

*SANDY CREEK DRIVE
CULVERT REPLACEMENT*
for
CITY OF WILSON
Wilson County, North Carolina
October 2021



MAYOR: CARLTON L. STEVENS

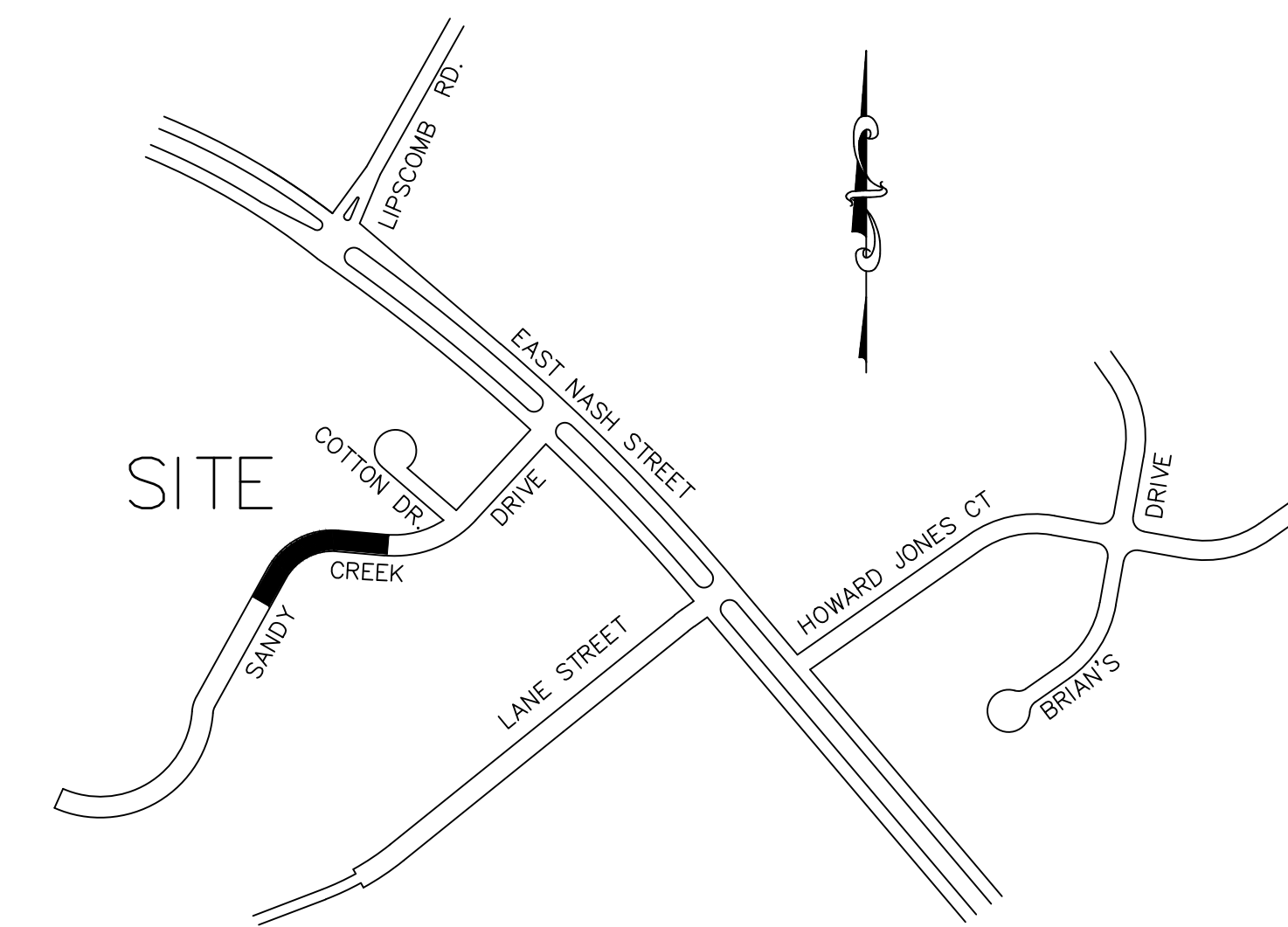
COUNCIL MEMBERS:

MICHAEL S. BELL
DEREK D. CREECH
DONALD I. EVANS
WILLIAM THOMAS "TOM" FYLE
JAMES M. JOHNSON, III
LOGAN T. LILES
GILLETTIA M. MORGAN

CITY MANAGER: GRANT W. GOINGS

PUBLIC WORKS DIRECTOR: W. T. (BILL) BASS IV, P.E.

STORMWATER SPECIALIST: NOAH PARSONS



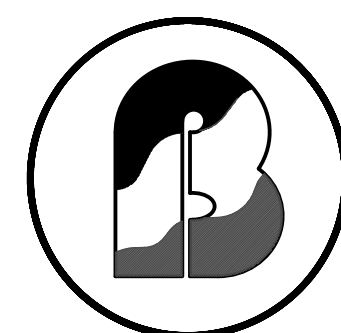
LOCATION MAP
NO SCALE

SHEET INDEX

CV	COVER SHEET
CP1	EXISTING CONDITIONS/DEMOLITION PLAN
CP2	OVERALL PROPOSED PLAN
CP3	PLAN & PROFILE
DT1	DETAILS

PREPARED BY:

BARTLETT ENGINEERING & SURVEYING, PC
1906 NASH STREET NORTH
WILSON, NORTH CAROLINA 27893-1726



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LICENSE# C-1551
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COVER SHEET

