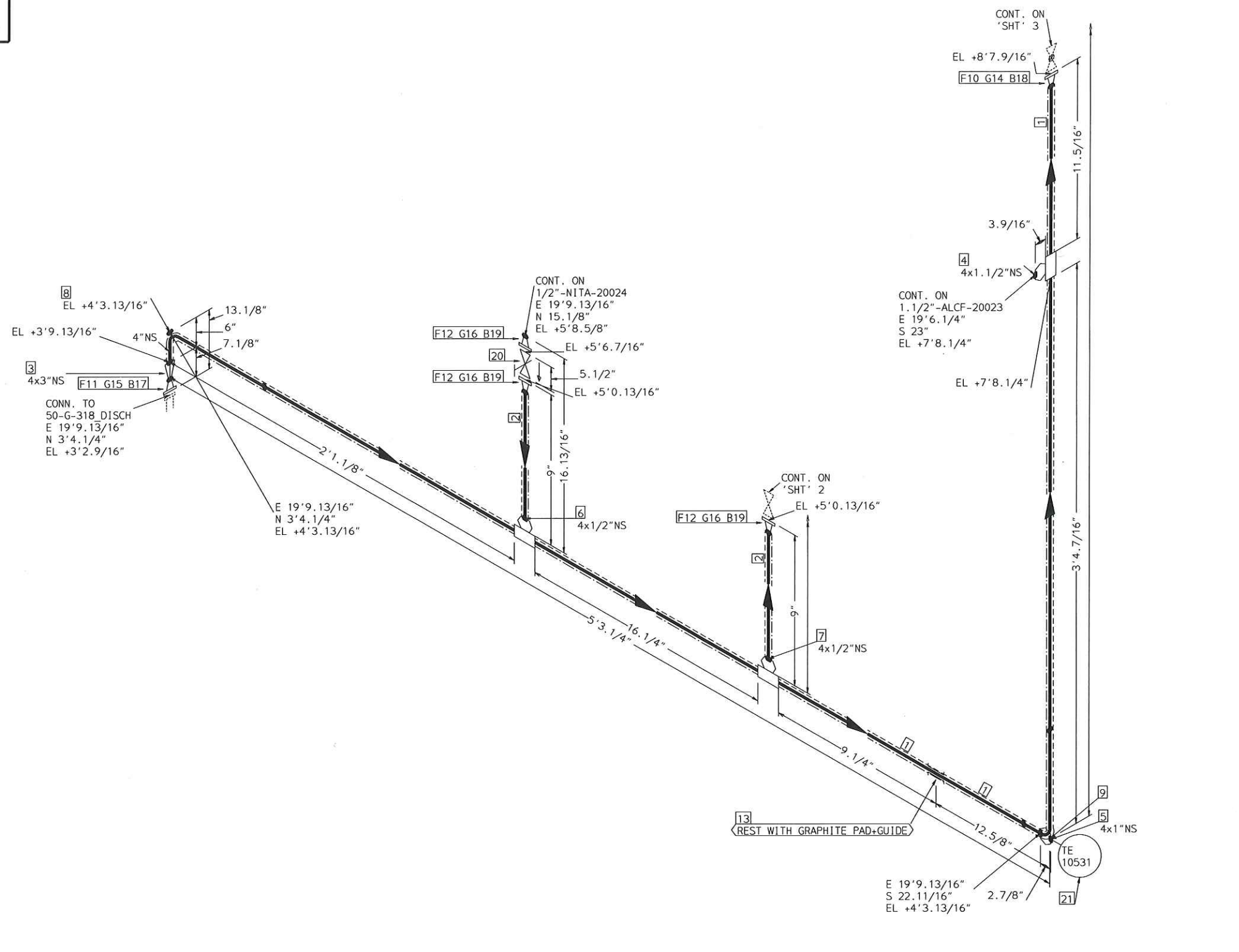


TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
1	ALCF	PIPE	2	86.0'
		PIPE STD WT SMLS STL A106-B		
2	ALCF	FITTINGS	2	6
		ELL 90 DEG LR STD WT STL A234 WPB BW		
3	ALCF	FLANGES	2	2
		FLG WN 300# RF STL STD BORE A105		
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
4	SUPP	FITTINGS	2	3
		SPS-2 RESTING SUPPORT		
		SPS-25 TRUNNION SUPPORT		
5	SUPP	SPS-25 TRUNNION SUPPORT	2	1
6	SUPP	SPS-2G GUIDE SUPPORT	2	4
7	ALCF	GASKETS	2	1
		GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG		
8	ALCF	BOLTS	11/16	8
		3.9/16 x5/8" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS		

AREA: CETYL		2"-ALCF-08003	
PIPING GA NO: -	P&ID NO: 1008/1020	STRESS CRITICAL: NA	
OP. TEMP: 490°F	OP. PRESS: 30 psig	TEST MEDIUM: Hydro	
DES. TEMP: 600°F	DES. PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL. TYPE: N5-CELLULAR	INSUL. THK: 1.5 inch	
LINE NO. / FILE NAME: 2"-ALCF-08003			ISSUE: R3

SIZE-A3



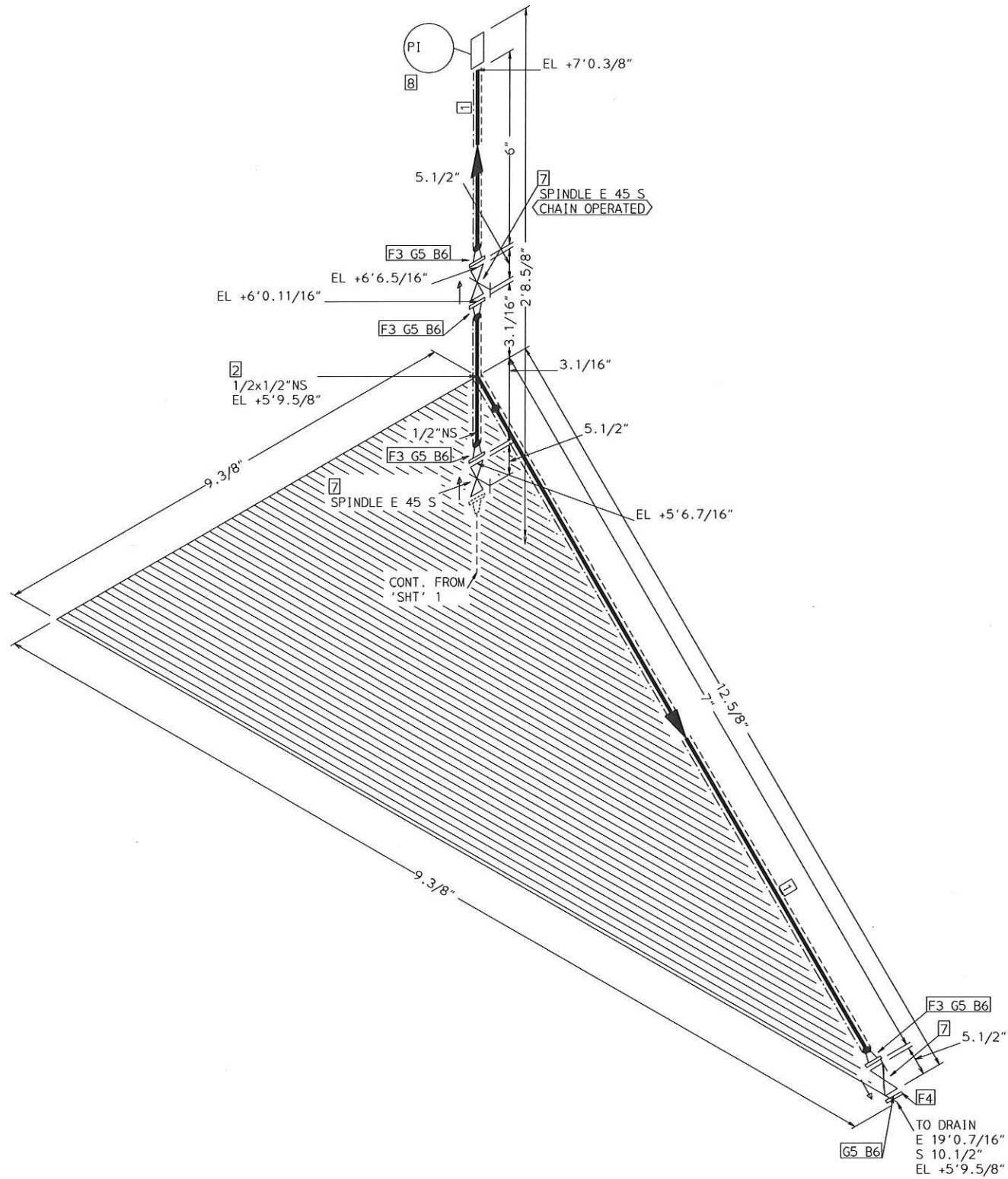
TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	4	7.9'
2	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.7'
FITTINGS				
3	ALCF	REDUCER CONC STD WT STL A234 WPB BW	4 x 3	1
4	ALCF	WELDOLET STD WT STL A105	4 x 1.1/2	1
5	ALCF	ELBOLET STD WT STL A105 BW	4 x 1	1
6	ALCF	WELDOLET STD WT STL A105	4 x 1/2	1
7	ALCF	WELDOLET STD WT X SCH 80 STL A105	4 x 1/2	1
8	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	4	1
9	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	4	1
FLANGES				
10	ALCF	FLG WN 300# RF STL STD BORE A105	4	1
11	ALCF	FLG WN 300# RF STL STD BORE A105	3	1
12	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	3

ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
FITTINGS				
13	SUPP	SPS-2G GUIDE SUPPORT	4	1
GASKETS				
14	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	4	1
15	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	3	1
16	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	3
BOLTS				
17	ALCF	4.5/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	8
18	ALCF	4.5/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	8
19	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	12
VALVES / IN-LINE ITEMS				
20	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1
INSTRUMENTS				
21		TEMPERATURE TRANSMITTER TE 10531	1	1

AREA: CETYL		4"-ALCF-20021	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA	
OP.TEMP: 490°F	OP.PRESS: 30 psig	TEST MEDIUM: Hydro	
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL.TYPE: NS-CELLULAR	INSUL.THK: 2 Inch	
LINE NO. / FILE NAME: 4"-ALCF-20021			ISSUE: R3

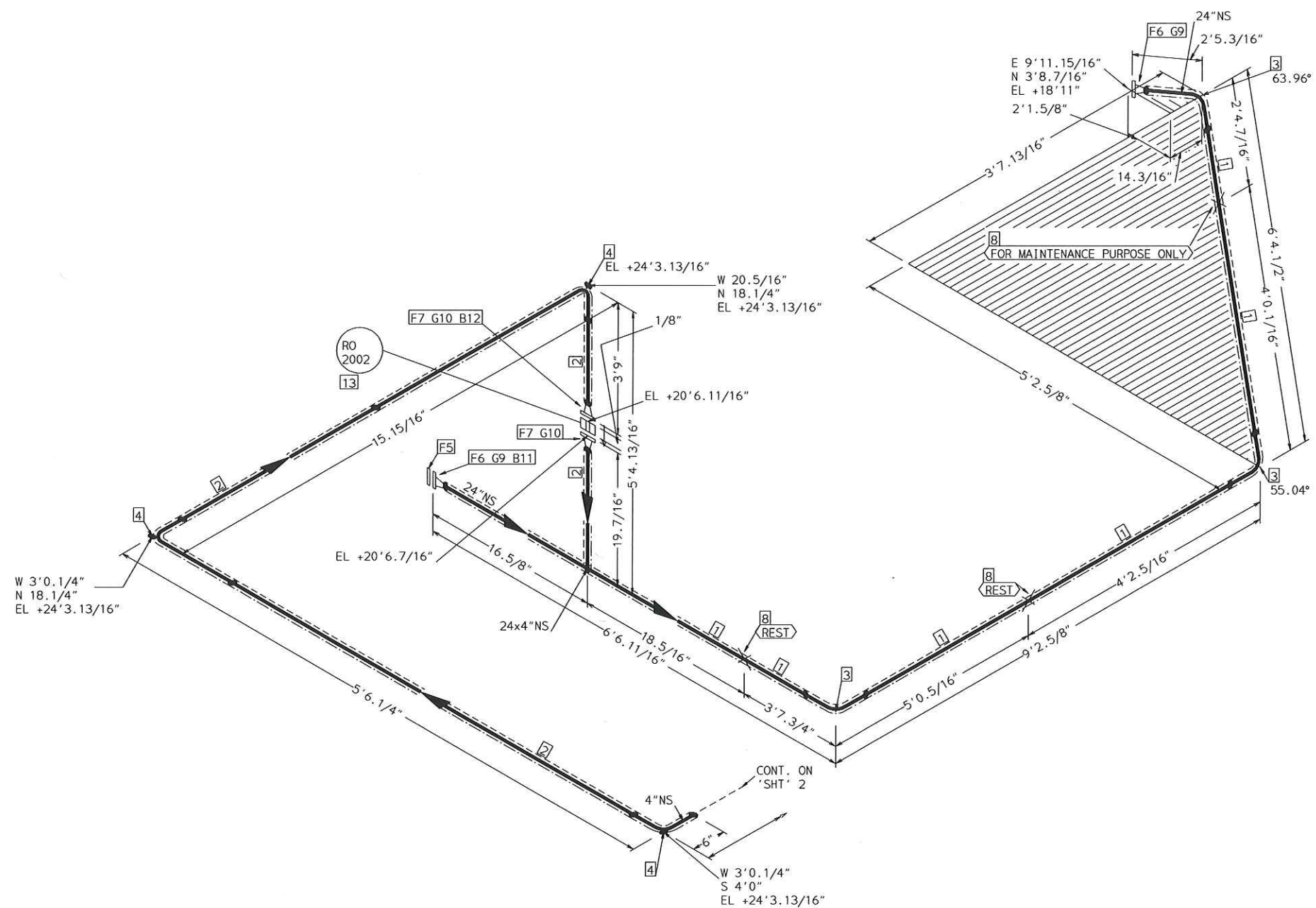
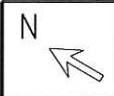
SIZE-A3



TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
1	ALCF	PIPE	1/2	0.7'
		PIPE STD WT SMLS STL A106-B		
2	ALCF	FITTINGS	1/2 x 1/2	1
		TEE STD WT STL A234 WPB BW		
3	ALCF	FLANGES	1/2	4
		FLG WN 300# RF STL STD BORE A105		
4	ALCF	FLG BLIND 300# RF STL A105	1/2	1
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
5	ALCF	GASKETS	1/2	5
		GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG		
6	ALCF	BOLTS	9/16	20
		2.9/16 x 1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS		
7	ALCF	VALVES / IN-LINE ITEMS	1/2	3
		GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)		
8		INSTRUMENTS	1/2	1
		PRESSURE INDICATOR WITH DIAPHRAGM SEAL PI		

