



Stantec
2127 Ayrley Town Boulevard, Suite 300
Charlotte, North Carolina 28273-3555
Tel: (704) 329-0900
www.stantec.com
License No. F-0672

TOWN OF SMITHFIELD

JOHNSTON COUNTY, NORTH CAROLINA



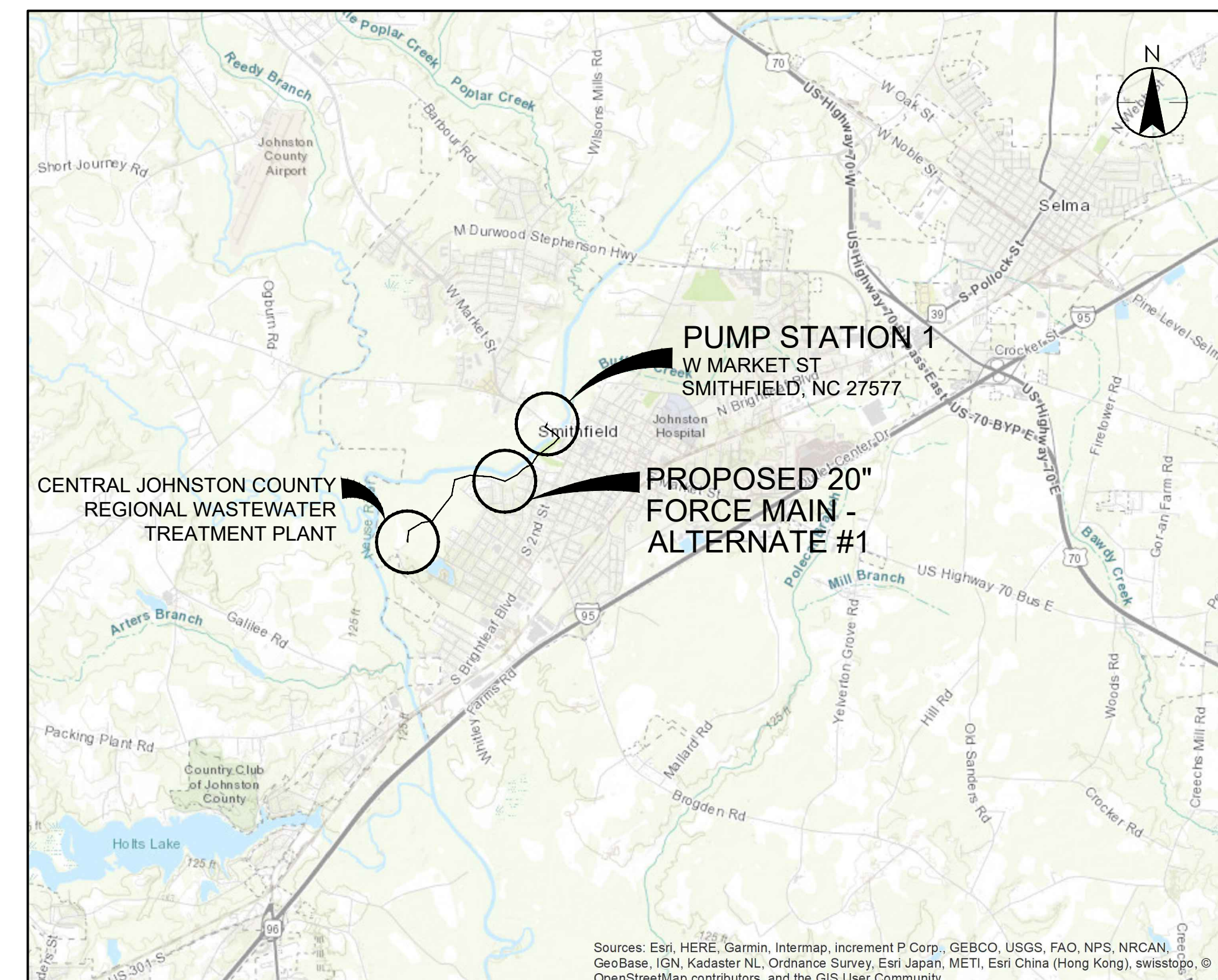
PUMP STATION #1

FORCE MAIN IMPROVEMENTS -

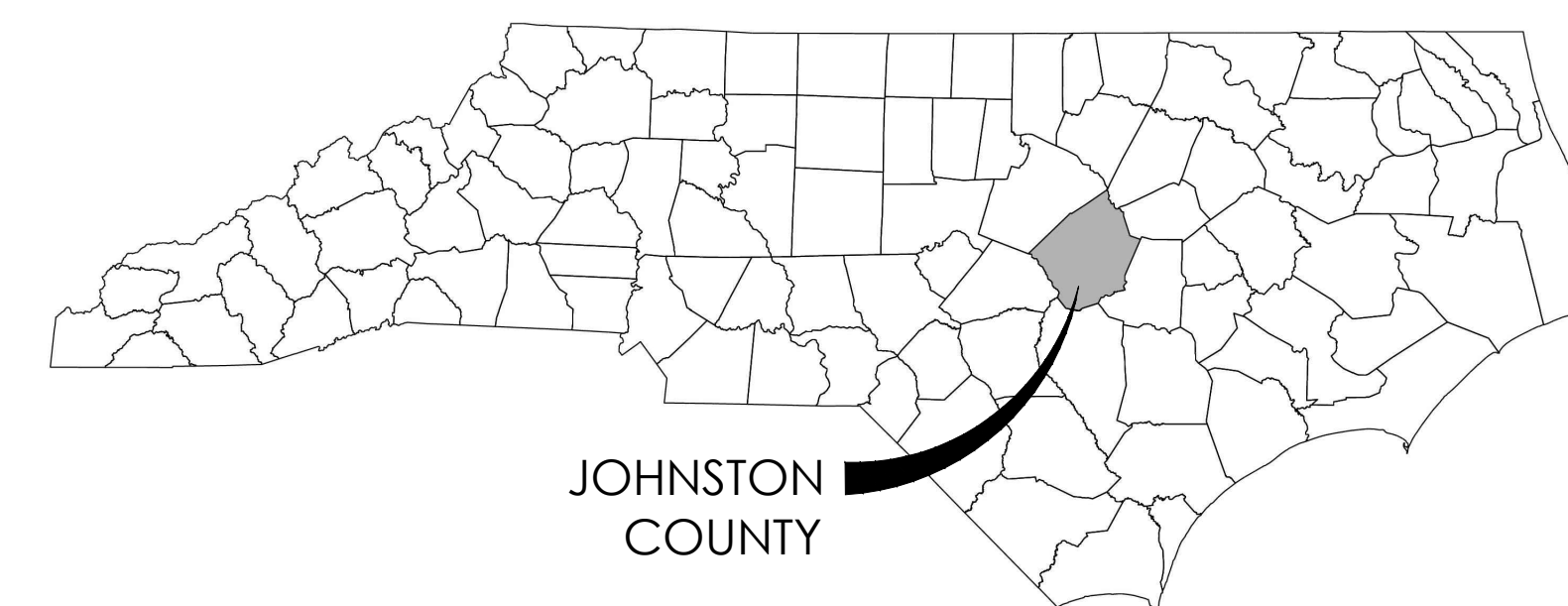
ALTERNATE #1

FINAL DRAWINGS - FOR BIDDING

AUGUST 2025
DWI No.: SRP - W - ARP - 0063
STANTEC PROJECT No.: 175568555

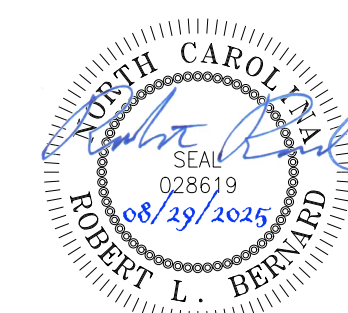


VICINITY MAP
NOT TO SCALE



JOHNSTON
COUNTY

KEY MAP
NOT TO SCALE



Know what's below.
Call before you dig.

1. **OWNER:** TOWN OF SMITHFIELD
ADDRESS: 350 EAST MARKET STREET SMITHFIELD NC 27577
PHONE: (919) 934-2116
2. **DESIGN ENGINEER:** STANTEC CONSULTING SERVICES, INC.
ADDRESS: 801 JONES FRANKLIN ROAD SUITE 300 RALEIGH NC 27606
PHONE: (919) 851-6866
3. **SURVEYOR:** STANTEC CONSULTING SERVICES, INC.
ADDRESS: 801 JONES FRANKLIN ROAD SUITE 300 RALEIGH NC 27606
PHONE: (919) 851-6866
4. **ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.**

THE PURPOSE OF THIS PROJECT IS TO REDUCE SANITARY SEWER OVERFLOWS AND ULTIMATELY PROTECT THE SAFETY AND HEALTH OF SMITHFIELD'S CITIZENS AND PROTECT THE ENVIRONMENT. THIS PROJECT WILL HELP PROVIDE ADDITIONAL CAPACITY AND UPDATED INFRASTRUCTURE ALONG THE NEUSE RIVER AND RESIDENTS IN THE PUMP STATION #1 SEWER BASIN.

THE PROJECT GOALS INCLUDE REMOVING THE EXISTING FLOW FROM THE PUMP STATION (PS1) IN SMITHFIELD, NC FROM THE EXISTING JOHNSTON COUNTY FORCE MAIN BY CONSTRUCTING A NEW FORCE MAIN FROM THE EXISTING STATION TO THE JOHNSTON COUNTY REGIONAL WASTEWATER FACILITY. THE REMOVAL OF THE EXISTING PS1 FLOWS BY THIS PROJECT WILL INCREASE THE CAPACITY OF THE EXISTING FORCE MAIN. FUTURE PROJECTS ARE EXPECTED TO IMPROVE THE EXISTING PUMP STATION INFRASTRUCTURE.

THE MANIFOLD WITH THE EXISTING JOHNSTON COUNTY FORCE MAIN WILL BE REMOVED AND A NEW FORCE MAIN WILL BE INSTALLED FROM PS1 TO THE CENTRAL JOHNSTON COUNTY REGIONAL WASTEWATER FACILITY (CJWWTF). A NEW 20-INCH FORCE MAIN WILL LEAVE THE PS1 SITE AND CONNECT TO THE EXISTING 12-INCH CROSSING OF THE NEUSE RIVER. ONCE ACROSS THE RIVER, A NEW 20-INCH FORCE MAIN WILL BE INSTALLED TO THE PLANT INSIDE THE COUNTY'S EXISTING EASEMENT. THE FORCE MAIN FROM THE WEST SMITHFIELD PUMP STATION WILL MANIFOLD TO THE NEW 20-INCH FORCE MAIN AT THE RIVER CROSSING. THE EXISTING BUFFALO CREEK PUMP STATION FORCE MAIN WILL BE REDIRECTED TO THE PROPOSED 20" FORCE MAIN TO DIVERT WASTEWATER FLOW TO THE CJWWTF.

1. CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH TOWN OF SMITHFIELD AND JOHNSTON COUNTY STANDARD SPECIFICATIONS.
2. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. ALL SHORING SHALL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS PART 1926, SUBPART P, AS AMENDED TO DATE.
4. IF THE PROPOSED SEWER MAIN IS INSTALLED WITHIN 12" IN ANY DIRECTION (VERTICALLY OR HORIZONTALLY) FROM A GAS MAIN, THEN THE CONTRACTOR SHALL CALL THE LOCAL UTILITY DIRECTLY AND INFORM THEM.
5. THE CONTRACTOR SHALL USE EROSION CONTROL MEASURES AS NEEDED PER NDEQ.
6. IF ADDITIONAL WORK SPACE IS NEEDED, AN ENCROACHMENT IS TO BE AGREED UPON BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER IN WRITING.
7. CONTRACTOR SHALL LOCATE AND PROTECT ALL PROPERTY MONUMENTS. IF CORNERS ARE DISTURBED THEY SHALL BE REPLACED BY A NC PLS AT CONTRACTORS EXPENSE.

1. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT ALL SAFETY REGULATIONS SHALL BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
2. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE NCDOT AND APPLICABLE LOCAL AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION WITHIN STATE OR CITY RIGHT OF WAYS.
3. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
4. CONTRACTOR SHALL PROVIDE AND MAINTAIN HIS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH HIS HEALTH AND SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB CONTRACTORS AND SUB CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.
5. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926 SUBPART P.
6. THE STANDARDS SET FORTH IN THE CURRENT EDITION OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMIT.
7. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION. ALL NORTH CAROLINA AMENDMENTS SHALL APPLY.
8. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTORS INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATION.
9. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 72 HOURS NOTICE TO NC811 PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.

ABAND	ABANDONED			REINF	REINFORCE (D) (ING) (MENT)
ABBRV	ABBREVIATION	GND	GROUND	REPL	REPLACE
ABC	AGGREGATE BASE COURSE	GR	GRADE	REQ	REQUIRE
ADDL	ADDITIONAL			REQD	REQUIRED
ADJ	ADJUSTABLE	HDPE	HIGH DENSITY POLYETHYLENE	REV	REVISION
AGGR	AGGREGATE	HDWL	HEADWALL	RT	RIGHT
ALT	ALTERNATE	HORIZ	HORIZONTAL	R/W	RIGHT OF WAY
ALUM	ALUMINUM	HT	HEIGHT		
AMT	AMOUNT			S	SOUTH
APPD	APPROVED	ID	INSIDE DIAMETER	SAN	SANITARY
APPROX	APPROXIMATE	IN	INCH	SECT	SECTION
ASPH	ASPHALT	INV	INVERT	SF	SQUARE FOOT
		INV EL	INVERT ELEVATION	SHT	SHEET
BDRY	BOUNDARY	IP	IRON PIPE	SIM	SIMILAR
BKGD	BACKGROUD			SPEC	SPECIFICATION
BL	BASE LINE	LB	POUND	SQ	SQUARE
BM	BENCHMARK	LF	LINEAR FOOT	SQ FT	SQUARE FOOT
BOC	BACK OF CURB	LFT	LEFT	SQ IN	SQUARE INCH
BOT	BOTTOM	LG	LONG, LENGTH	SQ YD	SQUARE YARD
BRG	BEARING	LIN	LINEAR	SSMH	SANITARY SEWER MANHOLE
BTWN	BETWEEN	LP	LIGHT POLE	SST, SSTL	STAINLESS STEEL
				STA	STATION
CB	CATCH BASIN	MATL	MATERIAL	STD	STANDARD
C/C	CENTER TO CENTER	MAX	MAXIMUM	STL	STEEL
CI	CAST IRON, CURB INLET	MFR	MANUFACTURER	STM	STORM
CL	CENTER LINE	MH	MANHOLE	STN	STONE
CMU	CONCRETE MASONRY UNIT	MIN	MINIMUM, MINUTE	STRUCT	STRUCTURAL
CO	CLEANOUT	MISC	MISCELLANEOUS	SWR	SEWER
CONC	CONCRETE			SYM	SYMBOL
CONN	CONNECTION	N	NORTH	SYMM	SYMMETRICAL
CONST	CONSTRUCTION	NA	NOT APPLICABLE		
CONT	CONTINUOUS	#, NO	NUMBER	TBA	TO BE ABANDONED
CTR	CENTER	NTS	NOT TO SCALE	TBM	TEMPORARY BENCHMARK
				TBR	TO BE REMOVED
D	DEPTH	OC	ON CENTER	TCE	TEMPORARY CONSTRUCTION
DAT	DATUM	OD	OUTSIDE DIAMETER	EASEMENT	
D.B.	DEED BOOK	OPNG	OPENING	TEMP	TEMPORARY, TEMPERATURE
DBL	DOUBLE	ORIG	ORIGINAL	THK	THICKNESS
DEMO	DEMOLITION			THRU	THROUGH
DET	DETAIL	P.B.	PLAT BOOK	TOC, TC	TOP OF CONCRETE, TOP OF CURB
DI	DUCTILE IRON, DROP INLET	PERM	PERMANENT	TOW	TOP OF WALL
DIA	DIAMETER	PERP	PERPENDICULAR	TYP	TYPICAL
DIM	DIMENSION	PG	PAGE		
DIST	DISTANCE	PI	POINT OF INTERSECTION	UON	UNLESS OTHERWISE NOTED
DN	DOWN	PK	PK NAIL	UTIL	UTILITY
DR	DRAIN	PL	PROPERTY LINE		
DWG	DRAWING	PREFAB	PREFABRICATED	VAR	VARIES
		PRELIM	PRELIMINARY	VC	VITRIFIED CLAY PIPE
EA	EACH	PROJ	PROJECT	VERT	VERTICAL
ELEC	ELECTRIC (AL)	PROP	PROPERTY		
EL, ELEV	ELEVATION	PT	PRESSURE TREATED	W	WEST
ENGR	ENGINEER	PVC	POLYVINYL CHLORIDE	W/	WITH
EP	EDGE OF PAVEMENT			W/O	WITHOUT
EQ	EQUAL	QTY	QUANTITY		
ESMT	EASEMENT	QUAL	QUALITY		
EX, EXIST	EXISTING				
		R	RADIUS		
FF	FINISHED FLOOR	RC	REINFORCED CONCRETE		
FFE	FINISHED FLOOR ELEVATION	RCP	REINFORCED CONCRETE PIPE		
FLEX	FLEXIBLE	REBAR	REINFORCING STEEL BARS		
FT	FOOT, FEET	REF	REFERENCE		

EXISTING FEATURES		PROPOSED FEATURES	
	EXISTING IRON PIN		BASE LINE AND STATION
	EXISTING EASEMENT		INDEX CONTOUR
	FENCE LINE		INTERMEDIATE CONTOUR
	FIBER OPTIC LINE		LIMITS OF DISTURBANCE
	FIRE HYDRANT		PERMANENT SEWER EASEMENT
	FORCE MAIN		SANITARY SEWER FORCE MAIN
	GAS LINE		SILT FENCE
	INDEX CONTOUR		SILT FENCE OUTLET
	INTERMEDIATE CONTOUR		ROCK CHECK DAM
	LIGHT POLE		TEMPORARY CONSTRUCTION EASEMENT
	OVERHEAD ELECTRIC		TEMPORARY CONSTRUCTION ENTRANCE
	POWER POLE		TREE PROTECTION FENCE
	PROPERTY/RIGHT-OF-WAY LINE		TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY/BOUNDARY PARK INNER		PROPOSED PERMANENT EASEMENT
	SANITARY SEWER LINE		
	SANITARY SEWER MANHOLE		
	SIGN		
	STORM DRAIN LINE		
	TREE		
	TREELINE		
	WATER LINE		
	WATER METER		
	WATER VALVE		
	MINIMUM SETBACK		
	WETLAND		
	STREAM		
	EXISTING EASEMENT		

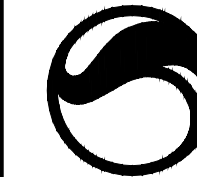
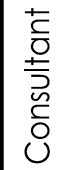
SYMBOL		DESCRIPTION
	NORTH ARROW	
	DETAIL CALLOUT	
	SECTION CALLOUT	

[illegible]

Client/Project TOWN OF SMITHFIELD	PUMP STATION # 1 AND FORCE MAIN IMPROVEMENTS				Smithfield, NC
	Project No.: 175568555				
	File Name: 68555_G003_SYMBOLS_FWI				
	Scale: AS NOTED				
JR Dwn.		JR Dign.		RLB Chkd.	
				2025.08.29 YYYY.MM.DD	
Title GENERAL NOTES, SYMBOLS AND ABBREVIATIONS					
Revision:0		Sheet:		of X	
Drawing No.					

G-003

1. THE PROPOSED FORCE MAIN CONTRACT WORK (AS "ALTERNATE #1") SHALL BEGIN DOWNSTREAM OF THE 12" PLUG VALVE (IDENTIFIED AS 12" PLUG VALVE "A" ON THIS SHEET) AND BLIND FLANGE. THE CONTRACTOR SHALL INCLUDE 12" PLUG VALVE "A" AND BLIND FLANGE AS PART OF THE BASE BID FOR THE PUMP STATION #1 IMPROVEMENTS CONTRACT.
2. THE CONTRACTOR SHALL REMOVE THE BLIND FLANGE DOWNSTREAM OF PLUG VALVE "A" AND CONNECT THE PROPOSED FORCE MAIN TO PLUG VALVE "A" UPON COMPLETION AND INSPECTION OF THE PROPOSED FORCE MAIN AND ONCE APPROVED BY THE OWNER AND ENGINEER.



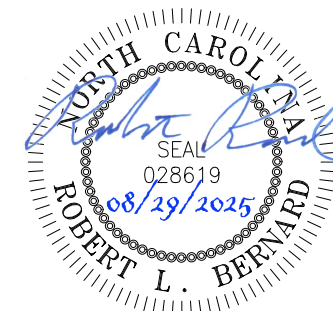
Stantec
521 E Morehead Street, Suite 425
Charlotte, North Carolina 28202
Tel: (704) 329-0900
www.stantec.com

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any dimensions not reported to Stantec, or any dimensions that are not clearly indicated on the drawing, shall be the responsibility of the Contractor. Stantec's reproduction of drawings for any purpose other than that authorized by Stantec is forbidden.

License No. F-0672

[illegible]

Permit/Sea



Client/Project
TOWN OF SMITHFIELD

PUMP STATION #1 AND FORCE MAIN IMPROVEMENTS

Smithfield NC

Project No.: 175568555

File Name: 68555 C100-C113.F

Scale: AS NOTED

JR	JR	RLB	2025.08.29
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title

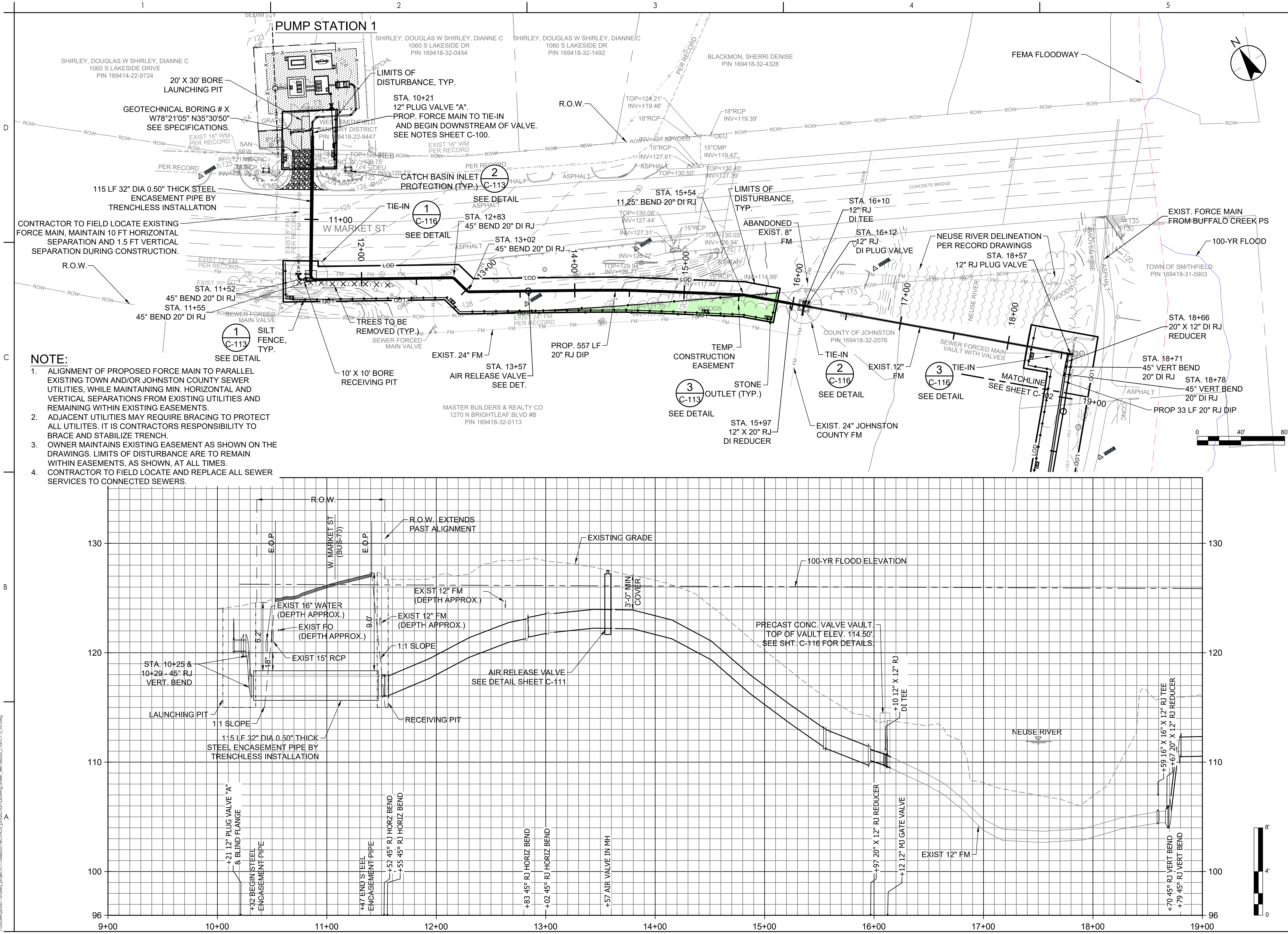
PUMP STATION 1 SITE PLAN

Revision: 0 Sheet: of X

Drawing No.

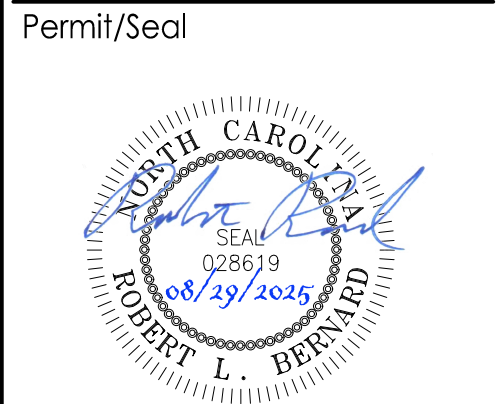
C-100

\\us044-cv000\Users\jg000\OneDrive\Projects\175568555\Technical\production\working\Sheet\Bbox\68555_c100-c113_fm.dwg
PLOT DATE: 08/29/2025 09:00 1:30 PM User: jg000
\\us044-cv000\Users\jg000\OneDrive\Projects\175568555\Technical\production\working\Sheet\Bbox\68555_c100-c113_fm.dwg



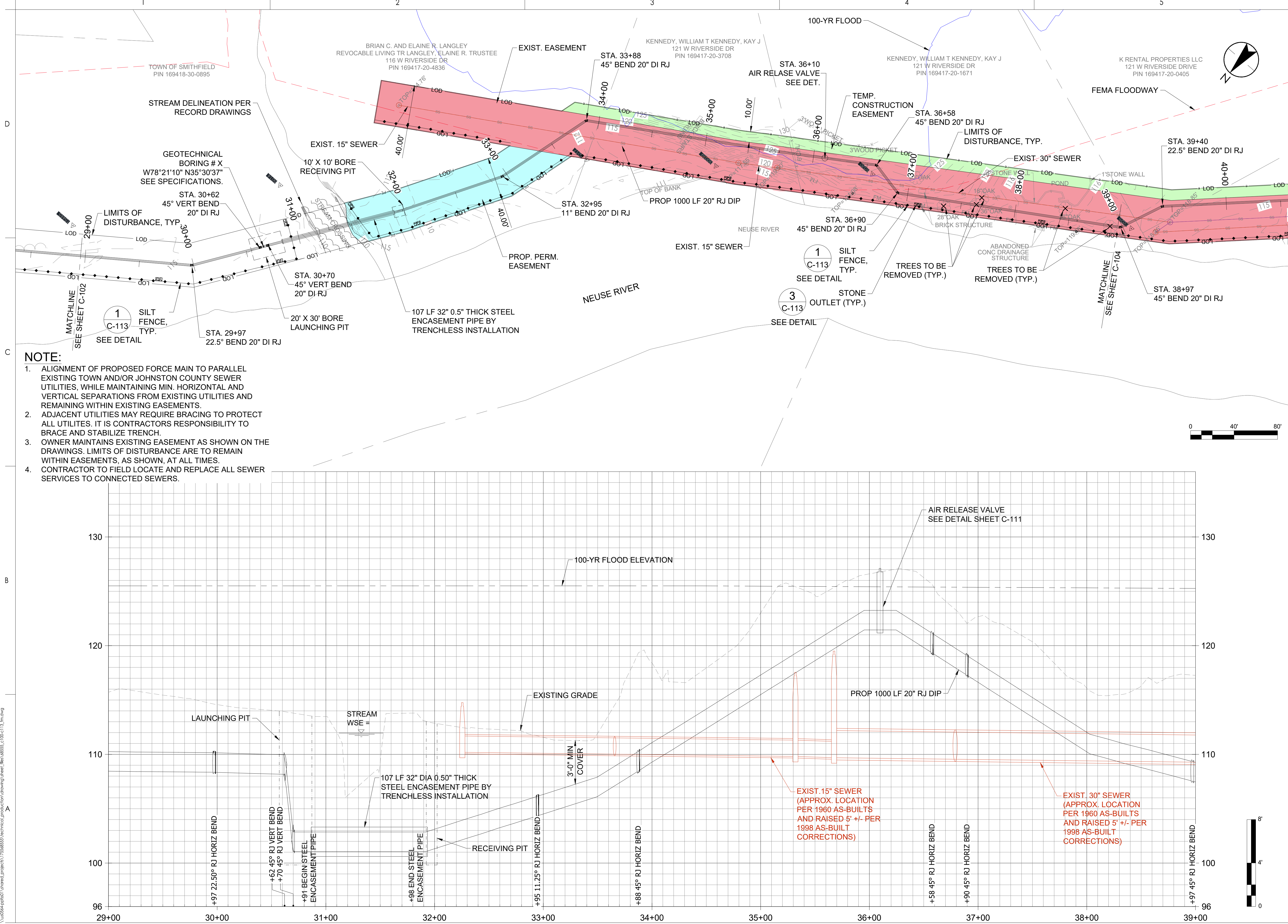
- NOTE:**
- ALIGNMENT OF PROPOSED FORCE MAIN TO PARALLEL EXISTING TOWN AND/OR JOHNSTON COUNTY SEWER UTILITIES, WHILE MAINTAINING MIN. HORIZONTAL AND VERTICAL SEPARATIONS FROM EXISTING UTILITIES AND REMAINING WITHIN EXISTING EASEMENTS.
 - ADJACENT UTILITIES MAY REQUIRE BRACING TO PROTECT ALL UTILITIES. IT IS CONTRACTORS RESPONSIBILITY TO BRACE AND STABILIZE TRENCH.
 - OWNER MAINTAINS EXISTING EASEMENT AS SHOWN ON THE DRAWINGS. LIMITS OF DISTURBANCE ARE TO REMAIN WITHIN EASEMENTS, AS SHOWN, AT ALL TIMES.
 - CONTRACTOR TO FIELD LOCATE AND REPLACE ALL SEWER SERVICES TO CONNECTED SEWERS.

Consultant			
Issued	By	Appd	YTY:MM/DD
0			
Revision	By	Appd	YTY:MM/DD
0			
Issued	By	Appd	YTY:MM/DD
0			
Revision	By	Appd	YTY:MM/DD
0			



\\N0554-p0001\Shared\Projects\175568555\Technical\production\drawing\sheet\Bbox\68555_c100-c113_fm.dwg
P:\Projects\2025\0829_1357.dwg User: Boudreau, J...
2025.08.29 10:54:40 AM Viewed Project: 175568555

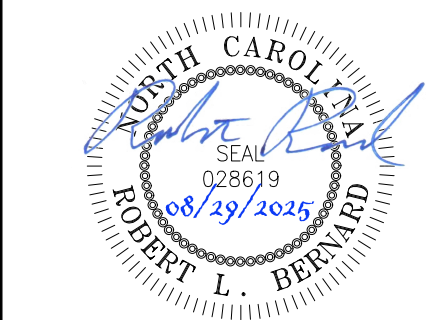
ORIGINAL SHEET - ANSI D



Consultant

Revision		By	Appd	YTYTJ.MW.DD
0				
Issued		JR	Appd	2025.08.29
FINAL DRAWINGS - FOR BIDDING		JR	Appd	YTYTJ.MW.DD

Permit/Seal



Client/Project
TOWN OF SMITHFIELD

PUMP STATION # 1 AND
FORCE MAIN IMPROVEMENTS

Smithfield, NC

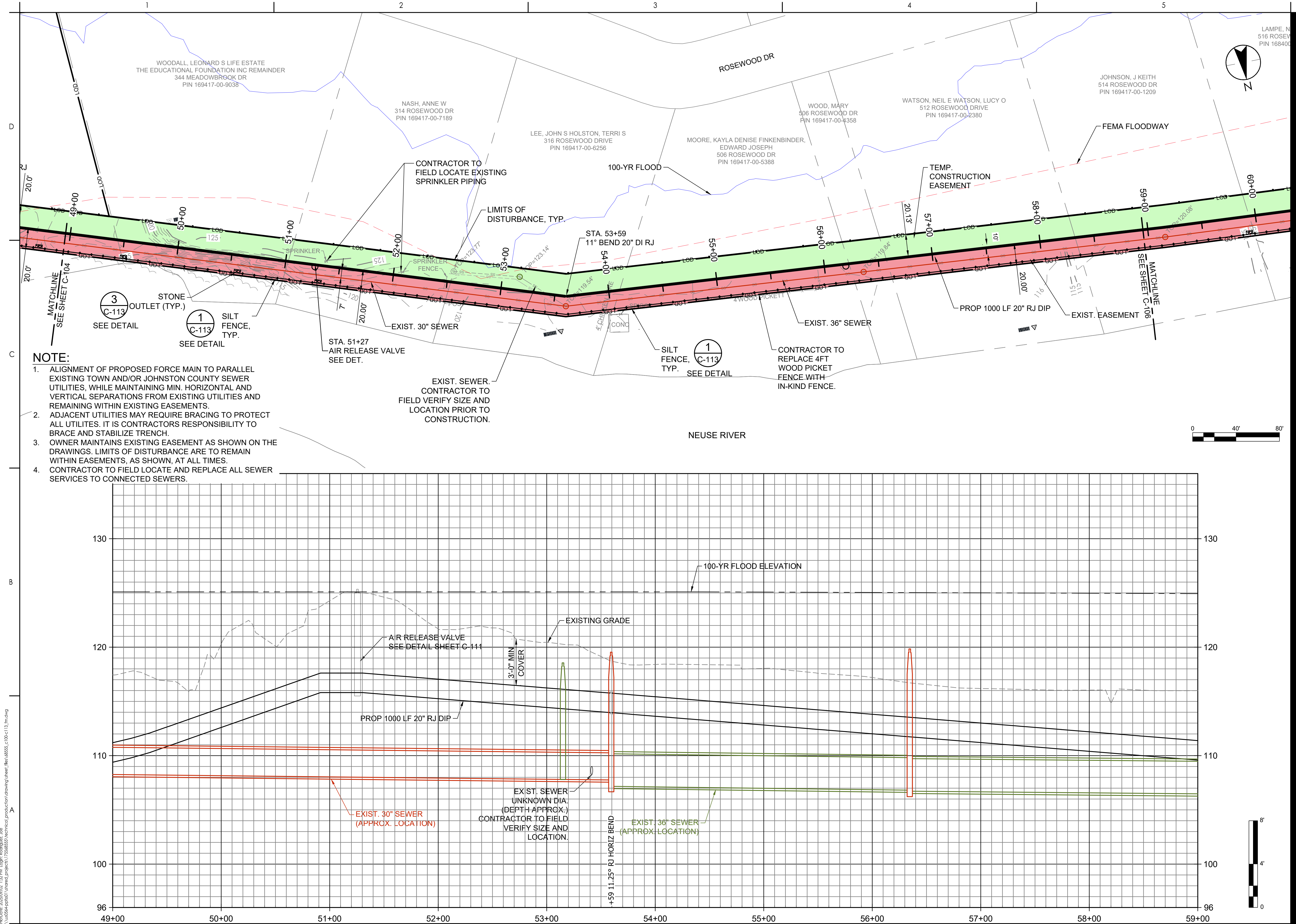
Project No.: 175568555
File Name: 68555_C100-C113_FM
Scale: AS NOTED

JR	JR	R/LB
Dwn.	Dsgn.	Chkd.
2025.08.29	YTYTJ.MW.DD	

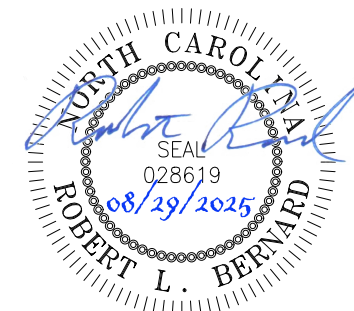
Title
PLAN AND PROFILE
STA 29+00 TO STA 39+00

Revision:0 Sheet: of X
Drawing No.

C-103

[illegible]

Permit/Sea



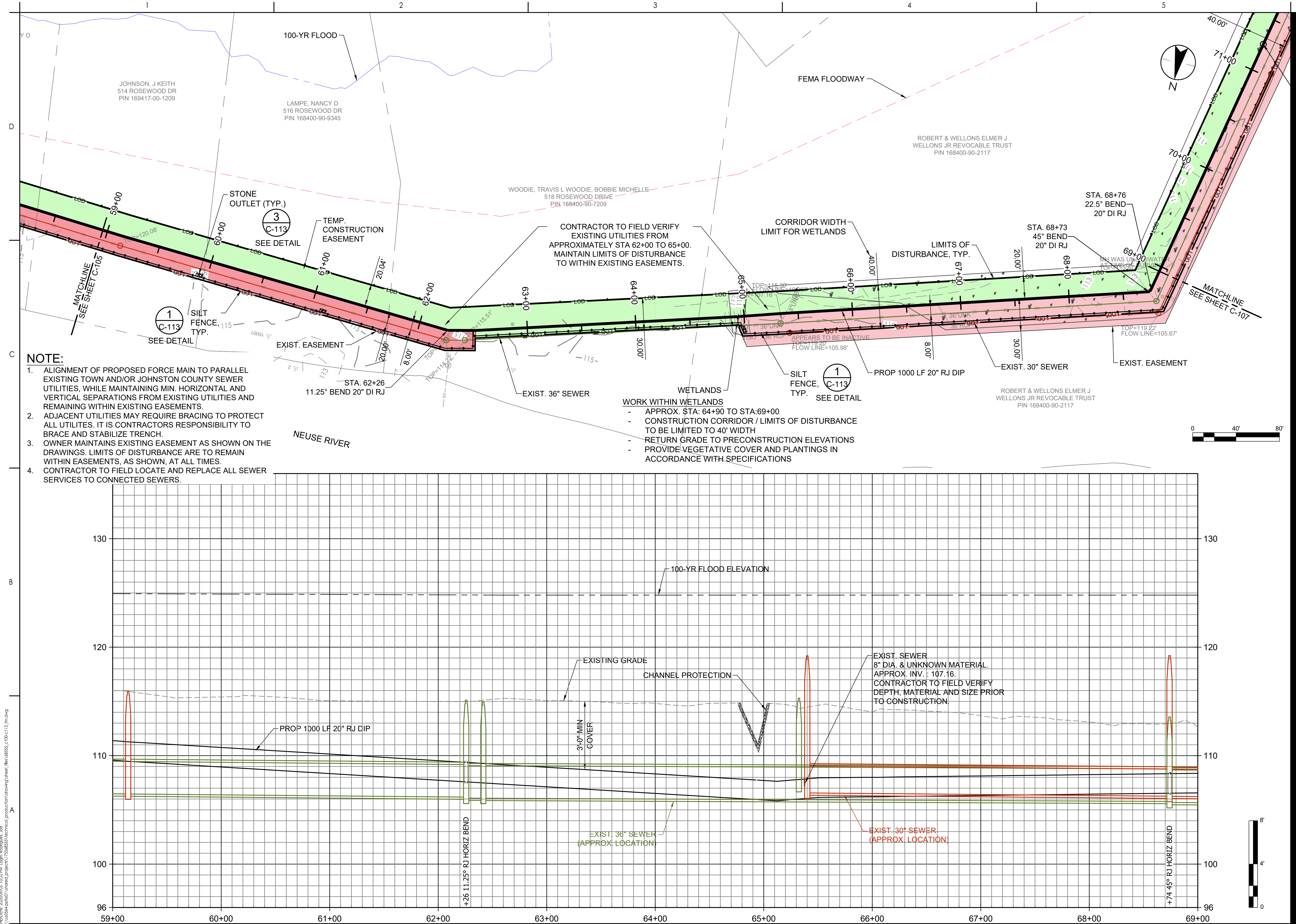
Client/Project
TOWN OF SMITHFIELD
PUMP STATION #1 AND
FORCE MAIN IMPROVEMENTS
Smithfield, NC

Project No.: 175568555			
File Name: 68555_C100-C113_FM			
Scale: AS NOTED			
JR	JR	RLB	2025.08.29
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

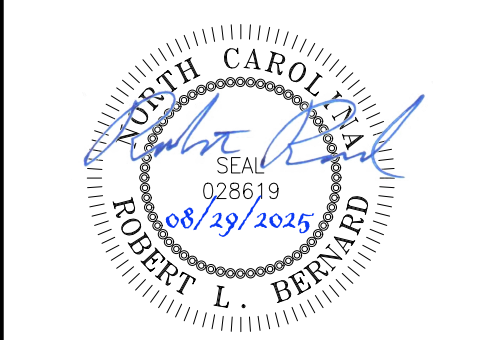
Title
PLAN AND PROFILE
STA 49+00 TO STA 59+00

Revision:0	Sheet:	of X
Drawing No.		

C-105

[illegible]

Permit/Seal



Client/Project
TOWN OF SMITHFIELD

PUMP STATION #1 AND
FORCE MAIN IMPROVEMENTS

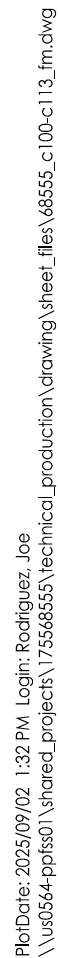
Smithfield, NC

Project No.: 175568555
 File Name: 68555_C100-C113_FM
 Scale: AS NOTED

JR	JR	RLB	2025.08.29
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title
 PLAN AND PROFILE
 STA 59+00 TO STA 69+00

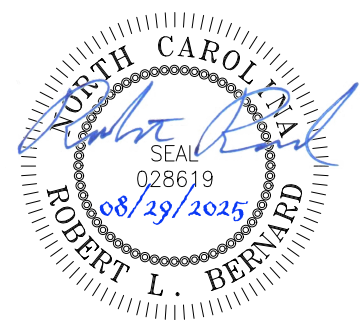
Revision: 0 Sheet: of X
 Drawing No.



Consultant

[illegible]

Permit/Seal



Client/Project TOWN OF SMITHFIELD	PUMP STATION #1 AND FORCE MAIN IMPROVEMENTS	Smithfield, NC
Project No.: 68555		
File Name: 68555_C100-C113_FM		
Scale: AS NOTED		
JR Dwn.	JR Dign.	RLB Chkd. 2025.08.29 YYYY.MM.DD
Title PLAN AND PROFILE STA 69+00 TO STA 79+00		
Revision: 0 Sheet: of X		
Drawing No.		

C-107

 **Stantec**

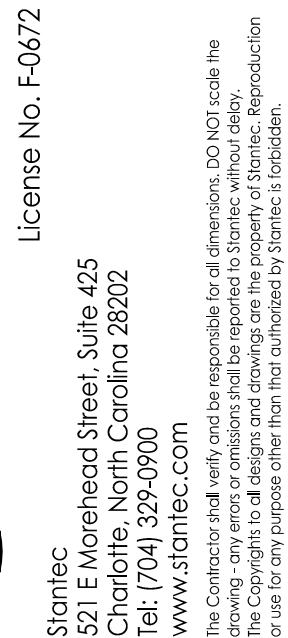
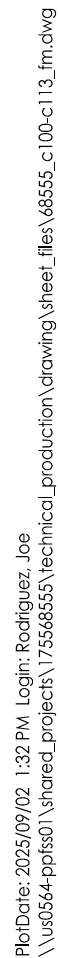
License No. F-0672

Stantec
321 E Morehead Street, Suite 425
Charlotte, North Carolina 28202
Tel: (704) 329-0900
www.stantec.com

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing.

The Copyright © to design and drawings are the property of Stantec. Reproduction without written permission is prohibited.

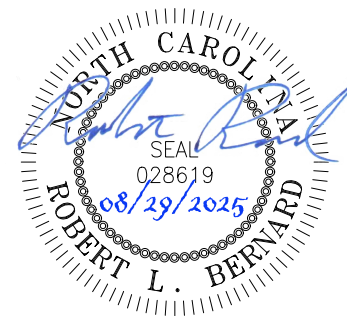




Consultant

[illegible][illegible]

Permit/Seal



Client/Project
TOWN OF SMITHFIELD

PUMP STATION #1 AND FORCE MAIN IMPROVEMENTS

Smithfield, NC

Project No.: 175568555

File Name: 68555_C100-C113_FM

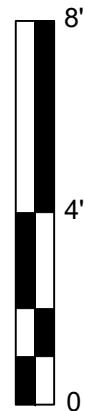
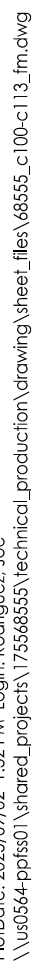
Scale: AS NOTED			
JR	JR	RLB	2025.08.29
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title

PLAN AND PROFILE STA 89+00 TO STA 99+00

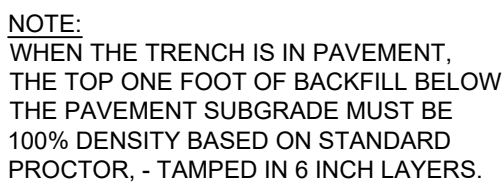
Revision:0	Sheet:	of X
Drawing No.		

C-109





NOT TO SCALE



NOT TO SCALE



NOT TO SCALE

- NOTES:**
- A. VAULT SHALL BE SIZED AS NEEDED FOR PIPE (6 X 5' MINIMUM) AND RATED FOR NCDOT HS-20 LOADING - SUBMIT SHOP DRAWINGS / S.P. SEALED FOR REVIEW.
 - B. ALL CONCRETE SHALL BE MINIMUM 5,000 PSI COMPRESSIVE STRENGTH.
 - C. ALL CONCRETE SHALL BE REINFORCED WITH #4 BARS AT 18" ON CENTER.
 - D. PRECAST CONCRETE UTILITY STRUCTURE.
 - E. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857.
 - F. REBARS SHALL BE GRADE 60 PER ASTM A615.
 - G. WEDG WIRE FABRIC SHALL CONFORM TO ASTM A185.
 - H. DIAGONAL REINFORCING SHALL BE ADDED AT ALL OPENINGS.
 - I. PIPE PENETRATIONS SHALL BE MADE WITH FLEXIBLE CONNECTORS (MANHOLE BOXES MUST BE OF BRICK AND MORTAR) AND TO NOT VIOLATE CONSTRUCTION EXPANSION MATERIAL).
 - J. ALL VALVES SHALL OPEN COUNTERCLOCKWISE - OPEN LEFT.
 - K. FRAME TO BE FLUSH WITH FINISH MAINTAINED ROAD OR YARD RAMP AND 2' ABOVE GROUND IN SEWER EASEMENT.
 - L. KIRN AND VACUUM VALVE TO BE SHORT BODY TYPE, SIZED PER MANUFACTURER'S SPECIFICATIONS.
 - M. VALVE TO BE INSTALLED AT MIDPOINT OF A FULL JOINT OF DUCTILE IRON PIPE WHEN INSTALLING PVC FRAME AND WELLS.
 - N. VALVE MANHOLE AREAS SHALL BE PROTECTED TO FLOODING SHALL HAVE SOLD CONCRETE FLOOR VENT (PER CLTJ STANDARD DETAILS) EXTENDING TO 2' ABOVE 100 YEAR FLOOD ELEVATION - FRAME AND COVERS SHALL BE WATER TIGHT PER EIS AND EIS-1.
 - O. ALL JOINTS SHALL BE MADE WATERTIGHT USING 2 LBS OF BUTYL RUBBER JOINT MASTIC - SEE JOINT DETAIL.
 - P. PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.

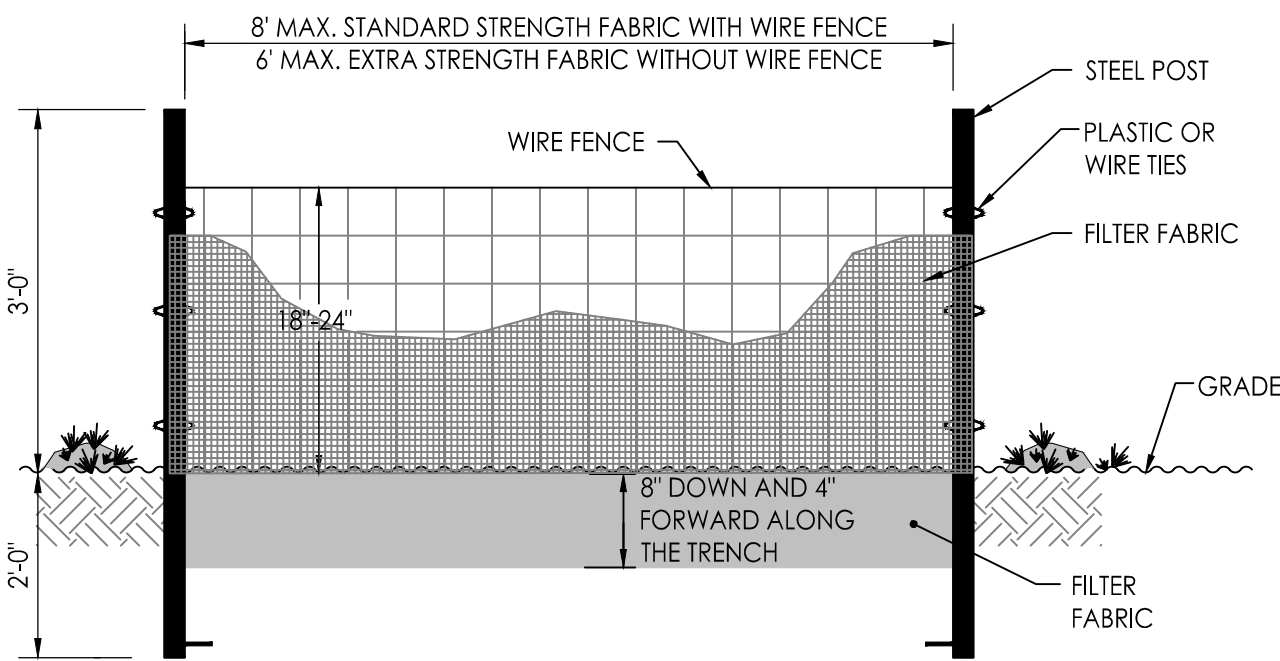
\\us054-p0001\shared_projects\17556855\technical_production\drawing\sheet\17556855_c100-c113_fm.dwg
PLOT DATE: 2025/08/29 3:59 PM User: baskin_joe

A

B

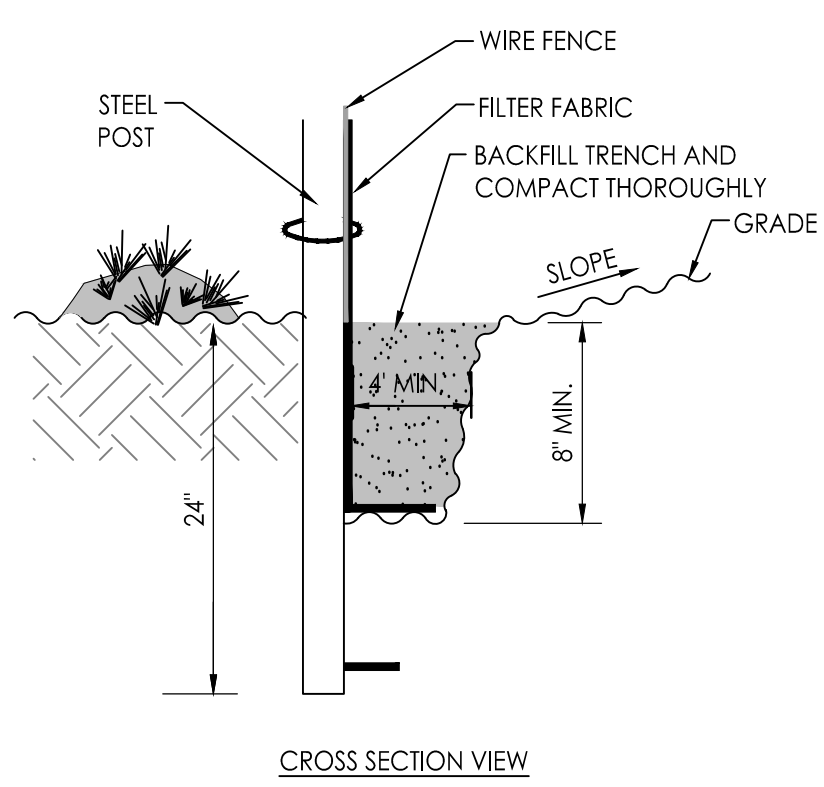
C

D

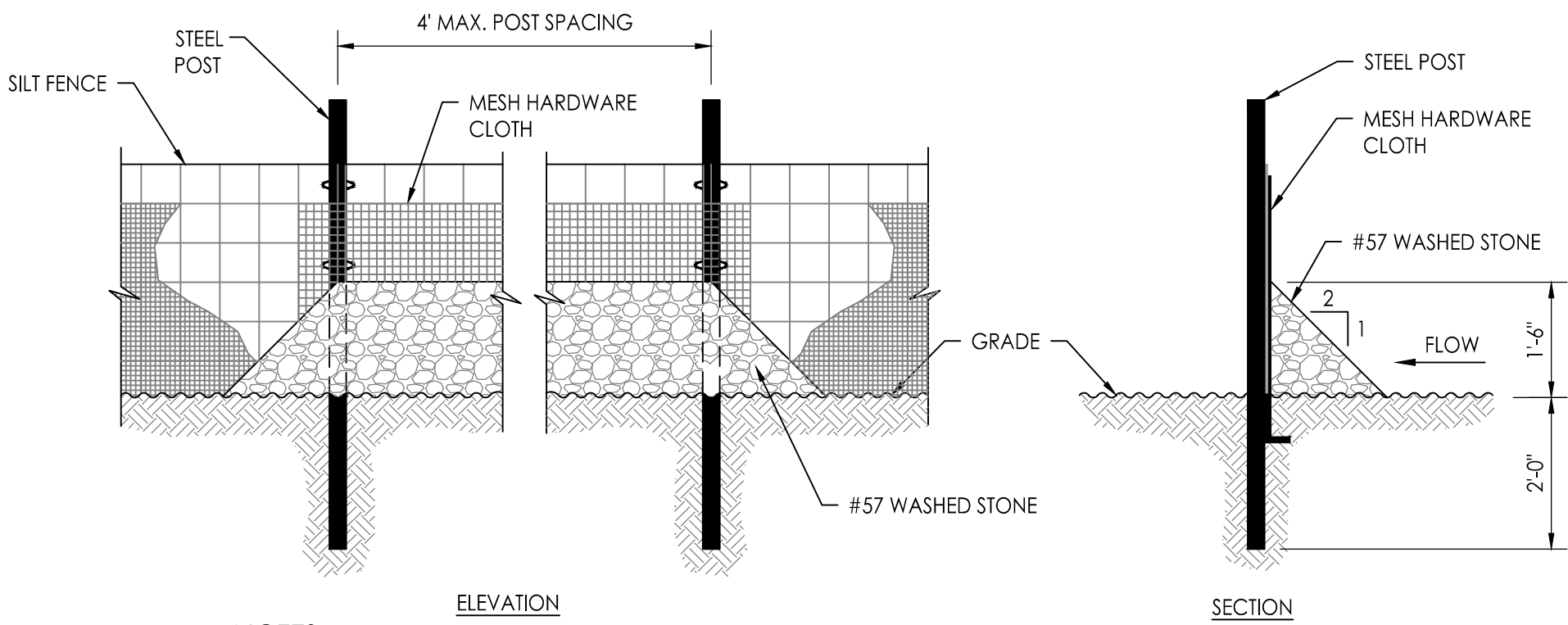
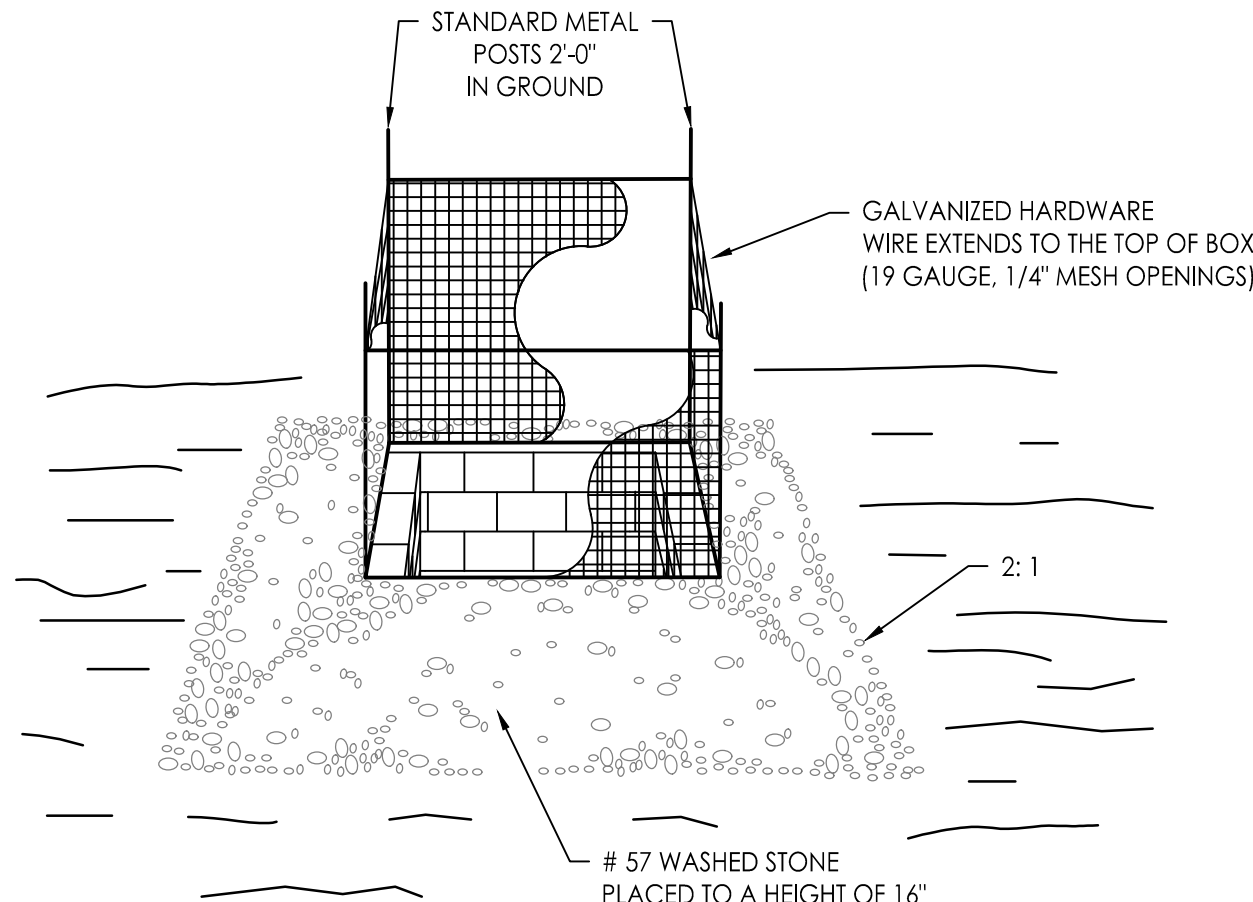


- NOTES:**
1. INSTALL SILT FENCE WHERE SHOWN ON DRAWINGS OR 5' FROM EDGE OF EXCAVATION, WHICHEVER IS GREATER.
 2. MAINTAIN SILT FENCE UNTIL PERMANENT GROUND COVER HAS BEEN ESTABLISHED AND THE ENTIRE SITE PROTECTED BY THE SILT FENCE HAS BEEN STABILIZED.