SANDY CREEK DRIVE
CULVERT REPLACEMENT
CITY OF WILSON
WILSON COUNTY

DATE: OCTOBER 2021
SURVEY BY:
DRAWN BY: LR
CLIENT CODE: WC
PROJECT: 21-235
CADFILE: 21235SP2
SCALE: NTS

REVISIONS

SHEET

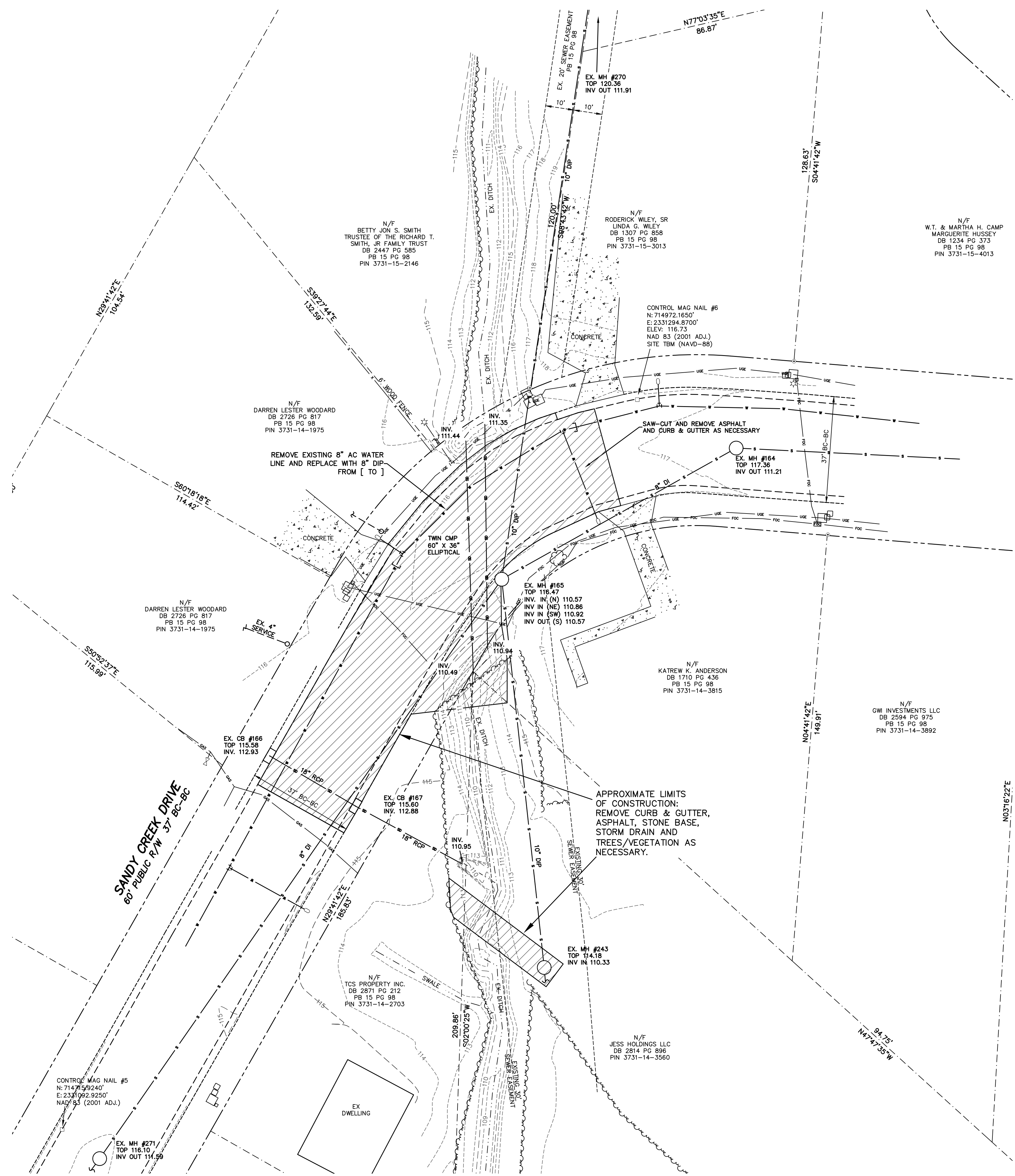
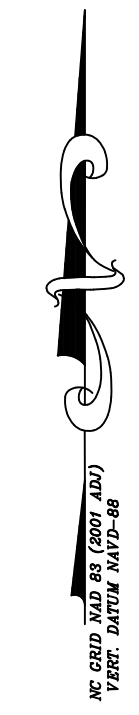
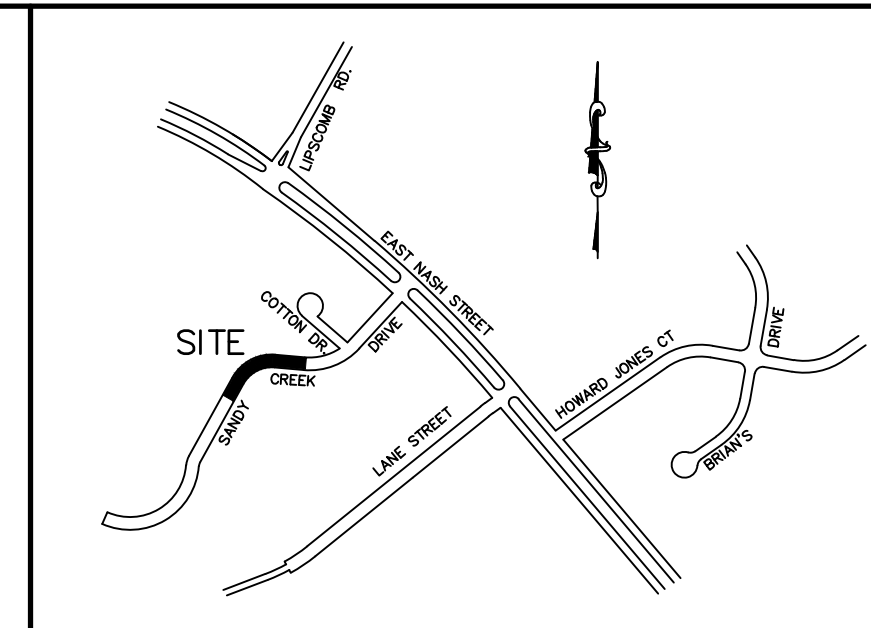
CV

NOTES

- AREAS COMPUTED BY COORDINATE CALCULATIONS.
- NO GRID MONUMENT FOUND WITHIN 2000'.
- ALL DISTANCES SHOWN ARE HORIZONTAL UNLESS NOTED OTHERWISE.
- ALL RIGHTS-OF-WAY ARE PUBLIC UNLESS NOTED OTHERWISE.
- WETLANDS, IF ANY, HAVE NOT BEEN DELINEATED.
- A PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA (SFHA - 100 YR. FLOOD) PANEL 3720373100K, EFFECTIVE ON 04/16/2013.
- THIS PROPERTY IS NOT LOCATED IN A PROTECTED WATERSHED AREA.
- THERE ARE NO CEMETERIES VISIBLE.
- THIS PROPERTY IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, RESTRICTIVE COVENANTS AND ORDINANCES.
- A TITLE REPORT HAS HAS NOT X BEEN SUPPLIED FOR THIS PROPERTY.
- COORDINATES SHOWN ON PLAT ARE HORIZONTAL COORDINATES UNLESS STATED OTHERWISE.

REFERENCES:

DEED BOOK 2726	PAGE 817
DEED BOOK 2447	PAGE 585
DEED BOOK 1307	PAGE 858
DEED BOOK 1234	PAGE 373
DEED BOOK 1710	PAGE 436
DEED BOOK 2814	PAGE 896
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DEED BOOK 2594	PAGE 975
PLAT BOOK 15	PAGE 98



- LEGEND**
- IRON PIPE FOUND
 - ⊙ IRON REBAR FOUND
 - ⊕ EXISTING HYDRANT
 - ⊗ EXISTING WATER METER
 - ⊘ EXISTING WATER VALVE
 - ⊙ EXISTING UTILITY POLE
 - ⊙ EXISTING UTILITY POLE
 - ⊙ EXISTING ELECTRIC BOX/TRANSFORMER
 - ⊙ EXISTING TELEPHONE PEDESTAL
 - ⊙ EXISTING CATCH BASIN
 - ⊙ EXISTING DROP INLET
 - ⊙ EXISTING SANITARY MANHOLE
 - ⊙ EXISTING GAS VALVE

- LINE LEGEND & ABBREVIATIONS**
- GAS — EXISTING GAS LINE (APPROX. LOCATION)
 - DHE — EXISTING UNDERGROUND ELECTRIC (APPROX. LOCATION)
 - W — EXISTING WATER LINE (APPROX. LOCATION)
 - SD — EXISTING STORM DRAIN LINE (APPROX. LOCATION)
 - S — EXISTING SANITARY SEWER LINE (APPROX. LOCATION)
 - - - EXISTING RIGHT-OF-WAY LINE (APPROX. LOCATION)
 - FOC — EXISTING FIBER OPTIC CABLE LINE (APPROX. LOCATION)

EXISTING CONDITIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE CONDITIONS AFFECTING WORK SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER FOR POSSIBLE CLARIFICATION OR RECONCILIATION.

CONSTRUCTION SAFETY:

THESE DRAWINGS DO NOT CONTAIN THE REQUIREMENTS FOR JOB SAFETY. ALL PROVISIONS FOR SAFETY SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES:

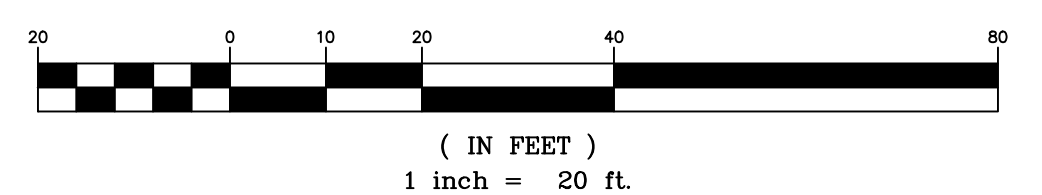
WORK WITHIN THE NCDOT RIGHT-OF-WAY SHALL CONFORM TO NCDOT STANDARDS AND SPECIFICATIONS. CALL ONE CALL CENTER AT 1-800-632-4949 FOR LOCATIONS OF EXISTING UTILITIES PRIOR TO EXCAVATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT OR CITY RIGHT-OF-WAY. ALL METHODS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.

