH X 28-INCH WOVEN POLYPROPYLENE BAGS. STONE: USE KTC NO. 57 STONE.

HEIGHT OF STONE BAGS ABOVE CULVERT INVERTS: CONSTRUCT A MINIMUM OF TWO COURSES OF BAGS. THE STONE-FILLED BAGS SHALL BE STACKED TO A HEIGHT EQUAL TO 1/2 THE DIAMETER OF THE CULVERT BEING PROTECTED.



ATTACH FILTER

FOLD FABRIC TO OVERLAP AND SECURE TO POST WITH STAPLES

FABRIC TO FRAME AND POSTS SECURE WITH STAPLES @ 8IN.(MAX) O.C.

2IN. X 4IN WOOD FRAME

2IN. X 4IN WOOD POSTS

ESCAPING UNDER FENCE.

BURY TOE OF FABRIC IN A 6" X 6" TRENCH,

IN AN "L" SHAPE. BACKFILL WITH COMPACTED

FILL MATERIAL TO PREVENT SEDIMENT FROM

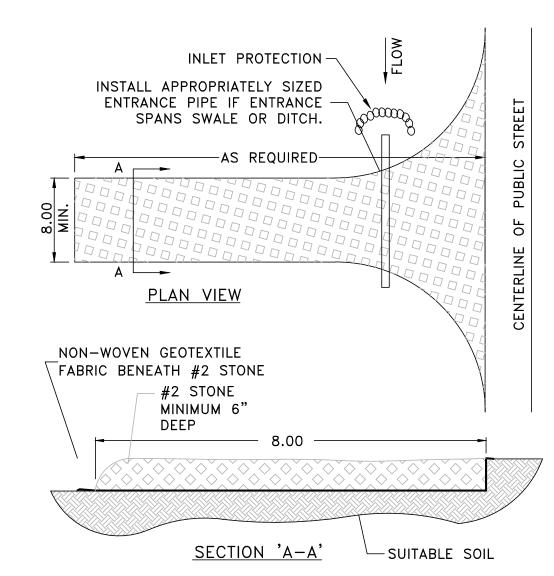
FILTER FABRIC INLET PROTECTION DETAIL

(N.T.S.)

3' MIN.

3" MINIMUM RIP-RAP
SET IN 4" DEEP TRENCH
A
B
B
SECTION 'C-C'

RIP-RAP CHECK DAM (N.T.S.)



GENERAL EPSC NOTES:

CONSTRUCTION SITE(S).

STOCKPILES, AS REQUIRED.

1. ALL PRACTICAL MEASURES SHALL BE TAKEN TO PRESERVE

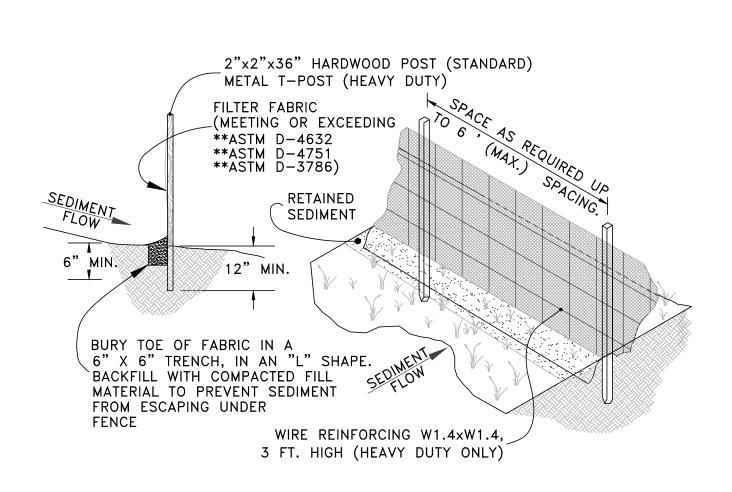
2. EPSC MEASURES SHALL BE INSTALLED IN ADVANCE OF ALL OTHER CONSTRUCTION IN EACH AREA OF CONSTRUCTION.
 3. SILT FENCING OR OTHER APPROVED EPSC DEVICE(S) SHALL BE INSTALLED ON THE DOWN-SLOPE SIDE OF TEMPORARY

EXISTING VEGETATION ON AND ADJACENT TO THE

4. APPROPRIATE EPSC DEVICES SHALL BE INSTALLED AT TEMPORARY PIPE YARDS AND/OR STORAGE AREAS, AS

ALL ENTRANCES LEADING TO PUBLIC ROADS SHALL BE STABILIZED, IF SILT FENCE WILL BE DEPOSITED ON ROADWAY, BY REMOVING THE VEGETATION, PLACING NON-WOVEN GEO-TEXTILE MATERIAL AND THEN PLACING 6 INCHES OF #2 AGGREGATE. AREA MUST BE A MINIMUM OF 8 FEET WIDE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL (N.T.S.)



SILT CONTROL FENCE DETAIL (N.T.S.)

JONATHAN
LAWSON

30397

CENSED

SCALE: NOT TO SCALE

DATE: 1-30-08

DWG NO.: WD

DESIGNED: WCWD

CHECKED: JES

REVISIONS:

DATE:

DRAWN:

SHEET: