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See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet 1C-1 Through 1C-? For Survey Control Sheets

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-4786	SU-1

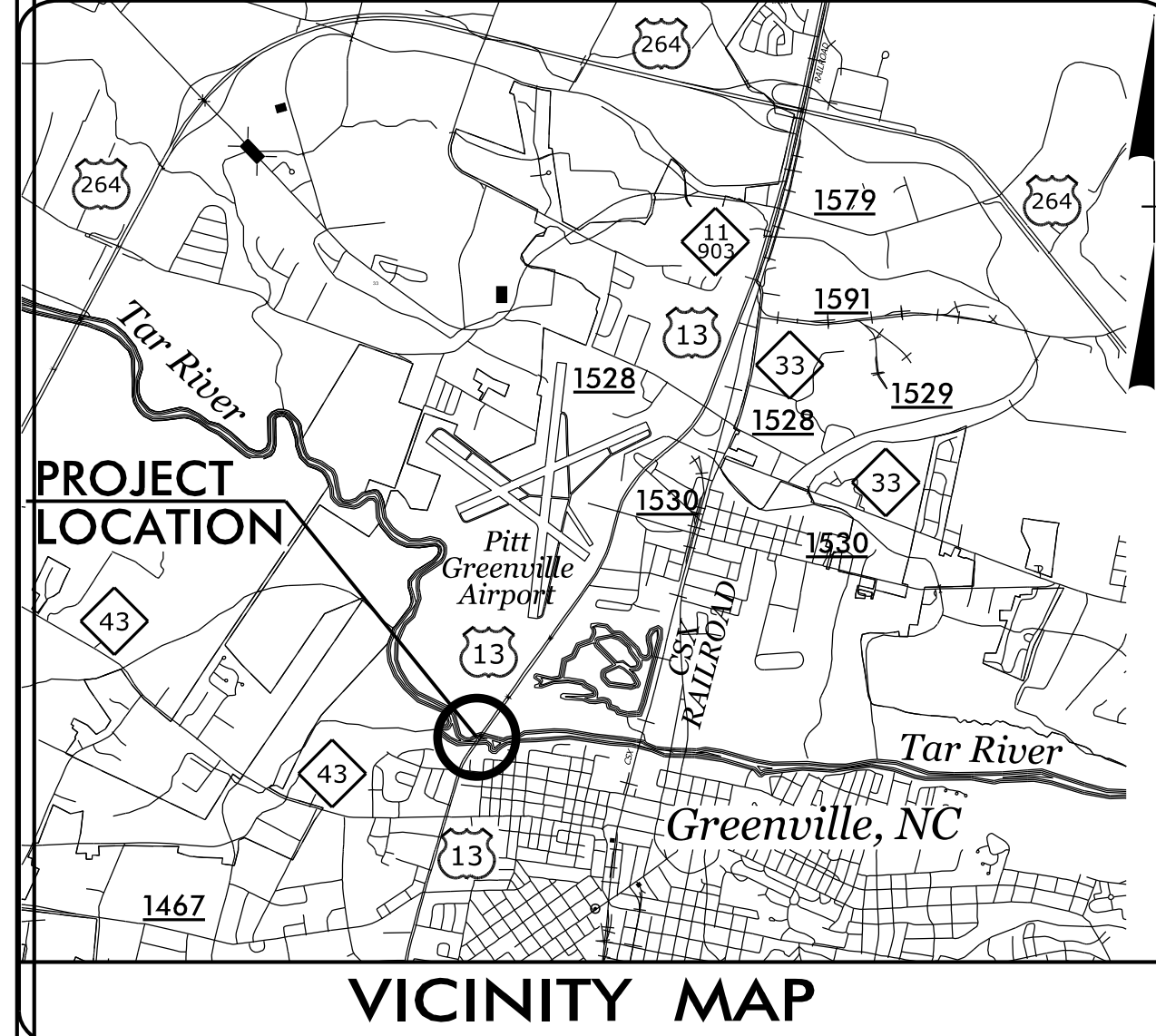
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STRUCTURE UTILITIES PLANS PITT COUNTY

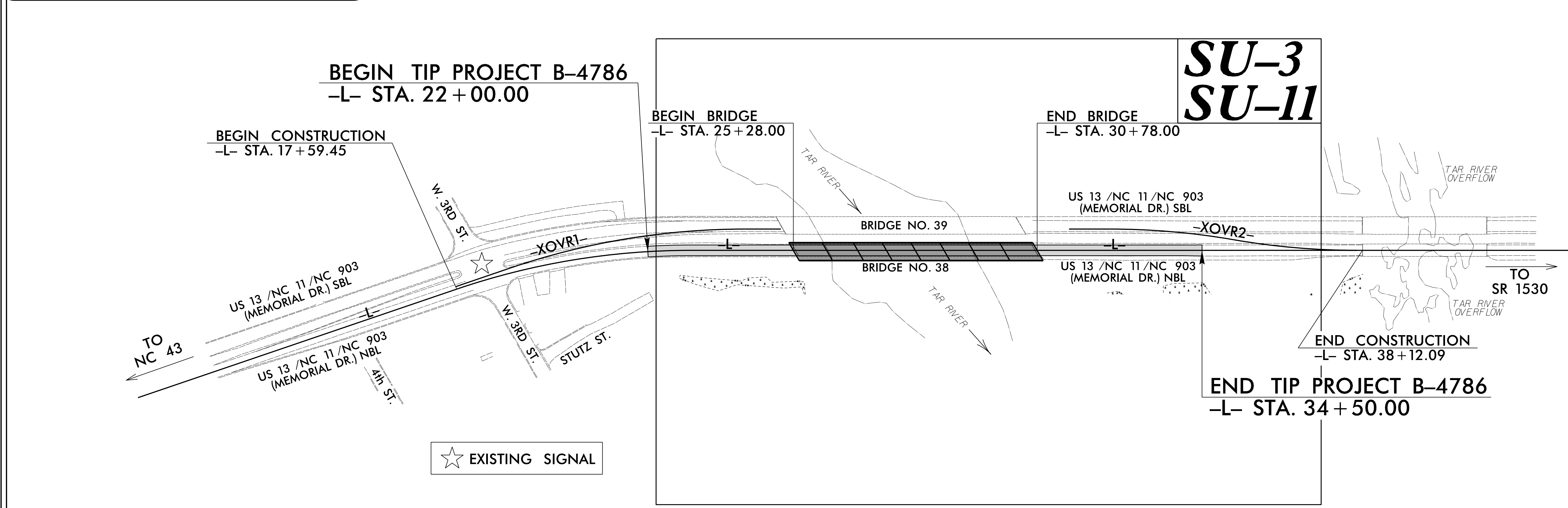
**LOCATION: REPLACE BRIDGE NO. 38 OVER THE TAR RIVER
ON US 13 IN GREENVILLE**

**TYPE OF WORK: ATTACH TEMPORARY 8" WATER LINE TO THE EXISTING
BRIDGE NO.39 AND ATTACH A PERMANENT 12" WATER
LINE TO THE PROPOSED BRIDGE NO.38**

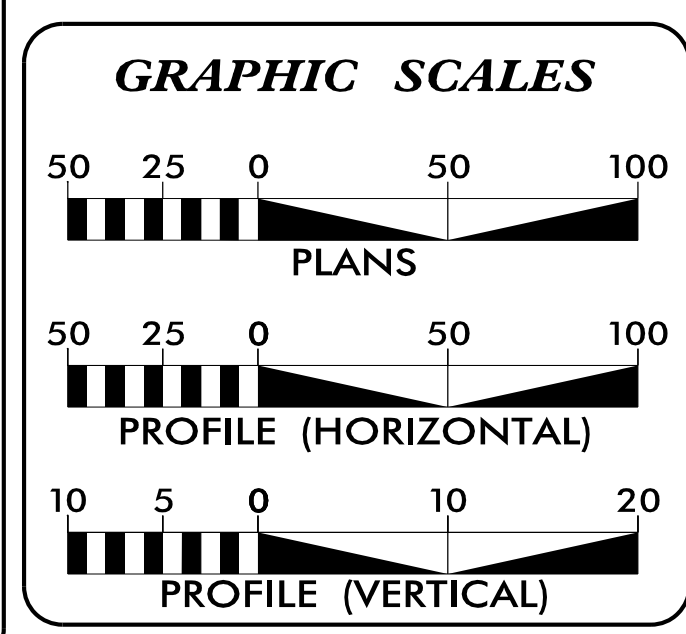
TIP PROJECT: B-4786



RIGHT OF WAY PLANS



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GREENVILLE.



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
SU-1	TITLE SHEET
SU-2	UTILITY SYMBOLOGY
SU-3 THRU SU-10	8" WL BRIDGE ATTACHMENT PLAN SHEETS
SU-11 THRU SU-23	12" WL BRIDGE ATTACHMENT PLAN SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) GREENVILLE UTILITIES COMMISSION

PREPARED IN THE OFFICE OF:

HINDE ENGINEERING

License No. C-2639
401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513
Ph. (919) 653-0001

Clint L. Stevens, P.E. UTILITIES PROJECT MANAGER
Corey D. Bousquet, P.E. UTILITIES PROJECT ENGINEER
Jordan K. Chapman UTILITIES PROJECT DESIGNER

SEAL

3/17/2022

DIVISION OF HIGHWAYS UTILITIES UNIT
1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Nabil S. Hamdan UTILITIES REGIONAL ENGINEER
Stephen G. Sealy UTILITIES ENGINEER
Tanga N. Sampson UTILITIES AREA COORDINATOR
Larry M. James UTILITIES COORDINATOR

I7-MAR-2022 15:24 S:\Server_Files\PROJECTS\2018\A2018302.00_NCDOT_B-4786\Design\Utilities\Engineering\UC\Proj\New 12 WL Bridge Attachment Plans\B4786_UT_Tsh_SUI_psh.dgn \$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS



UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	..... 12" WL
11¼ Degree Bend ++
22½ Degree Bend	..... +x
45 Degree Bend	..... +X
90 Degree Bend †
Plug	..... |
Tee ††
Cross †††
Reducer ▶
Gate Valve	..... GV
Butterfly Valve	..... BV
Tapping Valve	..... TGV
Line Stop	..... LS
Line Stop with Bypass	..... LS/BP
Blow Off	..... BO
Fire Hydrant	..... PFH
Relocate Fire Hydrant	..... RFH
Remove Fire Hydrant	..... REM FH
Water Meter	..... PWM
Relocate Water Meter	..... RWM
Remove Water Meter	..... REM WM
Water Pump Station	..... PST(W)
RPZ Backflow Preventer	..... PRPZ
DCV Backflow Preventer	..... PBFP
Relocate RPZ Backflow Preventer	..... RRPZ
Relocate DCV Backflow Preventer	..... RBFP

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	..... 12" SS
Force Main Sewer Line (Sized as Shown)	..... 12" FSS
Manhole (Sized per Note) •
Sewer Pump Station	..... PST(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	..... 0
Telephone Pole	..... -0-
Joint Use Pole	..... -0-
Telephone Pedestal	..... TEL PED
Utility Line by Others (Type as Shown)	..... PROP O/H POW LINES
Trenchless Installation	..... 12" TL INSTALL
Encasement by Open Cut	..... 24" ENCAS. BY OC
Encasement	..... 24" ENCASUREMENT

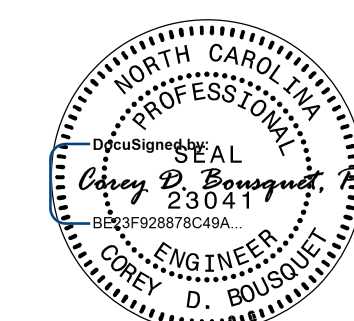
Thrust Block	..... |
Air Release Valve	..... AR
Utility Vault	..... UV
Concrete Pier	..... CP
Steel Pier	..... SP
Plan Note	..... NOTE
Pay Item Note	..... PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole	..... •	*Underground Power Line	..... P
Telephone Pole	..... •	*Underground Telephone Cable	..... T
Joint Use Pole	..... •	*Underground Telephone Conduit	..... TC
Utility Pole	..... •	*Underground Fiber Optics Telephone Cable	..... T FO
Utility Pole with Base	..... □	*Underground TV Cable	..... TV
H-Frame Pole	..... •—•	*Underground Fiber Optics TV Cable	..... TV FO
Power Transmission Line Tower	..... ☒	*Underground Gas Pipeline	..... G
Water Manhole	..... ⊗	Aboveground Gas Pipeline	..... A/G Gas
Power Manhole	..... ⊗	*Underground Water Line	..... W
Telephone Manhole	..... ⊗	Aboveground Water Line	..... A/G Water
Sanitary Sewer Manhole	..... ⊗	*Underground Gravity Sanitary Sewer Line	..... SS
Hand Hole for Cable	..... ☒	Aboveground Gravity Sanitary Sewer Line	..... A/G Sanitary Sewer
Power Transformer	..... ☒	*Underground SS Forced Main Line	..... FSS
Telephone Pedestal	..... ☒	Underground Unknown Utility Line	..... ?UL
CATV Pedestal	..... ☒	SUE Test Hole •
Gas Valve	..... ◇	Water Meter ⊖
Gas Meter	..... ◇	Water Valve ⊗
Located Miscellaneous Utility Object	..... ⊖	Fire Hydrant ◇
Abandoned According to Utility Records	..... AATUR	Sanitary Sewer Cleanout ⊗
End of Information	..... E.O.I.		

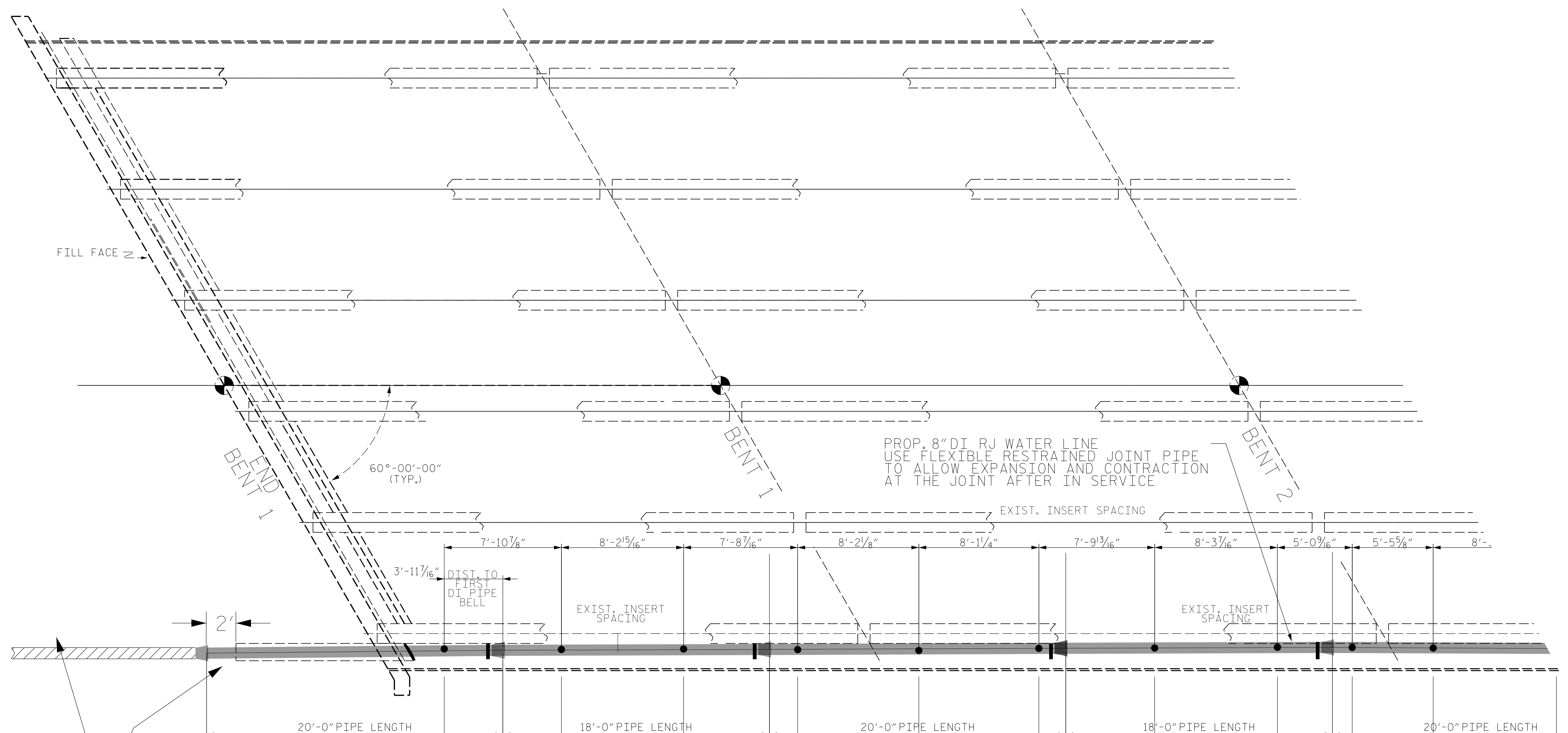
*For Existing Utilities
 Utility Line Drawn from Record (Type as Shown) W
 Designated Utility Line (Type as Shown) W

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PLACE PROP. 20' SECTION OF 8" RJ DI WATER LINE THRU EXIST. 14" ENCASEMENT.

REMOVE EXIST. 14" ENCASEMENT PIPE 2' BEYOND THE PROP. FIRST SECTION OF 20' - 8" WATER LINE THRU THE EXIST. END BENT. SEE UC PLANS FOR CONTINUATION OF THE 8" WATER LINE.

PLACE PROPOSED 8" RJ DI PIPE THRU EXIST. 14" ENCASEMENT USE CASING SPACERS (2-PER JOINT) TO SUPPORT THE PROP. 8" RJ DI PIPE INSIDE THE ENCASEMENT. GROUT THE SPACE BETWEEN THE 8" PIPE AND CASING AFTER THE PIPE IS INSTALLED.

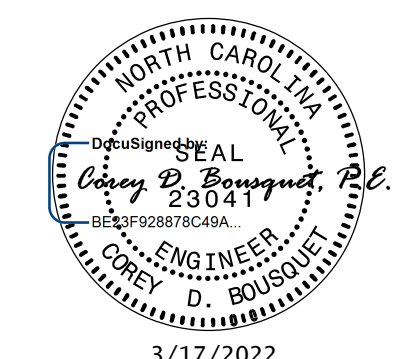
AFTER THE TEMPORARY 8" WL IS REMOVED CUT THE CASING AND 8" WL FLUSH WITH THE END BENT FACE. USE NON-SHRINKABLE GROUT TO FILL THE 8" DI PIPE AND 14" CASING FLUSH WITH THE END BENT FACE.

- PROP. PIPE HANGER AND EXIST. INSERT 1
- PROP. LATERAL PIPE BRACING 1 1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 2
- PROP. PIPE HANGER AND EXIST. INSERT 3
- PROP. LATERAL PIPE BRACING 2 1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 4
- PROP. PIPE HANGER AND EXIST. INSERT 5
- PROP. PIPE HANGER AND EXIST. INSERT 6
- PROP. LATERAL PIPE BRACING 3 1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 7
- PROP. PIPE HANGER AND EXIST. INSERT 8
- PROP. LATERAL PIPE BRACING 4 1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 9
- PROP. PIPE HANGER AND EXIST. INSERT 10

PROJECT NO. B-4786
PITT COUNTY
 STATION: SB EX. BRIDGE

SHEET OF

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
EXIST. BRIDGE PLAN OF SPAN 8" WATER LINE ATTACHMENT					
SHEET NO. SU-4					
TOTAL SHEETS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

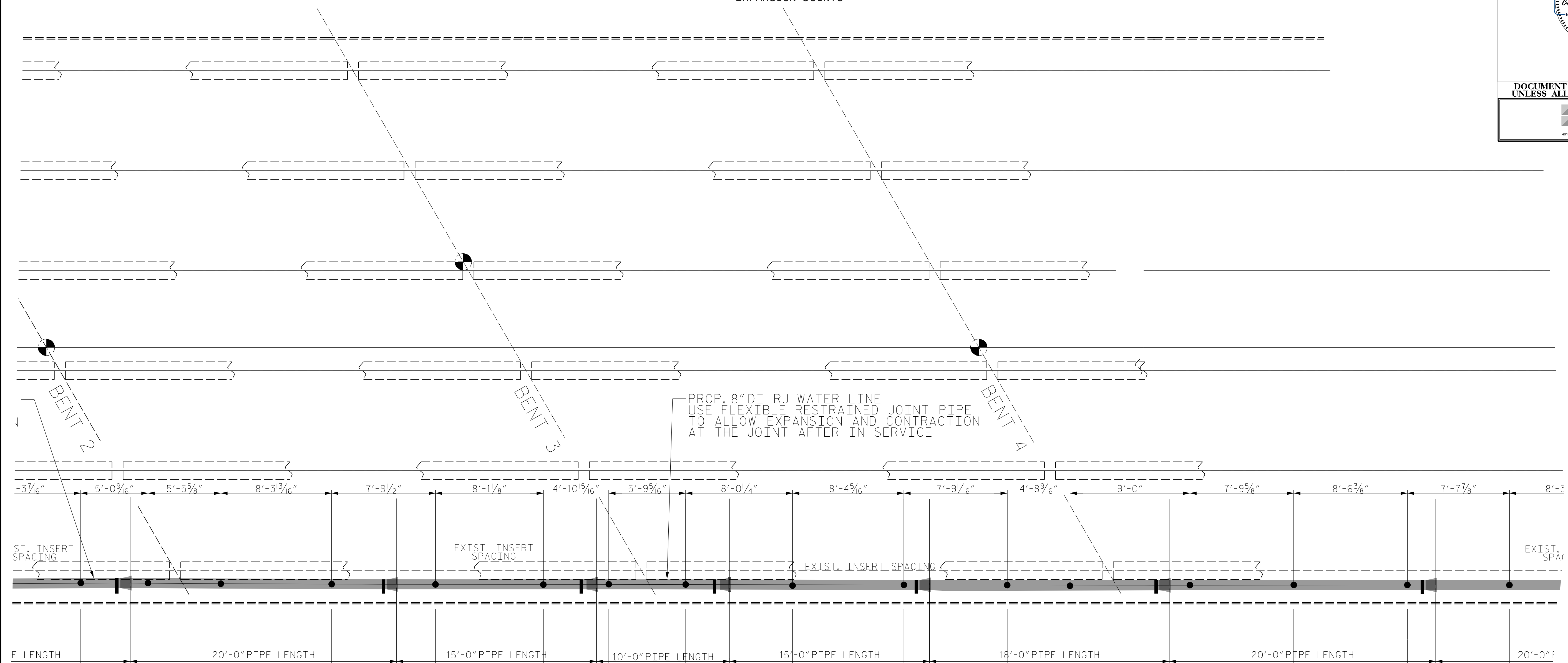


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EXIST. BRIDGE
EXPANSION JOINTS

PROP. 8" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



- PROP. PIPE HANGER AND EXIST. INSERT 8
- PROP. LATERAL PIPE BRACING 4
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 9
- PROP. PIPE HANGER AND EXIST. INSERT 10
- PROP. PIPE HANGER AND EXIST. INSERT 11
- PROP. LATERAL PIPE BRACING 5
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 12
- PROP. PIPE HANGER AND EXIST. INSERT 13
- PROP. LATERAL PIPE BRACING 6
2'-5" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 14
- PROP. PIPE HANGER AND EXIST. INSERT 15
- PROP. LATERAL PIPE BRACING 7
2'-5" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 16
- PROP. PIPE HANGER AND EXIST. INSERT 17
- PROP. LATERAL PIPE BRACING 8
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 18
- PROP. PIPE HANGER AND EXIST. INSERT 19
- PROP. LATERAL PIPE BRACING 9
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 20
- PROP. PIPE HANGER AND EXIST. INSERT 21
- PROP. PIPE HANGER AND EXIST. INSERT 22

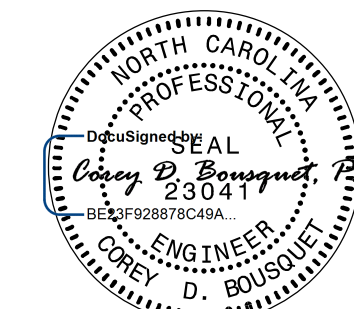
PROJECT NO. B-4786
PITT COUNTY
STATION: SB EX. BRIDGE

SHEET 10 OF 23

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

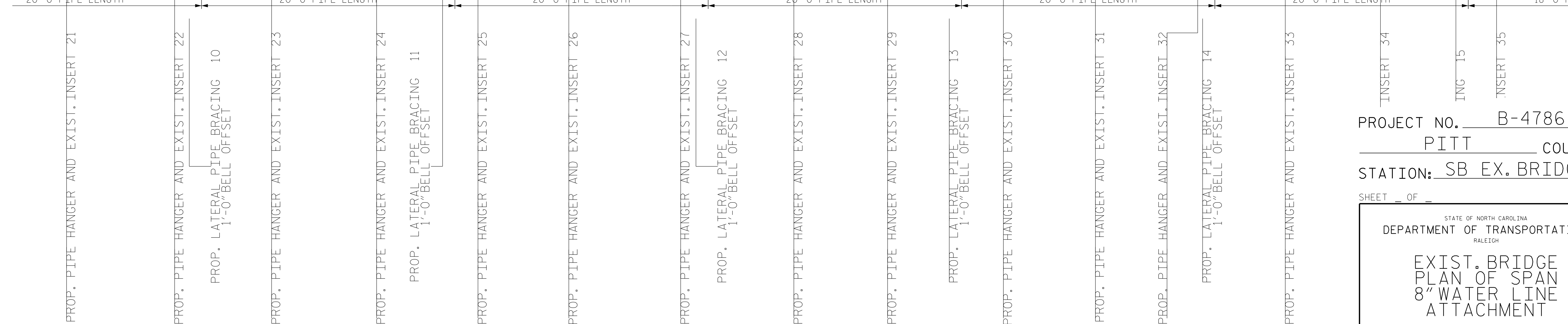
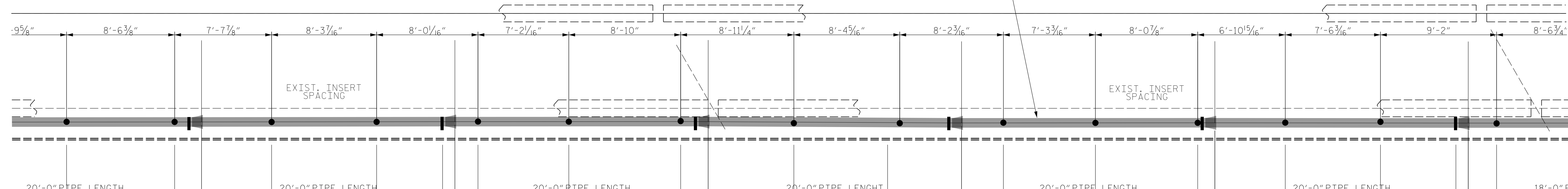
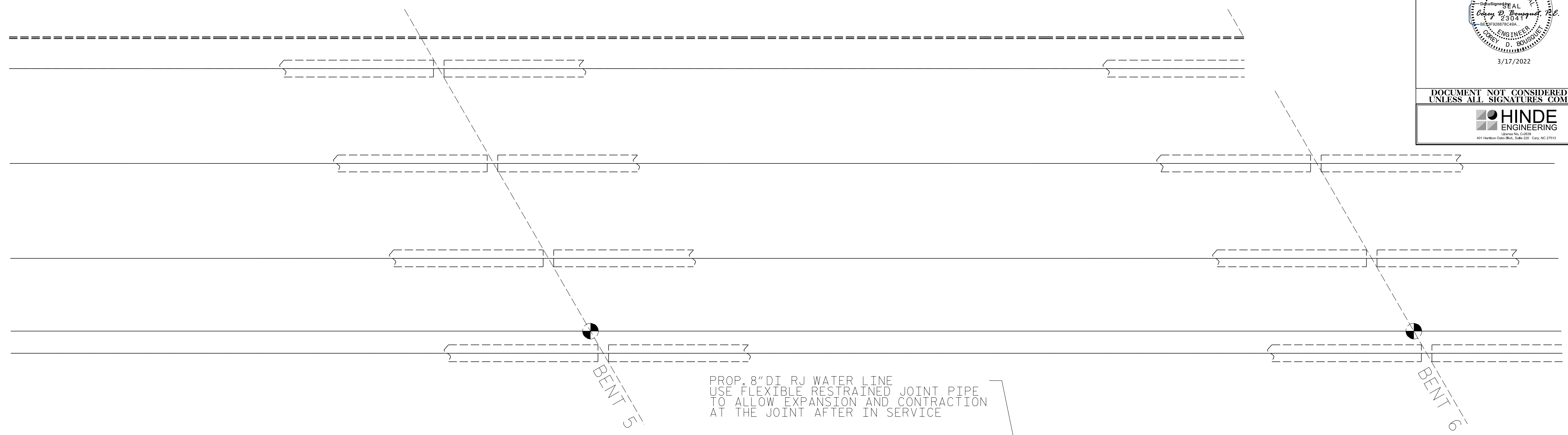
**EXIST. BRIDGE
PLAN OF SPAN
8" WATER LINE
ATTACHMENT**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SU-5
1			3			
2			4			



3/17/2022

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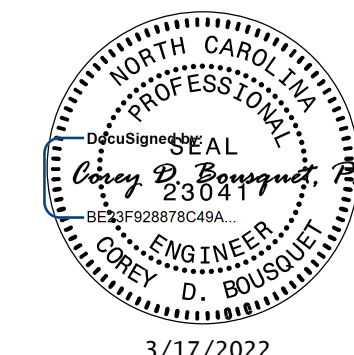
PROJECT NO. B-4786
PITT COUNTY
STATION: SB EX. BRIDGE

SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

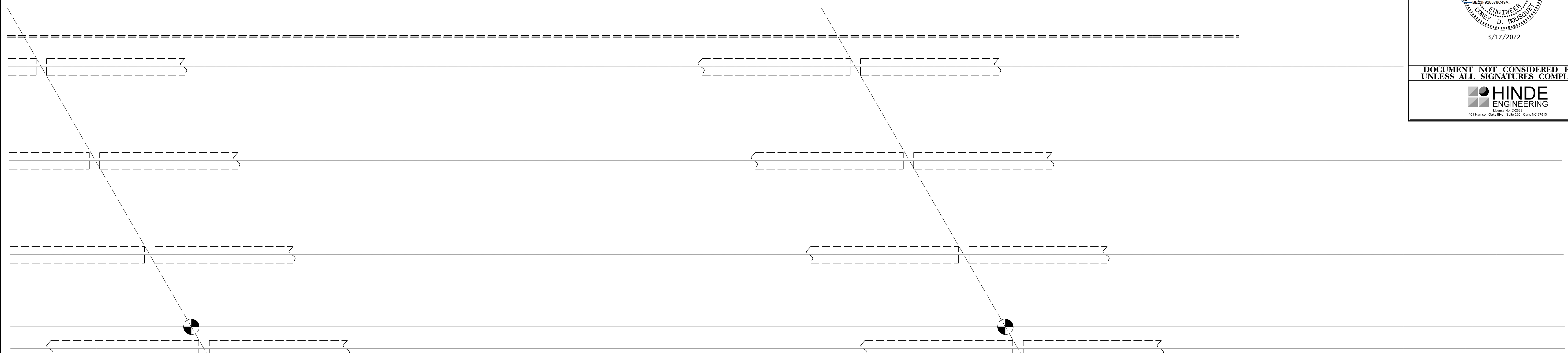
**EXIST. BRIDGE
PLAN OF SPAN
8\"/>**

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1			3			SU-6
2			4			

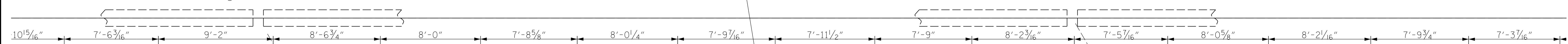


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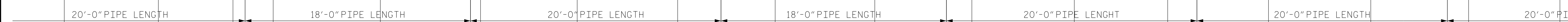
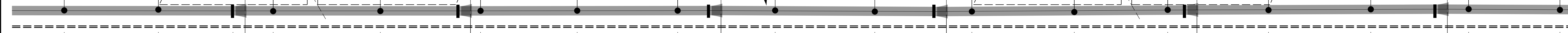


PROP. 8" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



EXIST. INSERT SPACING

EXIST. INSERT SPACING



- PROP. PIPE HANGER AND EXIST. INSERT 33
- PROP. PIPE HANGER AND EXIST. INSERT 34
- PROP. LATERAL PIPE BRACING 15
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 35
- PROP. PIPE HANGER AND EXIST. INSERT 36
- PROP. LATERAL PIPE BRACING 16
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 37
- PROP. PIPE HANGER AND EXIST. INSERT 38
- PROP. PIPE HANGER AND EXIST. INSERT 39
- PROP. LATERAL PIPE BRACING 17
1'-0" BELL OFFSET
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- PROP. PIPE HANGER AND EXIST. INSERT 41
- PROP. LATERAL PIPE BRACING 18
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 42
- PROP. PIPE HANGER AND EXIST. INSERT 43
- PROP. PIPE HANGER AND EXIST. INSERT 44
- PROP. LATERAL PIPE BRACING 19
1'-0" BELL OFFSET
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- RT 46
- RT 47
- RT 48

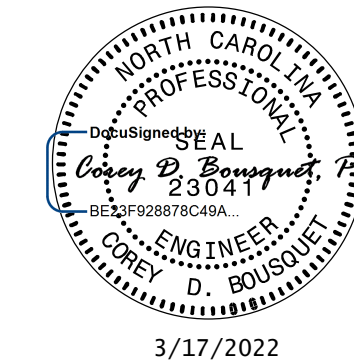
PROJECT NO. B-4786
PITT COUNTY
STATION: SB EX. BRIDGE

SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXIST. BRIDGE
PLAN OF SPAN
8" WATER LINE
ATTACHMENT

REVISIONS						SHEET NO.
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1			3			
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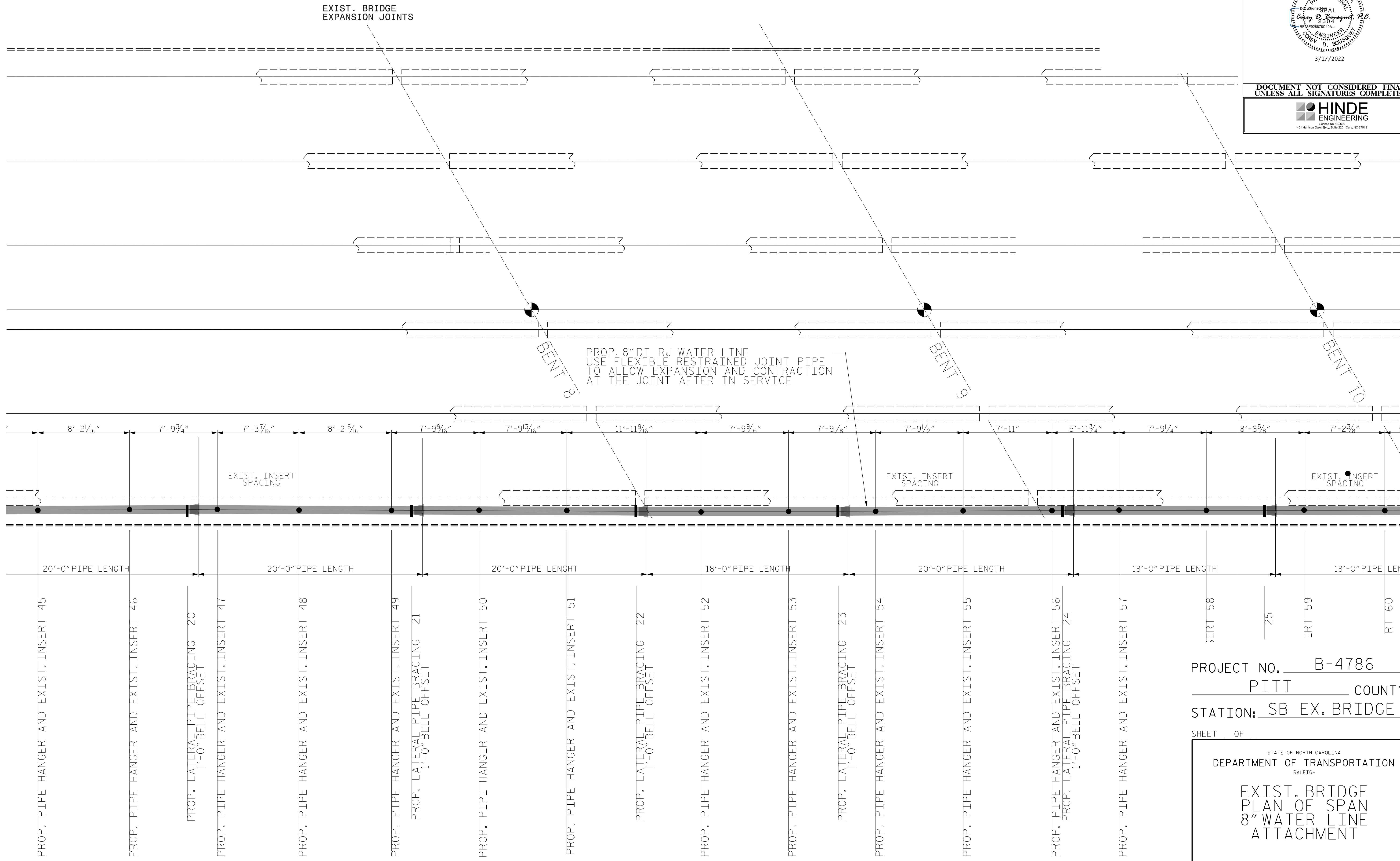
EXIST. BRIDGE
EXPANSION JOINTS

PROP. 8" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE

BENT 8

BENT 9

BENT 10



PROP. PIPE HANGER AND EXIST. INSERT 45

PROP. PIPE HANGER AND EXIST. INSERT 46

PROP. LATERAL PIPE BRACING 20
1'-0" BELL OFFSET

PROP. PIPE HANGER AND EXIST. INSERT 47

PROP. PIPE HANGER AND EXIST. INSERT 48

PROP. LATERAL PIPE BRACING 21
1'-0" BELL OFFSET

PROP. PIPE HANGER AND EXIST. INSERT 50

PROP. PIPE HANGER AND EXIST. INSERT 51

PROP. LATERAL PIPE BRACING 22
1'-0" BELL OFFSET

PROP. PIPE HANGER AND EXIST. INSERT 52

PROP. PIPE HANGER AND EXIST. INSERT 53

PROP. LATERAL PIPE BRACING 23
1'-0" BELL OFFSET

PROP. PIPE HANGER AND EXIST. INSERT 54

PROP. PIPE HANGER AND EXIST. INSERT 55

PROP. PIPE HANGER AND EXIST. INSERT 56
PROP. LATERAL PIPE BRACING 24
1'-0" BELL OFFSET

PROP. PIPE HANGER AND EXIST. INSERT 57

PROJECT NO. B-4786

PITT COUNTY

STATION: SB EX. BRIDGE

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXIST. BRIDGE
PLAN OF SPAN
8" WATER LINE
ATTACHMENT

REVISIONS						SHEET NO.
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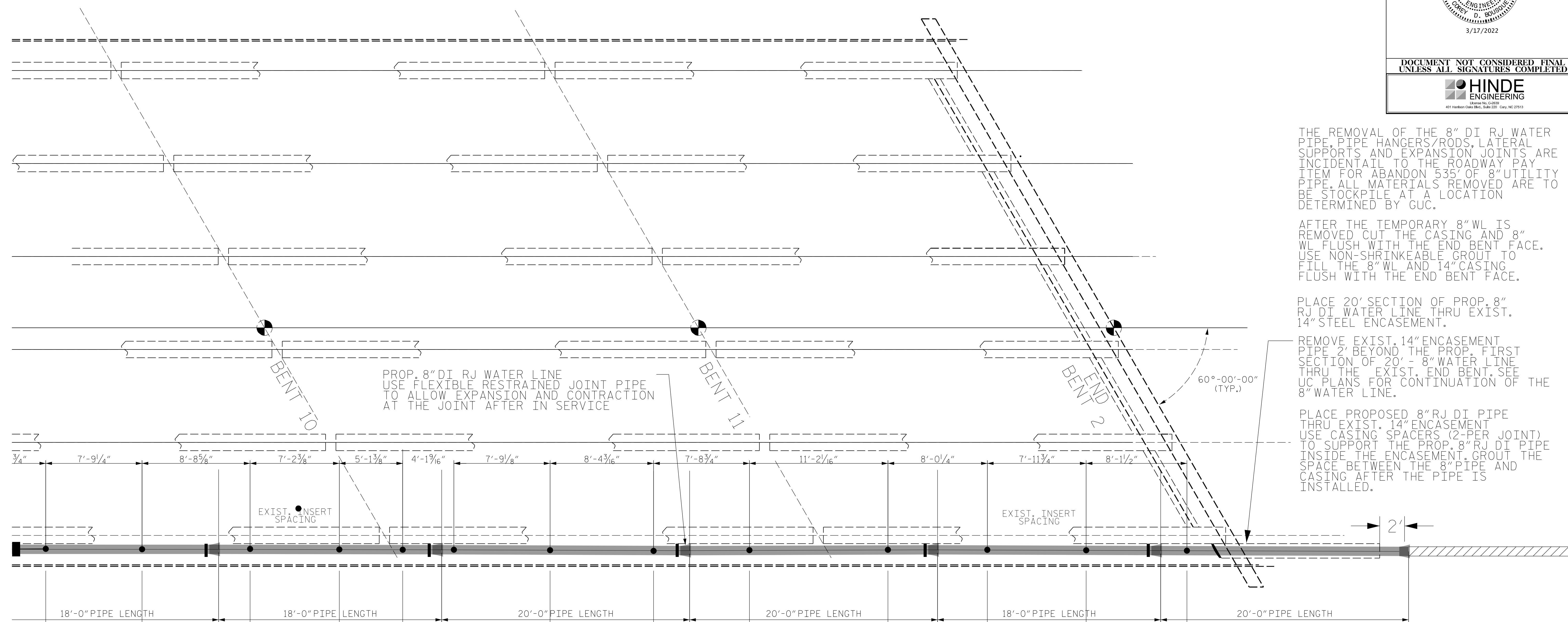
THE REMOVAL OF THE 8" DI RJ WATER PIPE, PIPE HANGERS/RODS, LATERAL SUPPORTS AND EXPANSION JOINTS ARE INCIDENTAL TO THE ROADWAY PAY ITEM FOR ABANDON 535' OF 8" UTILITY PIPE. ALL MATERIALS REMOVED ARE TO BE STOCKPILED AT A LOCATION DETERMINED BY GUC.

AFTER THE TEMPORARY 8" WL IS REMOVED CUT THE CASING AND 8" WL FLUSH WITH THE END BENT FACE. USE NON-SHRINKABLE GROUT TO FILL THE 8" WL AND 14" CASING FLUSH WITH THE END BENT FACE.

PLACE 20' SECTION OF PROP. 8" RJ DI WATER LINE THRU EXIST. 14" STEEL ENCASUREMENT.

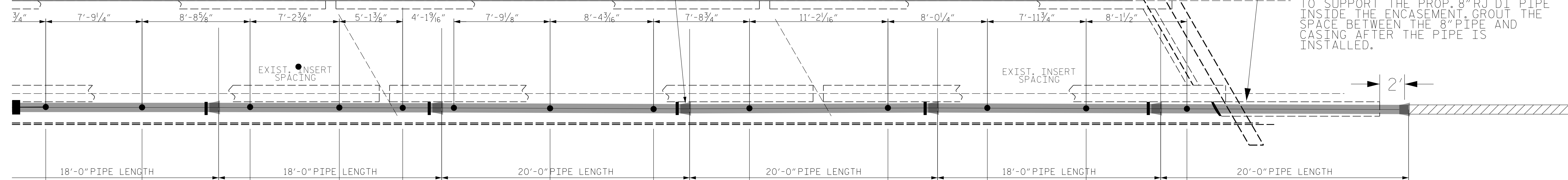
REMOVE EXIST. 14" ENCASUREMENT PIPE 2' BEYOND THE PROP. FIRST SECTION OF 20' - 8" WATER LINE THRU THE EXIST. END BENT. SEE UC PLANS FOR CONTINUATION OF THE 8" WATER LINE.

PLACE PROPOSED 8" RJ DI PIPE THRU EXIST. 14" ENCASUREMENT USE CASING SPACERS (2-PER JOINT) TO SUPPORT THE PROP. 8" RJ DI PIPE INSIDE THE ENCASUREMENT. GROUT THE SPACE BETWEEN THE 8" PIPE AND CASING AFTER THE PIPE IS INSTALLED.



PROP. 8" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE

60°-00'-00"
(TYP.)



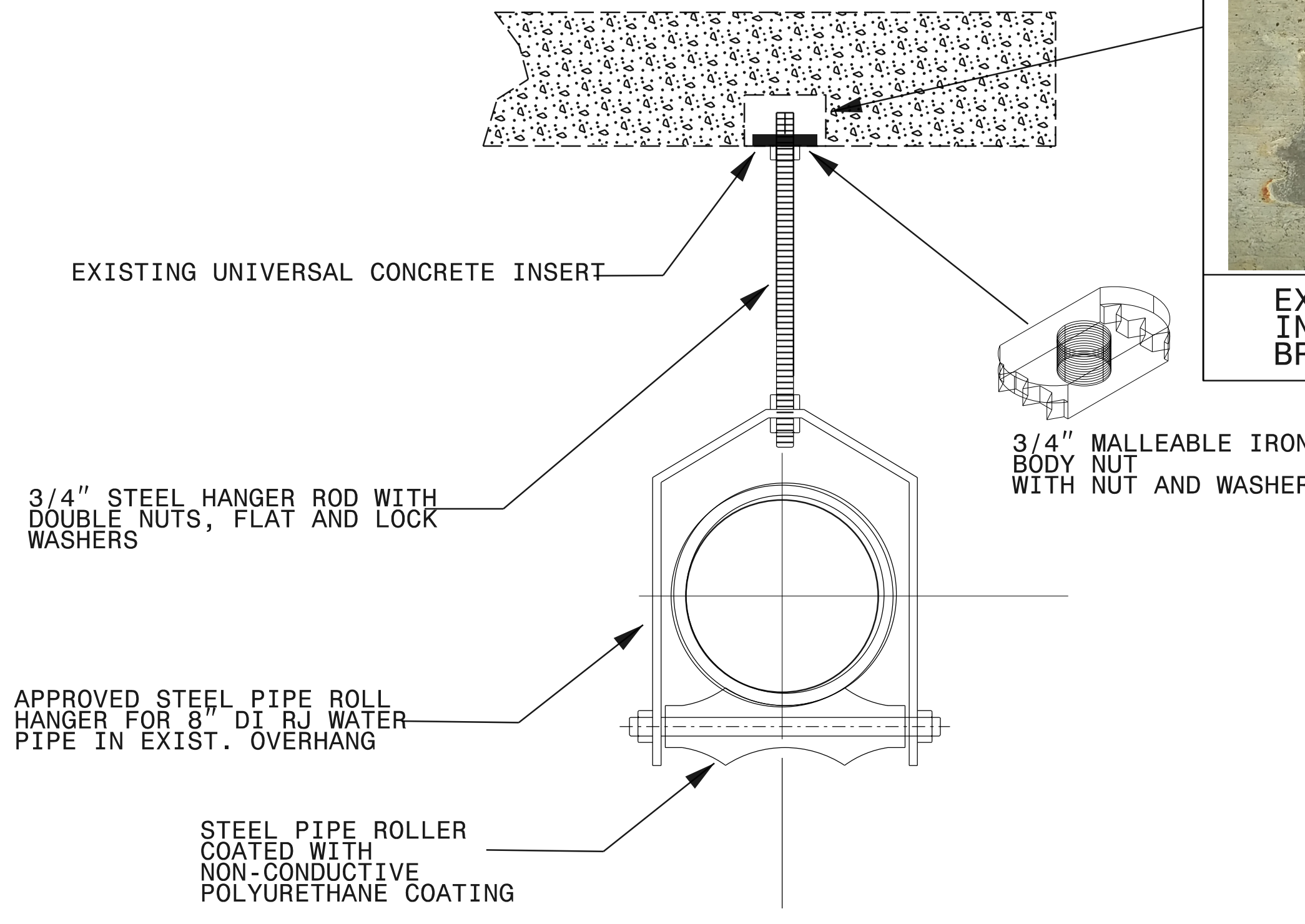
- PROP. PIPE HANGER AND EXIST. INSERT 57
- PROP. PIPE HANGER AND EXIST. INSERT 58
- PROP. LATERAL PIPE BRACING 25
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 59
- PROP. PIPE HANGER AND EXIST. INSERT 60
- PROP. PIPE HANGER AND EXIST. INSERT 61
- PROP. LATERAL PIPE BRACING 26
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 62
- PROP. PIPE HANGER AND EXIST. INSERT 63
- PROP. PIPE HANGER AND EXIST. INSERT 64
- PROP. LATERAL PIPE BRACING 27
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 65
- PROP. PIPE HANGER AND EXIST. INSERT 66
- PROP. LATERAL PIPE BRACING 28
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 67
- PROP. PIPE HANGER AND EXIST. INSERT 68
- PROP. LATERAL PIPE BRACING 29
1'-0" BELL OFFSET
- PROP. PIPE HANGER AND EXIST. INSERT 69

PROJECT NO. B-4786
PITT COUNTY
STATION: SB EX. BRIDGE

SHEET OF

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
EXIST. BRIDGE PLAN OF SPAN 8" WATER LINE ATTACHMENT					
SHEET NO. SU-9					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

PIPE HANGER ASSEMBLY SHALL BE PAINTED WITH ONE PRIME COAT AND ONE FINAL FLAT BLACK COAT ANY PAINT DAMAGED DURING THE INSTALLATION SHALL BE RECOATED HARDWARE SHALL BE CARBON STEEL ZINC PLATED



EXIST. CONCRETE INSERTS IN THE BRIDGE OVERHANG

3/4" STEEL HANGER ROD WITH DOUBLE NUTS, FLAT AND LOCK WASHERS

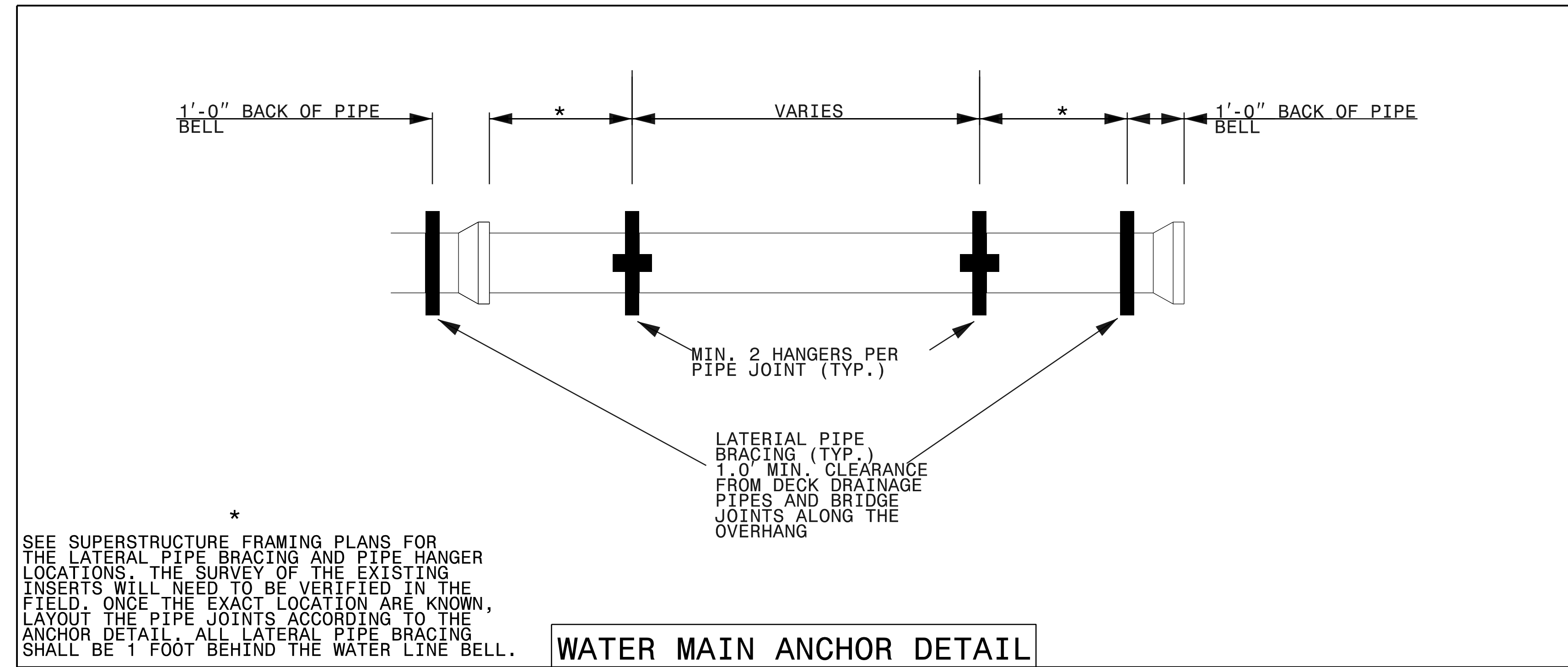
3/4" MALLEABLE IRON BODY NUT WITH NUT AND WASHER

APPROVED STEEL PIPE ROLL HANGER FOR 8" DI RJ WATER PIPE IN EXIST. OVERHANG

STEEL PIPE ROLLER COATED WITH NON-CONDUCTIVE POLYURETHANE COATING

PIPE ROLL TYPE HANGER FOR 8" DI RJ WATER MAIN

HANGER ASSEMBLY AND HARDWARE SHALL BE HOT DIPPED GALVANIZED



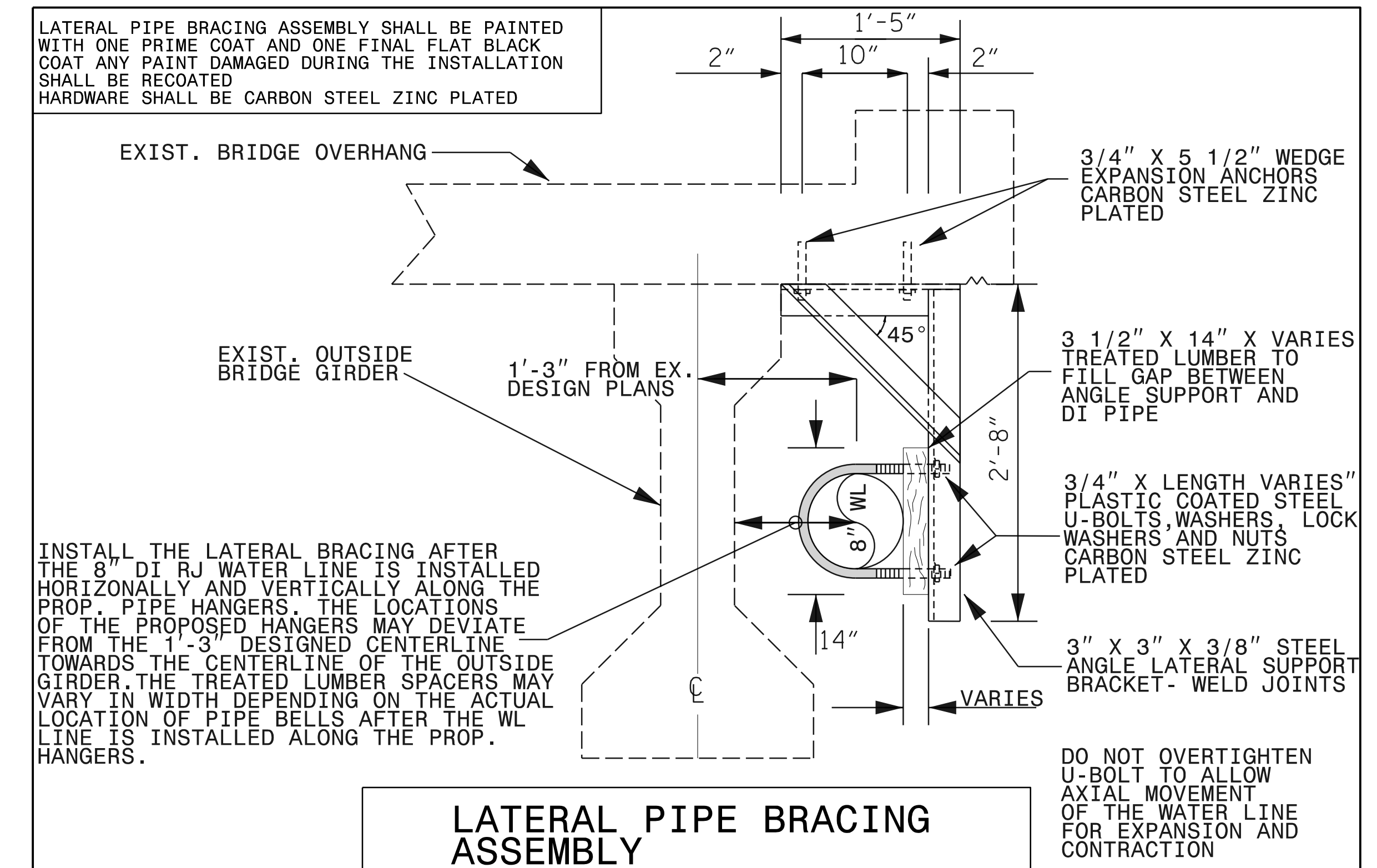
WATER MAIN ANCHOR DETAIL

* SEE SUPERSTRUCTURE FRAMING PLANS FOR THE LATERAL PIPE BRACING AND PIPE HANGER LOCATIONS. THE SURVEY OF THE EXISTING INSERTS WILL NEED TO BE VERIFIED IN THE FIELD. ONCE THE EXACT LOCATION ARE KNOWN, LAYOUT THE PIPE JOINTS ACCORDING TO THE ANCHOR DETAIL. ALL LATERAL PIPE BRACING SHALL BE 1 FOOT BEHIND THE WATER LINE BELL.

BILL OF MATERIALS FOR 8" WATER MAIN

NO.	UNITS	ITEMS
1	69 EA	PIPE HANGER ASSEMBLY (PAINTED)
2	29 EA	LATERAL PIPE BRACE ASSEMBLY (PAINTED)
3	562 LF	8" DUCTILE IRON RESTRAINED JOINT (D.I.R.J.) WATER PIPE, PRESSURE CLASS 350
4	2 EA	END PLUG FOR 8" DI WATER PIPE
5	1 CY	GROUT EXIST. ENCASEMENT AFTER PROPOSED 8" WATER LINE IS INSTALLED THRU END BENT
6	2 LOT	PAINT (AS REQUIRED)

THESE MATERIALS ARE ESTIMATED QUANTITIES ONLY AND ARE TO BE FURNISHED BY THE CONTRACTOR FOR THE ATTACHMENT TO THE EXIST. BRIDGE



LATERAL PIPE BRACING ASSEMBLY SHALL BE PAINTED WITH ONE PRIME COAT AND ONE FINAL FLAT BLACK COAT ANY PAINT DAMAGED DURING THE INSTALLATION SHALL BE RECOATED HARDWARE SHALL BE CARBON STEEL ZINC PLATED

INSTALL THE LATERAL BRACING AFTER THE 8" DI RJ WATER LINE IS INSTALLED HORIZONTALLY AND VERTICALLY ALONG THE PROP. PIPE HANGERS. THE LOCATIONS OF THE PROPOSED HANGERS MAY DEVIATE FROM THE 1'-3" DESIGNED CENTERLINE TOWARDS THE CENTERLINE OF THE OUTSIDE GIRDER. THE TREATED LUMBER SPACERS MAY VARY IN WIDTH DEPENDING ON THE ACTUAL LOCATION OF PIPE BELLS AFTER THE WL LINE IS INSTALLED ALONG THE PROP. HANGERS.

LATERAL PIPE BRACING ASSEMBLY

DO NOT OVERTIGHTEN U-BOLT TO ALLOW AXIAL MOVEMENT OF THE WATER LINE FOR EXPANSION AND CONTRACTION

PROJECT NO. B-4786
PITT COUNTY
 STATION: SB EX. BRIDGE
 SHEET OF

STATE OF NORTH CAROLINA
 PROFESSIONAL ENGINEER
 COREY D. BOUSQUET, P.E.
 23041
 3/22/2022

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HINDE ENGINEERING
 License No. C-2039
 401 Harrison Oaks Blvd., Suite 200, Cary, NC 27513

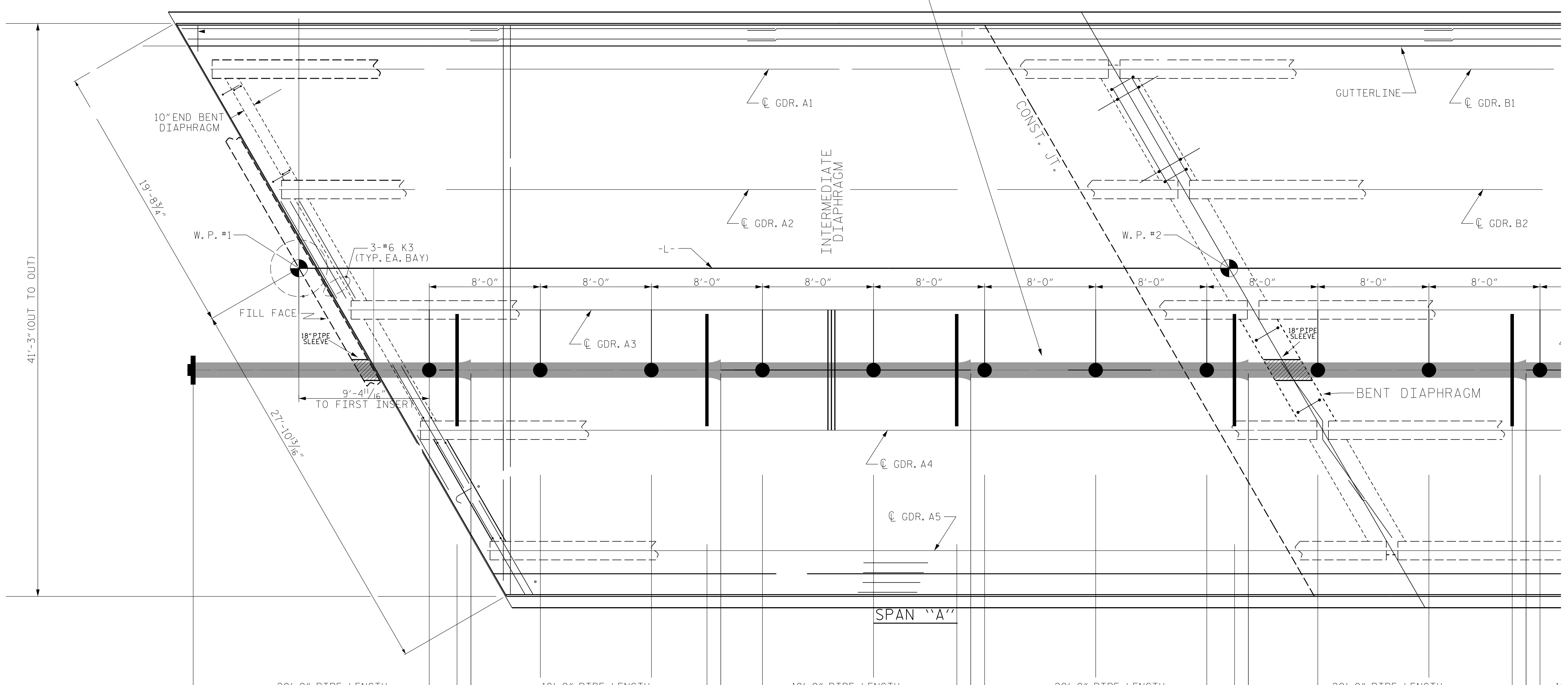
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

8" WATER LINE BRIDGE ATTACHMENT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			SU-10
2			4			

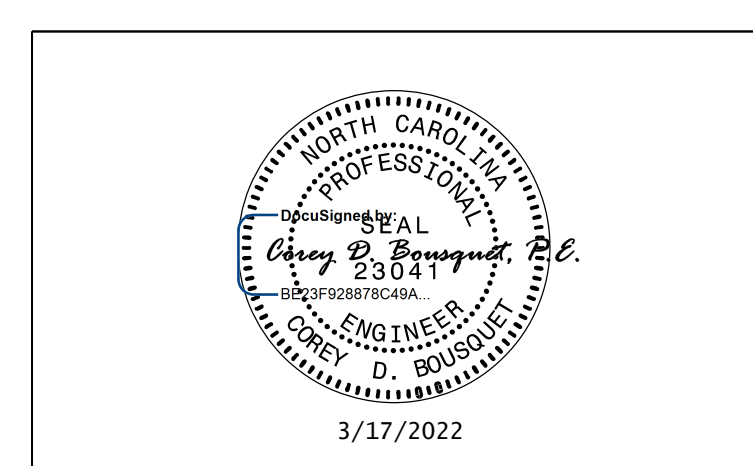
DRAWN BY : SBW DATE : 8-18
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 DESIGN ENGINEER OF RECORD: DATE :

PROP. 12" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



PROJECT NO. B-4786
PITT COUNTY
 STATION: 28+03.00 -L-

SHEET OF



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(LPB) - LATERAL PIPE BRACING

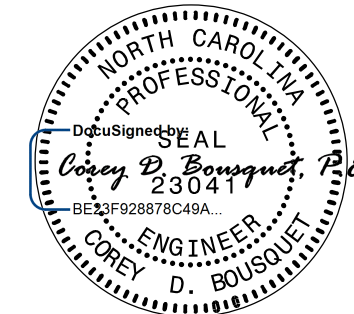
INTERMEDIATE DIAPHRAGM TO BE
REMOVED PRIOR TO PROPOSED
WATER LINE BEING INSTALLED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPAN
12" WATER LINE
ATTACHMENT

DRAWN BY : SBW DATE : 8-18
 CHECKED BY : DATE :
 DESIGN ENGINEER OF RECORD: DATE :

REVISIONS						SHEET NO.
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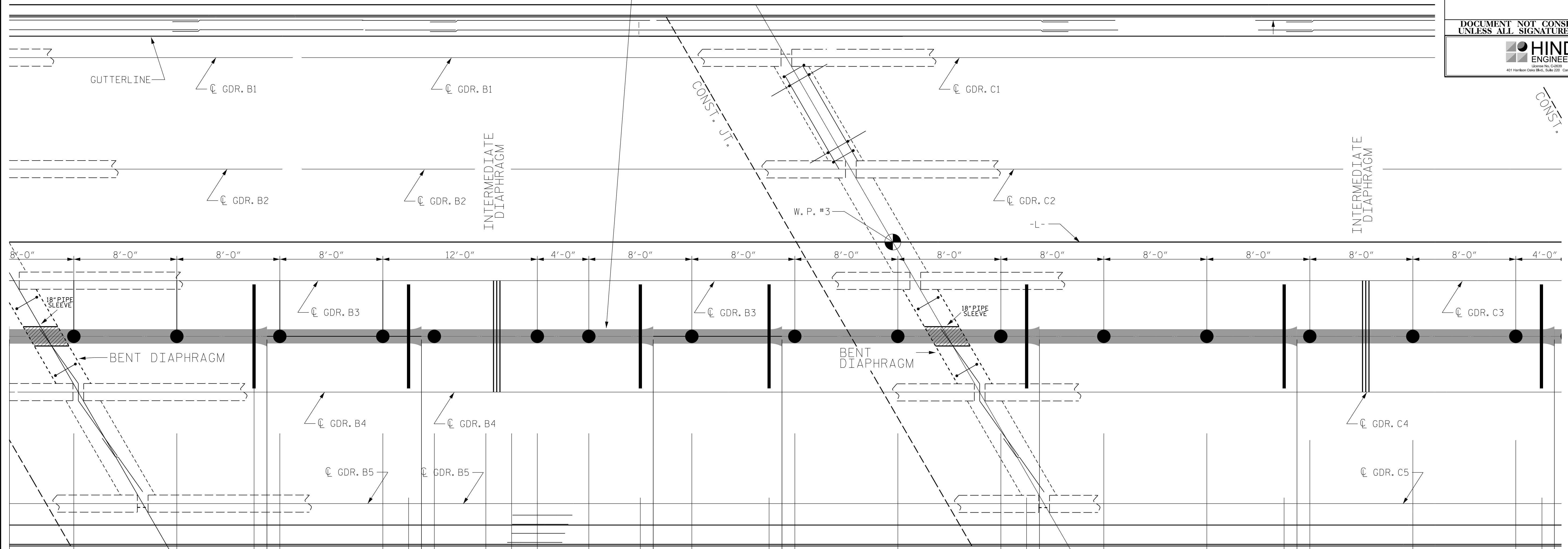


3/17/2022

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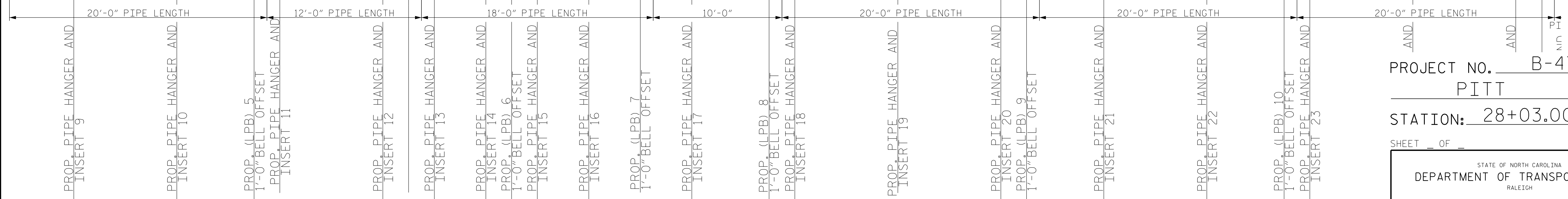


PROP. 12" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



SPAN "B"

SPAN "C"



(LPB) - LATERAL PIPE BRACING
INTERMEDIATE DIAPHRAGM TO BE
REMOVED PRIOR TO PROPOSED
WATER LINE BEING INSTALLED

PROJECT NO. B-4786
PITT COUNTY
STATION: 28+03.00 -L-

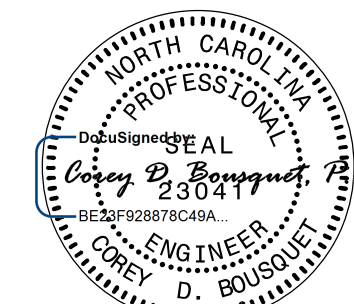
SHEET _ OF _

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPAN 12" WATER LINE ATTACHMENT

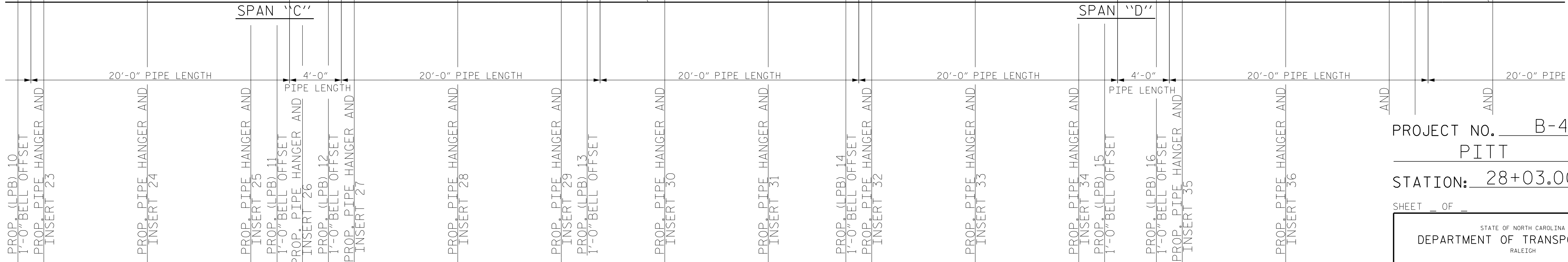
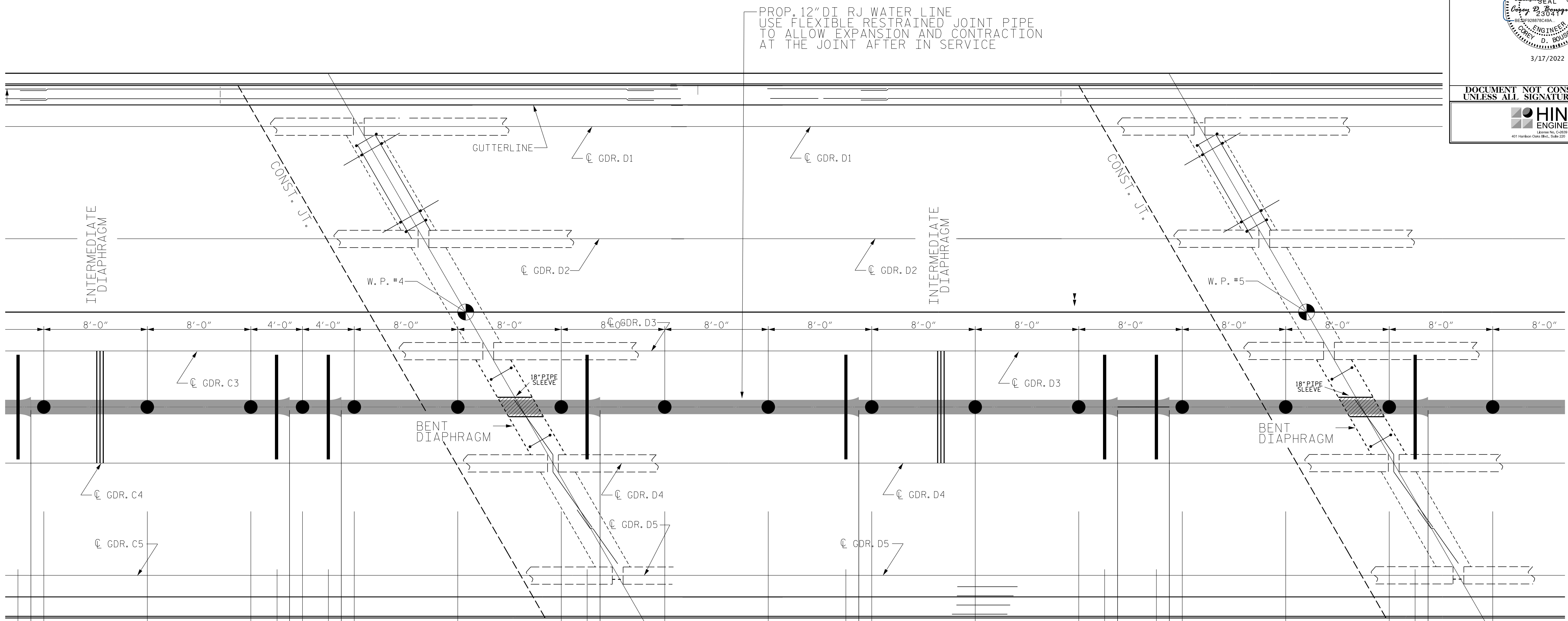
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DRAWN BY : SBW DATE : 8-18
CHECKED BY : DATE :
DESIGN ENGINEER OF RECORD: DATE :



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(LPB) - LATERAL PIPE BRACING
INTERMEDIATE DIAPHRAGM TO BE REMOVED PRIOR TO PROPOSED WATER LINE BEING INSTALLED

PROJECT NO. B-4786
PITT COUNTY
STATION: 28+03.00 -L-

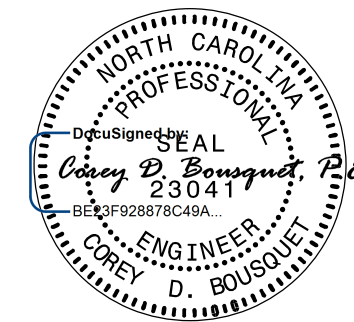
SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN OF SPAN
12" WATER LINE
ATTACHMENT

DRAWN BY : SBW DATE : 8-18
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DESIGN ENGINEER OF RECORD: DATE :

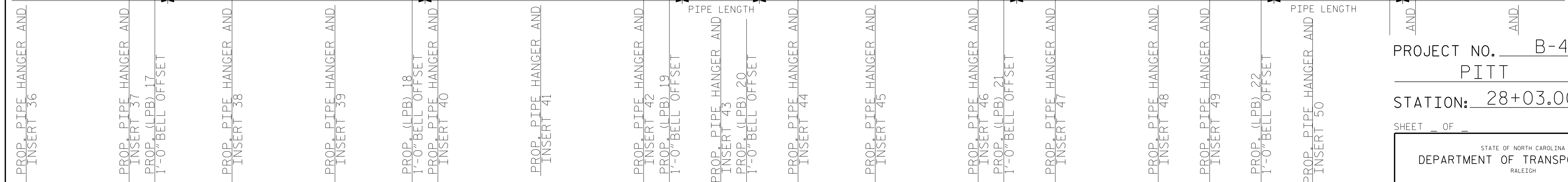
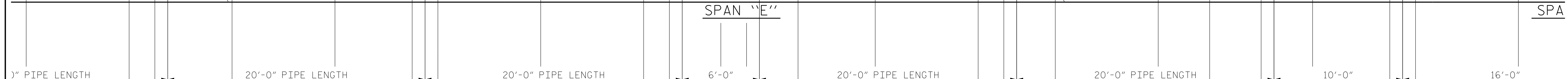
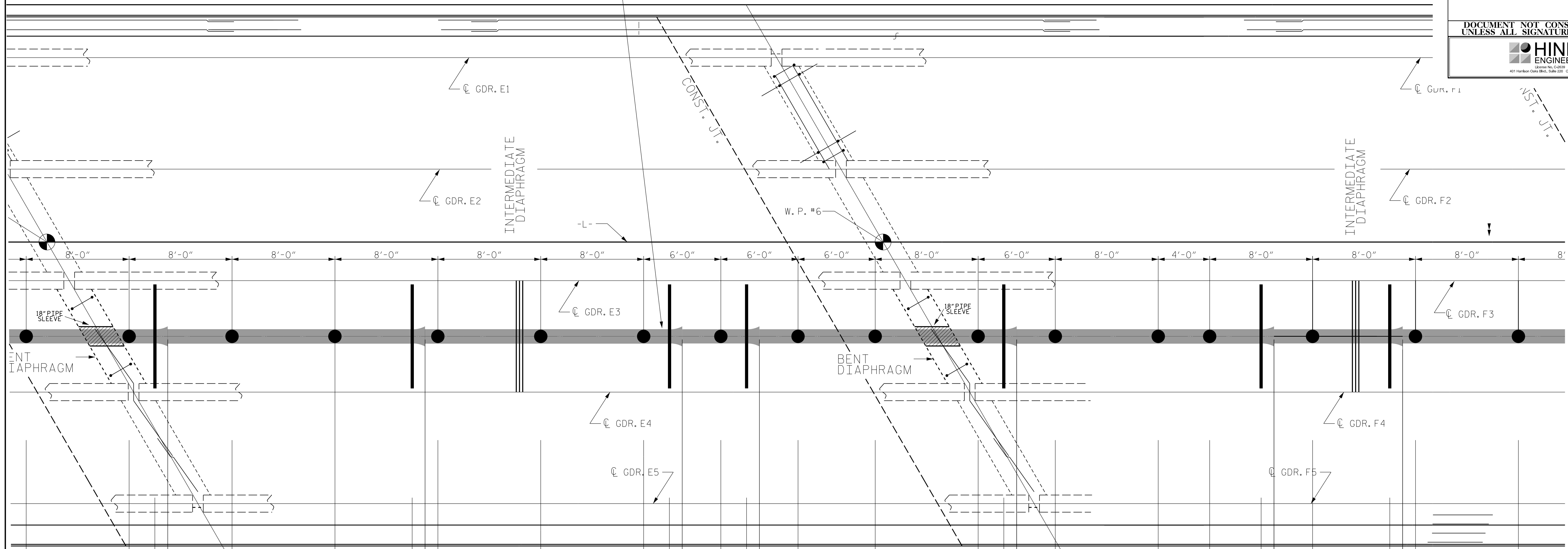
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2			4				

PROP. 12" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



3/17/2022

DOCUMENT NOT CONSIDERED FINAL
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(LPB) - LATERAL PIPE BRACING
INTERMEDIATE DIAPHRAGM TO BE
REMOVED PRIOR TO PROPOSED
WATER LINE BEING INSTALLED

PROJECT NO. B-4786
PITT COUNTY
STATION: 28+03.00 -L-

SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN OF SPAN
12" WATER LINE
ATTACHMENT

DRAWN BY : SBW DATE : 8-18
CHECKED BY : DATE :
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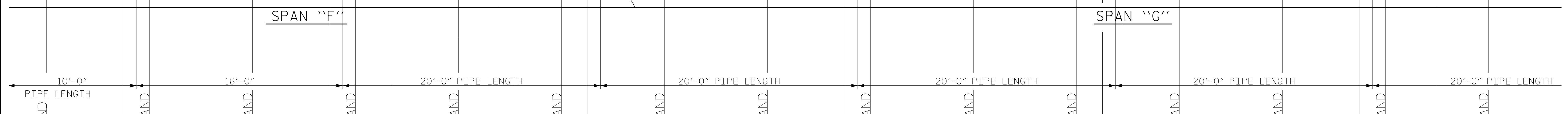
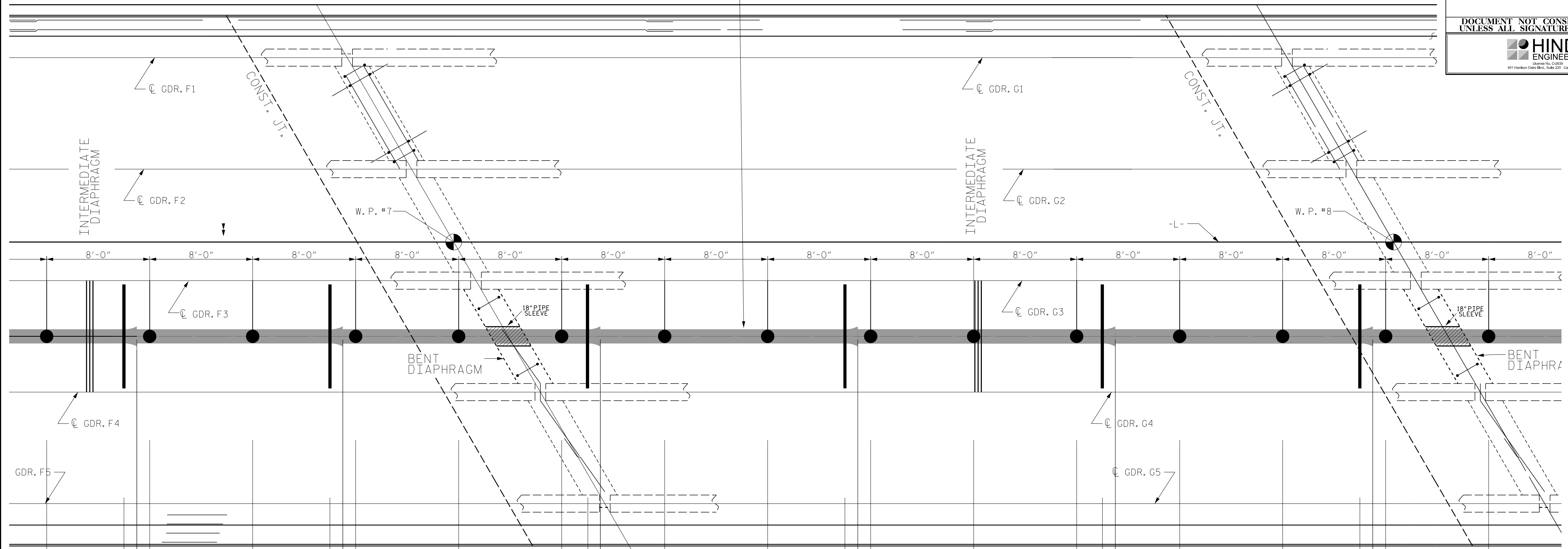
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PROP. 12" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



3/17/2022

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



(LPB) - LATERAL PIPE BRACING
INTERMEDIATE DIAPHRAGM TO BE
REMOVED PRIOR TO PROPOSED
WATER LINE BEING INSTALLED

PROJECT NO. B-4786
PITT COUNTY
STATION: 28+03.00 -L-

SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPAN 12" WATER LINE ATTACHMENT

DRAWN BY : SBW DATE : 8-18
CHECKED BY : DATE :
DESIGN ENGINEER OF RECORD: DATE :

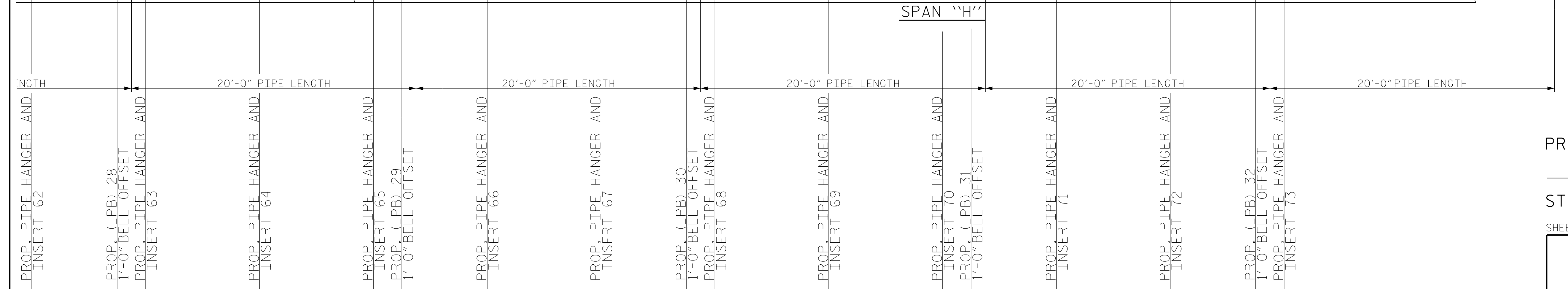
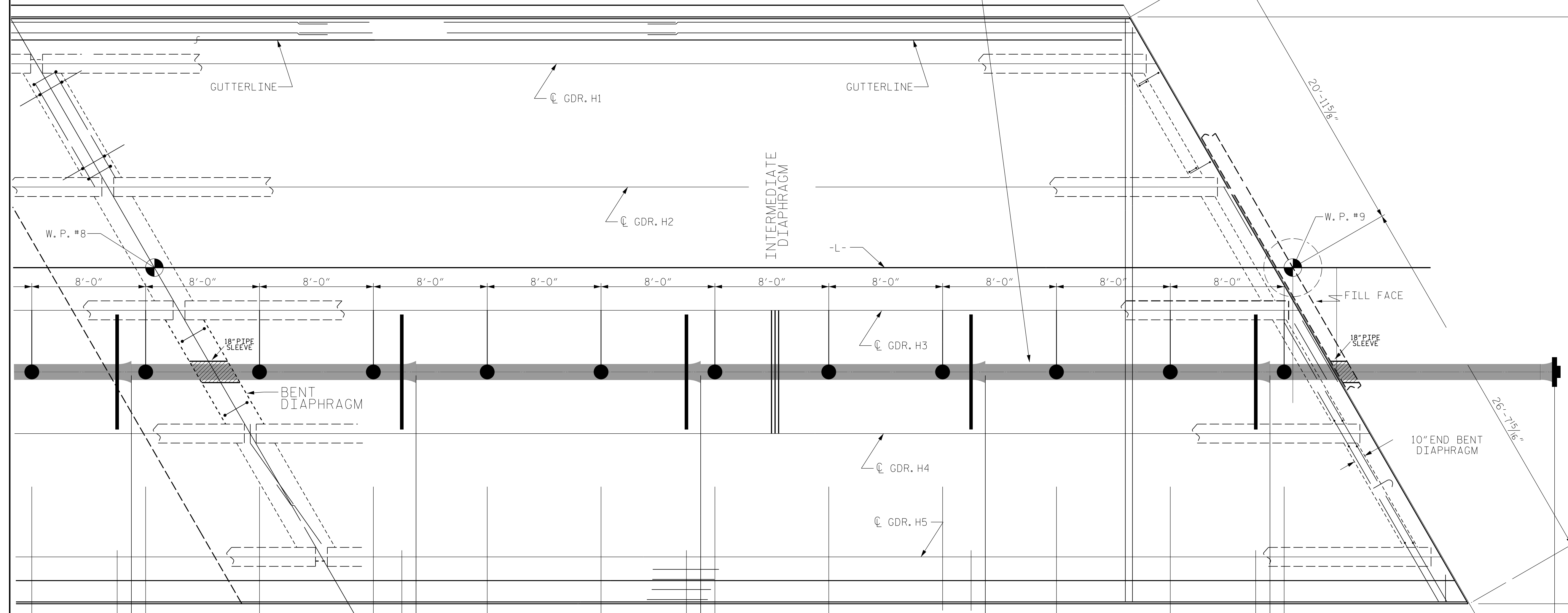
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			SU-16
2			4			

PROP. 12" DI RJ WATER LINE
USE FLEXIBLE RESTRAINED JOINT PIPE
TO ALLOW EXPANSION AND CONTRACTION
AT THE JOINT AFTER IN SERVICE



3/17/2022

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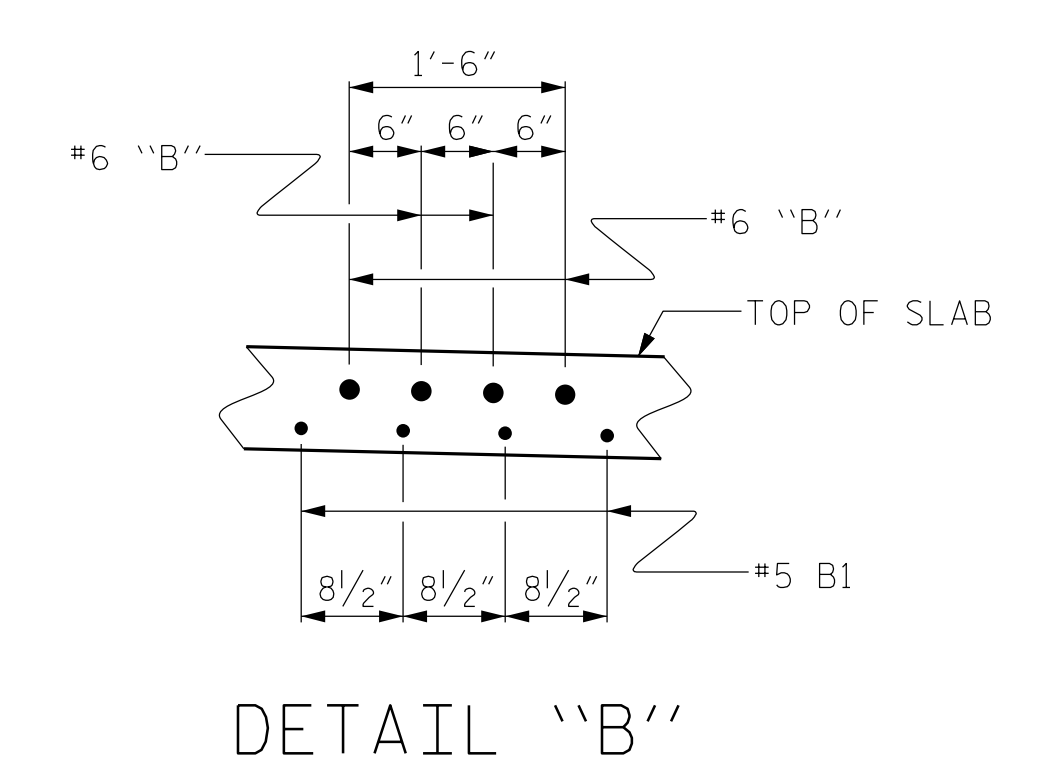
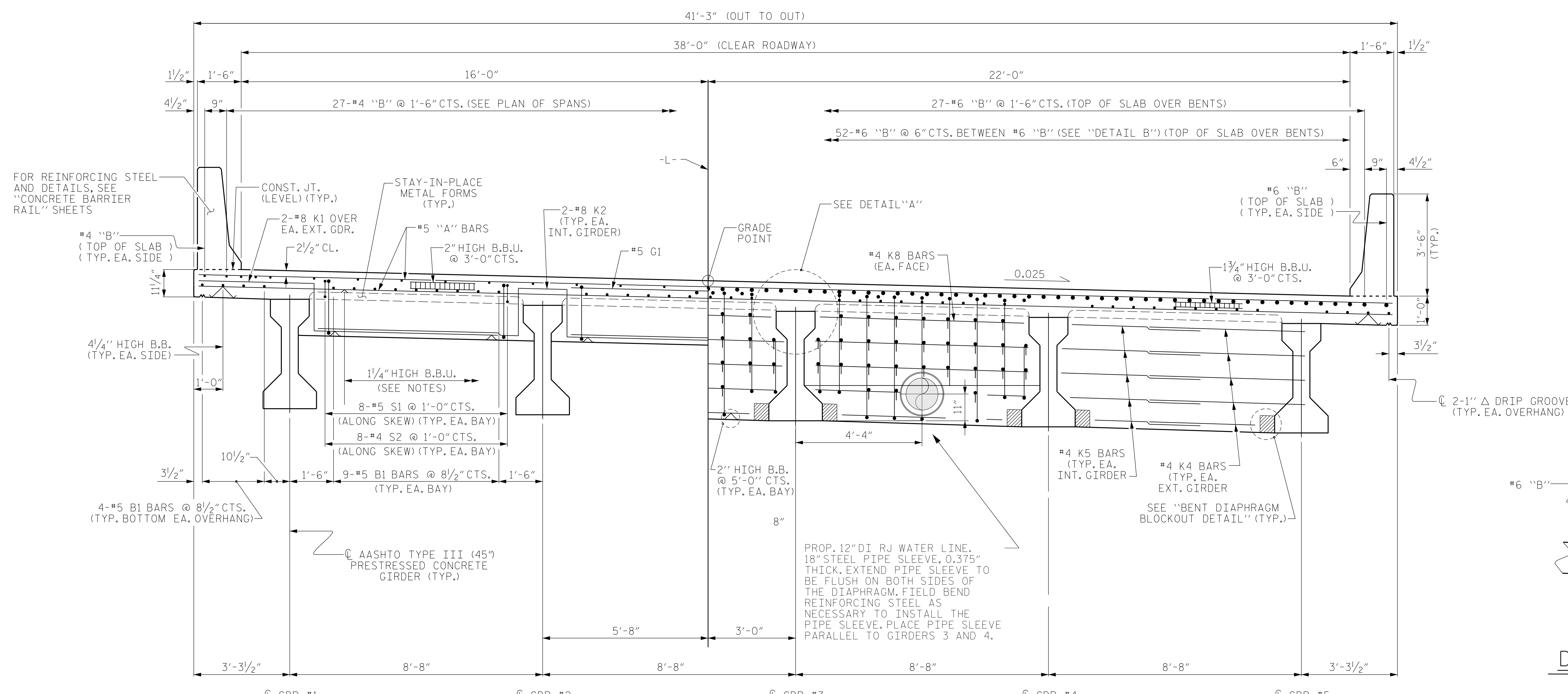
(LPB) - LATERAL PIPE BRACING
INTERMEDIATE DIAPHRAGM TO BE
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WATER LINE BEING INSTALLED

PROJECT NO. B-4786
PITT COUNTY
STATION: 28+03.00 -L-

SHEET OF

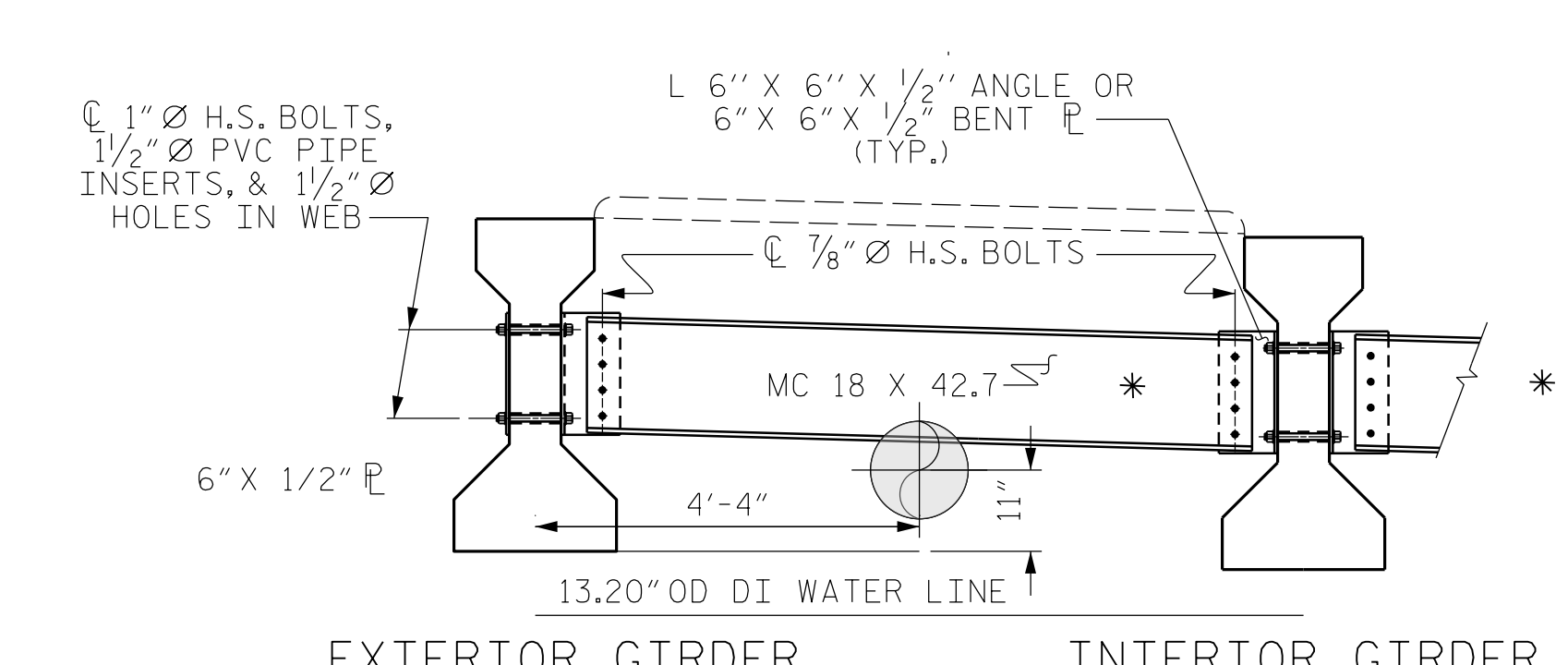
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF SPAN 12" WATER LINE ATTACHMENT					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
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DRAWN BY : SBW DATE : 8-18
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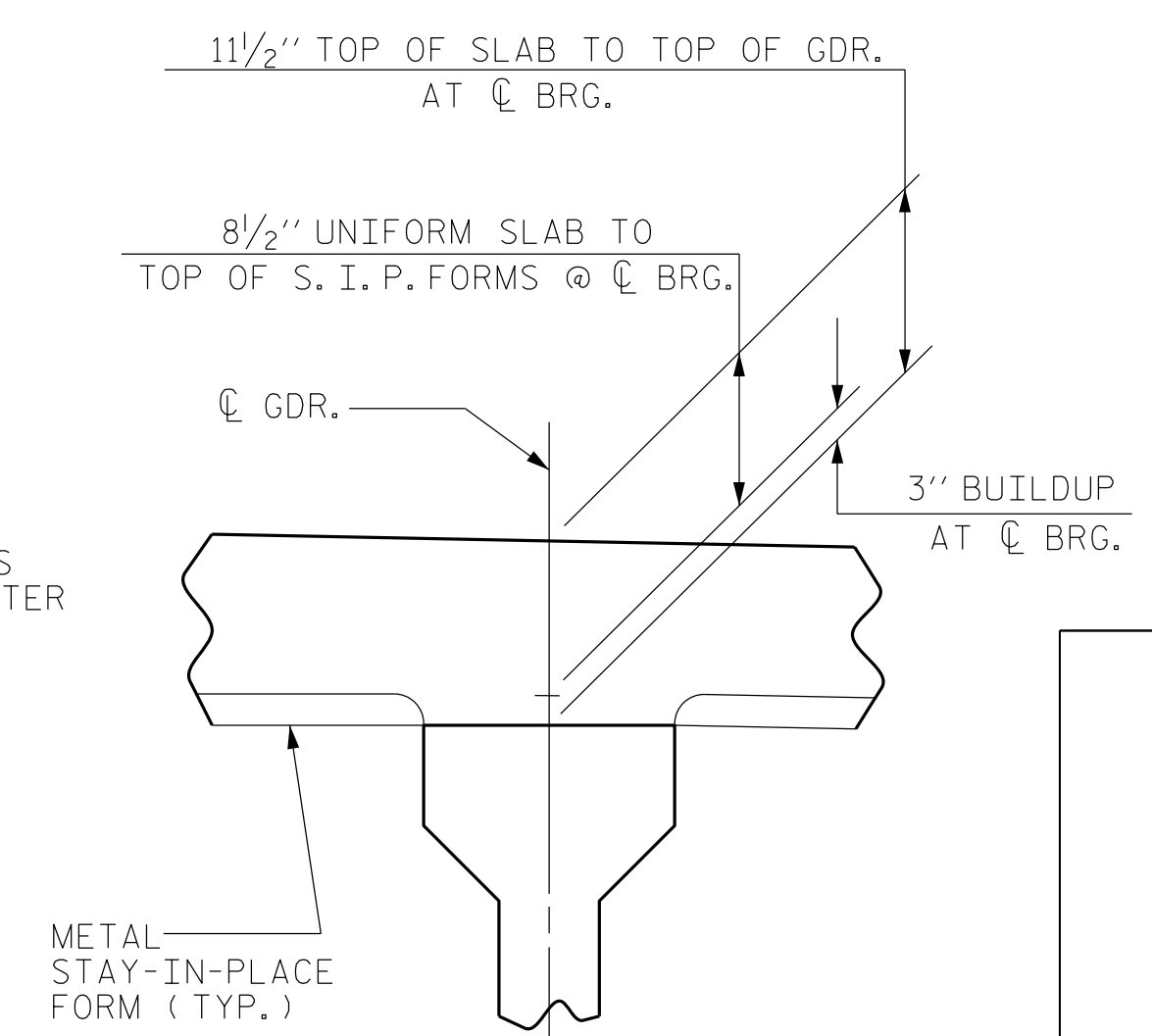


PARTIAL TYPICAL SECTION
(SHOWING END BENT DIAPHRAGMS)

PARTIAL TYPICAL SECTION
(SHOWING CONTINUOUS BENT DIAPHRAGMS)



PARTIAL TYPICAL SECTION
(SHOWING INTERMEDIATE DIAPHRAGMS)
(FOR DETAILS, SEE "INTERMEDIATE STEEL DIAPHRAGMS FOR TYPE III PRESTRESSED CONCRETE GIRDERS" SHEET.)



DETAIL 'A'

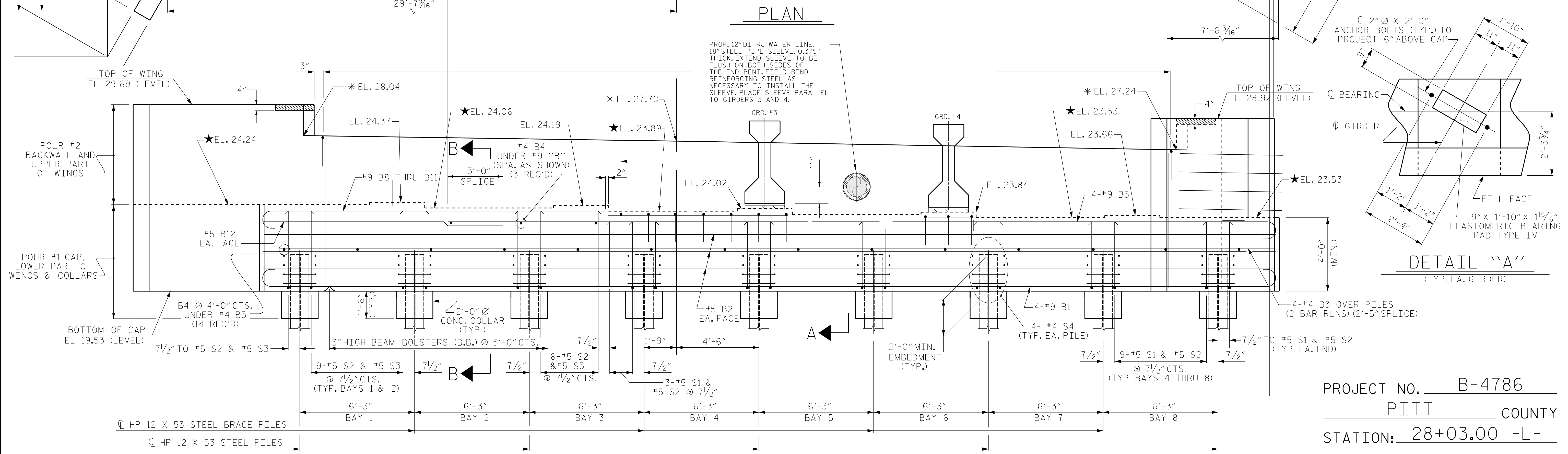
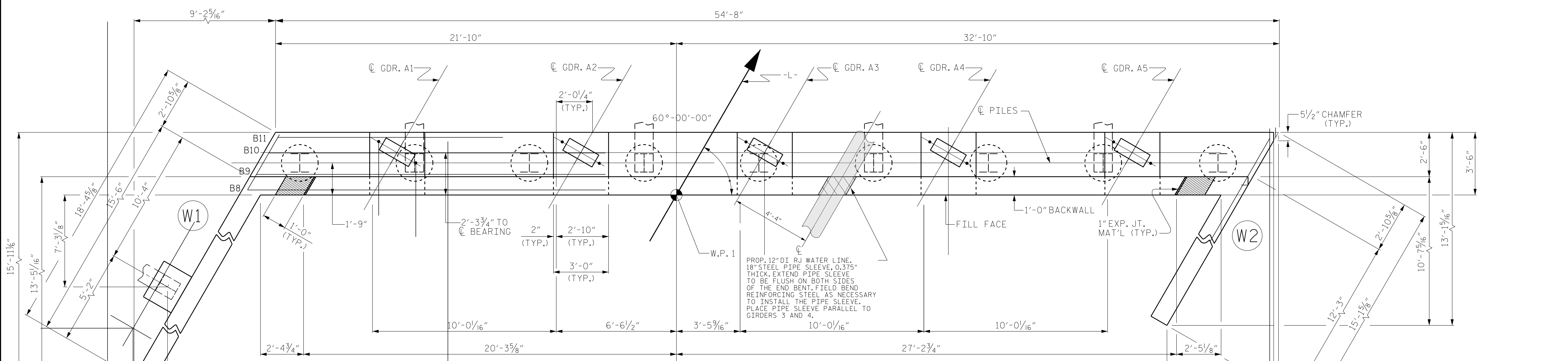
PROJECT NO. B-4786
PITT COUNTY
 STATION: 28+03.00 -L-
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 TYPICAL SECTION
 12" WATER LINE
 ATTACHMENT**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SU-18
1			3			TOTAL SHEETS
2			4			

DRAWN BY : SBW DATE : 8-18
 CHECKED BY : MGC DATE : 11-18
 DESIGN ENGINEER OF RECORD: TBE DATE : -



PROJECT NO. B-4786
 PITT COUNTY
 STATION: 28+03.00 -L-

SHEET 1 OF 3

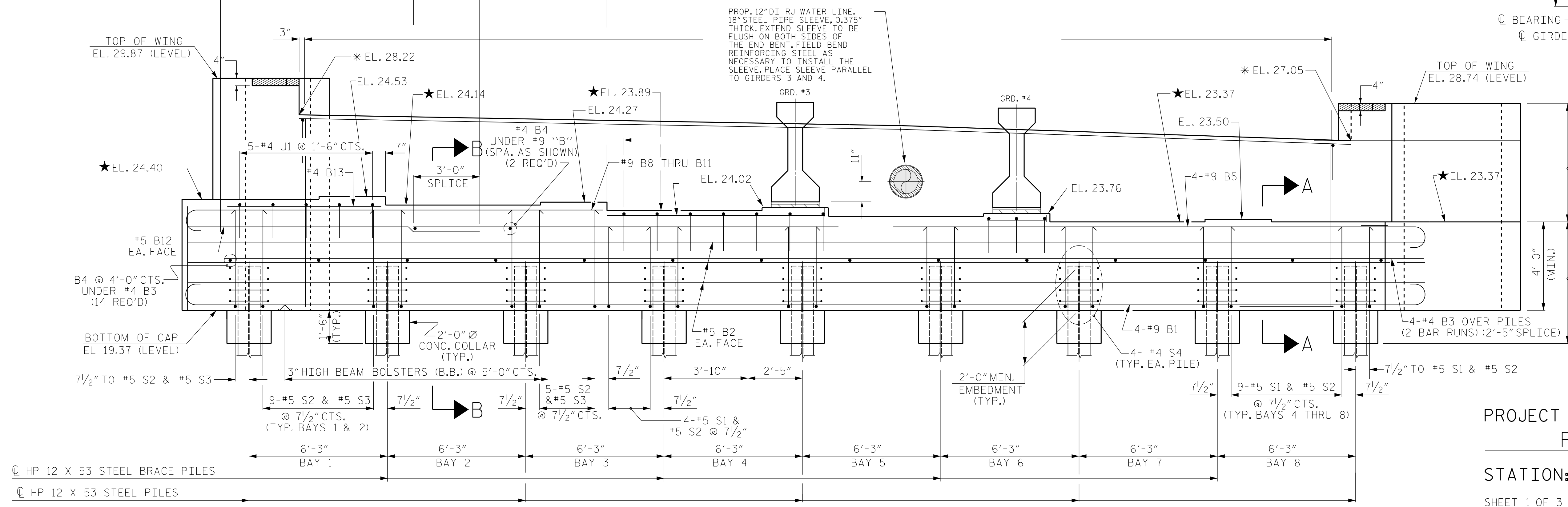
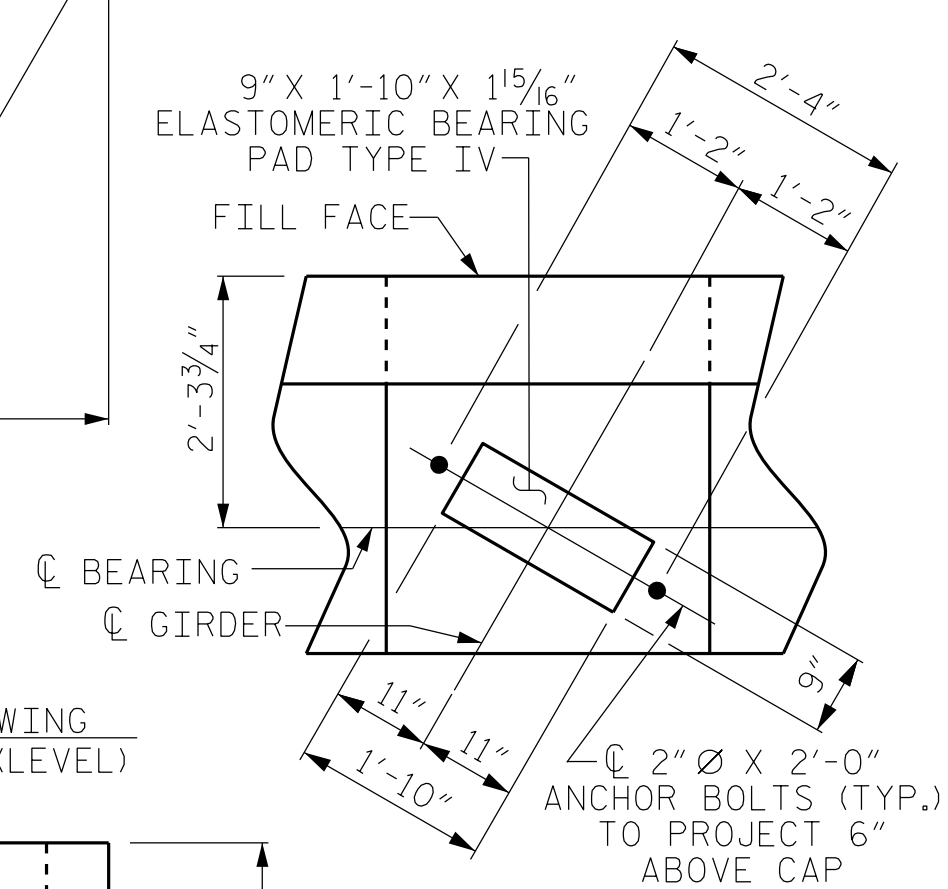
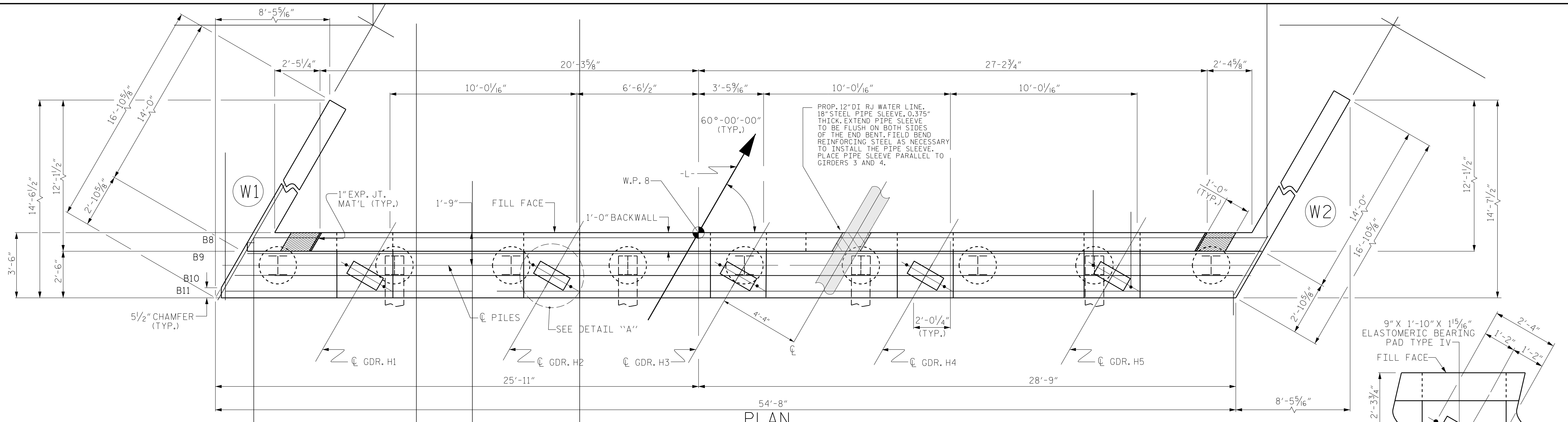
DRAWN BY : S. B. WILLIAMS DATE : 6-19
 CHECKED BY : MGC DATE : 6-19
 DESIGN ENGINEER OF RECORD: TBE DATE : -

17-MAR-2022 15:32
 *****DCN*****
 *****USERNAME*****

STATE OF NORTH CAROLINA
 PROFESSIONAL ENGINEER
 Cary D. Bousquet, P.E.
 License No. 23041
 3/17/2022

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE END BENT 1 12" WATER LINE ATTACHMENT					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					SU-19
TOTAL SHEETS					4

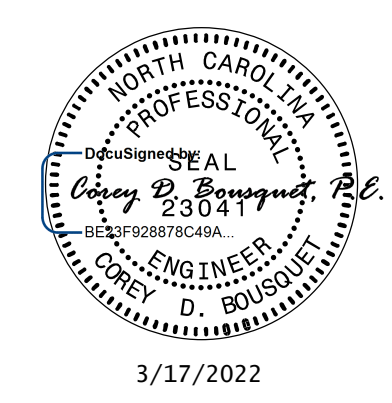
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PROJECT NO. B-4786
 PITT COUNTY
 STATION: 28+03.00 -L-
 SHEET 1 OF 3

ELEVATION

★ FOR LOCATION OF ELEVATIONS BETWEEN BRIDGE SEAT BUILD UPS, SEE SECTION A-A, SHEET 3 OF 3.
 * THIS ELEVATION TAKEN ON FILL FACE OF BACKWALL.

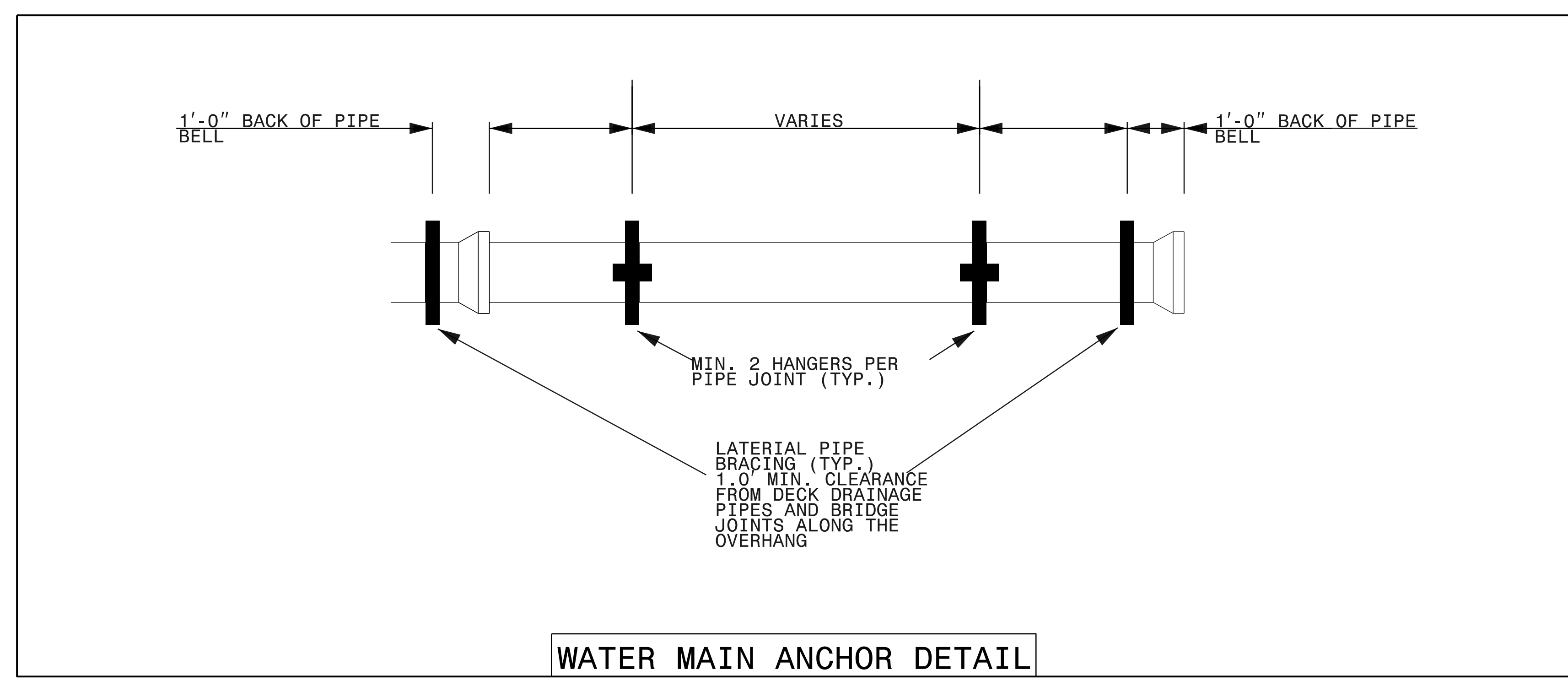
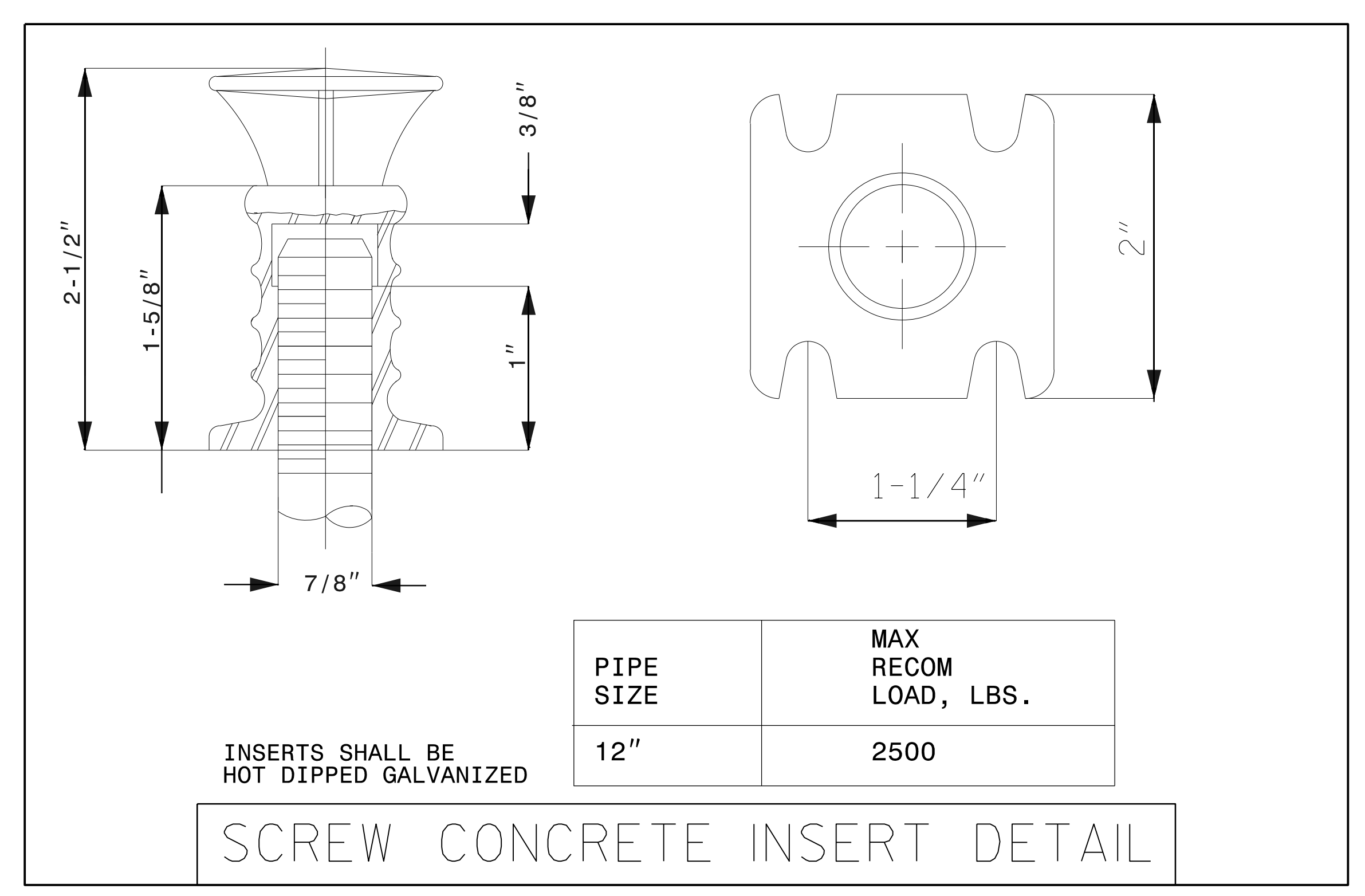
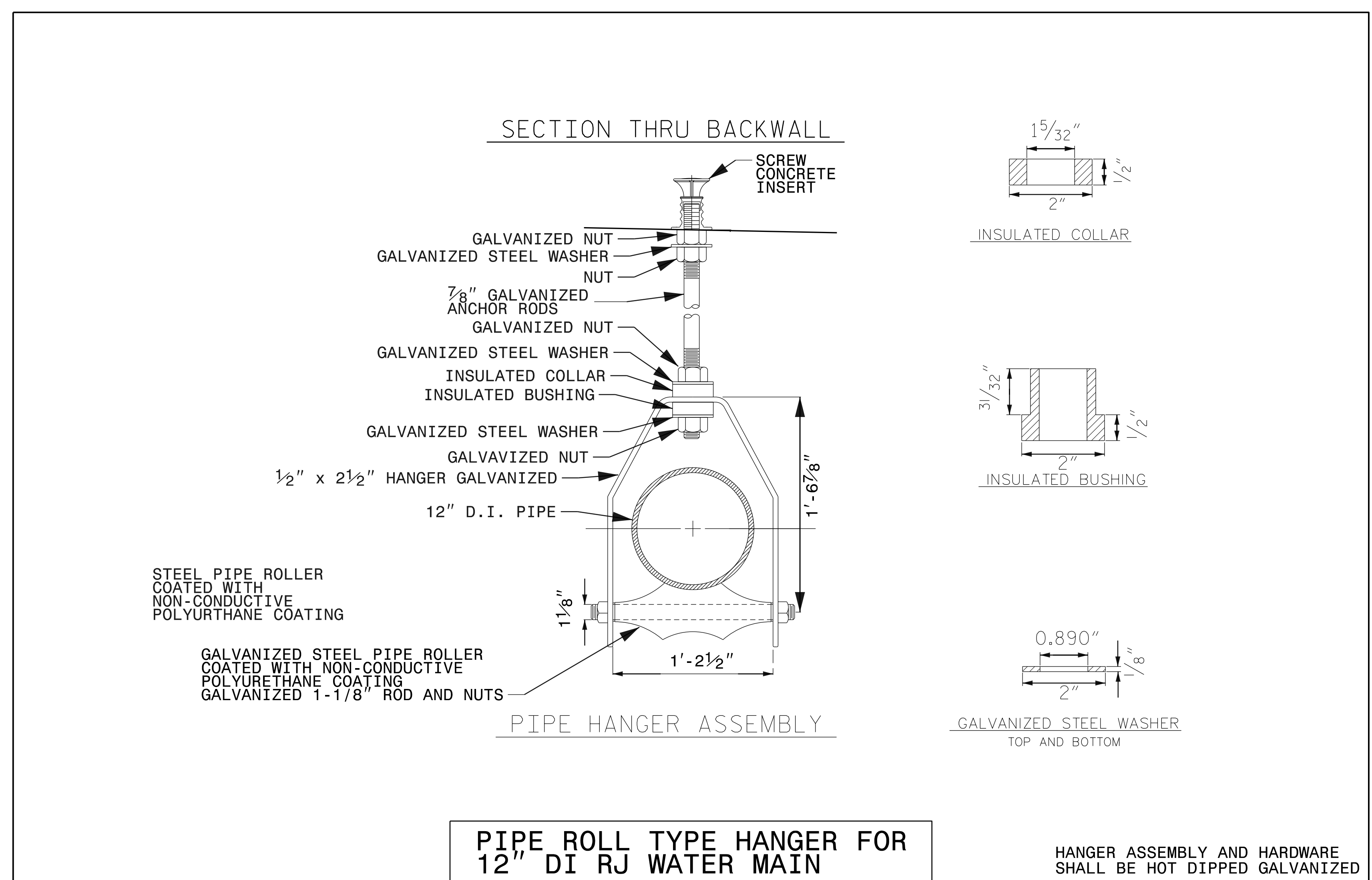


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 END BENT 2
 12" WATER LINE
 ATTACHMENT

DRAWN BY : S. B. WILLIAMS DATE : 6-19
 CHECKED BY : MGC DATE : 7-19
 DESIGN ENGINEER OF RECORD: TBE DATE : -



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SU-20
1			3			TOTAL SHEETS
2			4			



PROJECT NO. B-4786
PITT COUNTY
 STATION: PROPOSED BRIDGE
 SHEET OF

3/22/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

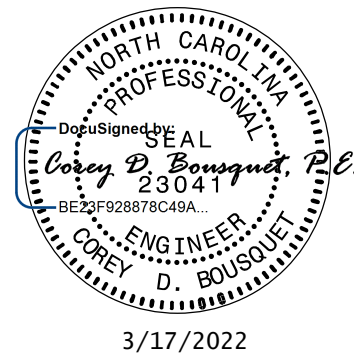
12" WATER LINE BRIDGE ATTACHMENT DETAILS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					
REVISIONS					
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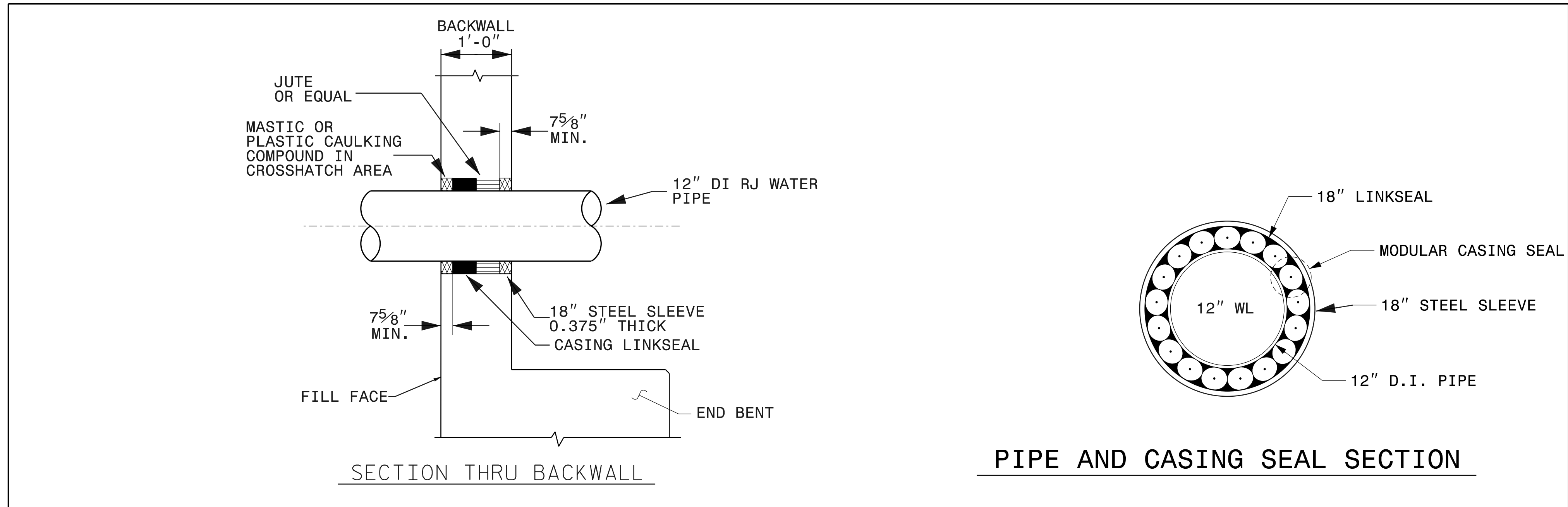
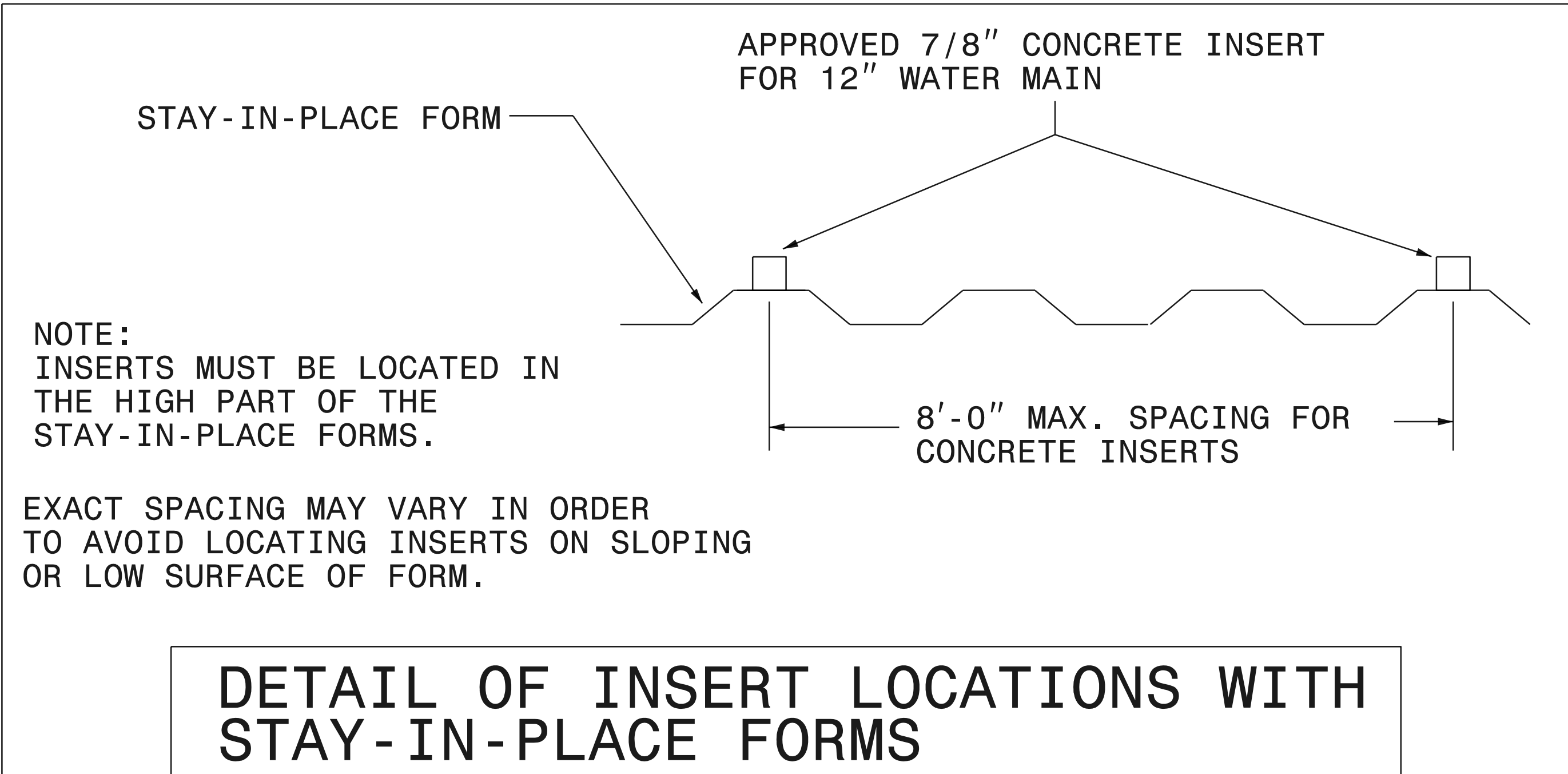
401 Harrison Oaks Blvd., Suite 200, Cary, NC 27513

SHEET NO. SU-21

DRAWN BY : SBW DATE : 8-18
 CHECKED BY : DATE :
 DESIGN ENGINEER OF RECORD: DATE :



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PROJECT NO. B-4786
PITT COUNTY
 STATION PROPOSED BRIDGE
 SHEET OF

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

12" WATER LINE BRIDGE
 ATTACHMENT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SU-22
1			3			
2			4			