DEMOLITION NOTES:

1. UNUSABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM DEMOLITION SHALL BE DISPOSED OF AT AN APPROVED PERMITTED OFF-SITE LOCATION BY CONTRACTOR.
2. CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. CONTRACTOR SHALL RAISE OR LOWER TOPS OF EXISTING MANHOLES AS REQUIRED TO MATCH FINISHED GRADES.
3. COORDINATE WITH THE LOCAL UTILITY PROVIDER FOR REMOVAL/RELOCATION OF EXISTING ELECTRICAL TRANSFORMERS AND/OR LIGHT POLES.
4. SIDEWALK AND CURB TO BE REMOVED TO NEAREST JOINT OR SAW-CUT IN A MANNER SUCH THAT NO JOINT IS LESS THAN 5 FEET.
5. ANY EXISTING CURB & GUTTER OR ASPHALT DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

GRAPHIC SCALE



BARTLETT
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License No. C-1551

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www.bartletteng.com

EXISTING CONDITIONS & DEMOLITION PLAN

SANDY CREEK DRIVE
— CULVERT REPLACEMENT —

DATE: OCTOBER 2021

SCALE(HORZ): 1" = 20'

SCALE(VERT): N/A

REVISIONS:

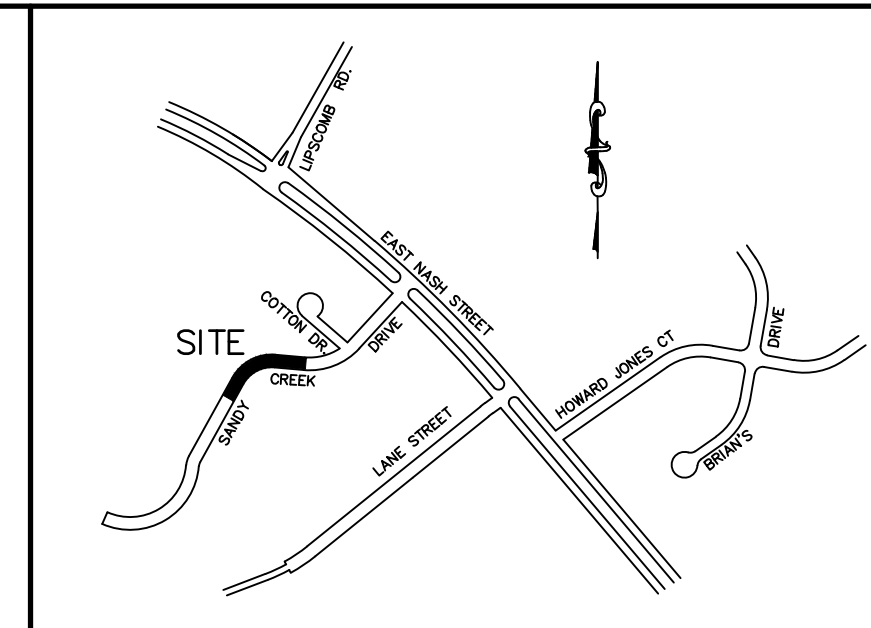
CITY OF WILSON	WILSON COUNTY
NORTH CAROLINA	ZONE:
PIN #	SHEET CP1

P:_CAD\LANDPROJ\GIS\WC\21235\DWG\21235SP2.DWG, Oct 26, 2021, 12:00PM EST

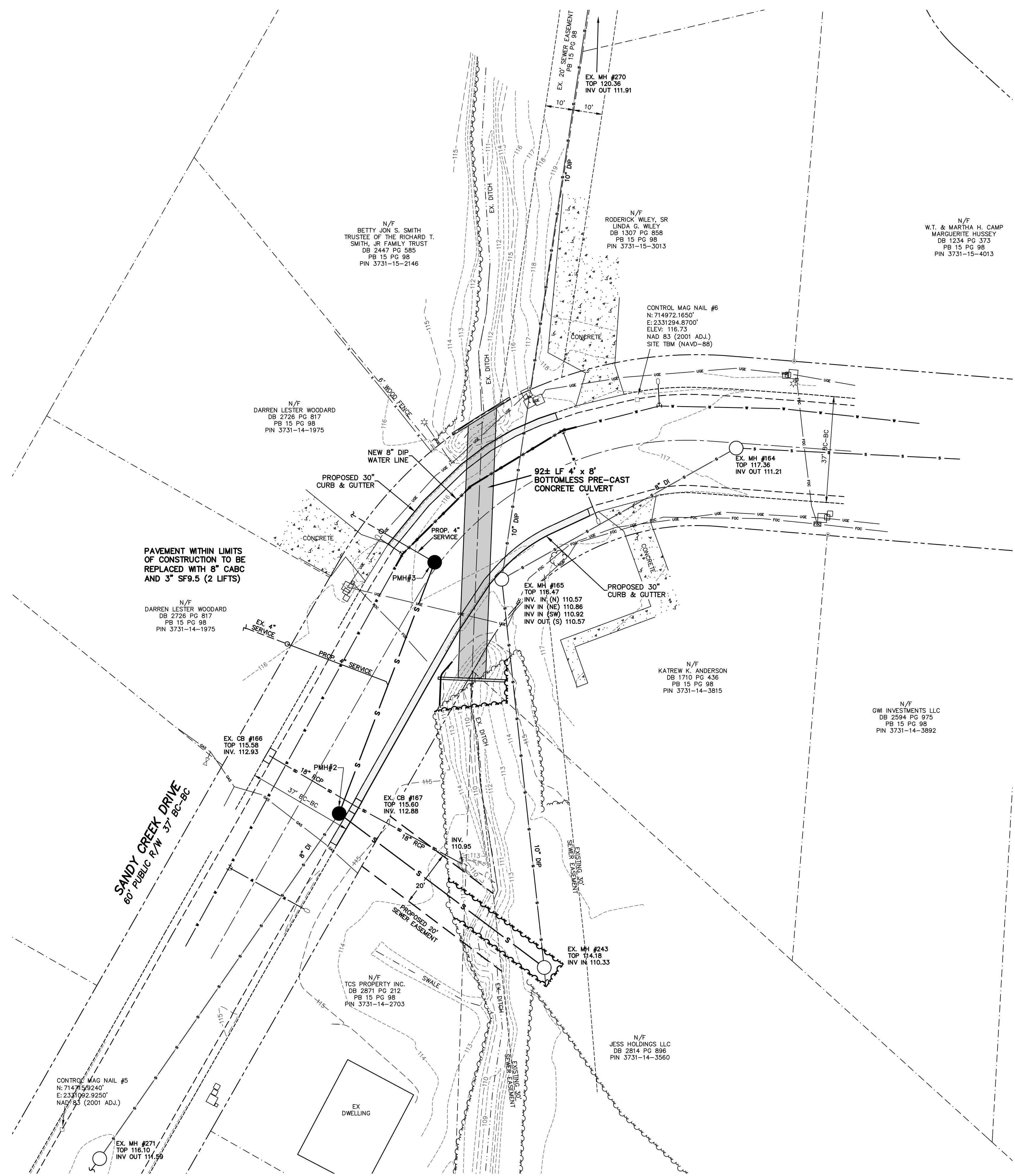
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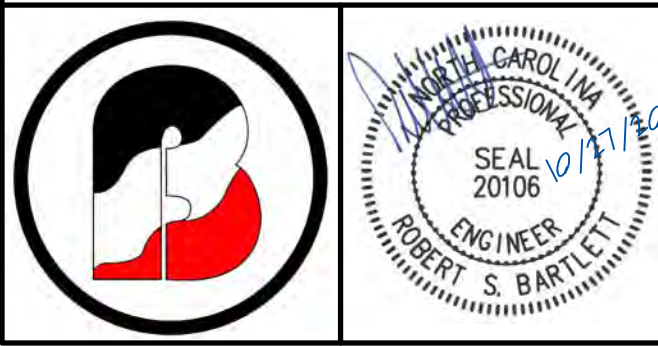
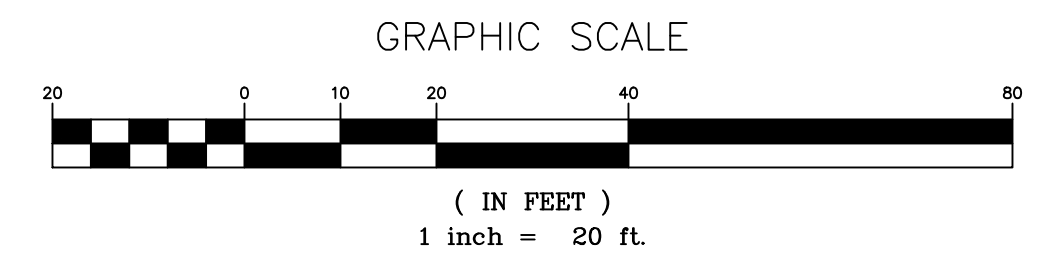
LOCATION MAP
NOT TO SCALE