AREA: CETYL	4" -ALCF-20021	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA
OP.TEMP: 490°F	OP.PRESS: 30 psig	TEST MEDIUM: Hydro
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig
SCALE: NONE	INSUL.TYPE: NS-CELLULAR	INSUL.THK: 2 inch
LINE NO. / FILE NAME: 4" -ALCF-20021	ISSUE: R3	

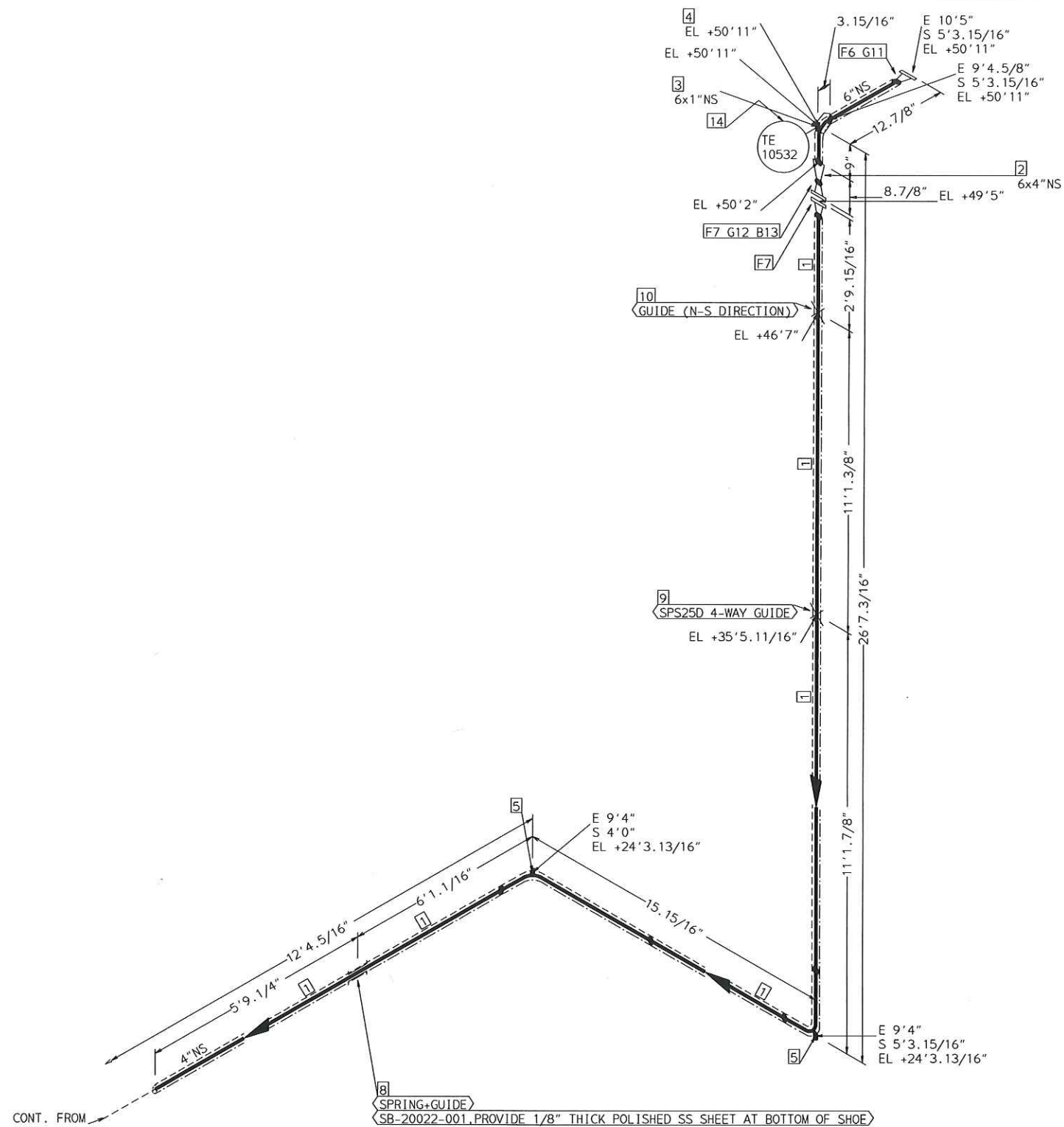


TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
<u>PIPE</u>				
1	ALCF	PIPE STD WT SMLS STL A106-B	24	10.6'
2	ALCF	PIPE STD WT SMLS STL A106-B	4	9.2'
<u>FITTINGS</u>				
3	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	24	3
4	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	4	3
<u>FLANGES</u>				
5	ALCF	FLG BLIND 300# RF STL A105	24	1
6	ALCF	FLG WN 300# RF STL STD BORE A105	24	2
7	ALCF	FLG WN 300# RF STL STD BORE A105	4	2
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
<u>FITTINGS</u>				
8	SUPP	SPS-2C RESTING SUPPORT	24	3
<u>GASKETS</u>				
9	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG1	24	2
10	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	4	2
<u>BOLTS</u>				
11	ALCF	9.1/16 x1-1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	1.9/16	24
12	ALCF	4.3/4 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	8
<u>INSTRUMENTS</u>				
13		ORIFICE PLATE 3MM #300 RF RO 2002	4	1

AREA: CETYL		4"-ALCF-20022	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA	
OP.TEMP: 490°F	OP.PRESS: 30 psig	TEST MEDIUM: Hydro	
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL.TYPE: N5-CELLULAR	INSUL.THK: 2 inch	
LINE NO. / FILE NAME: 4"-ALCF-20022			ISSUE: R3

SIZE-A3



TRACING SPEC: S-TRACING (NOTE-10)

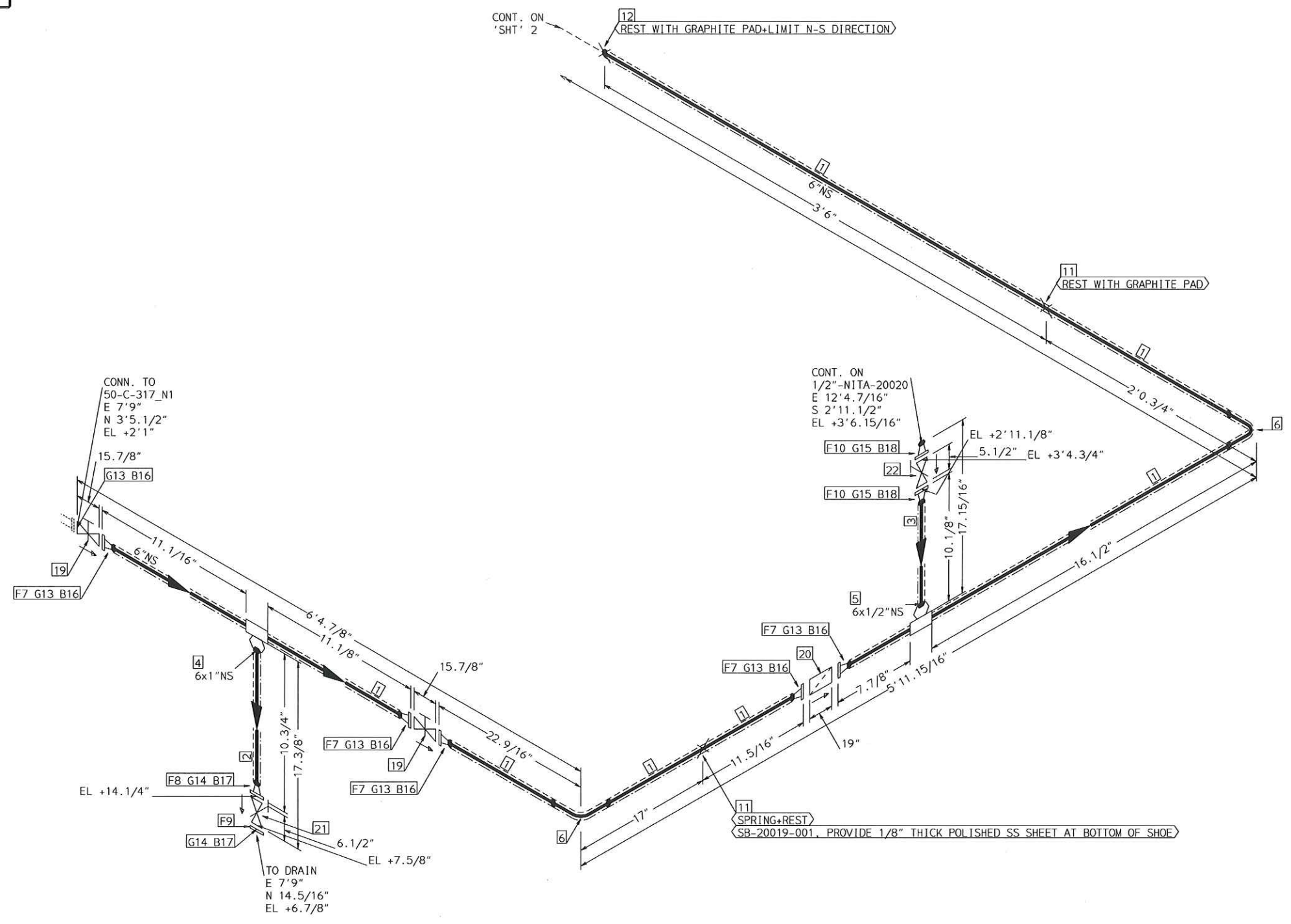
FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
1	ALCF	PIPE	4	36.1'
		PIPE STD WT SMLS STL A106-B		
2	ALCF	FITTINGS	6 x 4	1
		REDUCER CONC STD WT STL A234 WPB BW		
3	ALCF	ELBOLET STD WT STL A105 BW	6 x 1	1
4	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	6	1
5	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	4	2
6	ALCF	FLANGES	6	1
		FLG WN 300# RF STL STD BORE A105		
7	ALCF	FLG WN 300# RF STL STD BORE A105	4	2
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
8	SUPP	FITTINGS	4	1
		SPS-2G GUIDE SUPPORT		
		SPS-25 TRUNNION SUPPORT		
9	SUPP	SPS-67G support	4	1
11	ALCF	GASKETS	6	1
		GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG		
12	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	4	1
13	ALCF	BOLTS	7/8	8
		4.5/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS		
14		INSTRUMENTS	1	1
		TEMPERATURE TRANSMITTER TE 10532		

CONT. FROM 'SHT' 1

8 SPRING-GUIDE
SB-20022-001, PROVIDE 1/8" THICK POLISHED SS SHEET AT BOTTOM OF SHOE

AREA: CETYL		4"-ALCF-20022	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA	
OP. TEMP: 490°F	OP. PRESS: 30 psig	TEST MEDIUM: Hydro	
DES. TEMP: 600°F	DES. PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL. TYPE: NS-CELLULAR	INSUL. THK: 2 inch	
LINE NO. / FILE NAME: 4"-ALCF-20022			ISSUE: R3

SIZE-A3

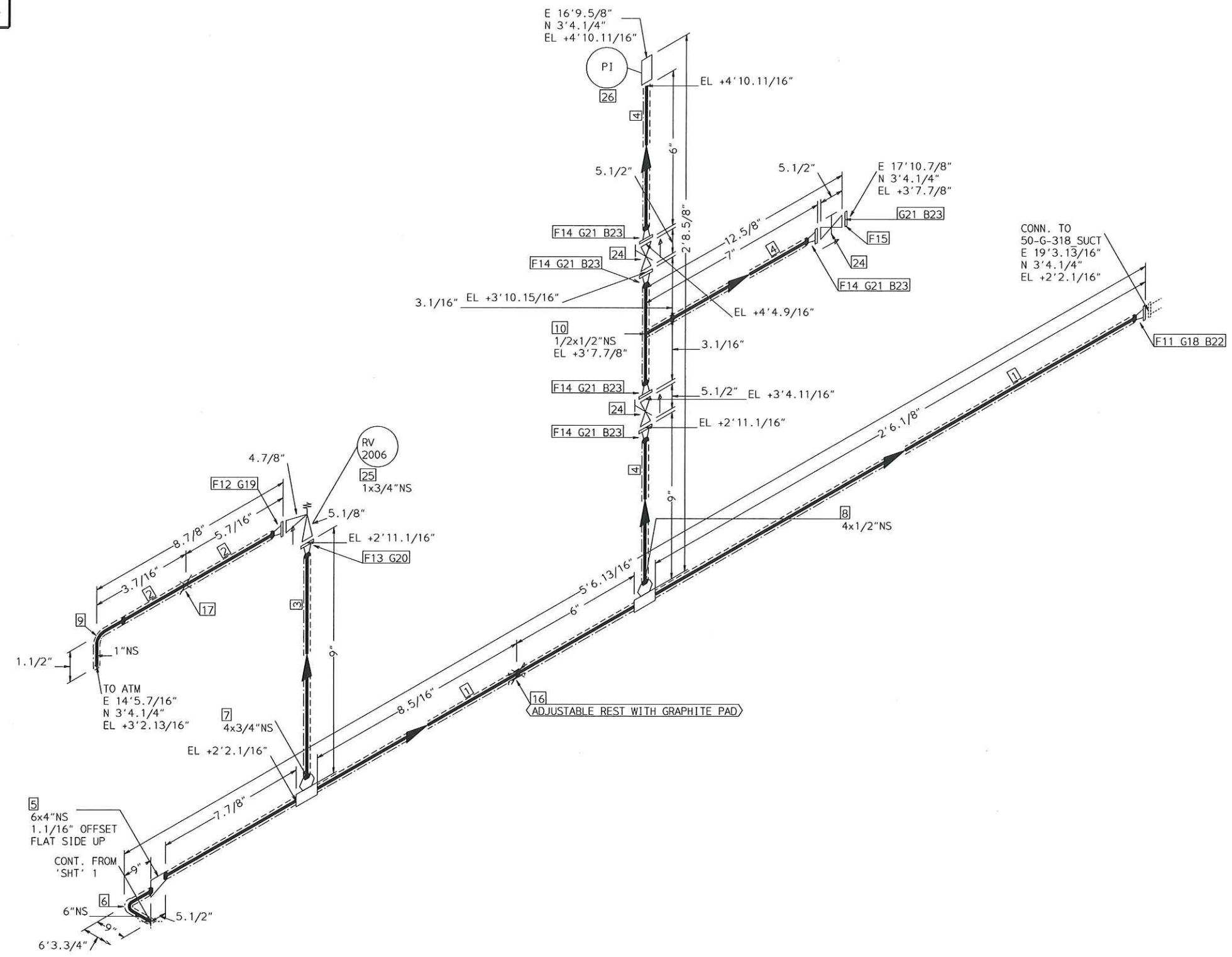


FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	6	9.1'
2	ALCF	PIPE STD WT SMLS STL A106-B	1	0.4'
3	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.4'
FITTINGS				
4	ALCF	WELDOLET STD WT STL A105	6 x 1	1
5	ALCF	WELDOLET STD WT STL A105	6 x 1/2	1
6	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	6	2
FLANGES				
7	ALCF	FLG WN 300# RF STL STD BORE A105	6	5
8	ALCF	FLG WN 300# RF STL STD BORE A105	1	1
9	ALCF	FLG BLIND 300# RF STL A105	1	1
10	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	2

ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
FITTINGS				
11	SUPP	SPS-2 RESTING SUPPORT	6	2
12	SUPP	SPS25 TRUNNION SUPPORT	6	1
GASKETS				
13	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	6	6
14	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1	2
15	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	2
BOLTS				
16	ALCF	4.15/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	72
17	ALCF	3.1/8 x5/8" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	11/16	8
18	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	8
VALVES / IN-LINE ITEMS				
19	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	6	2
20	ALCF	TEE TYPE STRAINERS; 300# RF GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	6	1
21	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1	1
22	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1

AREA: CETYL	6"-ALCF-20019	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA
OP. TEMP: 490°F	OP. PRESS: 30 psig	TEST MEDIUM: Hydro
DES. TEMP: 600°F	DES. PRESS: 300 psig	TEST PRESS: 450 psig
SCALE: NONE	INSUL. TYPE: N5-CELLULAR	INSUL. THK: 3 inch
LINE NO. / FILE NAME: 6"-ALCF-20019	ISSUE: R3	

SIZE-A3



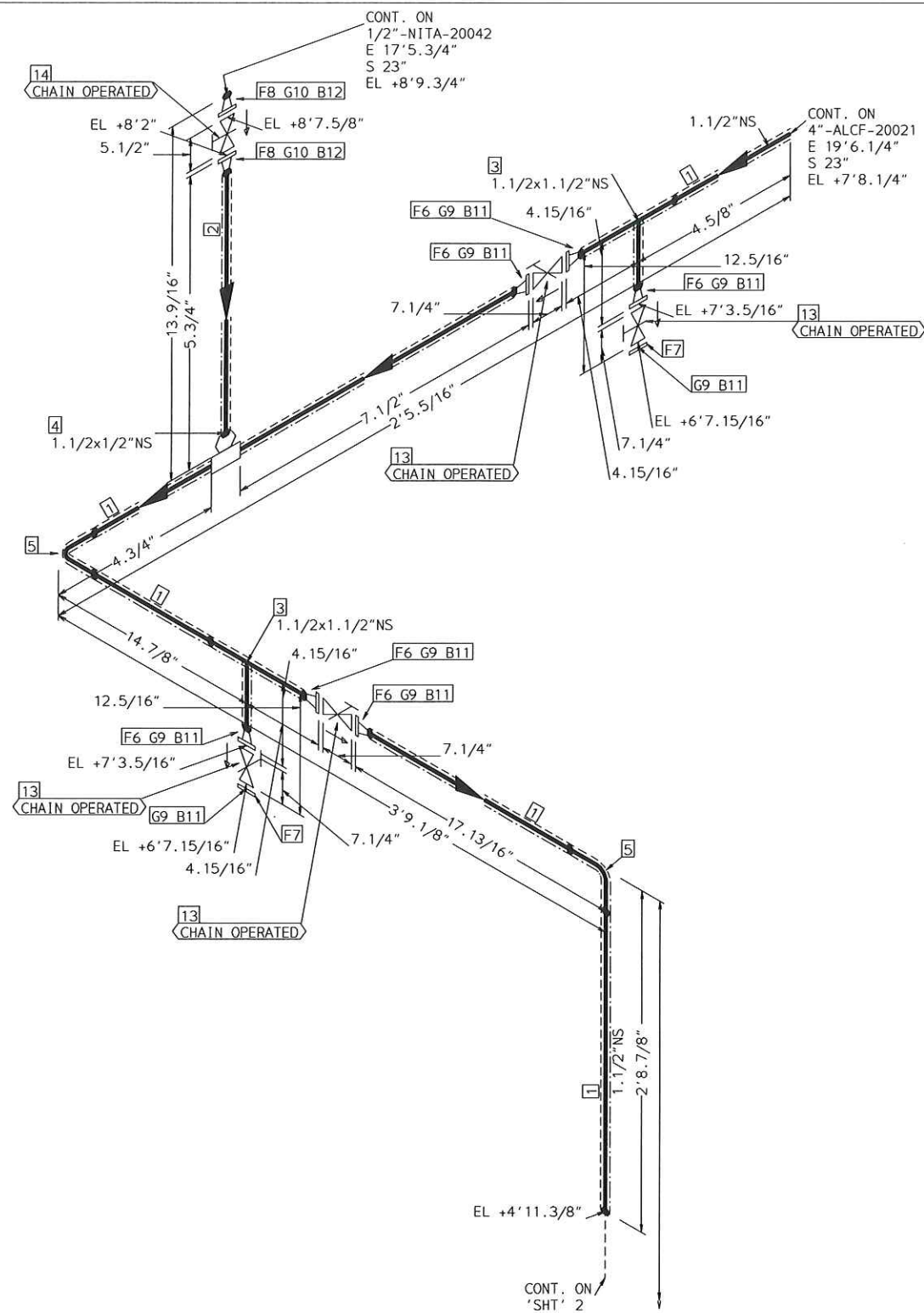
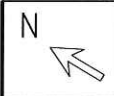
CONN. TO
50-G-318 SUCT
E 19'3.13/16"
N 3'4.1/4"
EL +2'2.1/16"

TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	4	4.1'
2	ALCF	PIPE STD WT SMLS STL A106-B	1	0.5'
3	ALCF	PIPE STD WT SMLS STL A106-B	3/4	0.4'
4	ALCF	PIPE STD WT SMLS STL A106-B	1/2	1.0'
FITTINGS				
5	ALCF	REDUCER ECC STD WT STL A234 WPB BW	6 x 4	1
6	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	6	1
7	ALCF	WELDOLET STD WT STL A105	4 x 3/4	1
8	ALCF	WELDOLET STD WT STL A105	4 x 1/2	1
9	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1	1
10	ALCF	TEE STD WT STL A234 WPB BW	1/2 x 1/2	1
FLANGES				
11	ALCF	FLG WN 300# RF STL STD BORE A105	4	1
12	ALCF	FLG WN 150# RF STL STD BORE A105	1	1
13	ALCF	FLG WN 300# RF STL STD BORE A105	3/4	1
14	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	5
15	ALCF	FLG BLIND 300# RF STL A105	1/2	1
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
FITTINGS				
16	SUPP	SPS66G ADJUSTABLE TRUNNION GUIDE SUPPORT	4	1
17	SUPP	SPS-24 SUPPORT	1	1
GASKETS				
18	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	4	1
19	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1	1
20	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	3/4	1
21	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	6
BOLTS				
22	ALCF	4.5/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	8
23	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	24
VALVES / IN-LINE ITEMS				
24	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	3
INSTRUMENTS				
25		PRESSURE SAFETY VALVE #300RF RV 2006	1 x 3/4	1
26		PRESSURE INDICATOR WITH DIAPHRAGM SEAL PI	1/2	1

AREA: CETYL	6"-ALCF-20019	
PIPING GA NO: -	P&ID NO: 1020	STRESS CRITICAL: NA
OP.TEMP: 490°F	OP.PRESS: 30 psig	TEST MEDIUM: Hydro
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig
SCALE: NONE	INSUL.TYPE: N5-CELLULAR	INSUL.THK: 3 inch
LINE NO. / FILE NAME: 6"-ALCF-20019	ISSUE: R3	

SIZE-A3

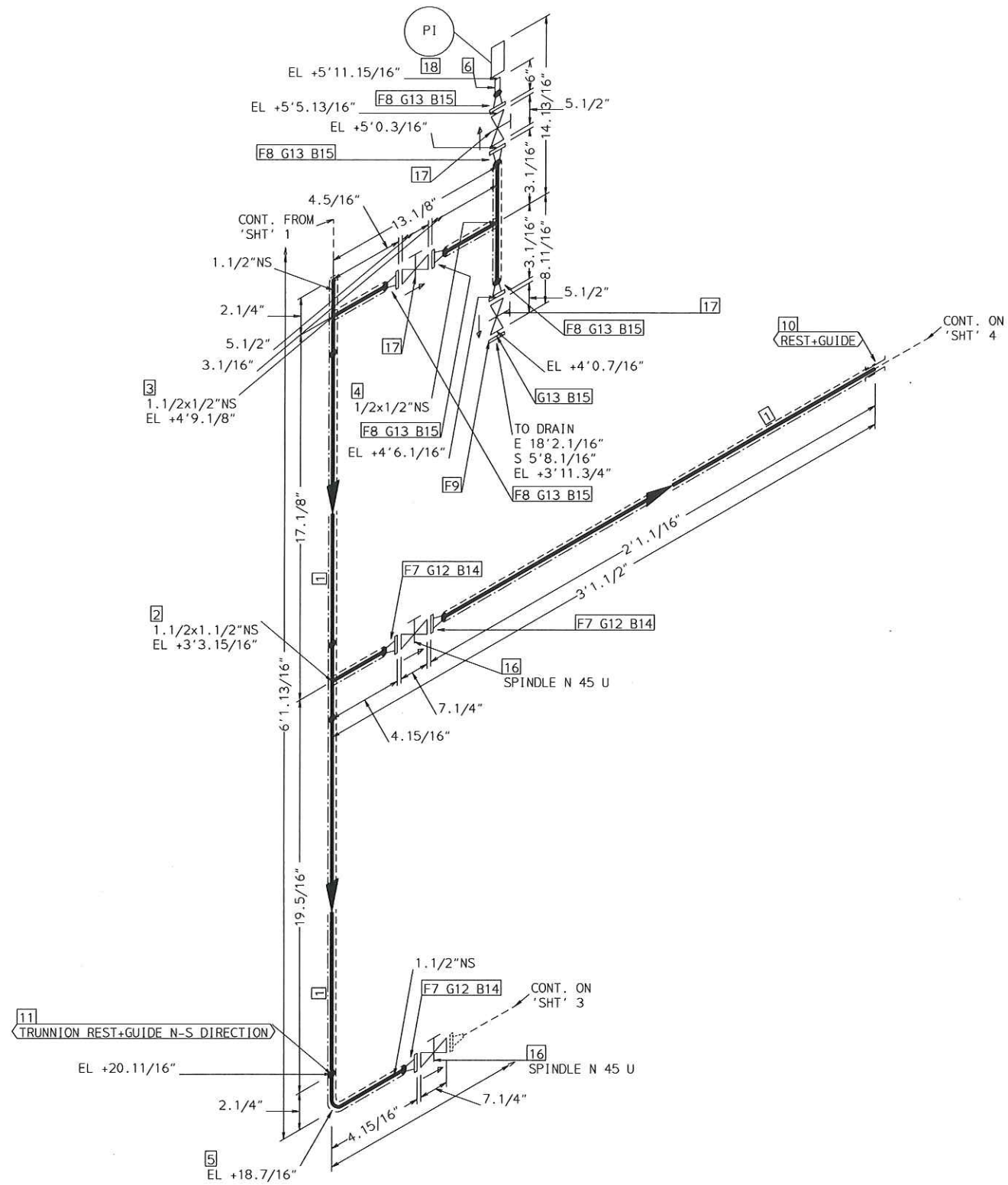
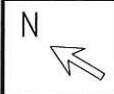


FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	1.1/2	5.3'
2	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.2'
FITTINGS				
3	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	2
4	ALCF	WELDOLET STD WT STL A105	1.1/2	1
5	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1.1/2	2
FLANGES				
6	ALCF	FLG WN 300# RF STL STD BORE A105	1.1/2	6
7	ALCF	FLG BLIND 300# RF STL A105	1.1/2	2
8	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	2
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
GASKETS				
9	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1.1/2	8
10	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	2
BOLTS				
11	ALCF	3.9/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	32
12	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	8
VALVES / IN-LINE ITEMS				
13	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1.1/2	4
14	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1

TRACING SPEC: S-TRACING (NOTE-10)

AREA: CETYL		1.1/2"-ALCF-20023	
PIPING GA NO: -	P&ID NO: 1020/1006	STRESS CRITICAL: NA	
OP.TEMP: 490°F	OP.PRESS: 15 psig	TEST MEDIUM: Hydro	
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL.TYPE: NS-CELLULAR	INSUL.THK: 1.5 inch	
LINE NO. / FILE NAME: 1.1/2"-ALCF-20023			ISSUE: R3

