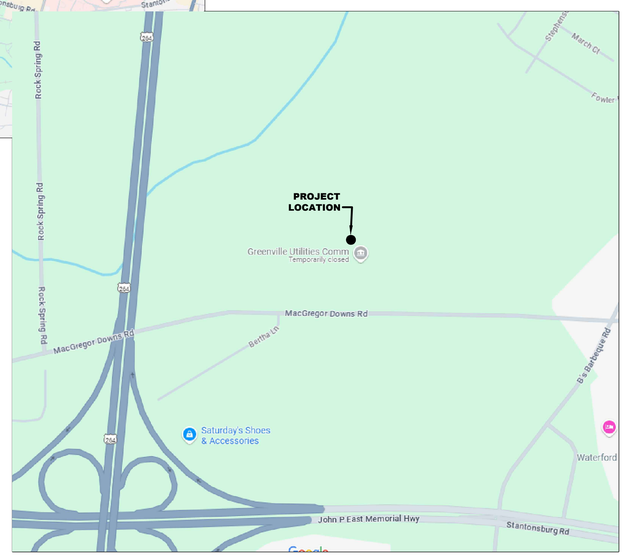
Greenville Utilities

Greenville Substation
Metering and Regulation Station
City of Greenville, North Carolina

October 3, 2025

VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE

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10/3/2025

SHEET INDEX

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 36780 WAYNE R. NOONOO 10/3/2025

RUMMEL • KLEPPER and KAHL, LLP
ENGINEERS | CONSTRUCTION MANAGERS | PLANNERS | SCIENTISTS
RICHMOND, VIRGINIA

DRAWING LEGEND

SYMBOL	DESCRIPTION
	CENTERLINE
	HYDRO
	EXISTING FENCE
	EXISTING GUARD RAIL
	EXISTING EDGE-OF-PAVEMENT
	EXISTING DRIVEWAY/PATH
	EXISTING GAS TO REMAIN
	EXISTING UTILITY EASEMENT
P	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY (R/W)
	EXISTING SANITARY SEWER
	EXISTING STORM DRAINAGE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING UNDERGROUND TELEPHONE CABLE
	EXISTING UNDERGROUND FIBER OPTIC
	EXISTING WATER
	BORROW PIT
	WETLAND BOUNDARY
	RIPARIAN BARRIER
	AE FLOODWAY
	AE FLOODZONE
	PROPOSED TEMPORARY WORKSPACE
	PROPOSED UTILITY EASEMENT
x	PROPOSED FENCE
	PROPOSED GAS PIPE ABOVE GRADE (DOUBLE LINE)
	PROPOSED GAS PIPE BELOW GRADE (DOUBLE LINE)

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION.
2. ALL PIPING TO BE FABRICATED & TESTED IN ACCORDANCE WITH 49 CFR 192 AND PROJECT SPECIFICATIONS.
3. ALL PIPE WELDING TO BE PERFORMED PER GUC WELD STANDARDS AND PROJECT SPECIFICATIONS.
4. ALL PIPING SHALL BE THOROUGHLY CLEANED OF MILL SCALE, WELD SLAG, & RUST PRIOR TO ASSEMBLY.
5. ALL PIPING SHALL BE VISUALLY INSPECTED BY ENGINEER/OWNER PRIOR TO FABRICATION OF ASSEMBLY.

10/3/2025

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DRAWING LEGEND

SYMBOL	DESCRIPTION
EX.	EXISTING
ST	STEEL
PE	POLYETHYLENE
PGS	PROPOSED GAS SERVICE
PROP.	PROPOSED
RCP	REINFORCED CONCRETE PIPE
STA	STATION
	INSULATING FLANGE LOCATION
1	PROPOSED ITEM NUMBER
	FLOW ARROW
	EARTH
	GRAVEL
	CONCRETE
1/4	DETAIL IDENTIFICATION / SHEET NUMBER
A/4	SECTION IDENTIFICATION / SHEET NUMBER

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

Item	Quantity	Unit	Size	Description of Station Materials (Domestic Source)
A1	29	EA	36"-4" x 1/2"	Thredolet, 3000#
A2	28	EA	1/2" x 2"	Pipe Nipple, Extra Strong, Grade B, Seamless C.S., thread both ends
A3	30	EA	1/2"	Pipe plug, Hex Head, Extra Strong, F.S., screwed
A4	2	EA	2"	Thredolet, 3000#
A5	2	EA	2"	Pipe Nipple, Extra Strong, Grade B, Seamless C.S., thread both ends
B1	48	EA	(6") ANSI 300	Stud Bolts, All Thread, Teflon Coated, 3/4" Diameter x 5 1/4" Long, Grade B-7, ASTM A-194, w/2 A-194, Grade 2H Heavy Hex Nuts (12 bolts per connection)
B2	112	EA	(4") ANSI 300	Stud Bolts, All Thread, Teflon Coated, 3/4" Diameter x 5" Long, Grade B-7, ASTM A-194, w/2 A-194, Grade 2H Heavy Hex Nuts (8 bolts per connection)
B3	64	EA	(2") ANSI 300	Stud Bolts, All Thread, Teflon Coated, 5/8" Diameter x 4" Long, Grade B-7, ASTM A-194, w/2 A-194, Grade 2H Heavy Hex Nuts (8 bolts per connection)
B4	8	EA	(8") ANSI 150	Stud Bolts, All Thread, Teflon Coated, 3/4" Diameter x 4 3/4" Long, Grade B-7, ASTM A-194, w/2 A-194, Grade 2H Heavy Hex Nuts (8 bolts per connection)
B5	40	EA	5/8" x 5 1/2"	Expansion Bolt, HILTI HVA, Adhesive System w, Carbon Steel Threaded Rods
C1	3	EA	6"	Valve, Ball, Flanged End, ANSI 300, Cameron T-31 or equivalent, Above Grade, Painted, Lockable w/ Gearbox and Handwheel
C2	5	EA	4"	Valve, Ball, Flanged End, ANSI 300, Cameron T-31 or equivalent, Above Grade, Painted, Lockable 1/4 Turn w/ 2" Nut
C3	1	EA	4"	Valve, Ball, Weld End, ANSI 300, Cameron T-31 or equivalent, Below Grade, Tarset Coated, Lockable 1/4 Turn w/ 2" Nut, w/ Lubrication Lines
C4	28	EA	1/2"	Valve, Ball, Class 3000, FNPT X FNPT, Chem Oil Series 3000 WCB, Lockable
C5	1	EA	4"	Strainer, Tee Style, Flanged End, ANSI 300, Apollo Engineering Model TSF
C6	4	EA	2"	Regulator, Pressure Reducing, Flanged End, ANSI 300, Fisher Type EZR
C7	1	EA	4"	Meter, Flanged End, ANSI 300, American Meter, Turbine
C8	1	EA	4"	Straightening Vanes, Flanged, Apollo Engineering, Model No. 04F30-90-00
C9	1	EA	8"	Transition Fitting, STL-PLS, SDR 11, 0.322" min. wall, Medium Density PE 2708, ASTM D2513 & ASTM D2683
C10	1	EA	6"	300D Spherical 3-WAY Tee and SHORTPLUG w/ Guide Bars - .72 Design Factor, ANSI 300, TD Williamson 26-1535-0631-21
C11	1	EA	6"x8"	Valve, Relief, ANSI 300 x ANSI 150, Flowsafe F7000
F1	3	EA	8"	Elbow, 90°, LR, Y-52, SCH 40, 0.322" w.t.
F2	2	EA	6"	Elbow, 90°, LR, Y-52, SCH 40, 0.280" w.t.
F3	6	EA	4"	Elbow, 90°, LR, Y-52, SCH 40, 0.237" w.t.
F4	1	EA	6"	Tee, Weld End, Straight, Y-52, WT = 0.280" x 0.280"
F5	3	EA	4"	Tee, Weld End, Straight, Y-52, WT = 0.237" x 0.237"
F6	1	EA	8"x6"	Reducer, Weld End, Concentric, Y-52, WT = 0.322" x 0.280"
F7	1	EA	6"x4"	Reducer, Weld End, Concentric, Y-52, WT = 0.280" x 0.237"
F8	2	EA	6"x2"	Reducer, Weld End, Concentric, Y-52, WT = 0.280" x 0.154"
F9	6	EA	4"x2"	Reducer, Weld End, Concentric, Y-52, WT = 0.237" x 0.154"
F10	7	EA	6"	Weld Neck Flange, RF, ANSI 300, A/SA694 F-52, WT = 0.280", Bore = 6.070"
F11	16	EA	4"	Weld Neck Flange, RF, ANSI 300, A/SA694 F-52, WT = 0.237", Bore = 4.030"
F12	8	EA	2"	Weld Neck Flange, RF, ANSI 300, A/SA694 F-52, WT = 0.154", Bore = 2.070"
F13	1	EA	8"	Weld Neck Flange, RF, ANSI 150, A/SA694 F-52, WT = 0.322", Bore = 6.070"
F14	1	EA	6"	Cap, Weld End, Y-52, WT = 0.280"
F15	1	EA	8"	Rain Cap w/ Flag
F16	1	EA	8"x6"	Tee, Weld End, Reducing, Y-52, WT = 0.322" x 0.280"
F17	2	EA	2"	Steel Cap, Threaded
G1	3	EA	6"	Flange Insulation Kit, ANSI 300, Type E, Linebacker, Double Washer Set, w/Full Length Phenolic Sleeves
G2	1	EA	4"	Flange Insulation Kit, ANSI 300, Type E, Linebacker, Double Washer Set, w/Full Length Phenolic Sleeves
G3	2	EA	6"	Gasket, Spiral Wound, Flexitallic, ANSI 300
G4	14	EA	4"	Gasket, Spiral Wound, Flexitallic, ANSI 300
G5	8	EA	2"	Gasket, Spiral Wound, Flexitallic, ANSI 300
G6	1	EA	8"	Gasket, Spiral Wound, Flexitallic, ANSI 150
S1	4	EA	6"	Pipe Support, EZ-Line, Model 508, Figure F w/ Neoprene Liner, Part No. 508-F, 6" P.S., D-3'-10" (*)
S2	3	EA	4"	Pipe Support, EZ-Line, Model 204, Figure F w/ Neoprene Liner, Part No. 204-F, 4" P.S., D-3'-10" (*)
S3	1	EA	4"	Pipe Support, EZ-Line, Model 204, Figure F w/ Neoprene Liner, Part No. 204-F, 4" P.S., D-1'-5" (*)
S4	1	EA	4"	Double Pipe Support, EZ-Line, Model DPS-02, 4"X4", D1 = 1'-5", D2 = 2'-5" (*) w/ 204-F Upper Cradle/U-Bolt Clamp
S5	1	EA	8"	Pipe Support, EZ-Line, Model 508, Figure F w/ Neoprene Liner, Part No. 508-F, 8" P.S., D-3'-10" (*)
P1	10	LF	8"	Steel Pipe, 0.322" w.t., X-52, Bare, ERW, BE, Spec API-5L
P2	20	LF	8"	Steel Pipe, 0.322" w.t., X-52, Coated, ERW, BE, Spec API-5L
P3	20	LF	6"	Steel Pipe, 0.280" w.t., X-52, Bare, ERW, BE, Spec API-5L
P4	10	LF	6"	Steel Pipe, 0.280" w.t., X-52, Coated, ERW, BE, Spec API-5L
P5	60	LF	4"	Steel Pipe, 0.237" w.t., X-52, Bare, ERW, BE, Spec API-5L
P6	60	LF	4"	Steel Pipe, 0.237" w.t., X-52, Coated, ERW, BE, Spec API-5L
X1	As Req'd.	NA	NA	Rock Shield
X2	4	EA	8' x 4'	Gradient Control Mat

*BASE PLATE OF PIPE STAND SHALL HAVE ¾"x1½" SLOTTED HOLES TO ACCOMMODATE ⅝" BOLTS.

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL

	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA

TESTED FROM STATION: _____ TO STATION: _____
MEDIUM: _____ RECORD TEST PRESSURE: _____ psig
DATE TEST COMPLETED: _____

PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

RK&K RUMMEL, KLEPPER & KAHL, LLP
2100 E. CARY ST. SUITE 309
RICHMOND, VIRGINIA 23223
T-804.782.1903 F-804.782.2142
ENGINEERS | CONSTRUCTION MANAGERS | PLANNERS | SCIENTISTS

RK&K COMM. NO. 24237.000

SCALE
PLAN NA
PROFILE
HOR. –
VERT. –

Greenville Utilities

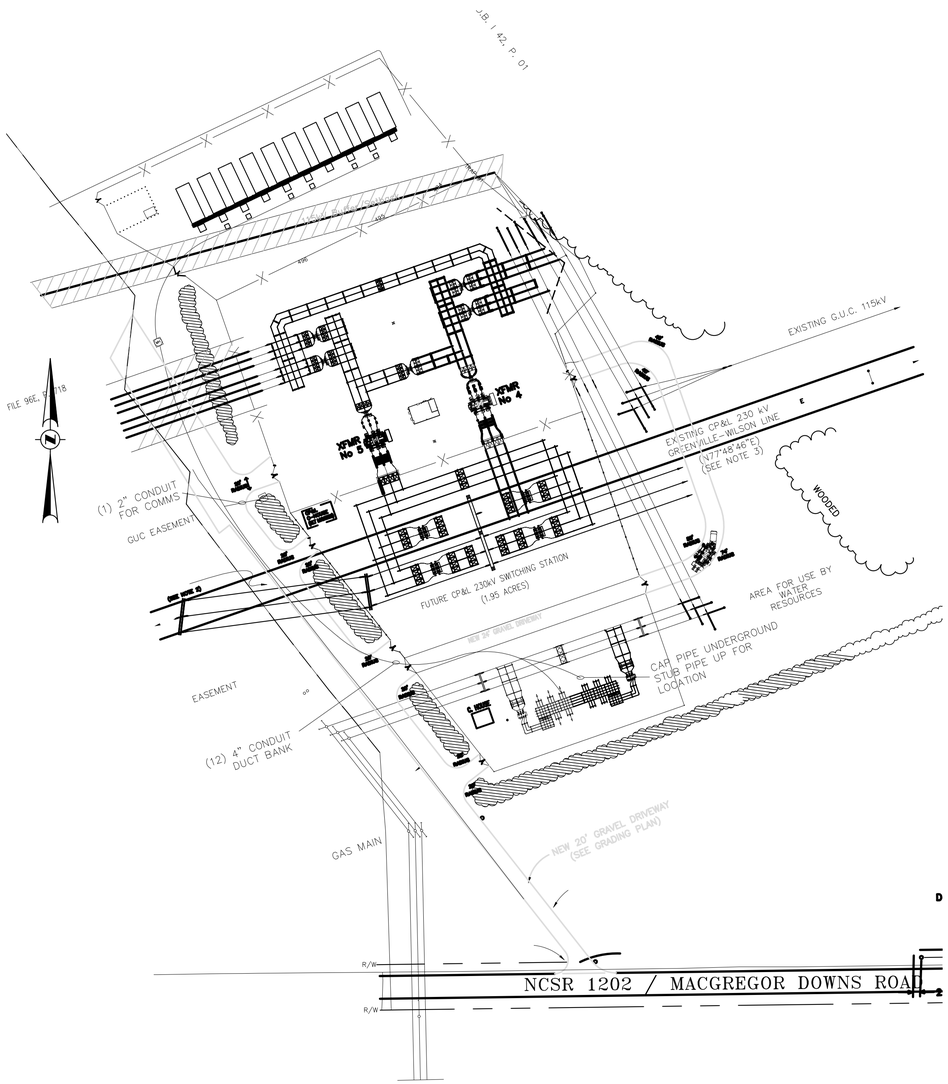
DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

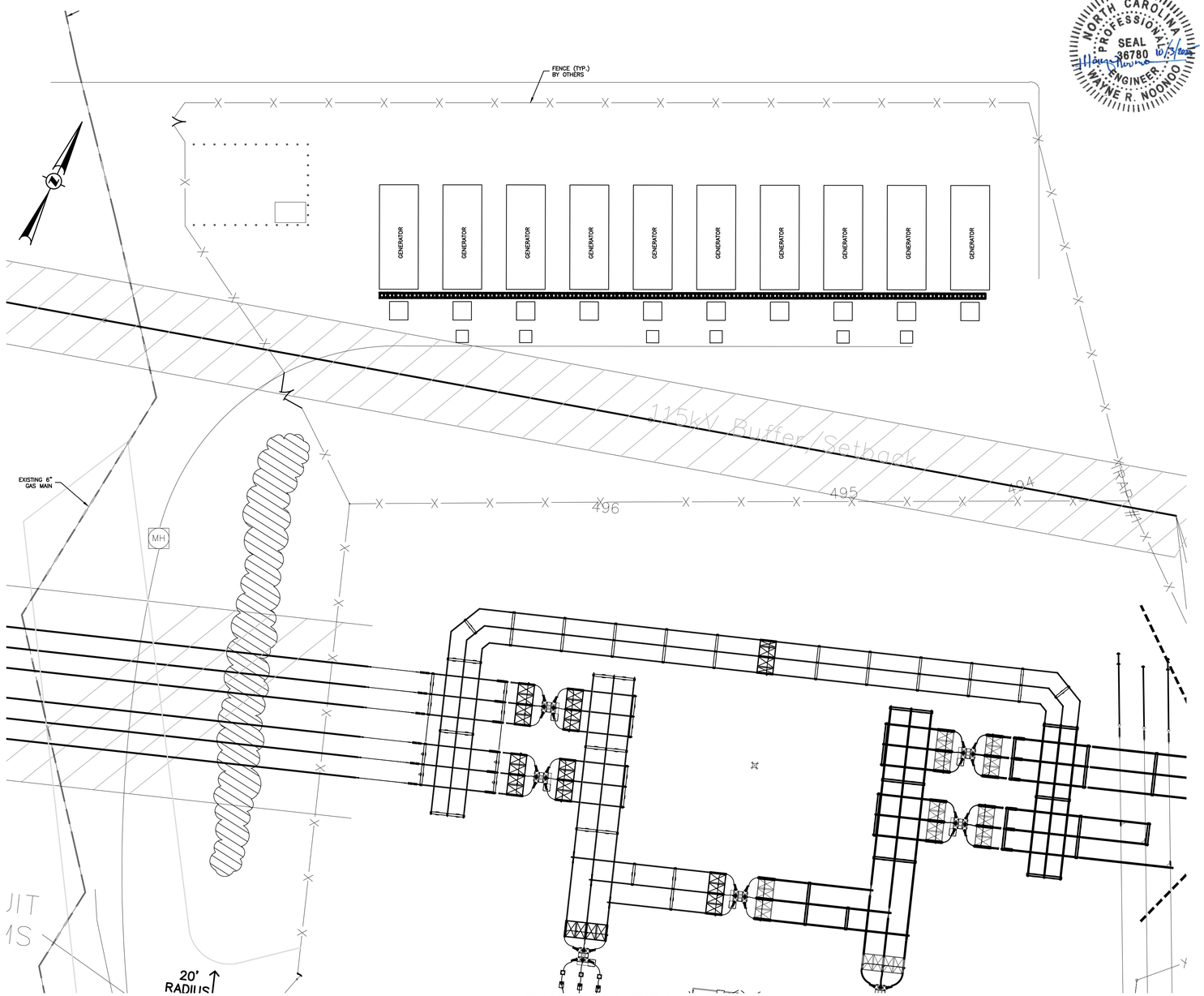
BILL OF MATERIALS,
DRAWING LEGEND,
AND GENERAL NOTES

SHEET: 1

REVISION: 0



EXISTING AREA PLAN
SCALE: 1" = 100'-0"



EXISTING CONDITIONS PLAN
SCALE: 1" = 30'-0"

0' 4' 8' 16' 32'
SCALE: 1/16" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

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10/3/2025

SUMMARY OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS					
REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL						
	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA
TESTED FROM STATION: _____ TO STATION: _____
MEDIUM: _____ RECORD TEST PRESSURE: _____ psig
DATE TEST COMPLETED: _____

PROJECT
GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

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RK&K COMM. NO. 24237.000

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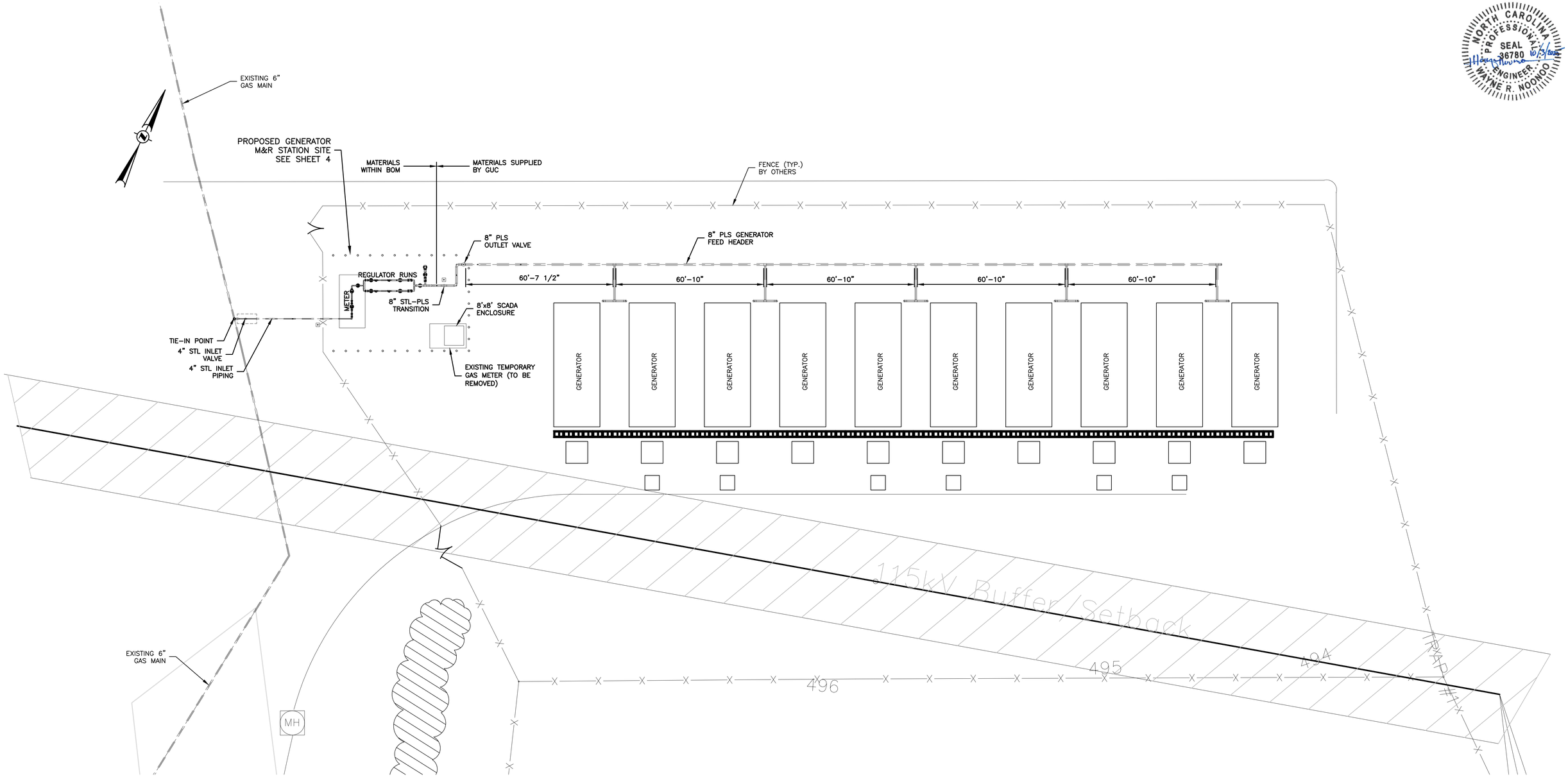
Greenville Utilities

DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION
EXISTING AREA AND
EXISTING CONDITIONS PLAN

SHEET: 2
REVISION: 0



NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 36780 WAYNE R. NOONOO 10/3/2025

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10/3/2025

PROPOSED GENERATOR M&R STATION PIPING PLAN
SCALE: 1" = 20'–0"

0' 4' 8' 16' 32'
SCALE: 1/16" = 1'–0"

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL

	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA

TESTED FROM STATION: _____ TO STATION: _____
MEDIUM: _____ RECORD TEST PRESSURE: _____ psig
DATE TEST COMPLETED: _____

PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

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Greenville Utilities

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SHEET DESCRIPTION

PROPOSED GENERATOR
M&R STATION PIPING PLAN

SHEET: 3

REVISION: 0

10/3/2025

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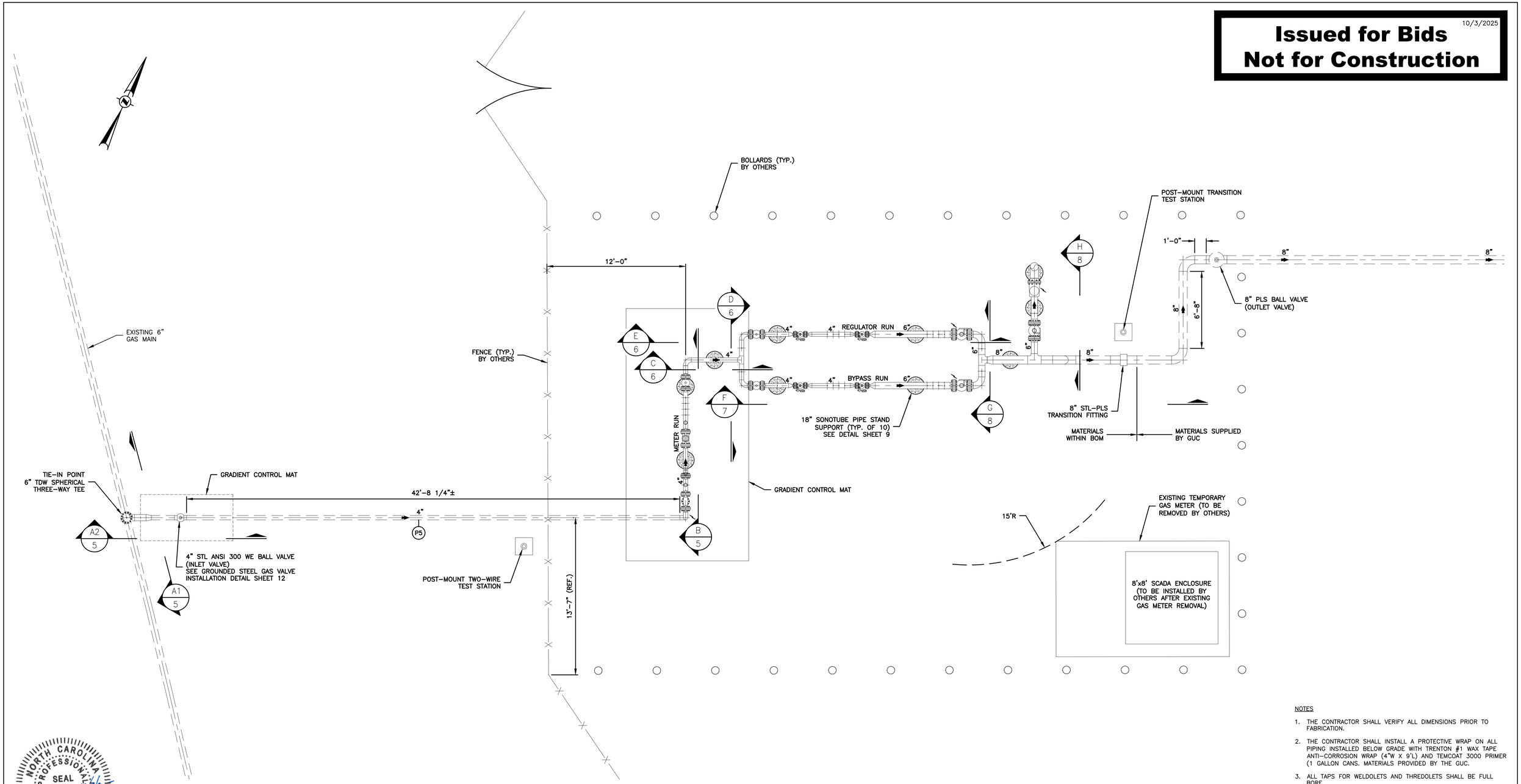
Not for Construction



PROPOSED GENERATOR M&R STATION PIPING PLAN

SCALE: 1/4" = 1'-0"

0' 6" 1' 2' 3'

SCALE: 3/4" = 1'-0"

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
2. THE CONTRACTOR SHALL INSTALL A PROTECTIVE WRAP ON ALL PIPING INSTALLED BELOW GRADE WITH TRENTON #1 WAX TAPE ANTI-CORROSION WRAP (4"W X 9'L) AND TEMCOAT 3000 PRIMER (1 GALLON CANS. MATERIALS PROVIDED BY THE GUC.
3. ALL TAPS FOR WELDOLETS AND THREDOLETS SHALL BE FULL BORE.
4. SITE SHALL BE GRADED AS TO ALLOW FOR PROPER DRAINAGE AWAY FROM REGULATOR PIPING.
5. PIPE STANDS SHALL BE CENTERED IN PIPE SPOOL UNLESS DIMENSIONED OTHERWISE.

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO

10/3/25

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL

	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA

TESTED FROM STATION: _____ TO STATION: _____

MEDIUM: _____ RECORD TEST PRESSURE: _____ psig

DATE TEST COMPLETED: _____

PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

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RK&K COMM. NO. 24237.000

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Greenville Utilities

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SHEET DESCRIPTION

PROPOSED GENERATOR M&R STATION
PIPING PLAN

SHEET: 4

REVISION: 0

10/3/2025

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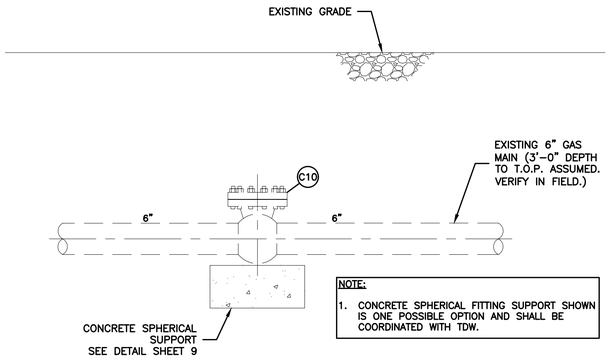
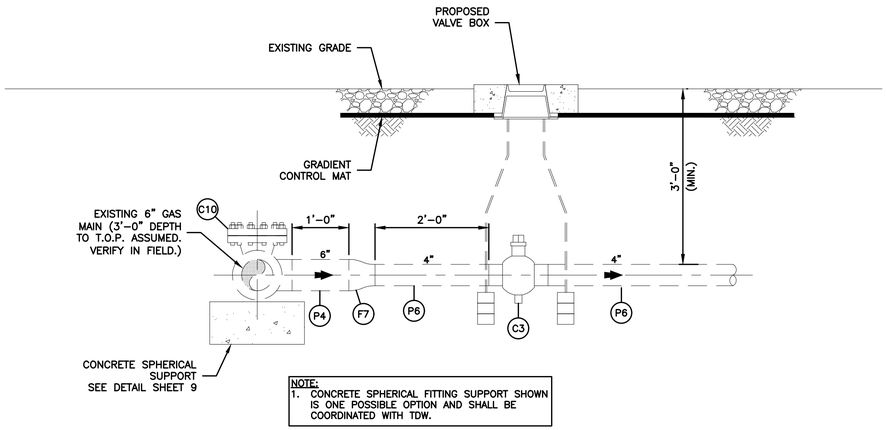
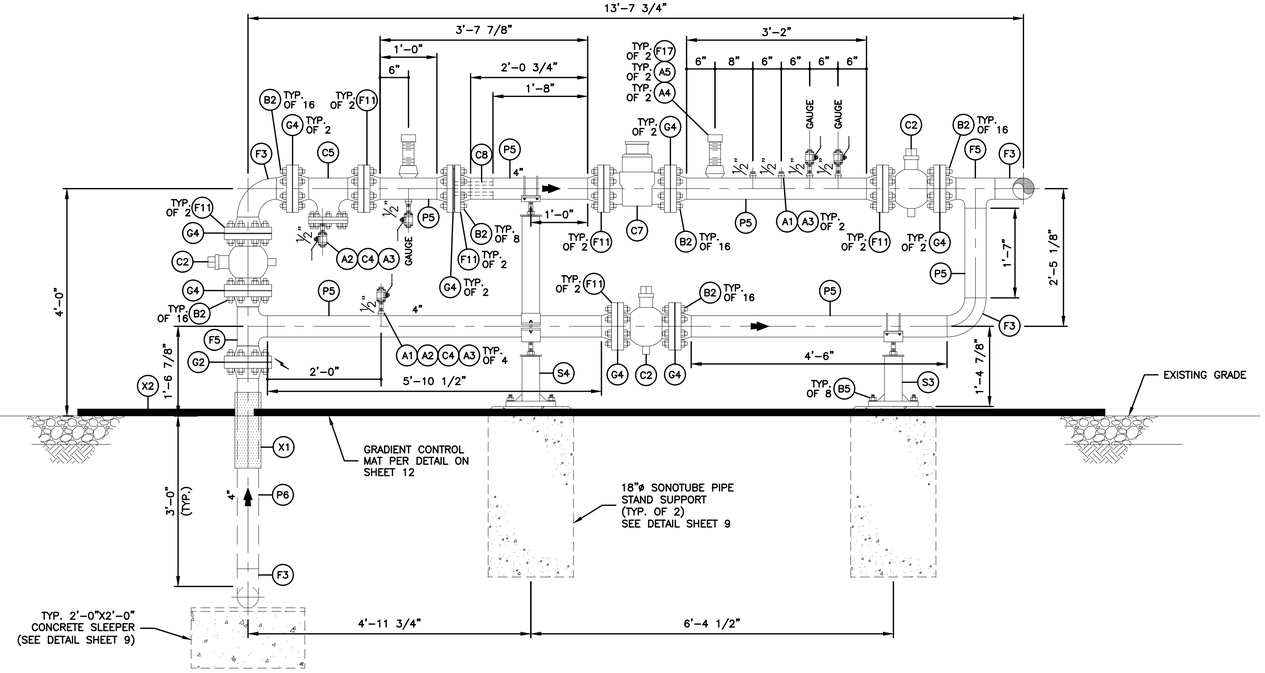
Not for Construction



SECTION A1
SCALE: 3/4" = 1'-0"



SECTION A2
SCALE: 3/4" = 1'-0"



SECTION B
SCALE: 3/4" = 1'-0"

0' 6" 1' 2' 3'
SCALE: 3/4" = 1'-0"

(X) REFER TO SHEET 1 FOR BILL OF MATERIALS

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
2. THE CONTRACTOR SHALL INSTALL A PROTECTIVE WRAP ON ALL PIPING INSTALLED BELOW GRADE WITH TRENTON #1 WAX TAPE ANTI-CORROSION WRAP (4"W X 9'L) AND TEMCOAT 3000 PRIMER (1 GALLON CANS. MATERIALS PROVIDED BY THE GUC.
3. ALL TAPS FOR WELDOLETS AND THREDOLETS SHALL BE FULL BORE.
4. SITE SHALL BE GRADED AS TO ALLOW FOR PROPER DRAINAGE AWAY FROM REGULATOR PIPING.
5. PIPE STANDS SHALL BE CENTERED IN PIPE SPOOL UNLESS DIMENSIONED OTHERWISE.