- NOTES:**
- ALL WORK TO BE DONE IN ACCORDANCE WITH CITY OF WILSON STANDARDS & SPECIFICATIONS.
 - INLET PROTECTION TO BE UTILIZED AT ALL STRUCTURES AND PIPE INLETS UNDER CONSTRUCTION.

- LEGEND**
- IRON PIPE FOUND
 - ⊕ IRON REBAR FOUND
 - ⊙ EXISTING HYDRANT
 - ⊙ EXISTING WATER METER
 - ⊙ EXISTING WATER VALVE
 - ⊙ EXISTING UTILITY POLE
 - ⊙ EXISTING ELECTRIC BOX/TRANSFORMER
 - ⊙ EXISTING TELEPHONE PEDESTAL
 - ⊙ EXISTING CATCH BASIN
 - ⊙ EXISTING DROP INLET
 - ⊙ EXISTING SANITARY SEWER MANHOLE
 - ⊙ EXISTING GAS VALVE
 - PROPOSED SANITARY SEWER MANHOLE

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 - FOC — EXISTING FIBER OPTIC CABLE LINE (APPROX. LOCATION)
 - — EXISTING TREE LINE
 - S — PROPOSED TREE LINE
 - S — PROPOSED SANITARY SEWER LINE



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PROPOSED PLAN

SANDY CREEK DRIVE
— CULVERT REPLACEMENT —

DATE: OCTOBER 2021

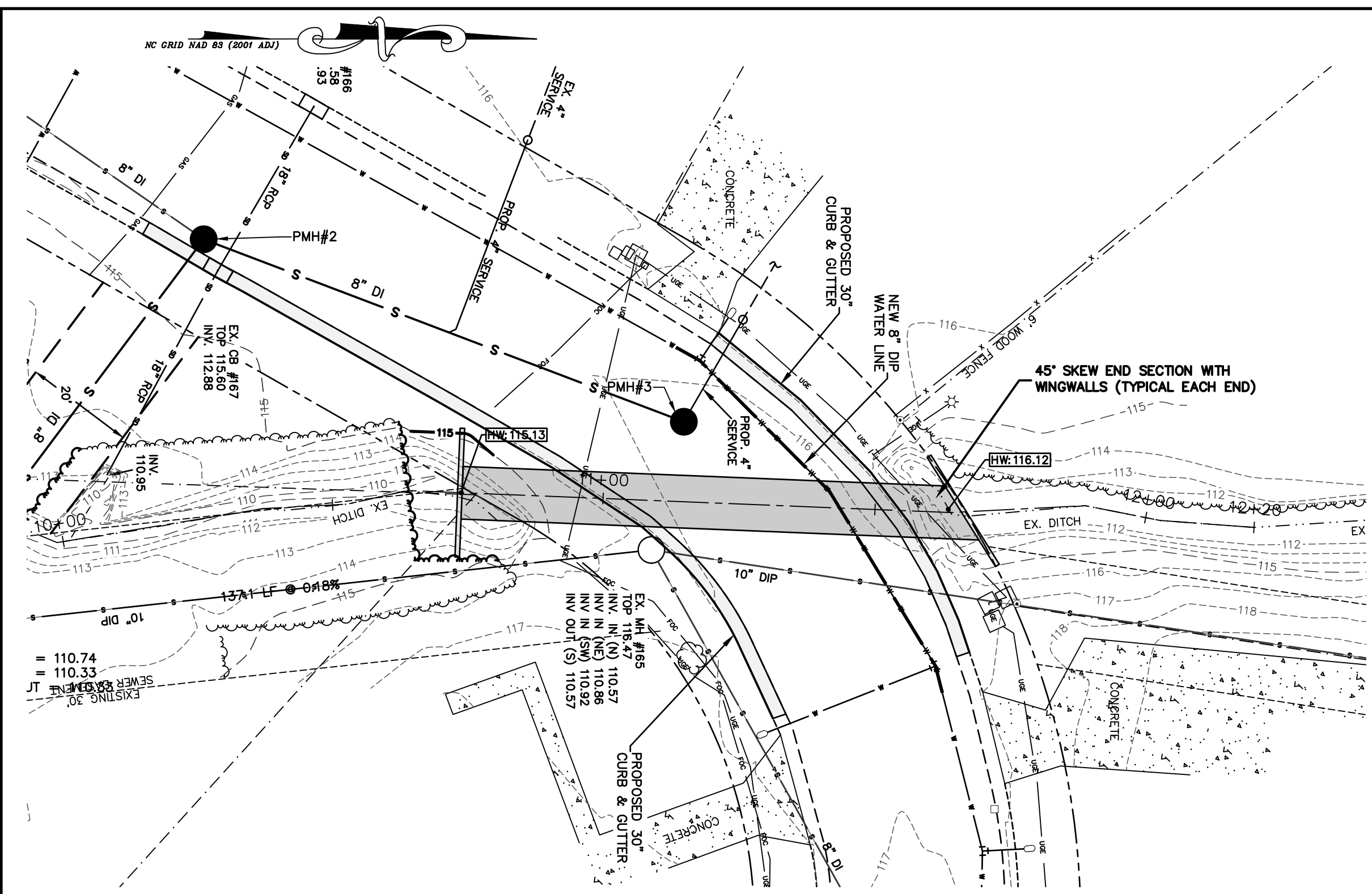
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SCALE(VERT): N/A

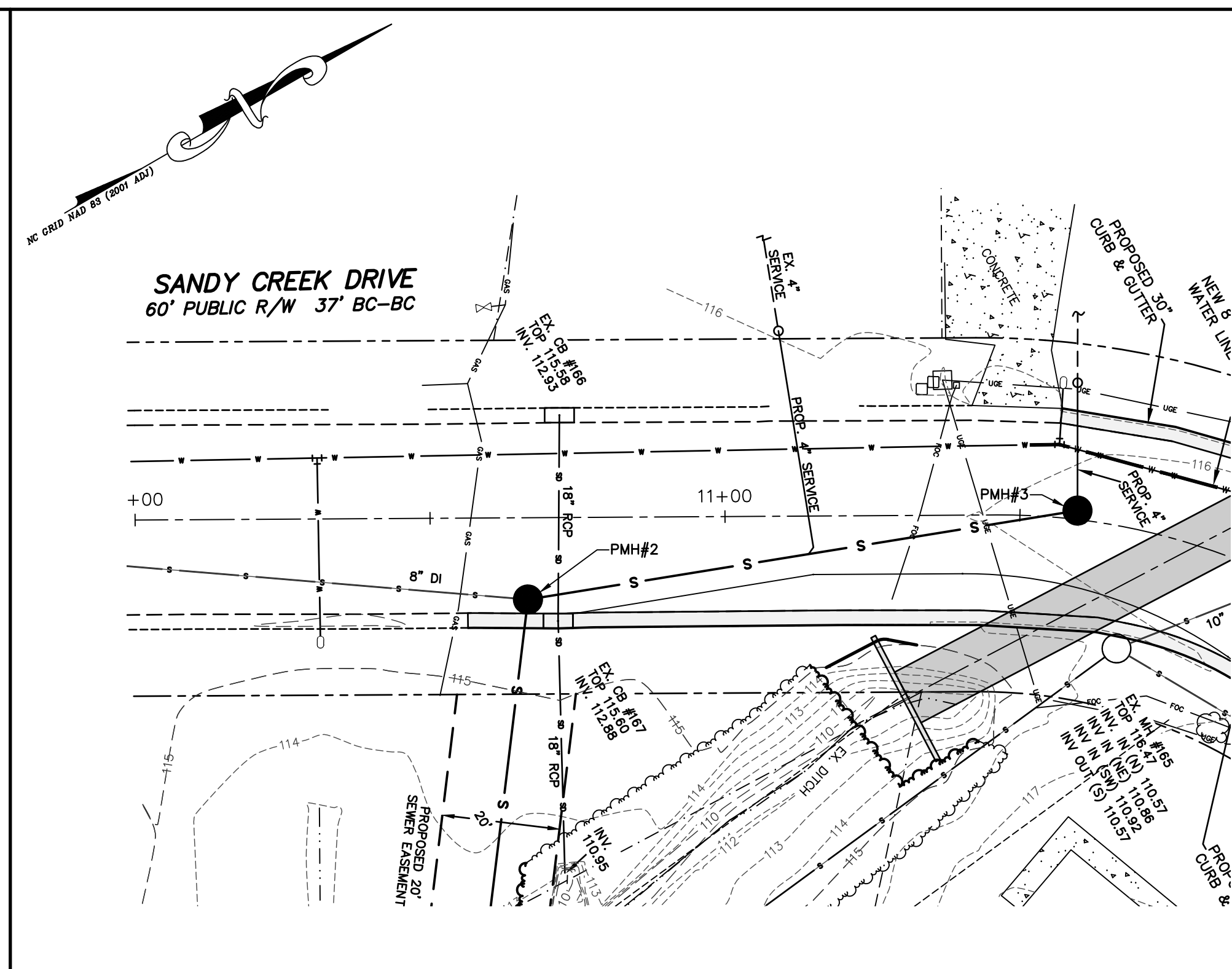
REVISIONS:

PROJECT: 21-235	CLIENT CODE: WC	CITY OF WILSON	WILSON COUNTY
CADFILE: 21235SP2	FIELD BOOK: 371	NORTH CAROLINA	ZONE:
DRAWN BY: TRB/LR	SURVEY BY: JEB/JLB	PIN #	SHEET CP2