1
C-113 SILT FENCE
NTS

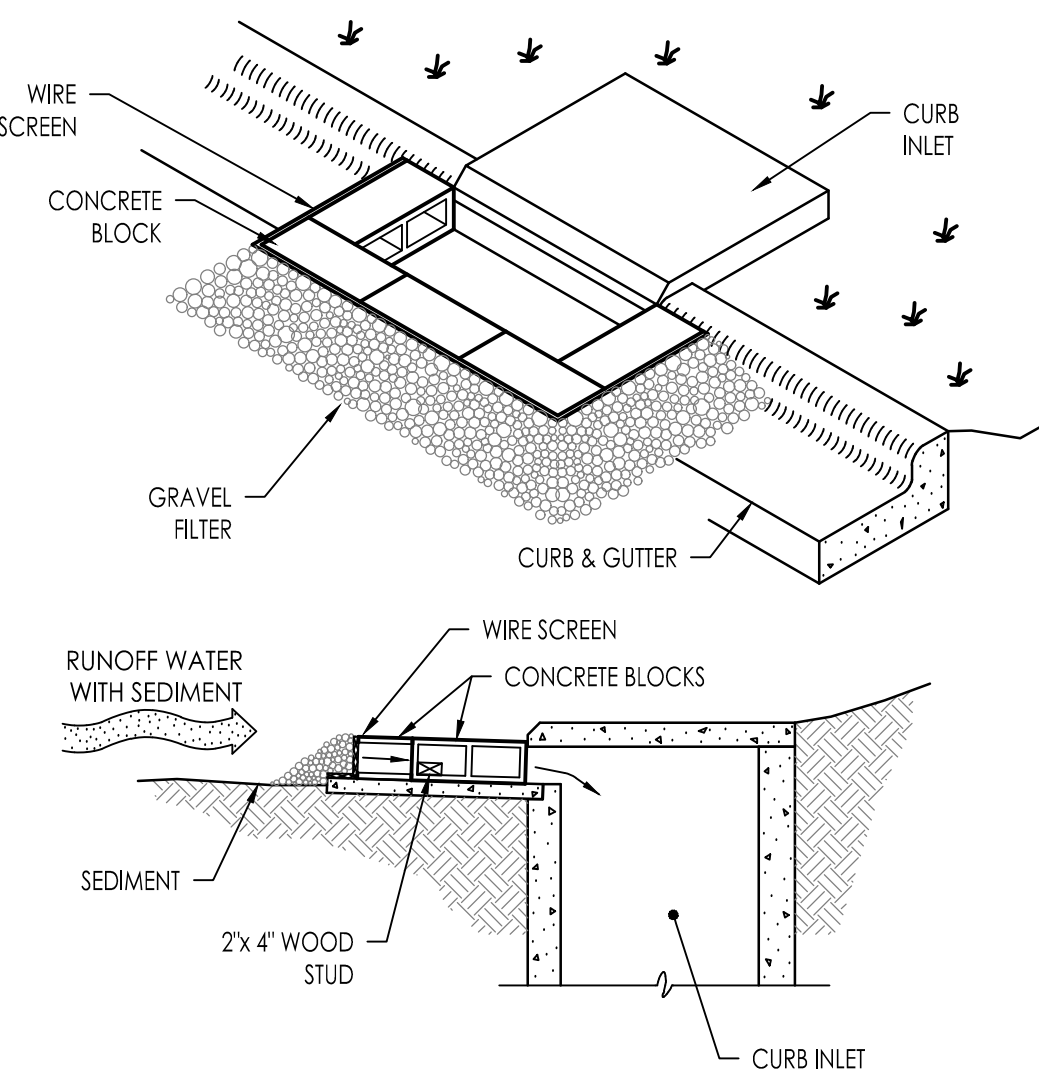


2
C-113 CATCH BASIN INLET PROTECTION
NTS

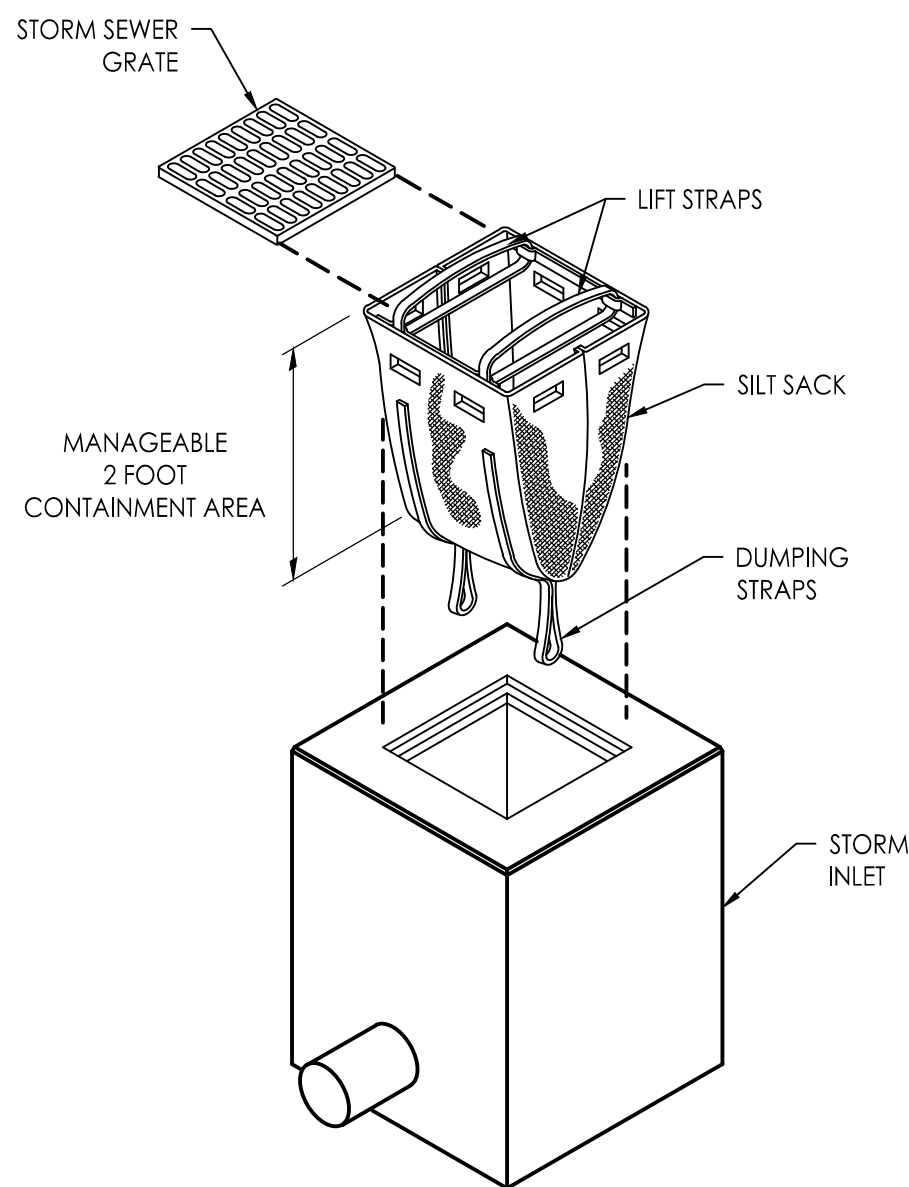


- NOTES:**
1. INSTALL STONE DRAINS AT A 100' INTERVAL MIN. OR AS SHOWN ON THE DRAWINGS.

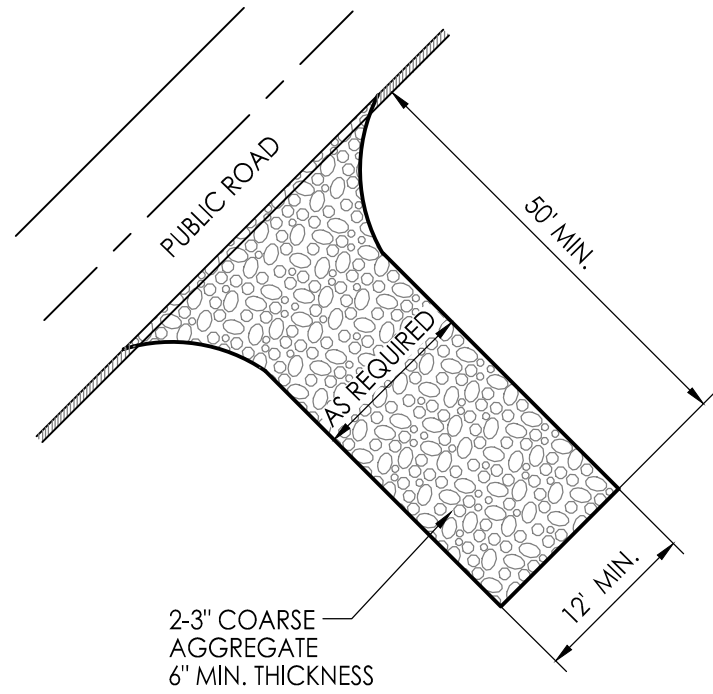
3
C-113 SILT FENCE STONE OUTLET
NTS



4
C-113 TEMPORARY BLOCK AND GRAVEL INLET PROTECTION
NTS



5
C-113 TYPICAL SILT SACK INLET PROTECTION
NTS



- NOTES:**
1. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS SHALL BE PROVIDED.
 2. ENTRANCE(S) SHALL BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
 3. ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOP DRESSING WITH STONE SHALL BE APPLIED BY CONTRACTOR.
 4. ANY MATERIAL TRACKED ONTO THE ROADWAY SHALL BE CLEANED UP IMMEDIATELY.
 5. GRAVEL CONSTRUCTION ENTRANCE(S) SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE SHALL BE PROVIDED.
 6. FILTER FABRIC SHALL BE PLACED BENEATH STONE.
 7. ALL MATERIALS SHALL BE APPROVED BY ENGINEER OR ENGINEERS ONSITE CONSTRUCTION MANAGER.

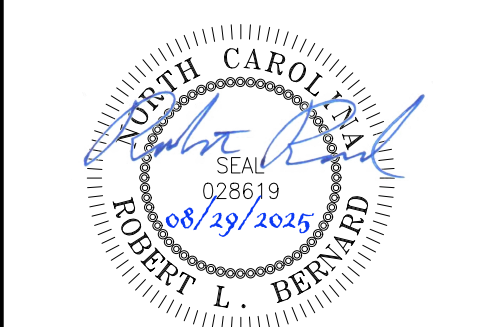
6
C-113 TEMPORARY CONSTRUCTION ENTRANCE
NTS

Consultant

Revision	By	Appd	YYYY.MM.DD
0			YYYY.MM.DD

Revision	By	Appd	YYYY.MM.DD
0			2025.08.29

Permit/Seal



Client/Project
TOWN OF SMITHFIELD

PUMP STATION #1 AND
FORCE MAIN IMPROVEMENTS

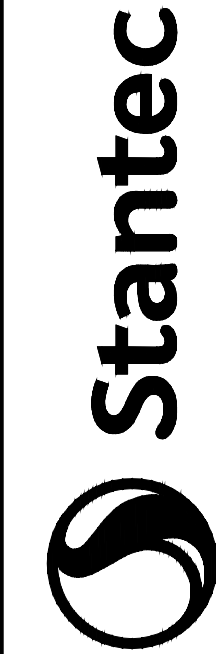
Smithfield, NC

Project No.: 175568555
File Name: 68555_C100-C113_FM
Scale: AS NOTED
Dwn. Dsgn. Chkd. RLB 2025.08.29
YYYY.MM.DD

Title
EROSION CONTROL
DETAILS

Revision: 0 Sheet: of X
Drawing No.

C-113



License No. F-0672
Stantec
521 E Morehead Street, Suite 425
Charlotte, North Carolina 28202
Tel: 704.329.0900
www.stantec.com
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawings. The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawings. The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawings.

C-114

\\us054-p0001\shared_projects\175568555\technical_production\drawing\sheet_175568555_c100-c113_fm.dwg
PLOT DATE: 2025/08/29 1:37 PM User: baskin_joe