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL

	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA

TESTED FROM STATION: _____ TO STATION: _____
MEDIUM: _____ RECORD TEST PRESSURE: _____ psig
DATE TEST COMPLETED: _____

PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

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RK&K COMM. NO. 24237.000

SCALE
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Greenville Utilities

DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

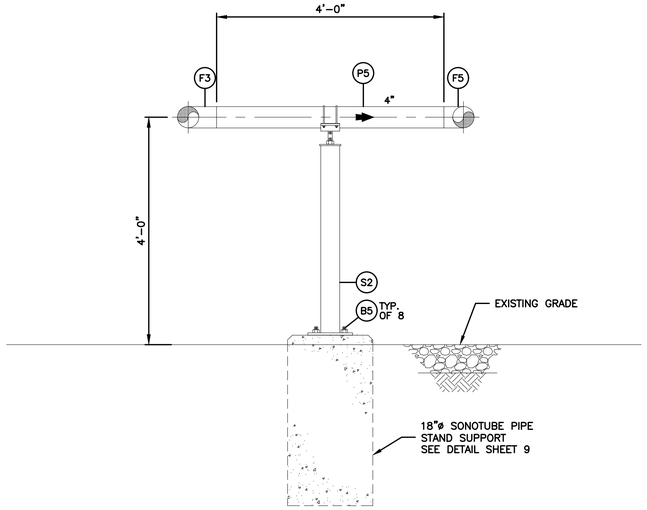
PROPOSED PIPING ELEVATIONS

SHEET: 5

REVISION: 0

10/3/2025

Issued for Bids
Not for Construction



SECTION C
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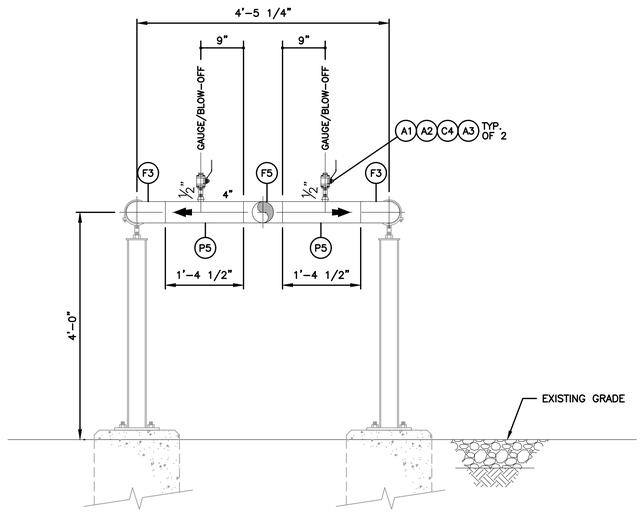

SECTION D
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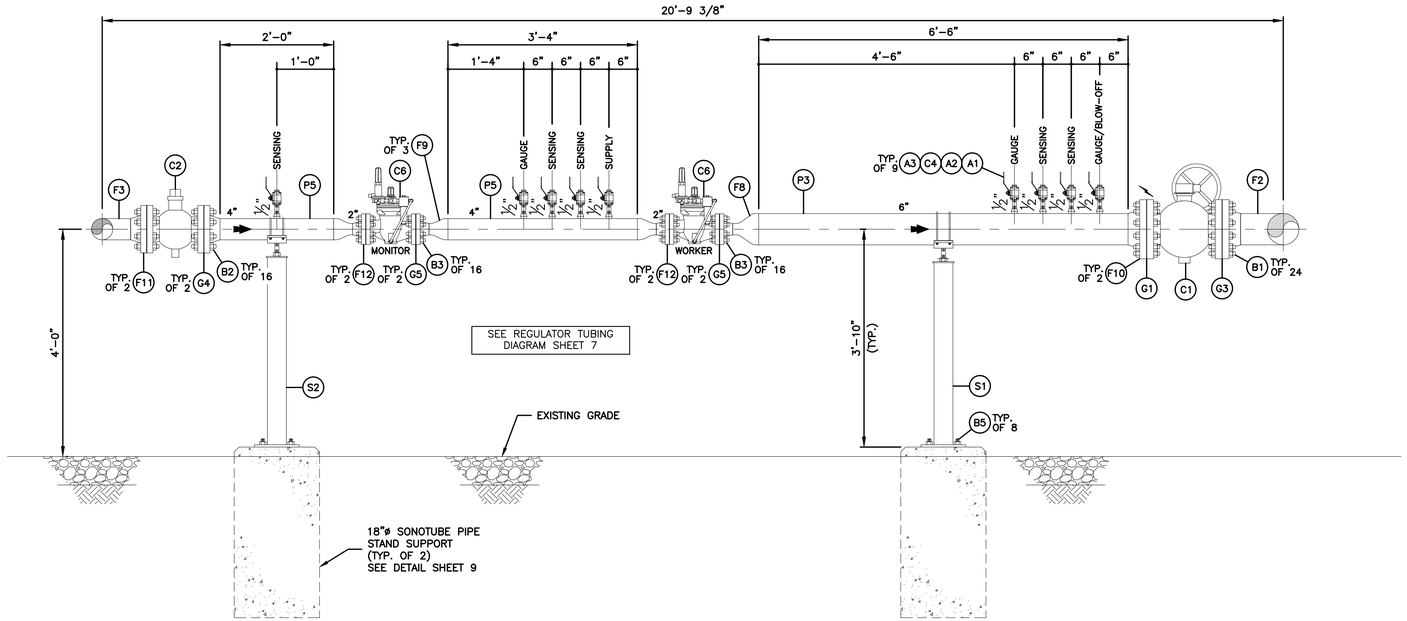

SECTION E
SCALE: 3/4" = 1'–0"

0' 6" 1' 2' 3'
SCALE: 3/4" = 1'–0"

(X) REFER TO SHEET 1 FOR BILL OF MATERIALS

NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
2. THE CONTRACTOR SHALL INSTALL A PROTECTIVE WRAP ON ALL PIPING INSTALLED BELOW GRADE WITH TRENTON #1 WAX TAPE ANTI–CORROSION WRAP (4"W X 9'L) AND TEMCOAT 3000 PRIMER (1 GALLON CANS. MATERIALS PROVIDED BY THE GUC.
3. ALL TAPS FOR WELDOLETS AND THREDOLETS SHALL BE FULL BORE.
4. SITE SHALL BE GRADED AS TO ALLOW FOR PROPER DRAINAGE AWAY FROM REGULATOR PIPING.
5. PIPE STANDS SHALL BE CENTERED IN PIPE SPOOL UNLESS DIMENSIONED OTHERWISE.

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL

	PERMITS		BID		CONSTRUCTION	
	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
ENGINEERING – RK&K	–	–	CJV/WRN	10/3/25	–	–

TEST DATA

TESTED FROM STATION: _____ TO STATION: _____
MEDIUM: _____ RECORD TEST PRESSURE: _____ psig
DATE TEST COMPLETED: _____

PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

RK&K RUMMEL, KLEPPER & KAHL, LLP
2100 E. CARY ST. SUITE 309
RICHMOND, VIRGINIA 23223
T–804.782.1903 F–804.782.2142
ENGINEERS | CONSTRUCTION MANAGERS | PLANNERS | SCIENTISTS

RK&K COMM. NO. 24237.000

SCALE
PLAN AS SHOWN
PROFILE
HOR. –
VERT. –

Greenville Utilities

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–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

PROPOSED PIPING ELEVATIONS

SHEET: 6

REVISION: 0

Issued for Bids
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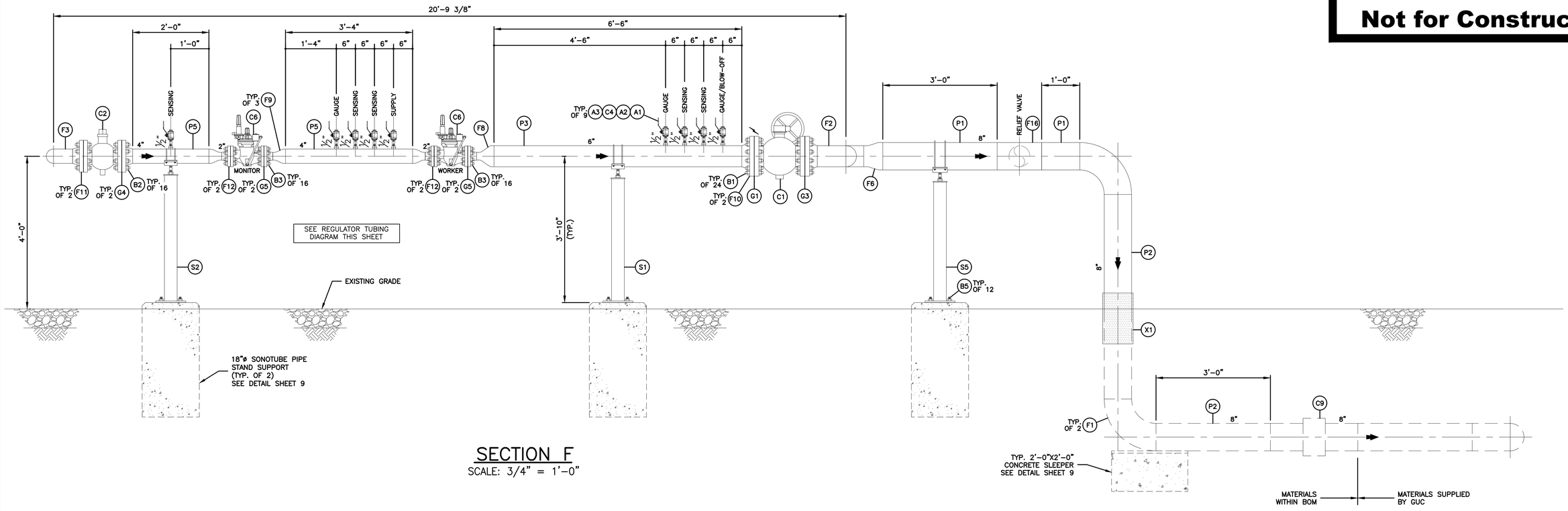
10/3/2025



SECTION F
SCALE: 3/4" = 1'-0"

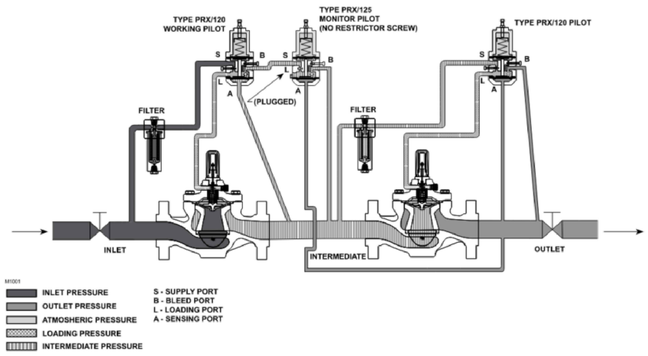


Figure 6. *Type EZR-PRX-PRX Working Monitor Schematic*

REGULATOR TUBING DIAGRAM
N.T.S.
(INSTALLED BY GUC)

SCALE: 3/4" = 1'-0"

(X) REFER TO SHEET 1 FOR BILL OF MATERIALS

NOTES

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NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

REVISIONS

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APPROVAL

	PERMITS		BID		CONSTRUCTION	
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SURVEY						
C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
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–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

PROPOSED PIPING ELEVATIONS
AND REGUALTOR SCHEMATIC

SHEET: 7

REVISION: 0

Issued for Bids
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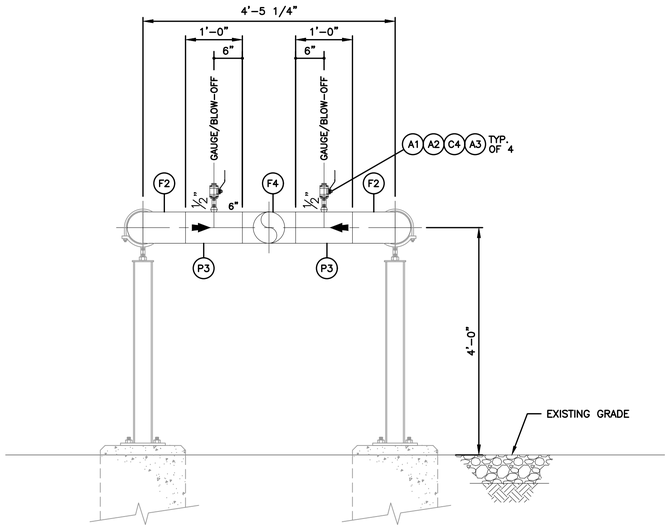
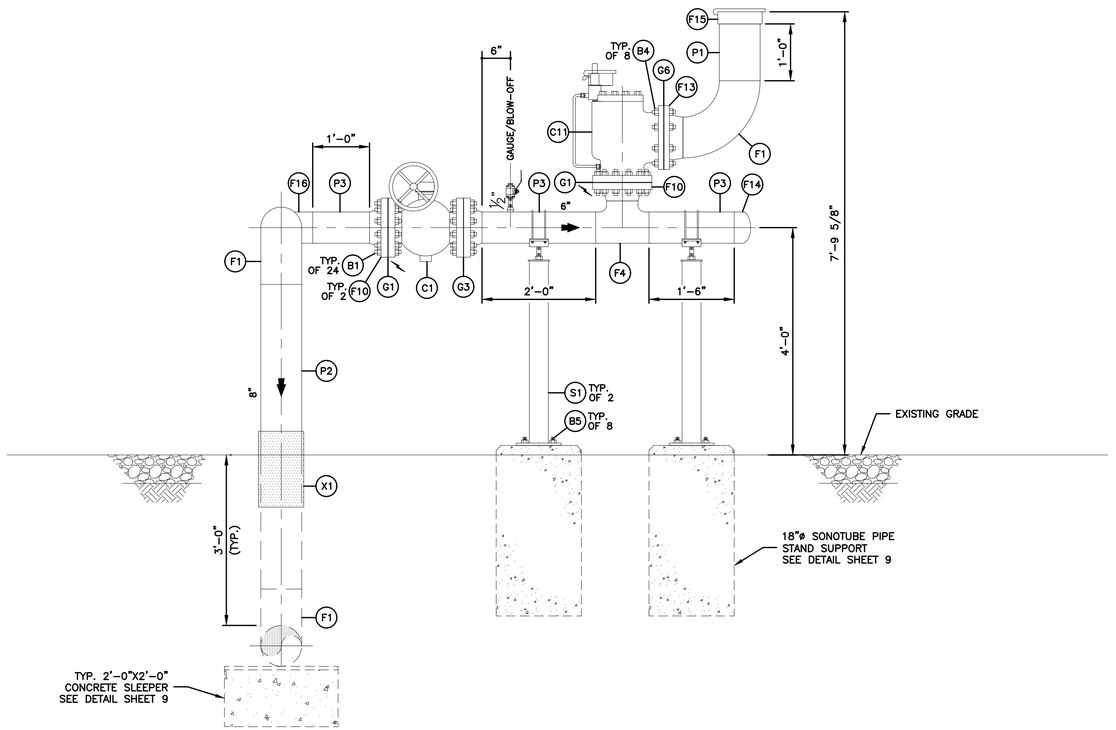
10/3/2025



SECTION G
SCALE: 3/4" = 1'-0"



SECTION H
SCALE: 3/4" = 1'-0"

NOTES

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0' 6" 1' 2' 3'
SCALE: 3/4" = 1'-0"

(X) REFER TO SHEET 1 FOR BILL OF MATERIALS

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONDO 10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

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Greenville Utilities

DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

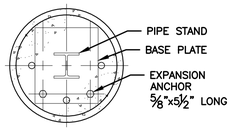
PROPOSED PIPING ELEVATIONS

SHEET: 8

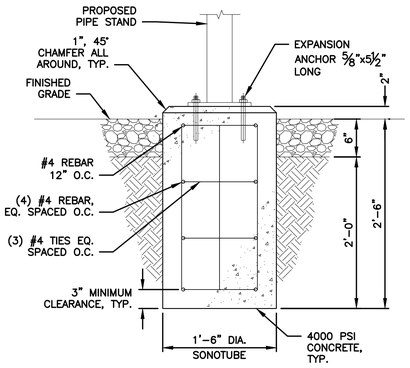
REVISION: 0

10/3/2025

Issued for Bids
Not for Construction

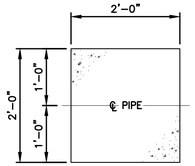


PLAN

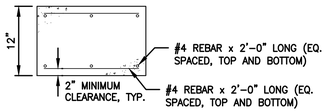


SONOTUBE PIPE STAND SUPPORT

SCALE: 1" = 1'-0"



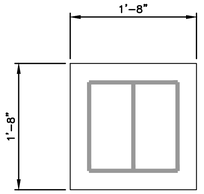
PLAN



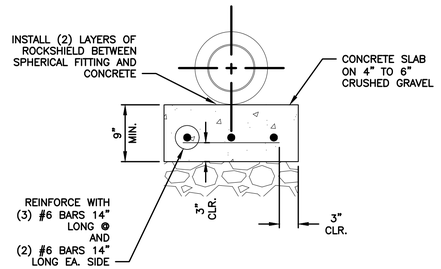
ELEVATION

CONCRETE SLEEPER DETAIL

SCALE: 1" = 1'-0"



PLAN



SECTION

CONCRETE SPHERICAL FITTING SUPPORT

SCALE: 1" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO
10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

NOTES

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PROJECT

GREENVILLE SUBSTATION
METERING AND REGULATION STATION

ALIGNMENT SHEET

RK&K RUMMEL, KLEPPER & KAHL, LLP
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Greenville Utilities

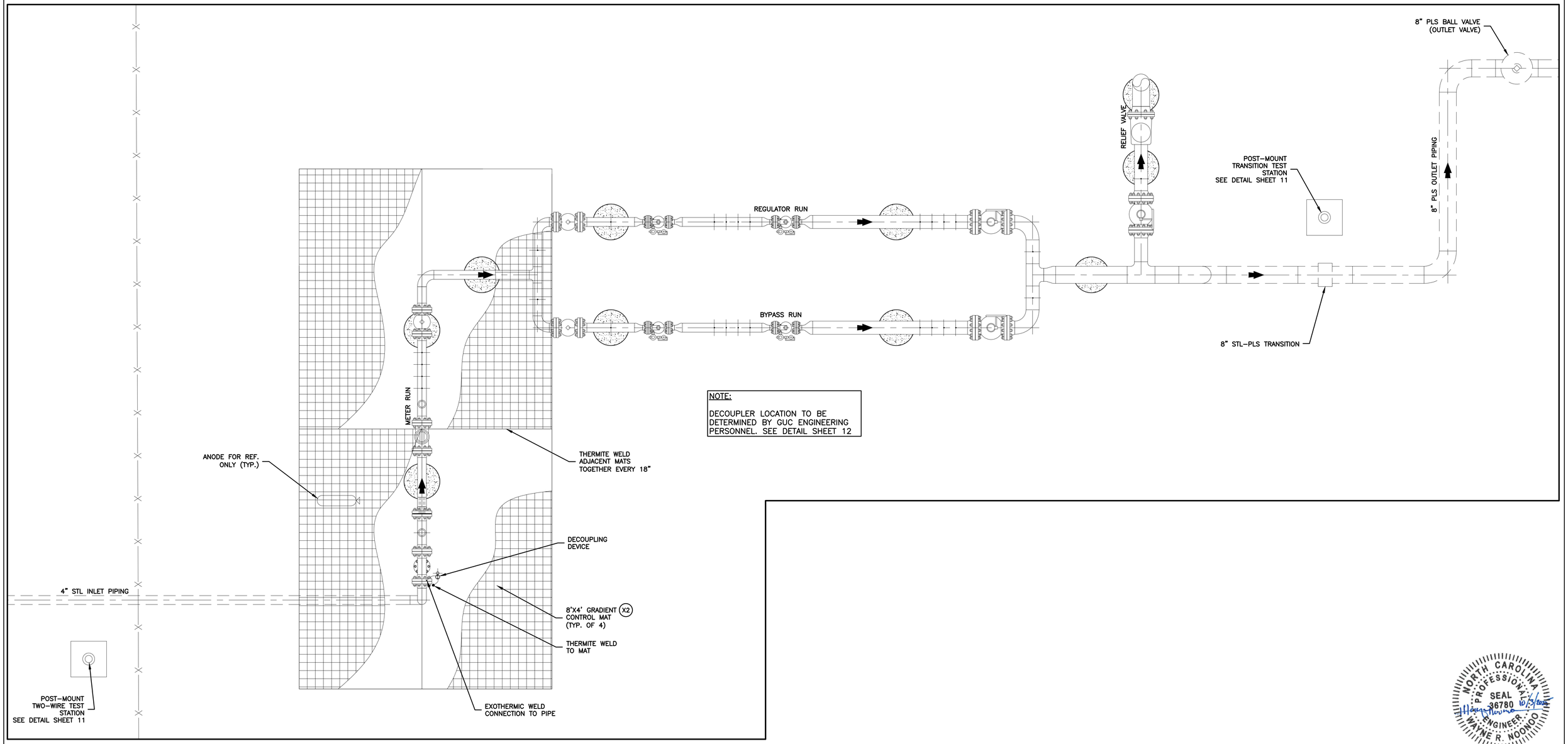
DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

CONCRETE DETAILS

SHEET: 9

REVISION: 0



NOTE:

DECOUPLER LOCATION TO BE DETERMINED BY GUC ENGINEERING PERSONNEL. SEE DETAIL SHEET 12

PROPOSED CATHODIC PROTECTION PLAN

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

0' 6" 1' 2' 4'

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

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO

10/3/2025

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SUMMARY OF MATERIALS

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Greenville Utilities

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SHEET DESCRIPTION

PROPOSED CATHODIC PROTECTION PLAN

SHEET: 10

REVISION: 0

10/3/2025

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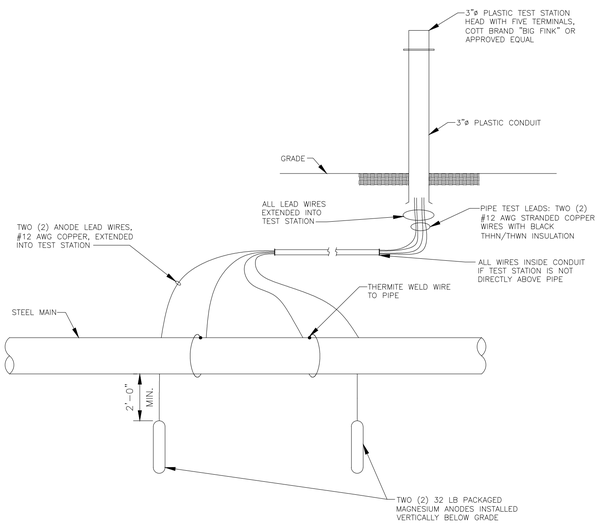
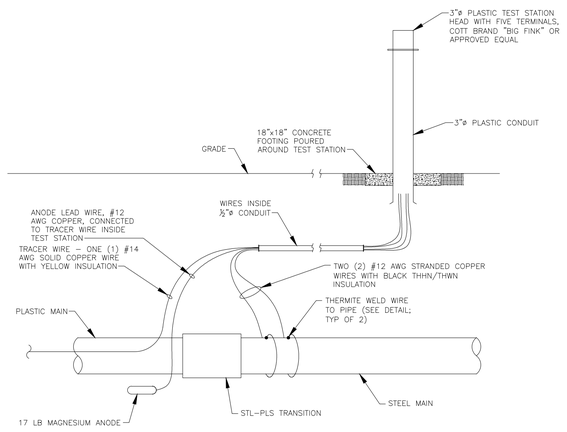
Not for Construction



NOTES:
1. LOCATE TEST STATION DIRECTLY OVER PIPING IF PIPING IS OUT OF PAVED AREA. IF PIPE IS UNDER PAVEMENT, MOVE TEST STATION TO NEAREST PAVEMENT EDGE.
2. EXTEND ANODE LEAD WIRES INTO TEST STATION AS SHOWN; DO NOT CONNECT TO STEEL MAIN.
3. ALL WIRES MUST BE MINIMUM 18" BELOW GRADE EXCEPT WHERE RISING UP INTO TEST STATION.

DETAIL – TWO–WIRE POST–MOUNT TEST STATION WITH TWO ANODES – PROFILE VIEW

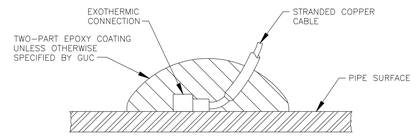
N.T.S.



NOTES:
1. LOCATE TEST STATION DIRECTLY OVER PIPING IF PIPING IS OUT OF TRAFFIC LANE
2. EXTEND TRACER WIRE INTO TEST STATION AS SHOWN; DO NOT CONNECT TO STEEL MAIN.

DETAIL – TRANSITION TEST STATION, POST MOUNT, W/ 17 LB ANODE – PROFILE VIEW

N.T.S.



NOTES:
1. METAL SURFACE TO BE DRY AND FREE OF ALL FOREIGN MATERIAL.
2. CONNECTION AND EXPOSED METAL TO HAVE 1/2" INSULATION.

THERMITE WELD DETAIL

N.T.S.