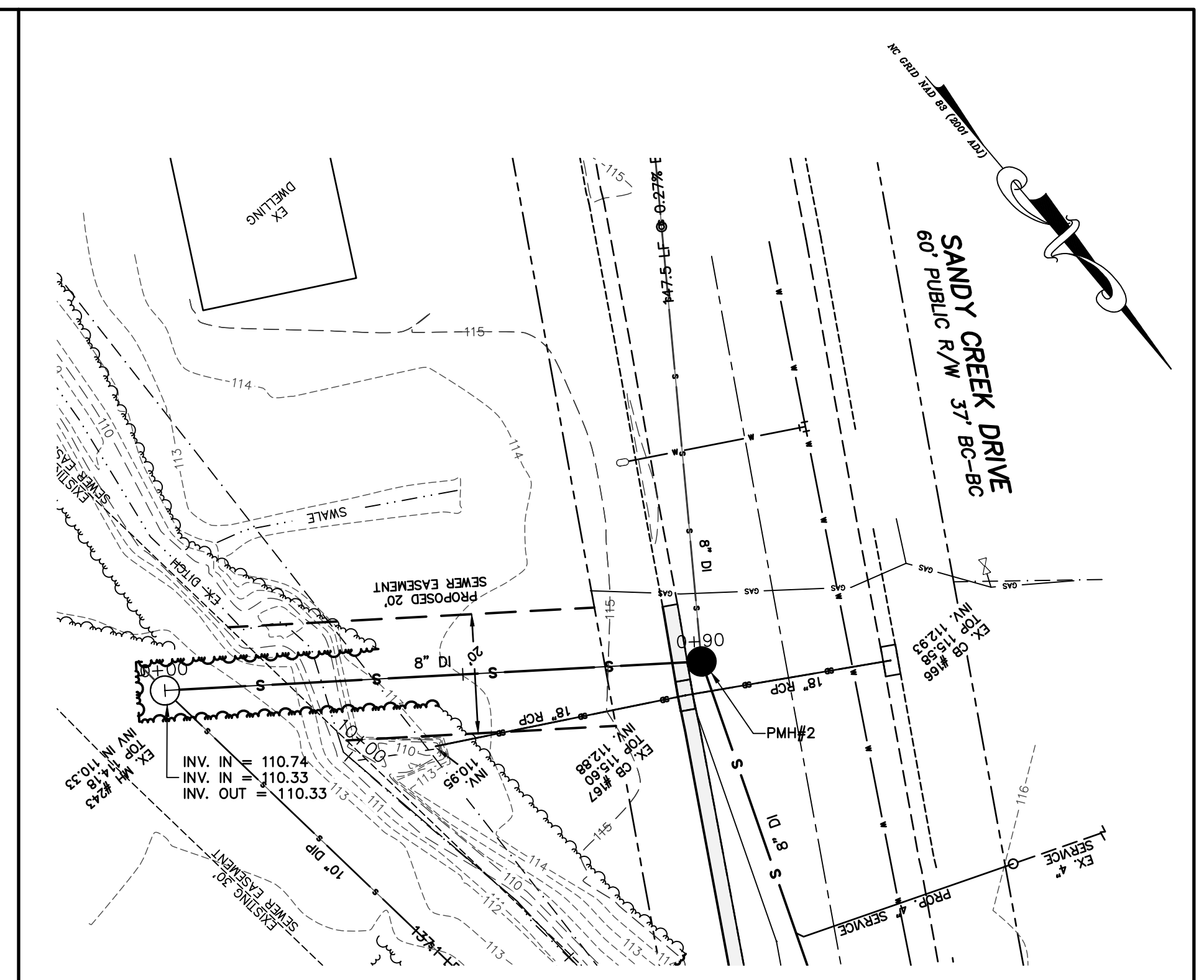
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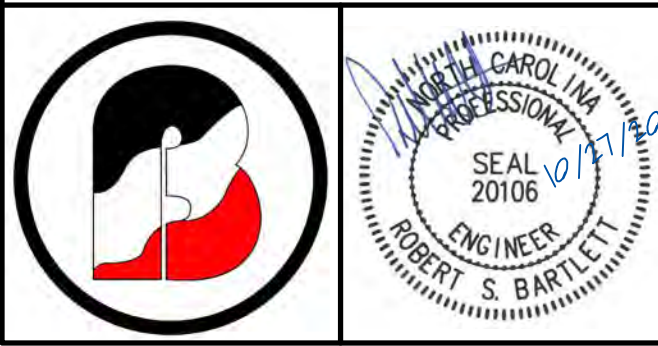
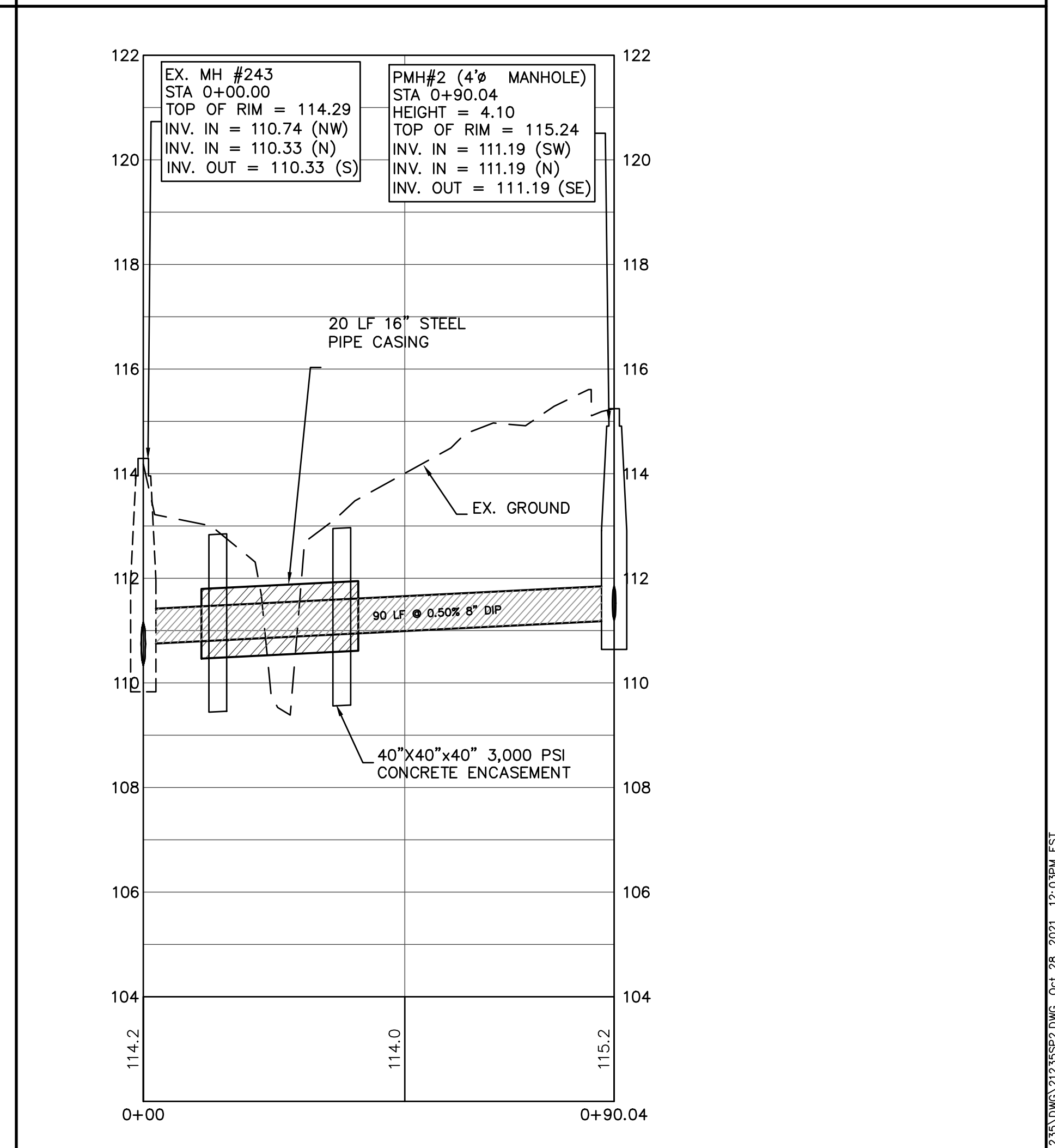
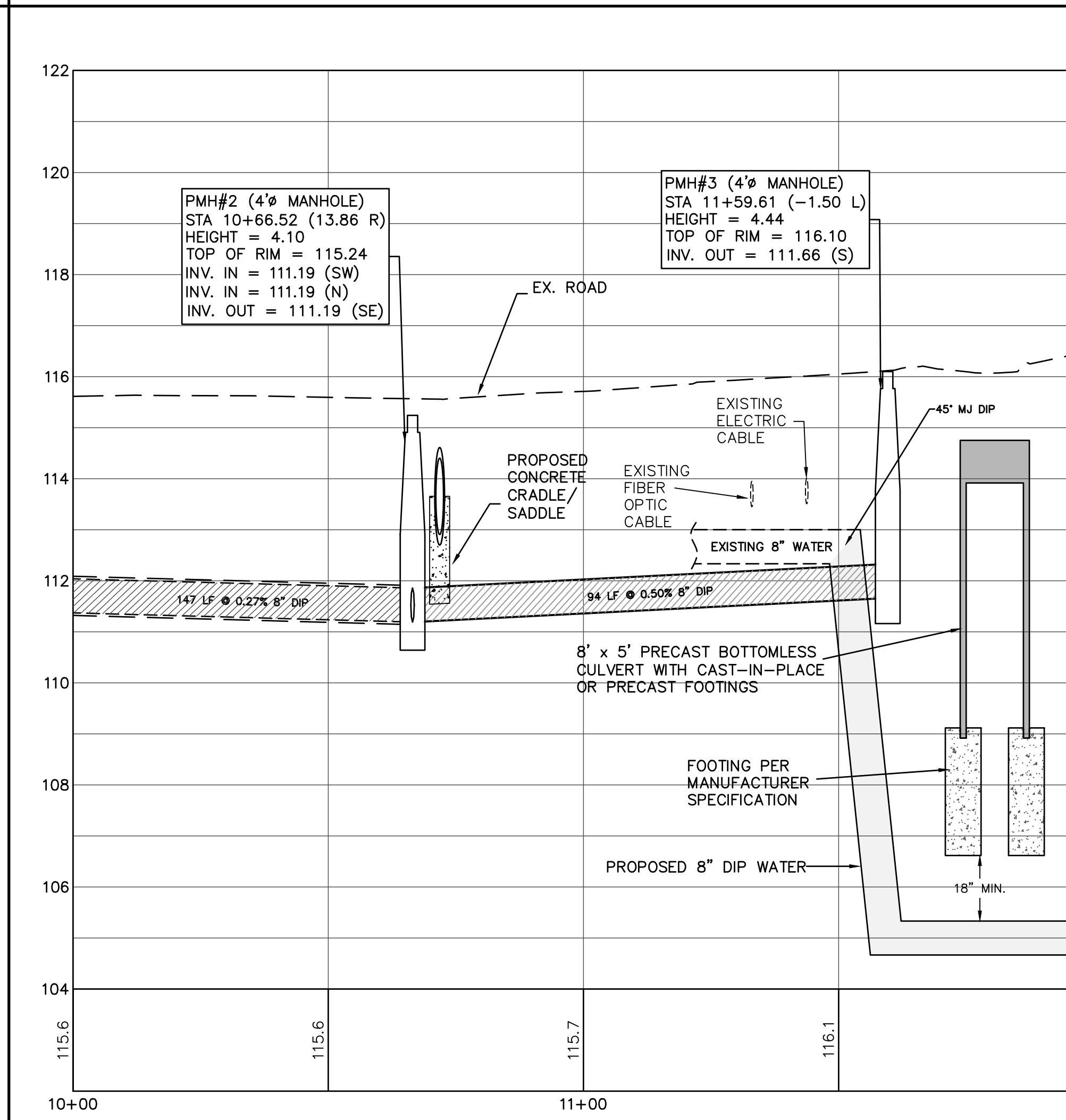
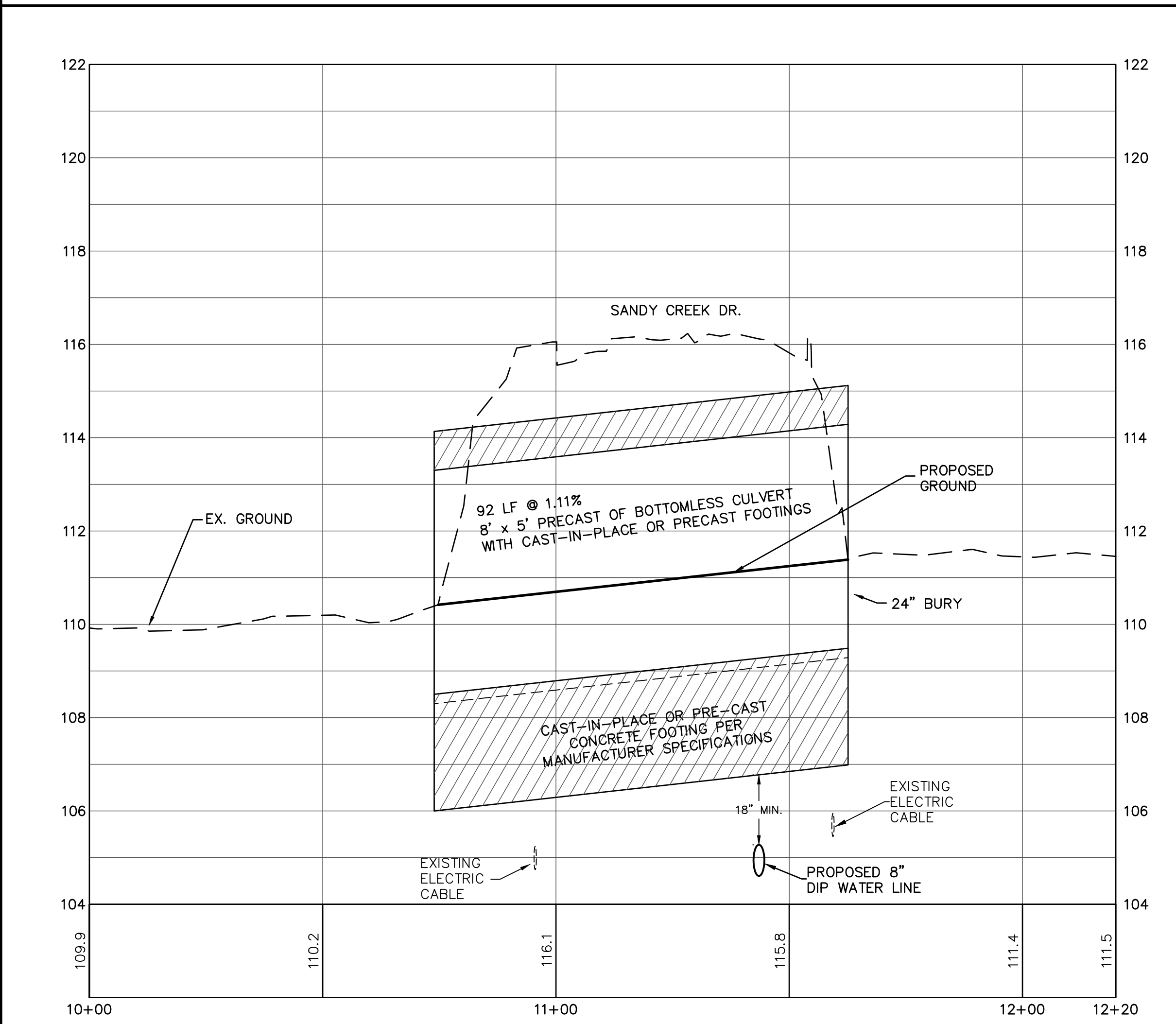
**STORM DRAINAGE
PLAN VIEW -L1-**