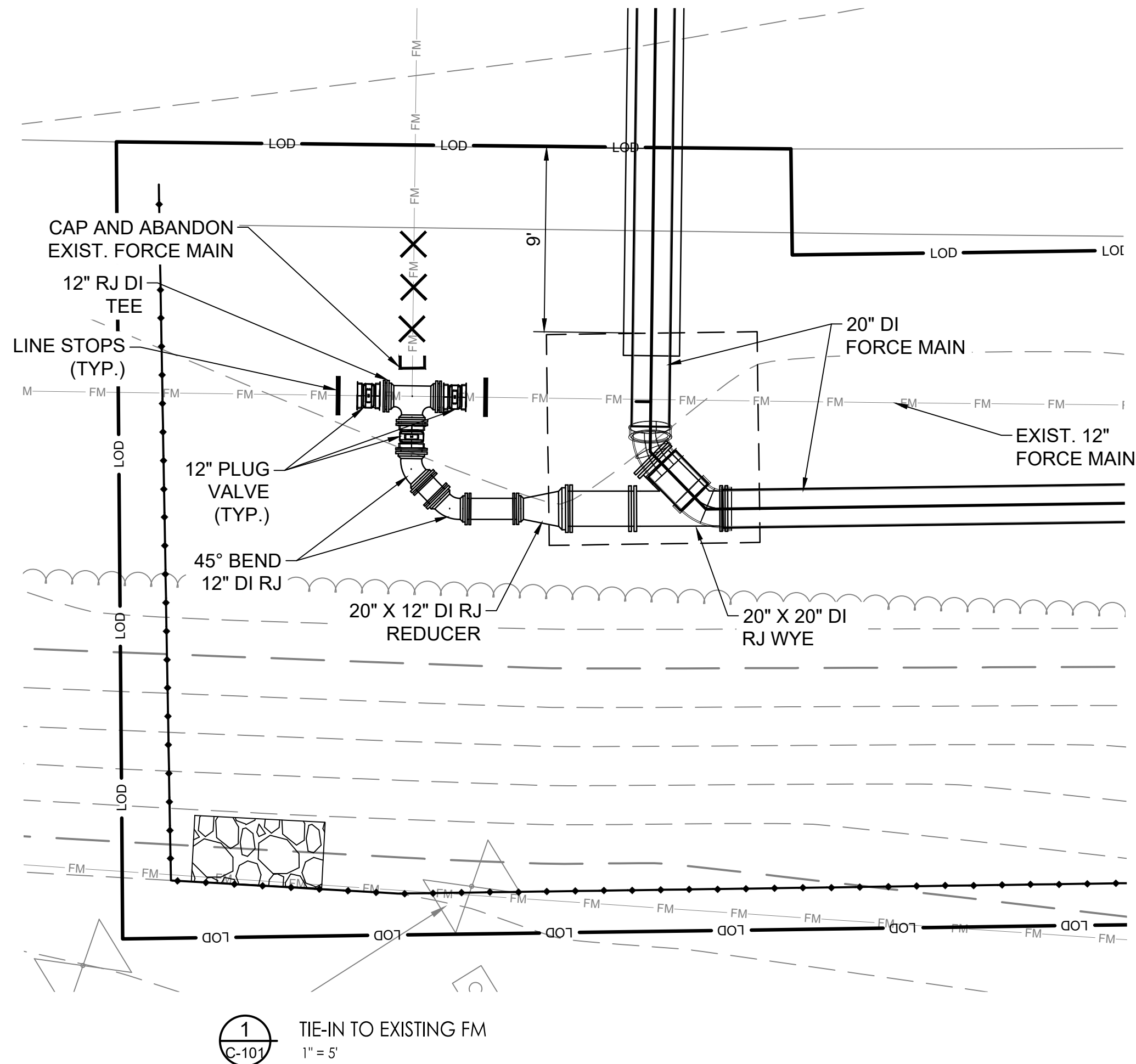
ORIGINAL SHEET - ANSI D

D

C

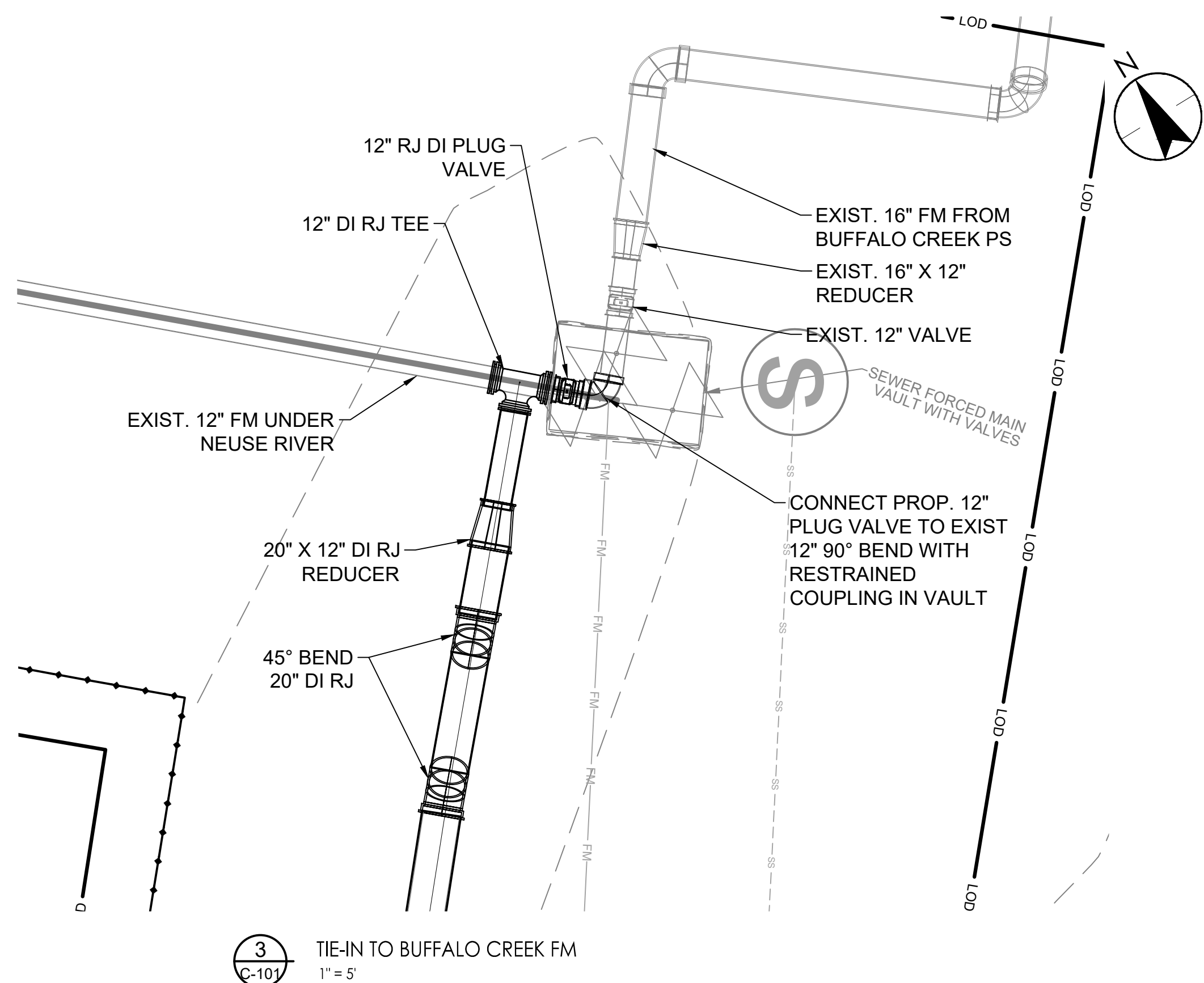
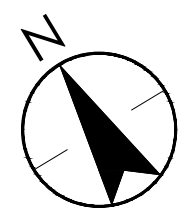
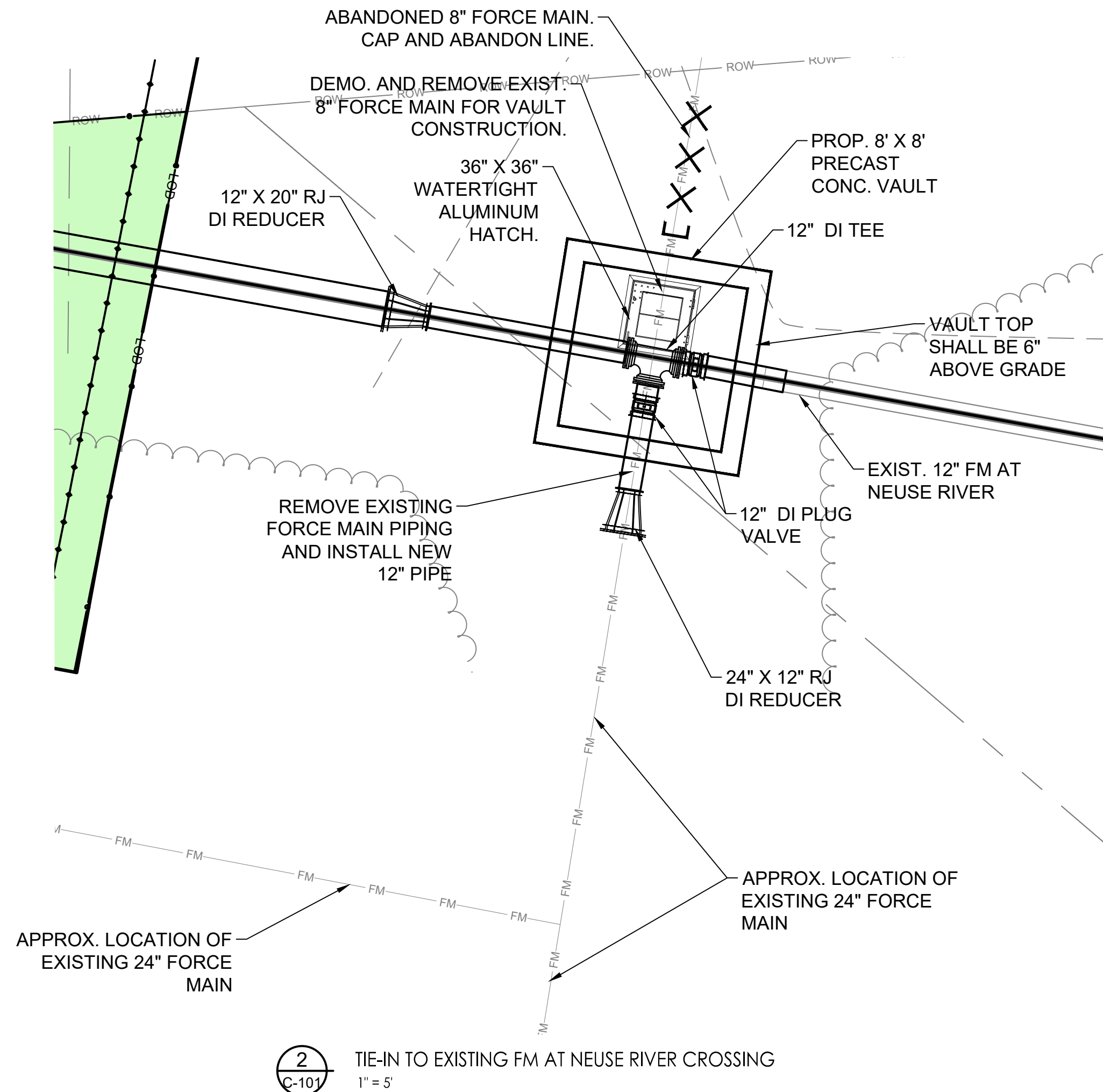
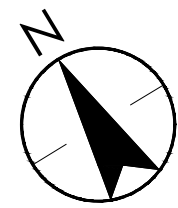
B

A



NOTE:

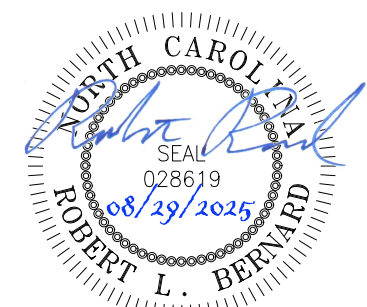
1. ALL TIE-IN CONNECTIONS TO EXISTING FORCE MAINS SHALL BE COORDINATED WITH THE TOWN OF SMITHFIELD UTILITIES AND JOHNSTON COUNTY UTILITIES. CONTRACTOR SHALL NOTIFY OWNER 24-HRS PRIOR TO ANY CONNECTIONS REQUIRING SERVICE INTERRUPTION.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING FORCE MAIN PIPE SIZES, MATERIAL AND LOCATIONS PRIOR TO INSTALLATION.



Consultant

Revision		By	Appd	YTYT.MM.DD
0				2025.08.29
Issued		JR	Appd	YTYT.MM.DD

Permit/Seal



Client/Project
TOWN OF SMITHFIELD

PUMP STATION #1 AND
FORCE MAIN IMPROVEMENTS
Smithfield, NC

Project No.: 175568555				
File Name: 68555_C100-C113_FM				
Scale: AS NOTED				
JR	JR	RLB	2025.08.29	
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD	

Title
FORCE MAIN TIE-IN
DETAILS

Revision: 0 Sheet: of X
Drawing No.



License No. F-0472
521 E Morehead Street, Suite 425
Charlotte, North Carolina 28202
Tel: 704.329.0900
www.stantec.com
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing.
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing.
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing.

C-116