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

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SHEET DESCRIPTION

CATHODIC PROTECTION DETAILS

SHEET: 11

REVISION: 0

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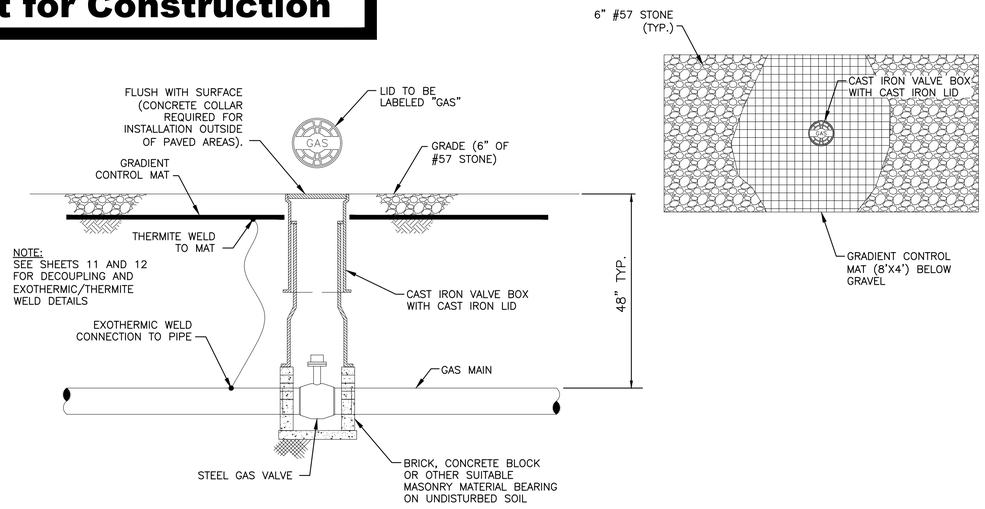
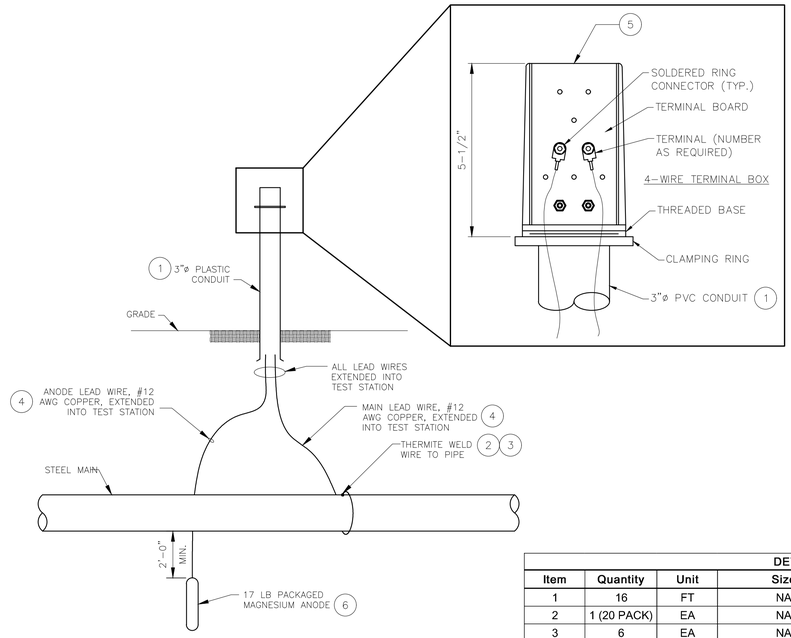
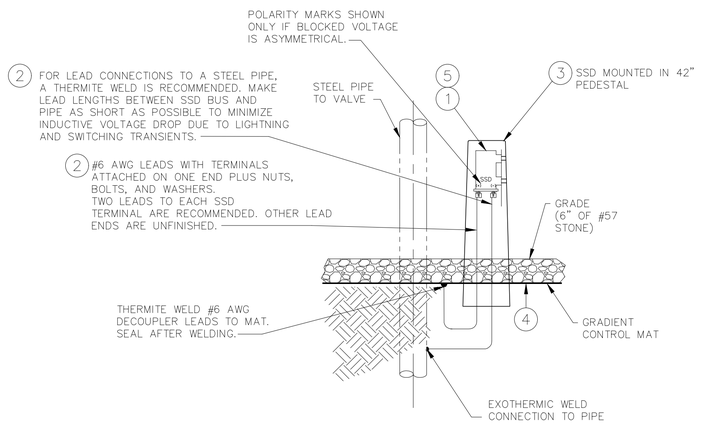


GROUNDED STEEL GAS VALVE INSTALLATION DETAIL
N.T.S.



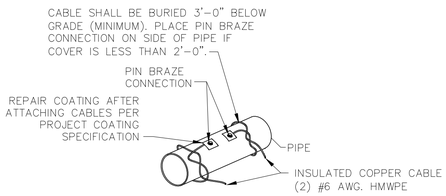
DETAIL 1 – POST-MOUNT TEST STATION WITH (1) 17LB ANODE – PROFILE VIEW
N.T.S.

DETAIL 1 STANDARD TEST STATION				
Item	**Quantity**	**Unit**	**Size**	**Description of Materials (Domestic Source)**
1	16	FT	NA	UV Resistant 3-Inch PVC Conduit
2	1 (20 PACK)	EA	NA	Thermite Weld Mold, Cadweld 15g Charge
3	6	EA	NA	Thermite Weld Coating Repair, Royston Handy Cap IP
4	60	FT	NA	#12 AWG Thin Insulated Station Solid Copper Wire (Black)
5	2	EA	NA	Standard Test Station Cott Model: Cott-BFTS
6	1	EA	NA	17 LB Magnesium Anode

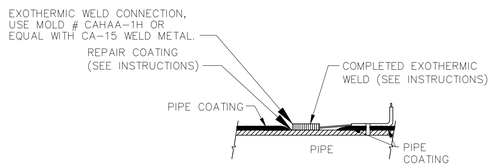


ABOVE GROUND APPURTENANCE DECOUPLER DETAIL WITH GRADIENT CONTROL MAT
N.T.S.

ABOVE GROUND APPURTENANCE DECOUPLER DETAIL W/ GRADIENT CONTROL MAT				
Item	**Quantity**	**Unit**	**Item**	**Description of Materials (Domestic Source)**
1	1	EA	SSD Decoupler	DEI Model # SSD-2/2-2.0-100-R Standard, Standard Terminal Arrangement, AC Fault Current Rating 2.0 kA (50/60 HZ) Blocking Voltage - 2.0V/+2V, Lightning Current Rating 100 kA. May be Mounted in 42" Fiberglass Pedestal
2	50	FT	Decoupler Lead	#6 AWG HMWPE Cable Leads with compression terminals
3	1	EA	Fiberglass Pedestal	DEI, 42" Fibersglass Free Standing Pedestal, 3/16" Fiberglass Thickness, 14 MIL Thick UV Stabilized Gelcoat, or Approved Equal
4	4	EA	Gradient Control Mat	DEI Model GMC 4-8 (4'X8'),3"X3" Grid Squares, 0.135 DIA Steel Wire (Or Owner Approved Equal)
5	1	EA	Isolation Switch	50 AMP AC Dairyland Electric SW-50-SSD or Equal
Note: Three decoupler leads per SSD for single mitigation wire installation.				



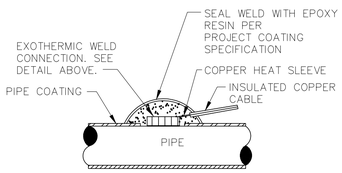
WELD DETAIL
CABLE ATTACHMENT



EXOTHERMIC WELD CONNECTION

INSTALLATION INSTRUCTIONS

1. REMOVE A MAXIMUM OF 1.57" X 1.57" OF COATING, WIRE, BRUSH CLEAN AND FILE BRIGHT.
2. STRIP CABLE INSULATION BARE 1" AND CLAMP.
3. USE THE CHARGE RECOMMENDED BY THE EXOTHERMIC WELD MANUFACTURER.
4. PLACE METAL RETAINER DISK FLAT IN MOLD, DUMP (DO NOT POUR) POWDER ONTO DISK AND CLOSE MOLD LID. MAKE SURE ALL FINE STARTING POWDER IS IN THE MOLD. IF ANY CLINGS TO BOTTOM OF CARTRIDGE, SQUEEZE OUT INTO MOLD AND BREAK UP FINE.
5. REPLACE EMPTY CARTRIDGE IN THE BOX, GREEN END UP TO KEEP REMAINING CARTRIDGES UPRIGHT.
6. LAY CABLE ON BRIGHT PIPE SURFACE USING SPRING LOADED CHAIN CLAMP TO HOLD CRUCIBLE TIGHT, REMOVE HAND COMPLETELY AWAY FROM TOOL.
7. USING EYE PROTECTION, STAND ON OPPOSITE SIDE OF CRUCIBLE FROM TOUCH HOLE AND IGNITE POWDER WITH SPARK FROM FLINT GUN. USE CARE, POWDER WILL FLASH WHEN IGNITED.
8. WHEN WELD HAS SET, REMOVE MOLD AND TEST EXOTHERMIC WELD CONNECTION BY RAPPING SHARPLY WITH HAMMER IN THE EVENT THERE IS ANY INDICATION THAT A COMPLETE WELD HAS NOT BEEN ACHIEVED, THE WELD SHALL BE REMOVED AND REPLACED WITH A PROPER WELD.
9. CLEAN SLAG FROM WELD AND PIPE.
10. ALL COATING DAMAGE SHALL BE REPAIRED USING THE PATCHING PROCEDURE AND MATERIALS AS SPECIFIED IN PROJECT COATING SPECIFICATIONS.



CORROSION PROTECTION SEAL

EXOTHERMIC WELD CONNECTION DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 36780 ENGINEER WAYNE R. NOONOO 10/3/2025

SUMMARY OF MATERIALS

ITEM	QUANTITY	DESCRIPTION

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C.P.						
DRAFTING & DESIGN – RK&K	–	–	CSY	10/3/25	–	–
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TEST DATA

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PROJECT

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Greenville Utilities

DISTRICT	COUNTY	STATE
–	PITT	NORTH CAROLINA

SHEET DESCRIPTION

CATHODIC PROTECTION DETAILS

SHEET: 12

REVISION: 0