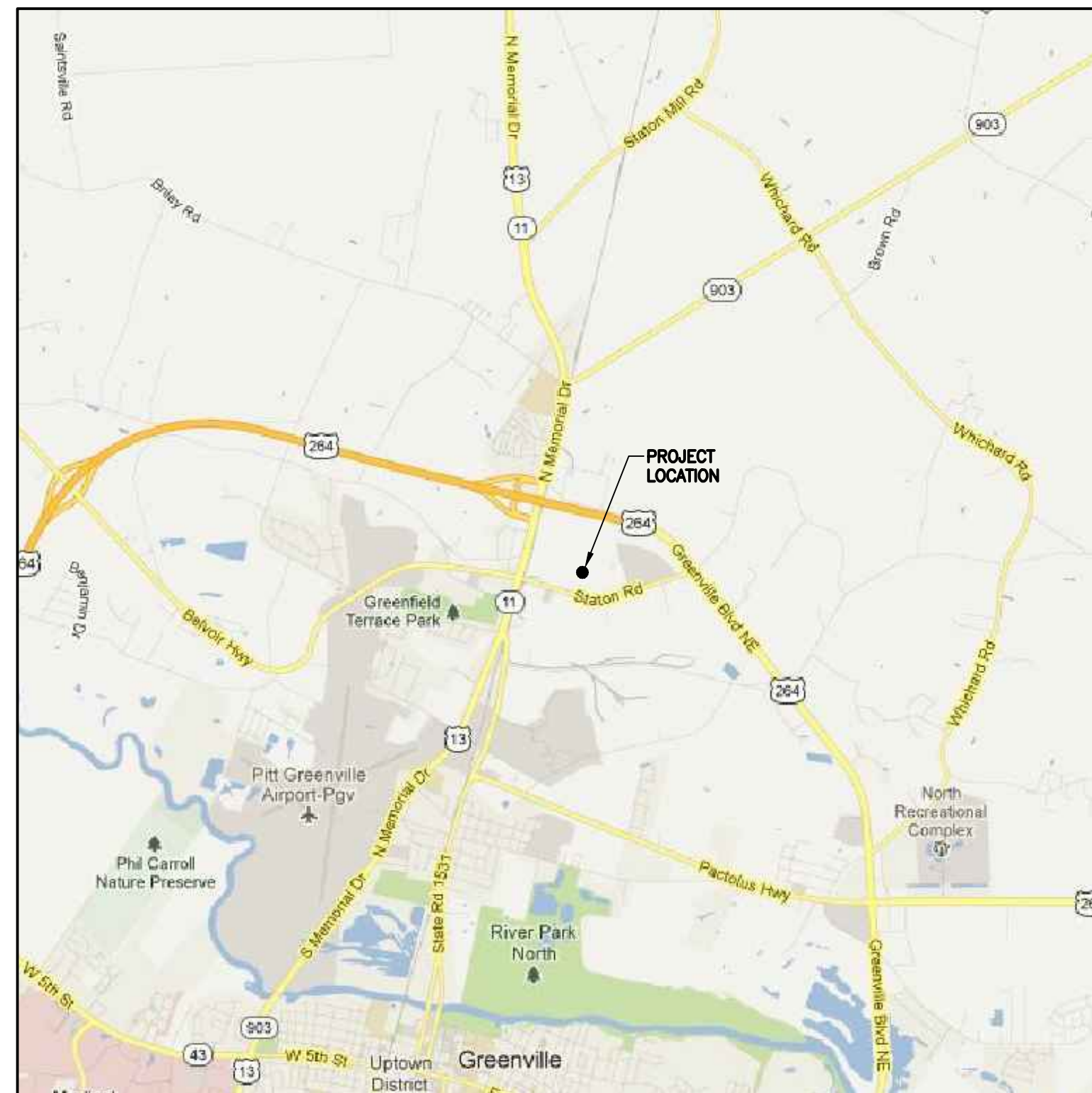


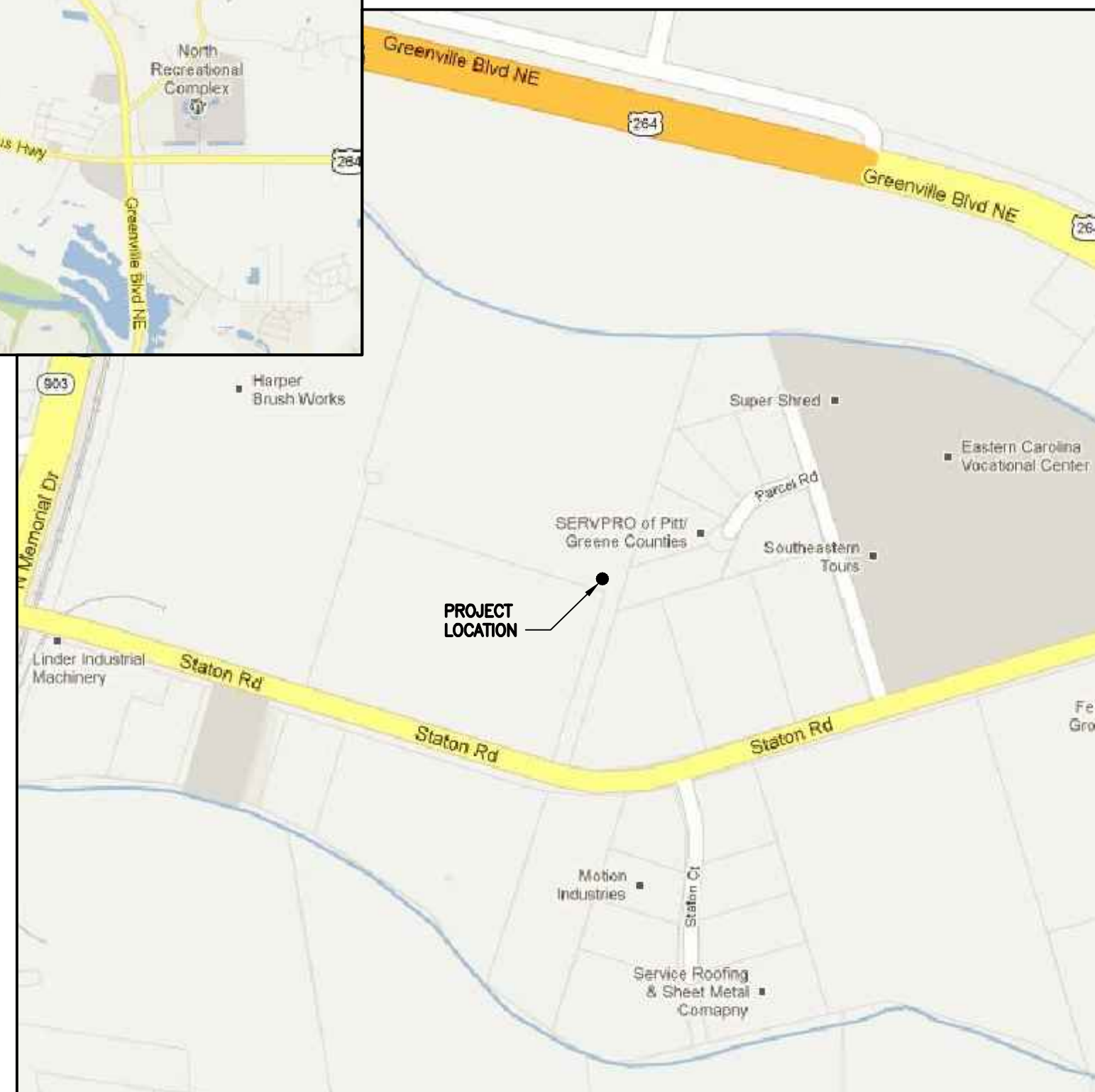
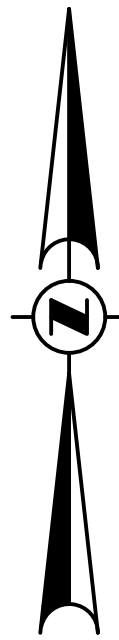
Greenville Utilities

S.T. Wooten Corporation Asphalt Plant Industrial Gas Meter Sets Replacement - Phase II City Of Greenville, North Carolina

Issued for Bid
May 2013



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

SHEET INDEX

<u>SHEET DESCRIPTION</u>	<u>SHEET NUMBER</u>
COVER SHEET	-
BILL OF MATERIALS AND GENERAL NOTES	STW-1
OVERALL SITE PLAN	STW-2
PROPOSED SITE PLAN	STW-3
PROPOSED PIPING PLAN	STW-4
METER RUN SECTION A-A	STW-5
REGULATOR RUN SECTION B-B	STW-6



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

PIPING BILL OF MATERIALS

ITEM NO.	QUANTITY	SIZE	DESCRIPTION
1	32	5/8"x3 3/4"	STUD BOLT, GRADE B-7, (ASTM-A193), W/2 GRADE 2-H HEX NUTS (ASTM-A194)
2	32	3/4"x4 1/2"	STUD BOLT, GRADE B-7, (ASTM-A193), W/2 GRADE 2-H HEX NUTS (ASTM-A194)
3	64	3/4"x4 3/4"	STUD BOLT, GRADE B-7, (ASTM-A193), W/2 GRADE 2-H HEX NUTS (ASTM-A194)
4	8	3"	GASKET, ANSI 150, SPIRAL WOUND, FLEXITALLIC
5	2	6"	GASKET, ANSI 150, SPIRAL WOUND, FLEXITALLIC
6	7	8"	GASKET, ANSI 150, SPIRAL WOUND, FLEXITALLIC
7	2	6"	FLANGE INSULATION KIT, ANSI 150, TYPE E, PSI LINEBACKER, DOUBLE WASHER SET, W/ FULL LENGTH PHENOLIC SLEEVES
8	2	8"	FLANGE INSULATION KIT, ANSI 150, TYPE E, PSI LINEBACKER, DOUBLE WASHER SET, W/ FULL LENGTH PHENOLIC SLEEVES
9	1	1/2"	THREDOLET, FOR 6" THRU 10" PIPE, 3000#
10	3	3/4"	THREDOLET, FOR 2" THRU 3 1/2" PIPE, 3000#
11	5	3/4"	THREDOLET, FOR 6" THRU 10" PIPE, 3000#
12	9	1"	THREDOLET, FOR 6" THRU 10" PIPE, 3000#
13	2	2"	THREDOLET, FOR 6" THRU 10" PIPE, 3000#
14	-	-	OMITTED
15	-	-	OMITTED
16	2	1/2"x3"	NIPPLE, PIPE, STEEL, GRADE B, SMLS, CS, TBE
17	6	3/4"x3"	NIPPLE, PIPE, STEEL, GRADE B, SMLS, CS, TBE
18	10	1"x3"	NIPPLE, PIPE, STEEL, GRADE B, SMLS, CS, TBE
19	2	2"x6"	NIPPLE, PIPE, STEEL, GRADE B, SMLS, CS, TBE
20	2	1/2"	PLUG, FORGED STEEL, HEX HEAD, SCREWED, 3000#
21	8	3/4"	PLUG, FORGED STEEL, HEX HEAD, SCREWED, 3000#
22	8	1"	PLUG, FORGED STEEL, HEX HEAD, SCREWED, 3000#
23	2	2"	CAP, FORGED STEEL, SCREWED, 3000#
24	8	3"	FLANGE, WELDING NECK, RF, ANSI 150, FORGED ST, WT = 0.216", BORE = 3.068"
25	6	6"	FLANGE, WELDING NECK, RF, ANSI 150, FORGED ST, WT = 0.280", BORE = 6.065"
26	10	8"	FLANGE, WELDING NECK, RF, ANSI 150, FORGED ST, WT = 0.322", BORE = 7.981"
27	6	6"	ELL, 90 DEG., L.R., GRADE B, 0.280" WALL
28	4	8"	ELL, 90 DEG., L.R., GRADE B, 0.322" WALL
29	2	6"x3"	TEE, WELDING, REDUCING, GRADE B, 0.280"x0.216" WALL
30	2	8"x6"	TEE, WELDING, REDUCING, GRADE B, 0.322"x0.280" WALL
31	4	6"x3"	REDUCER, WELD END, CONCENTRIC, GRADE B, BTM, 0.280"x0.216" WALL
32	2	8"x6"	REDUCER, WELD END, ECENTRIC, GRADE B, BTM, 0.322"x0.280" WALL
33	1	8"	STRAIGHTENING VANES, FLANGED TYPE, AMERICAN METER, PART NO. 74081P501
34	2	1/2"	BALL VALVE, SWAGelok SERIES 60, THREADED FEMALE ENDS, CLASS 3000
35	6	3/4"	BALL VALVE, SWAGelok SERIES 60, THREADED FEMALE ENDS, CLASS 3000
36	9	1"	BALL VALVE, SWAGelok SERIES 60, THREADED FEMALE ENDS, CLASS 3000
37	2	3"	BALL VALVE, FLANGE&WELD END, ANSI 150, WT=0.216", KEROTEST WELDBALL
38	2	6"	BALL VALVE, FLANGE&WELD END, ANSI 150, WT=0.280", KEROTEST WELDBALL
39	1	6"	BALL VALVE, WELD END, ANSI 150, WT=0.280", KEROTEST WELDBALL
40	2	8"	BALL VALVE, FLANGE&WELD END, ANSI 150, WT=0.322", KEROTEST WELDBALL
41	1	1"x1"	RELIEF VALVE, THREADED FEMALE ENDS, ANDERSON-GREENWOOD, SERIES 80, VALVE BODY 83, STAINLESS STEEL
42	1	8"	STRAINER, TEE STYLE, R.F. FLANGED ENDS, ANSI 150, APOLLO ENGINEERING, MODEL TSF
43	1	8"	TURBINE GAS METER, R.F. FLANGED ENDS, ANSI 150, ELSTER-AMERICAN METER, MODEL GTS
44A	1	3"	REGULATOR, PRESSURE REDUCING, R.F. FLANGED ENDS, ANSI 150, PIETRO FIORENTINI, NORVAL SERIES, W/ 375 HEAD CI, AND LIGHT BLUE SPRING (WORKER)
44B	1	3"	REGULATOR, PRESSURE REDUCING, R.F. FLANGED ENDS, ANSI 150, PIETRO FIORENTINI, NORVAL SERIES, W/ 375 HEAD CI, IN-LINE MONITOR ER DN80 CE, AND BROWN SPRING (MONITOR)
44C	1	3"	REGULATOR, PRESSURE REDUCING, R.F. FLANGED ENDS, ANSI 150, PIETRO FIORENTINI, NORVAL SERIES, W/ 375 HEAD CI, AND LIGHT BLUE SPRING
45	20 LF	3"	PIPE, 0.216" WALL, GRADE B, BARE, CS, ERW, BE, SPEC API-SL
46	100 LF	6"	PIPE, 0.280" WALL, GRADE B, BARE, CS, ERW, BE, SPEC API-SL
47	20 LF	8"	PIPE, 0.322" WALL, GRADE B, BARE, CS, ERW, BE, SPEC API-SL
48	AS REQ'D	N/A	ROCK SHIELD
-	-	-	-
-	-	-	-
-	-	-	-

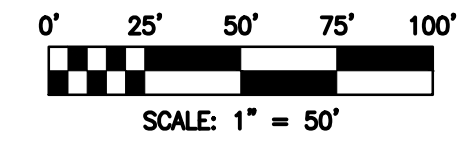
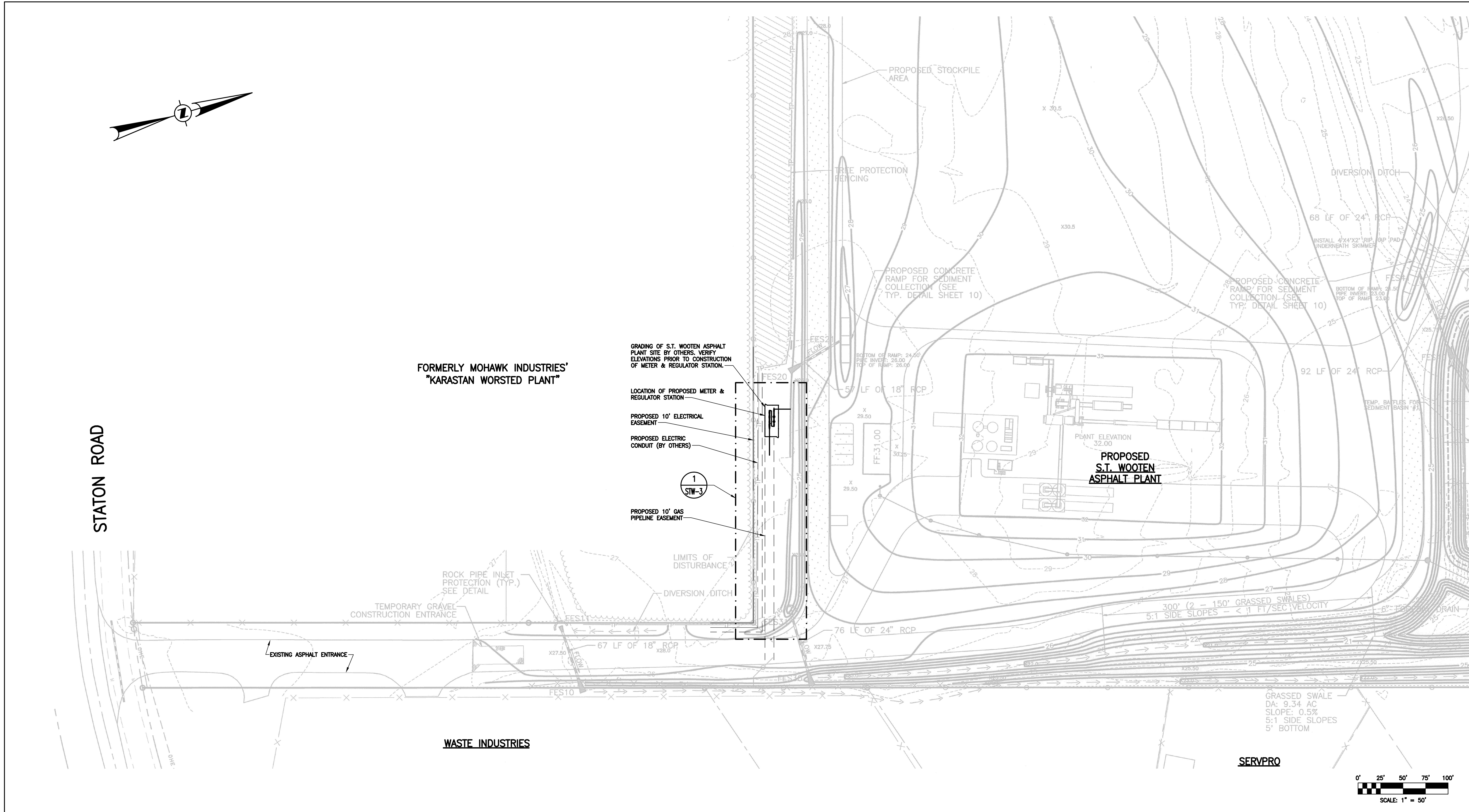
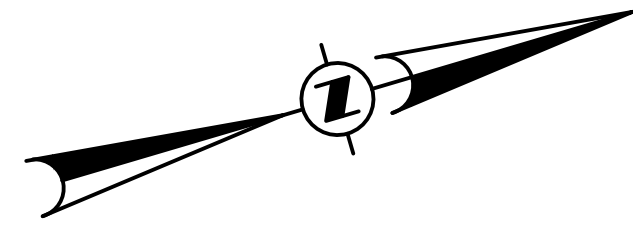
NOTES:

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

DRAWING LEGEND

SYMBOL	DESCRIPTION
	PROPERTY LINE
	EASEMENT
	CENTERLINE
	PROPOSED FENCE
	PROPOSED GAS PIPE ABOVE GRADE (DOUBLE LINE)
	PROPOSED GAS PIPE BELOW GRADE (DOUBLE LINE)
	INSULATING FLANGE LOCATION

SUMMARY OF MATERIALS		NOTES		APPROVAL			PROJECT	
QUANTITY	DESCRIPTION						S.T. WOOTEN CORPORATION ASPHALT PLANT INDUSTRIAL GAS METER SETS REPLACEMENT - PHASE II ALIGNMENT SHEET	
							 <small>FRANZ, KLEPPER & KHL, LLP 801 E. MAIN STREET, SUITE 1000 RICHMOND, VIRGINIA 23219 T-804-782-1903 F-804-782-2142</small> ENGINEERS CONSTRUCTION MANAGERS PLANNERS SCIENTISTS RK&K COMM. NO. 811-013-02.1	
							SHEET DESCRIPTION BILL OF MATERIALS AND GENERAL NOTES SHEET NO: STW-1	
							REVISION: _____	



SUMMARY OF MATERIALS	
QUANTITY	DESCRIPTION

NOTES				

REVISIONS					
REV.	DESIGN	DRAFT	CHECK	DESCRIPTION	DATE

APPROVAL					
PERMITS		BID		CONSTRUCTION	
INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY					
C.P.					
DRAWING & DESIGN - RK&K					
ENGINEERING - RK&K					
TEST DATA					
TESTED FROM STATION:			TO STATION:		
MEDIUM:			RECORD TEST PRESSURE:		
DATE TEST COMPLETED:					

PROJECT	
S.T. WOOTEN CORPORATION ASPHALT PLANT	
INDUSTRIAL GAS METER SETS REPLACEMENT - PHASE II	
ALIGNMENT SHEET	
<small>FRANK, KLEPPER & KHL, LLP 801 E. MAIN STREET, SUITE 1000 RICHMOND, VIRGINIA 23219 T-804-782-1903 F-804-782-2142</small>	
<small>ENGINEERS CONSTRUCTION MANAGERS PLANNERS SCIENTISTS</small>	
<small>RK&K COMM. NO. 811-013-02.1</small>	
SCALE	PLAN 1" = 50'
PROFILE	HOR. -
VERT.	-

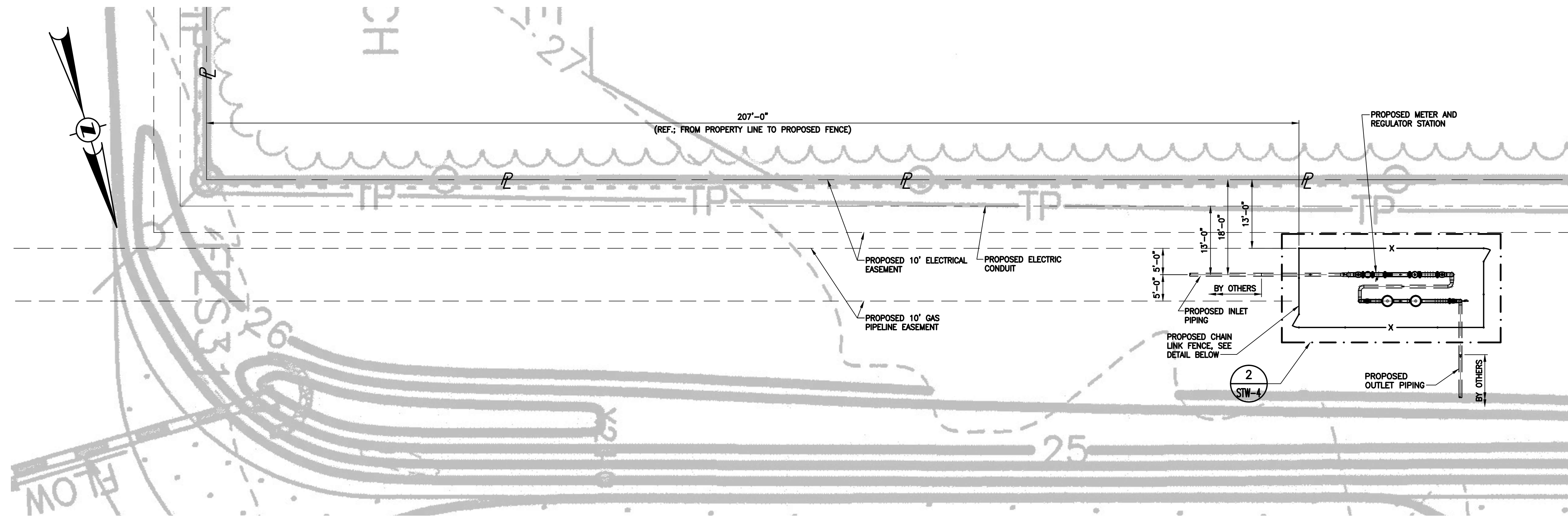
Greenville Utilities
City of Greenville, NC

SHEET DESCRIPTION

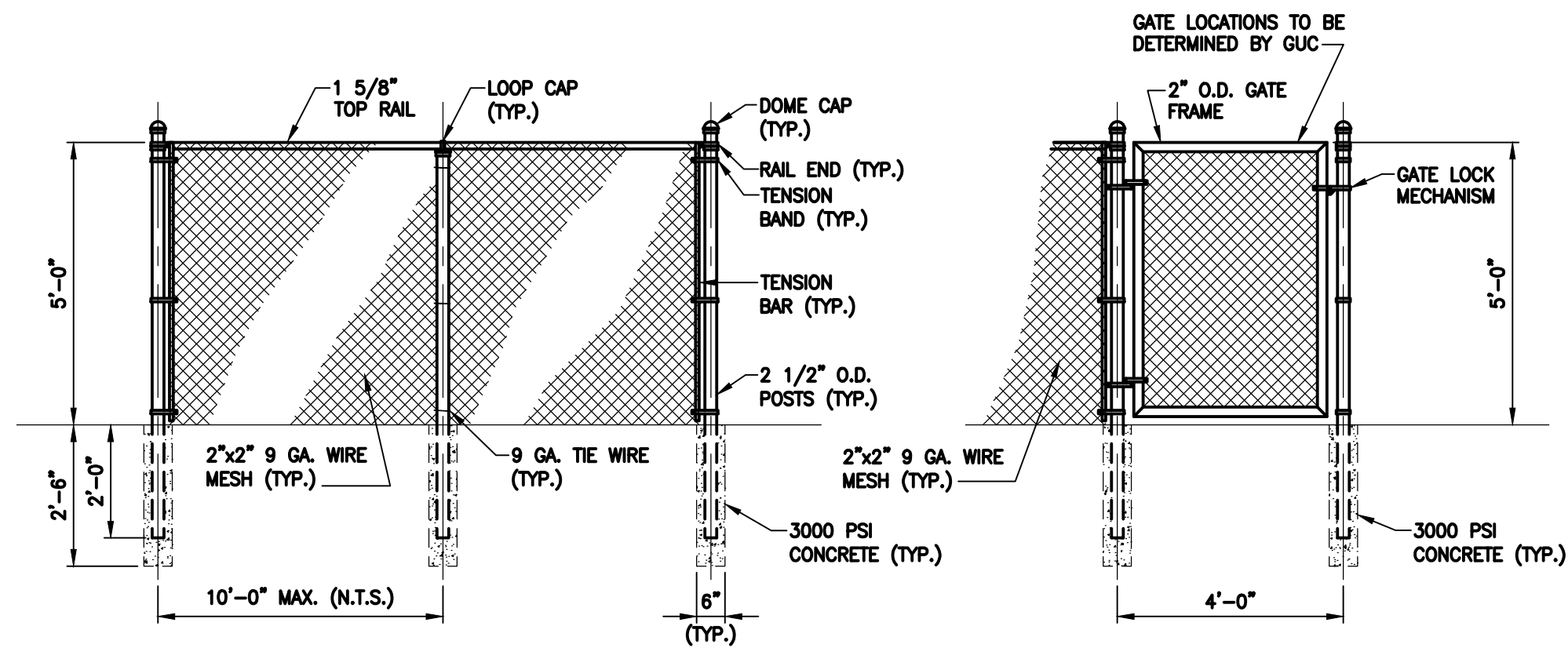
OVERALL SITE PLAN

SHEET NO: STW-2

REVISION:

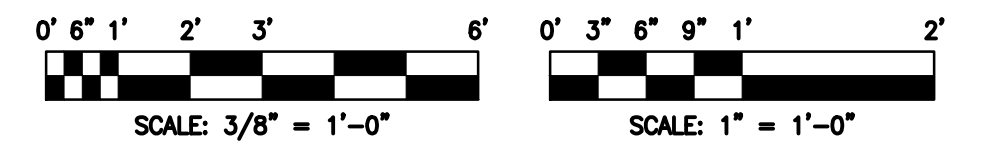


**PIPING SITE PLAN
DETAIL 1**
SCALE: 1" = 12'
REF. SHEET STW-2



PROPOSED FENCE DETAILS
SCALE: 3/8" = 1'-0"

- NOTES**
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION.
 - GRADING OF S.T. WOOTEN ASPHALT PLANT SITE BY OTHERS. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION OF METER & REGULATOR STATION.



SUMMARY OF MATERIALS	
QUANTITY	DESCRIPTION

NOTES			
REVISIONS			
REV.	DESIGN	DRAFT	CHECK

APPROVAL			
PERMITS	DATE		CONSTRUCTION
	INITIALS	DATE	

PROJECT	
S.T. WOOTEN CORPORATION ASPHALT PLANT	
INDUSTRIAL GAS METER SETS REPLACEMENT - PHASE II	
ALIGNMENT SHEET	
SCALE: AS SHOWN	PROFILE
HOR. -	VERT. -

Greenville Utilities
City of Greenville, NC

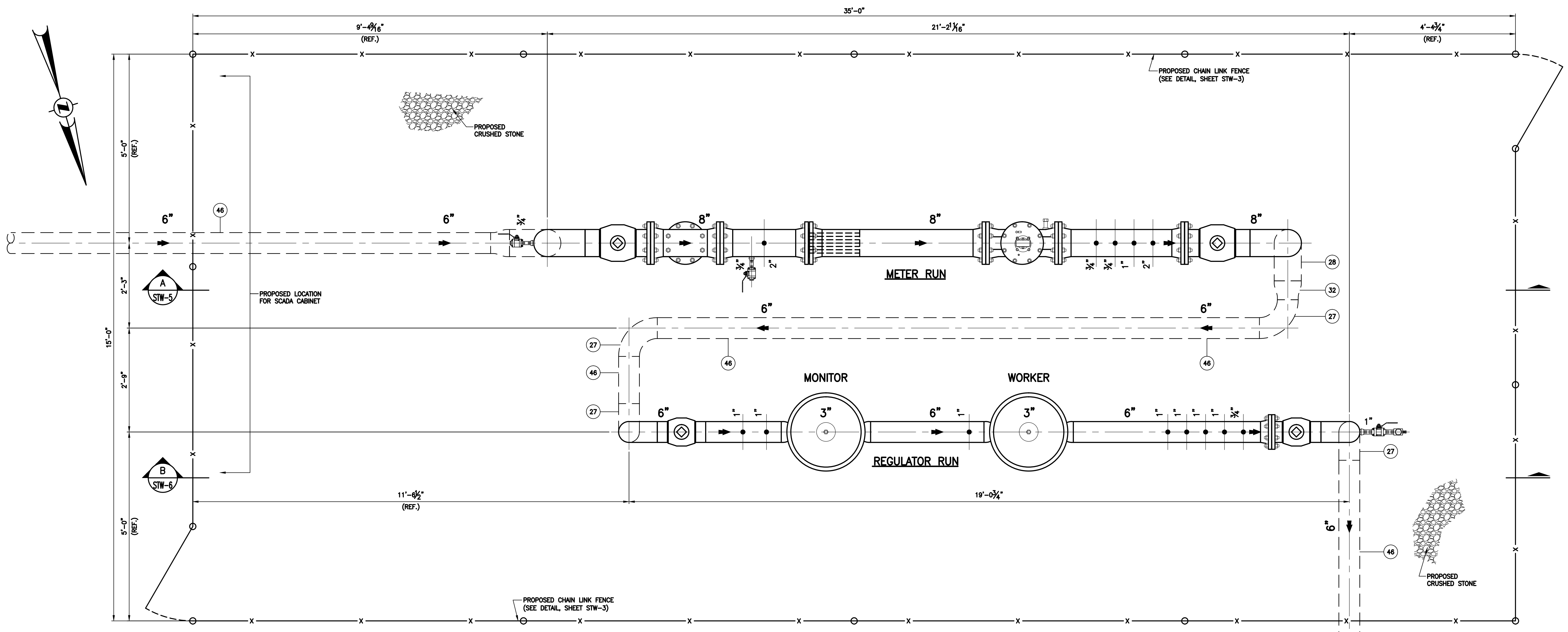
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SHEET NO: STW-3 REVISION:

RK&K ENGINEERS | CONSTRUCTION MANAGERS | PLANNERS | SCIENTISTS

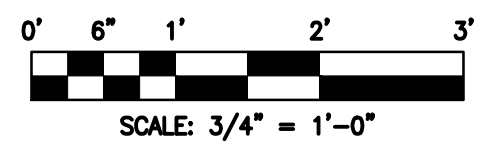
801 E. MAIN STREET, SUITE 1000
RICHMOND, VIRGINIA 23219
T-804-782-1903 F-804-782-2142

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



**PROPOSED PIPING PLAN
DETAIL 2**

SCALE: 3/4" = 1'-0"
REF. SHEET STW-3



- NOTES**
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
 - THE CONTRACTOR SHALL INSTALL A PROTECTIVE WRAP ON ALL INSTALLED BELOW GRADE PIPING WITH MATERIAL PROVIDED BY THE GUC.
- (X) REFER TO SHEET STW-1 FOR BILL OF MATERIALS

SUMMARY OF MATERIALS	
QUANTITY	DESCRIPTION

NOTES				
REV.	DESIGN	DRAFT	CHECK	DATE

APPROVAL					
PERMITS		BID		CONSTRUCTION	
INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
SURVEY					
C.P.					
DRAFTING & DESIGN - RK&K		AAL	5/13		
ENGINEERING - RK&K		CJV	5/13		

PROJECT
S.T. WOOTEN CORPORATION
ASPHALT PLANT

**INDUSTRIAL GAS METER SETS
REPLACEMENT - PHASE II**

ALIGNMENT SHEET

SCALE: AS SHOWN
PLAN: AS SHOWN
PROFILE: -
HOR: -
VERT: -

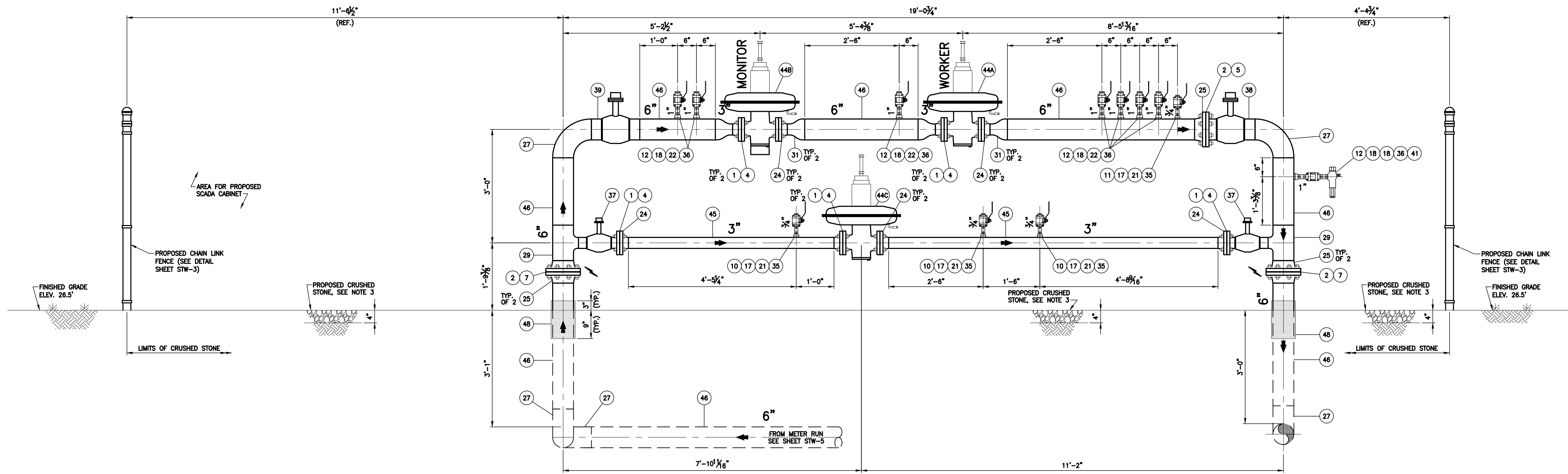
RK&K ENGINEERS | CONSTRUCTION MANAGERS | PLANNERS | SCIENTISTS
901 E. MAIN STREET, SUITE 1000
RICHMOND, VIRGINIA 23219
T-804.782.1903 F-804.782.2142

RK&K COMM. NO. 811-013-02.1

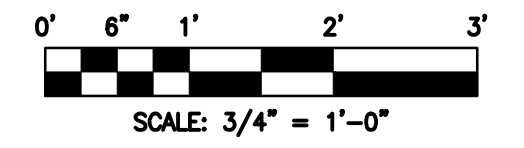
Greenville Utilities
City of Greenville, NC

SHEET DESCRIPTION
PROPOSED PIPING PLAN

SHEET NO: STW-4 REVISION:



**REGULATOR RUN
SECTION B-B**
SCALE: 3/4" = 1'-0"
REF. SHEET STW-4



- NOTES**
1. THE CONTRACTOR SHALL INSTALL A PROTECTIVE WRAP ON ALL INSTALLED BELOW GRADE PIPING WITH MATERIAL PROVIDED BY THE GUC.
 2. ALL TAPS FOR WELDOLETS AND THREDOLETS SHALL BE FULL BORE.
 3. SITE SHALL BE GRADED AS TO ALLOW FOR PROPER DRAINAGE AWAY FROM METER & REGULATOR STATION.

(X) REFER TO SHEET STW-1 FOR BILL OF MATERIALS

SUMMARY OF MATERIALS		NOTES		APPROVAL			PROJECT	
QUANTITY	DESCRIPTION	REV.	DESIGN DRAFT CHECK	PERMITS	BID	CONSTRUCTION	S.T. WOOTEN CORPORATION ASPHALT PLANT	
				INITIALS	DATE	INITIALS	DATE	INDUSTRIAL GAS METER SETS REPLACEMENT - PHASE II
								ALIGNMENT SHEET
								RK&K ENGINEERS CONSTRUCTION MANAGERS PLANNERS SCIENTISTS FRANKE, KLEPPER & KHL, LLP 801 E. MAIN STREET, SUITE 1000 RICHMOND, VIRGINIA 23219 T-804.782.1903 F-804.782.2142
				TEST DATA			SCALE	SHEET DESCRIPTION REGULATOR RUN SECTION B-B
				TESTED FROM STATION: _____ TO STATION: _____			PLAN AS SHOWN	
				MEDIUM: _____ RECORD TEST PRESSURE: _____ psig			PROFILE	
				DATE TEST COMPLETED: _____			HOR. _____	SHEET NO: STW-6
							VERT. _____	