**SANDY CREEK DRIVE
PLAN VIEW**



**SANITARY SEWER OUTFALL
PLAN VIEW**



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PLAN & PROFILE

SANDY CREEK DRIVE
- CULVERT REPLACEMENT -

DATE: OCTOBER 2021
SCALE(HORZ): 1" = 20'
SCALE(VERT): 1" = 2'
REVISIONS:

PROJECT: 21-235
CLIENT CODE: WC
CADFILE: 21235SP2
FIELD BOOK: 371
DRAWN BY: TRB/LR
SURVEY BY: JEB/JLB
CITY OF WILSON
NORTH CAROLINA
WILSON COUNTY
ZONE:
PIN # SHEET CP3

P:_CAD\LANDPROJ\21\21235\DWG\21235SP2.DWG, OCT 26, 2021, 12:00PM EST

Details Provided by APPAM Consulting Engineers - www.appamengineers.com 05/05/2010 - 12:00:38 PM

2-6" CURB AND GUTTER

2-6" ROLLED TYPE GUTTER

TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

LONGITUDINAL PLAIN BUTT JOINT

NOTES:

- Contraction joints shall be placed at 10' intervals. Min. joint spacing of catch basin tie-in shall be 5'. Where 10' curb sections are required to be removed, either remove & replace the entire joint or saw cut & dowel & minimum of 5' of curb to the next remaining section.
- Joint spacing may be altered if required by the City Engineer.
- Contraction joints may be installed by the use of templates or formed by other approved methods. Where such joints are not formed by templates, a minimum depth of 1 1/2" shall be obtained.
- All construction joints shall be filled with joint filler and hot applied joint sealer. See specifications section 02400.
- Expansion joints shall be spaced at 90' intervals, and adjacent to all rigid objects. Concrete to be a minimum of 3,000 PSI @ 28 days, air entrained.
- Seal joints before backfilling or performing adjacent operations.

STREET APPLICATION

SEE DETAILS 732.11 & 736.02 FOR 3'-0" x 3'-0" x 8" THK. CONCRETE COLLAR DETAILS
MANHOLE COVER & RING
SEE DETAILS C06.01 & 735.01

USE AN APPROVED BUTYL RUBBER (MASTIC) SEALANT APPLIED TO TOP OF CONE SECTION

USE ECCENTRIC CONE

STEPS REQUIRED FOR ALL MANHOLES (DETAIL C06.05)

ALL JOINTS TO BE TAG AND WILL HAVE MASTIC SEALER SEAL INSIDE & OUTSIDE OF JOINTS WITH HYDRAULIC CEMENT

REINFORCING PER PRECAST MANUFACTURER TO MEET ASTM C-478

EXTERNAL JOINT WRAP ON ALL BURIED JOINTS PER DETAIL 732.11

PRECAST OPENING OR CORE & BOOT REQUIRED FOR ALL PIPES. SEE PLANS FOR PIPE SIZES. SEE DETAIL 732.01

SET MANHOLE ON 12" NO. 57 STONE

SEE SPECS FOR FOUNDATION IMPROVEMENT WHEN NEEDED

USE 5" DIA. MANHOLE W/8" MINIMUM EXTENDED BASE WHEN MANHOLE DEPTH EXCEEDS 12". SEE DESIGN SECTION PARAGRAPH 3.1.5 FOR OTHER REQUIREMENTS

CONCRETE INVERT AND PIPE ENTRY PER DETAIL 732.01

FIELD + WOODS APPLICATION

MANHOLE COVER & RING
SEE DETAILS C06.01 & 735.01

FRAME SHALL BE MORTARED TO CONE SECTION

SEE DETAIL C06.03 FOR MANHOLE RING AND COVER GRADE ADJUSTMENT. MAXIMUM 24" FROM TOP OF CASTING TO FIRST STEP

USE AN APPROVED BUTYL RUBBER (MASTIC) SEALANT APPLIED TO TOP OF CONE SECTION

USE ECCENTRIC CONE

STEPS REQUIRED FOR ALL MANHOLES (DETAIL C06.05)

ALL JOINTS TO BE TAG AND WILL HAVE MASTIC SEALER SEAL INSIDE & OUTSIDE OF JOINTS WITH HYDRAULIC CEMENT

REINFORCING PER PRECAST MANUFACTURER TO MEET ASTM C-478

ANTI-SHIELD SEAL WRAP EXTERNAL SEALING SYSTEM ON ALL BURIED JOINTS PER DETAIL 732.11

PRECAST OPENING OR CORE & BOOT REQUIRED FOR ALL PIPES. SEE PLANS FOR PIPE SIZES. SEE DETAIL 732.01

SET MANHOLE ON 12" NO. 57 STONE

SEE SPECS FOR FOUNDATION IMPROVEMENT WHEN NEEDED

USE 5" DIA. MANHOLE W/8" MINIMUM EXTENDED BASE WHEN MANHOLE DEPTH EXCEEDS 12". SEE DESIGN SECTION PARAGRAPH 3.1.5 FOR OTHER REQUIREMENTS

CONCRETE INVERT AND PIPE ENTRY PER DETAIL 732.01

END SEAL DETAIL

TURN DOWN ELBOW WITH SS INSECT SCREEN (LOCATE PER DRAWINGS) AT HIGH END (SEWER MAINS ONLY)

2" GALV. VENT PIPE (1 PER CASING) AT HIGH END (SEWER MAINS ONLY)

8" BRCK WITH TYPE M OR S MORTAR END SEAL WITH 1" DIA. PVC WEEP HOLE AT BOTTOM OF END SEAL (ON BOTH ENDS OF ENCASEMENT)

TYPICAL 18" JOINT CARRIER PIPE

PLACE GROUT AROUND ALL OPENINGS

1/2" / FT SLOPE

PLACE NON-WOVEN FILTER FABRIC OVER WEEP HOLE

PLACE 1 TO 2 CF #57 STONE IN NON-WOVEN FILTER FABRIC BAG & PLACE BAG SNUG OVER WEEP HOLE.

SECTION A-A

VENT PIPE (SEWER MAINS ONLY)

WALL THICKNESS PER PLANS

3/4" DIAMETER STAINLESS STEEL BOLTS

WEEP HOLE

NOTES:

- Concrete strength to be 4,000 PSI minimum.
- Pipes will be grouted inside and out.
- Flexible sleeve boots cast in place or installed with stainless steel expander rings. Boots to meet ASTM C-923 standards.
- See detail 732.01 for typical invert shaping.
- Service laterals into existing manholes to be core drilled and booted.
- Maximum depth 4' diameter manhole = 12' (see sewer design section for other requirements / limitations).
- If height above grade exceeds 24", use eccentric flat top.
- For watertight applications, place butyl rubber between frame and cone.
- All bonded connections shall be double bonded. For pipe connections 12" and larger, 2 sets of bands shall be required.
- Lubricate the following: Pipe exterior, boot interior, boot exterior, S.S. bands (Top & bottom)
- Place manhole opening over the effluent line.
- Manholes subject to flooding shall have the top of the manhole rim a minimum of 24" above the 100 Yr. BFE unless approved otherwise by the City Engineer or Water Resources. When vents are permitted, vent every 3rd manhole, not exceeding 1,000 LF between vents. Vents shall be placed a minimum of 24" above the 100 Yr. BFE. See detail 732.10.
- Outfall manholes, regardless of manhole top elevation, shall be vented.

CITY of WILSON, N.C.

Public Services Department
1800 Herring Avenue, P.O. Box 10
Wilson, North Carolina 27894

Scale: 1/2" = 1'-0"

Detail # 1

Revision Date: June 2010

Sheet # 1 of 1

CITY of WILSON, N.C.

Public Services Department
1800 Herring Avenue, P.O. Box 10
Wilson, North Carolina 27894

Scale: 1/2" = 1'-0"

Detail # 2

Revision Date: June 2010

Sheet # 2 of 3

CITY of WILSON, N.C.

Public Services Department
1800 Herring Avenue, P.O. Box 10
Wilson, North Carolina 27894

Scale: 1/2" = 1'-0"

Detail # 3

Revision Date: June 2010

Sheet # 3 of 3

CITY of WILSON, N.C.

Public Services Department
1800 Herring Avenue, P.O. Box 10
Wilson, North Carolina 27894

Scale: 1/2" = 1'-0"

Detail # 4

Revision Date: June 2010

Sheet # 2 of 2

STANDARD ASPHALT PAVING DETAIL
NO SCALE

2" ASPHALT (SF9.5B)
8" CABC STONE BASE
COMPACTED SUBGRADE

HEAVY-DUTY PAVING DETAIL
NO SCALE

2" ASPHALT (SF9.5B)
3" ASPHALT (119.0B)
8" CABC STONE BASE
COMPACTED SUBGRADE

CONCRETE PAVING DETAIL
NO SCALE

BROOM FINISH
6" THICK 4000 PSI CONCRETE
6" x 6" - W2.0 x W2.0 WWF REINFORCEMENT (2" FROM BOTTOM)
6" CABC STONE BASE
COMPACTED SUBGRADE

PROVIDE EXPANSION JOINTS ALONG FACE OF BUILDING PAD AND SPACE EVERY 20' MAX.

CONCRETE CRADLE PROTECTION FOR SEWER LINE CROSSINGS

PROPOSED PIPELINE

2500 PSI CONCRETE TRANSIT MIXED FULL TRENCH WIDTH

1" THICK COMPRESSIBLE JOINT FILLER

6" MIN 24" MAX

12" MIN.

EXISTING SANITARY SEWER LINE

AERIAL DITCH CROSSING (STEEL ENCASEMENT)

ENCASEMENT

3000 PSI CONCRETE ENCASEMENT

LONGITUDINAL SECTION

TRAVERSE SECTION

5' MIN FROM TOP OF BANK

1" MIN.

12" MIN.

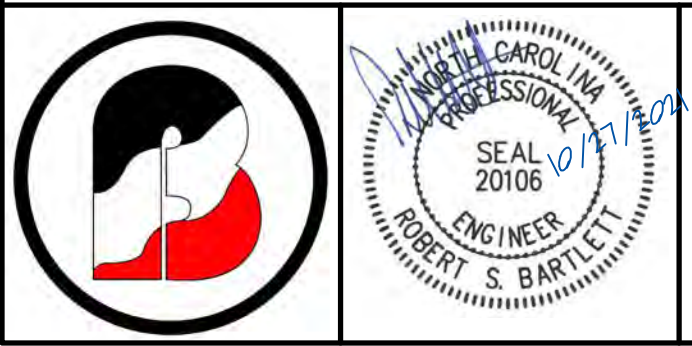
#57 STONE IN FILTER FABRIC BAG

CONCRETE ENCASEMENT

NOTES:

- CARRIER PIPE: MECHANICAL JOINT DIP
- PIPE SUPPORT ASSEMBLY: MINIMUM 3 SPIDER ASSEMBLY PER STANDARD PIPE LENGTH.
- GREASE ENCASEMENT PIPE AS REQUIRED FOR EASE OF INSTALLATION.
- SEE TABLE FOR CASING PIPE SIZE.
- STEEL PIPE TO BE 35,000 PSI MIN. YIELD STRENGTH, GRADE B.

CARRIER PIPE DIAMETER	CASING PIPE DIAMETER
6 & UNDER	12
8	16
10	20
12	24



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