SIZE-A3

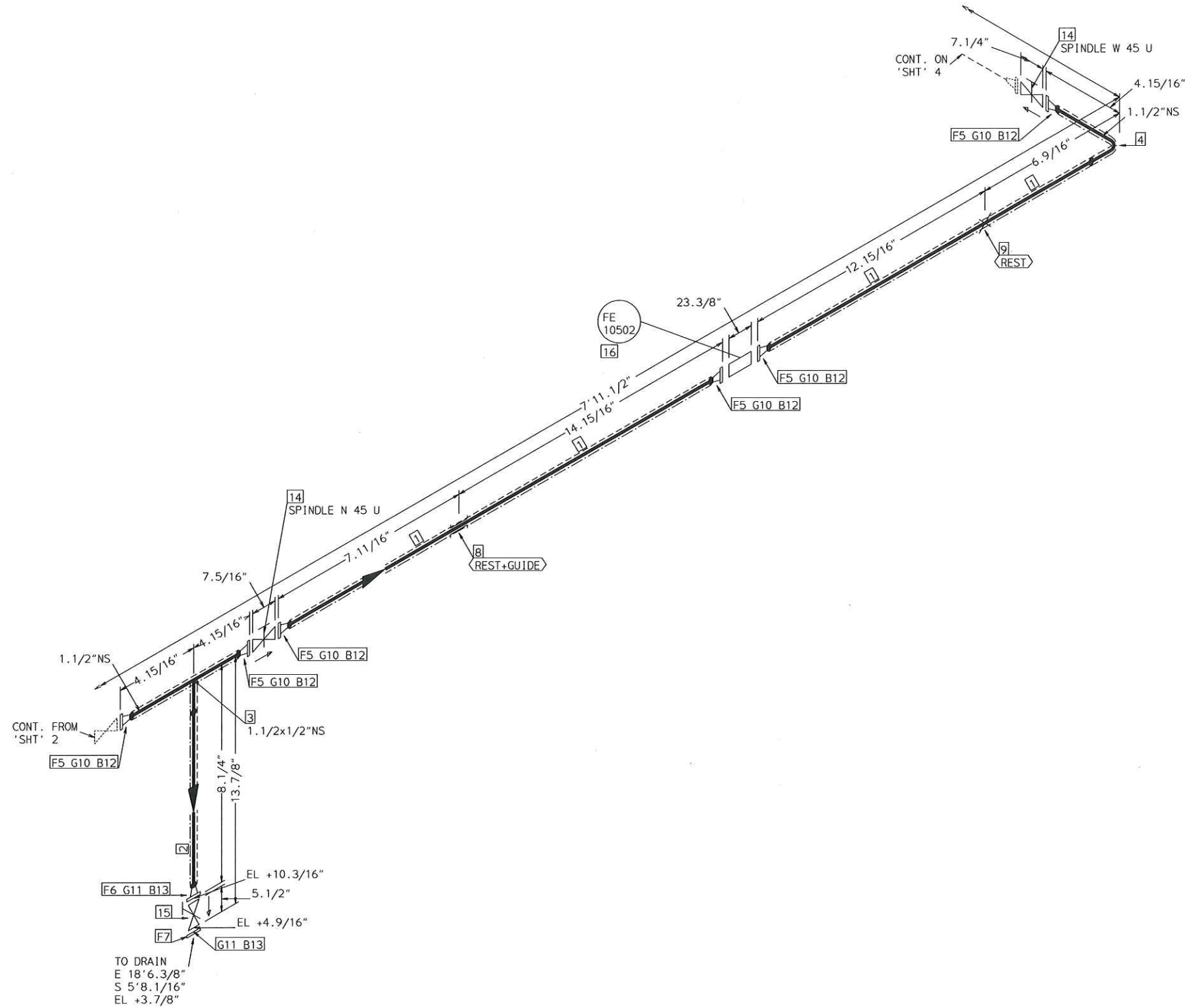


TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
1	ALCF	PIPE	1.1/2	4.4'
		PIPE STD WT SMLS STL A106-B		
2	ALCF	FITTINGS	1.1/2	1
		TEE STD WT STL A234 WPB BW		
3	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
		TEE STD WT STL A234 WPB BW		
4	ALCF	TEE STD WT STL A234 WPB BW	1/2	1
		TEE STD WT STL A234 WPB BW		
5	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1.1/2	1
		ELL 90 DEG LR STD WT STL A234 WPB BW		
6	ALCF	NIPPLE POE/TOE NPT 100MM LONG ASTM A105	1/2	1
		NIPPLE POE/TOE NPT 100MM LONG ASTM A105		
7	ALCF	FLANGES	1.1/2	3
		FLG WN 300# RF STL STD BORE A105		
8	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	5
		FLG WN 300# RF STL STD BORE A105		
9	ALCF	FLG BLIND 300# RF STL A105	1/2	1
		FLG BLIND 300# RF STL A105		
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
10	SUPP	FITTINGS	1.1/2	1
		SPS-2G GUIDE SUPPORT		
11	SUPP	SPS13A TRUNNION SUPPORT	1.1/2	1
		SPS13A TRUNNION SUPPORT		
12	ALCF	GASKETS	1.1/2	3
		GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG		
13	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	6
		GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG		
14	ALCF	BOLTS	7/8	12
		3.9/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS		
15	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	24
		2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS		
16	ALCF	VALVES / IN-LINE ITEMS	1.1/2	2
		GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)		
17	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	3
		GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)		
18		INSTRUMENTS	1/2	1
		PRESSURE INDICATOR WITH DIAPHRAGM SEAL PI		

AREA: CETYL	1.1/2"-ALCF-20023	
PIPING GA NO: -	P&ID NO: 1020/1006	STRESS CRITICAL: NA
OP.TEMP: 490°F	OP.PRESS: 15 psig	TEST MEDIUM: Hydro
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig
SCALE: NONE	INSUL.TYPE: NS-CELLULAR	INSUL.THK: 1.5 inch
LINE NO. / FILE NAME: 1.1/2"-ALCF-20023	ISSUE: R3	

SIZE-A3

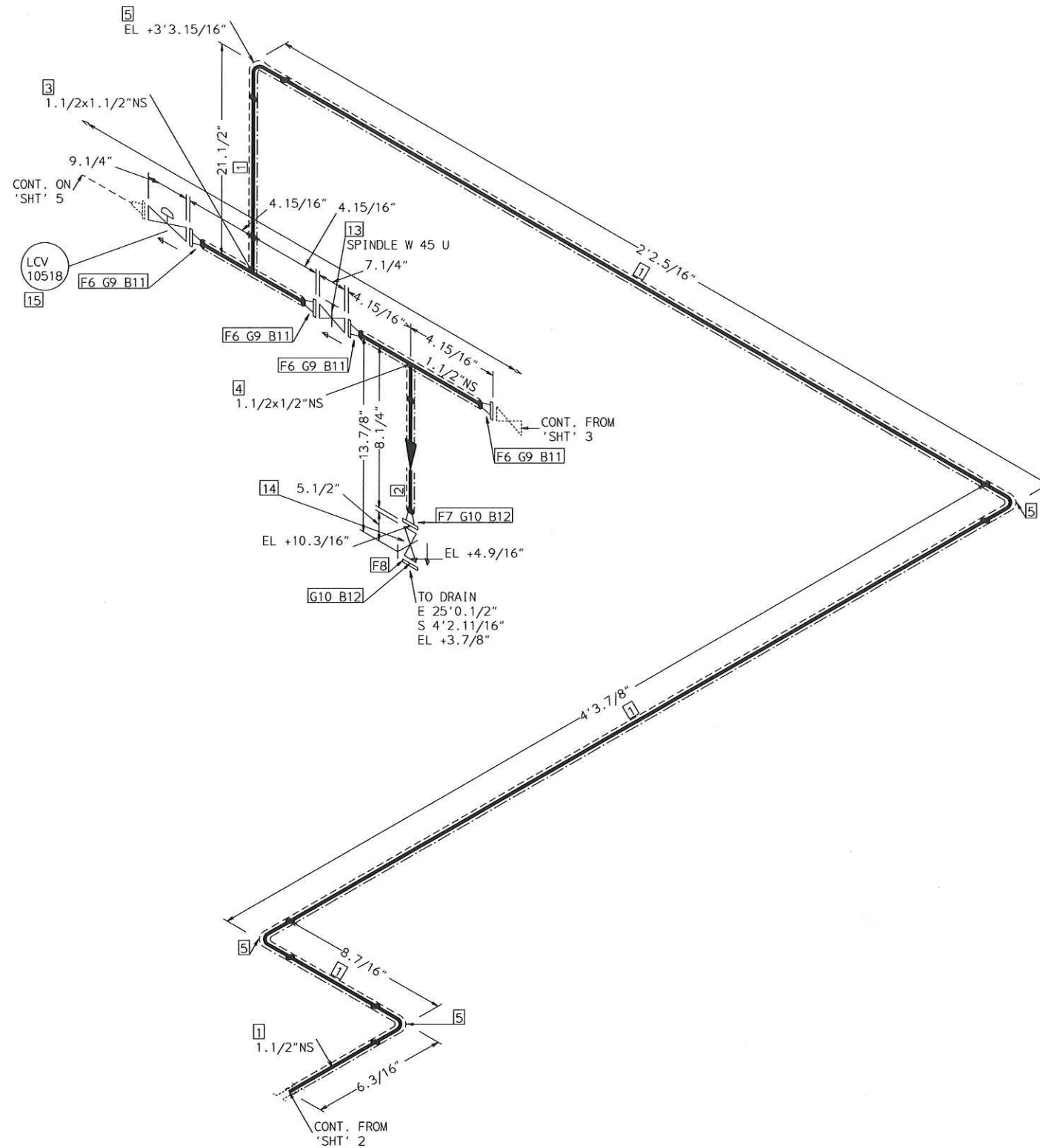


TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	1.1/2	2.7'
2	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.4'
FITTINGS				
3	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
4	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1.1/2	1
FLANGES				
5	ALCF	FLG WN 300# RF STL STD BORE A105	1.1/2	6
6	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	1
7	ALCF	FLG BLIND 300# RF STL A105	1/2	1

ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
FITTINGS				
8	SUPP	SPS-2G GUIDE SUPPORT	1.1/2	1
9	SUPP	SPS-2 RESTING SUPPORT	1.1/2	1
GASKETS				
10	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1.1/2	6
11	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	2
BOLTS				
12	ALCF	3.9/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	24
13	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	8
VALVES / IN-LINE ITEMS				
14	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1.1/2	2
15	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1
INSTRUMENTS				
16		MICRO MOTION FLOWMETER 300# RF FE 10502	1.1/2	1

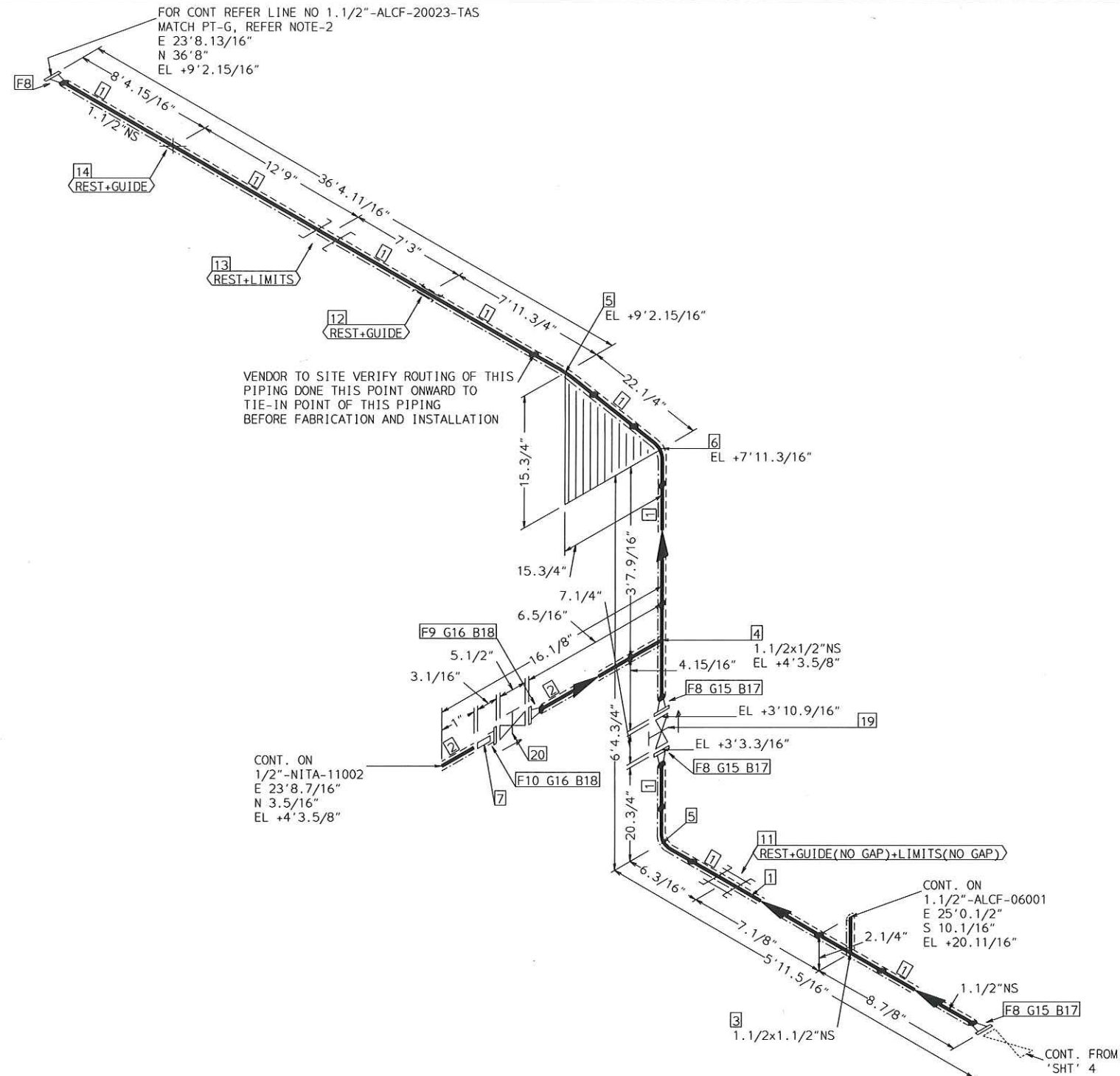
AREA: CETYL		1.1/2"-ALCF-20023	
PIPING GA NO: --	P&ID NO: 1020/1006	STRESS CRITICAL: NA	
OP.TEMP: 490°F	OP.PRESS: 15 psig	TEST MEDIUM: Hydro	
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL.TYPE: NS-CELLULAR	INSUL.THK: 1.5 inch	
LINE NO. / FILE NAME: 1.1/2"-ALCF-20023			ISSUE: R3



TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	1.1/2	7.9'
2	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.4'
FITTINGS				
3	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
4	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
5	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1.1/2	4
FLANGES				
6	ALCF	FLG WN 300# RF STL STD BORE A105	1.1/2	4
7	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	1
8	ALCF	FLG BLIND 300# RF STL A105	1/2	1
ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
GASKETS				
9	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1.1/2	4
10	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	2
BOLTS				
11	ALCF	3.9/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	16
12	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	8
VALVES / IN-LINE ITEMS				
13	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1.1/2	1
14	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1
INSTRUMENTS				
15		CONTROL VLV. GLOBE 300# RF LCV 10518	1.1/2	1

AREA: CETYL	1.1/2"-ALCF-20023	
PIPING GA NO: -	P&ID NO: 1020/1006	STRESS CRITICAL: NA
OP.TEMP: 490°F	OP.PRESS: 15 psig	TEST MEDIUM: Hydro
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig
SCALE: NONE	INSUL.TYPE: N5-CELLULAR	INSUL.THK: 1.5 inch
LINE NO. / FILE NAME: 1.1/2"-ALCF-20023	ISSUE: R3	



TRACING SPEC: S-TRACING (NOTE-10)

FABRICATION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
PIPE				
1	ALCF	PIPE STD WT SMLS STL A106-B	1.1/2	43.3'
2	ALCF	PIPE STD WT SMLS STL A106-B	1/2	0.3'
FITTINGS				
3	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
4	ALCF	TEE STD WT STL A234 WPB BW	1.1/2	1
5	ALCF	ELL 90 DEG LR STD WT STL A234 WPB BW	1.1/2	2
6	ALCF	ELL 45 DEG STD WT STL A234 WPB BW	1.1/2	1
7	NITA	NIPPLE TBE NPT 3" LONG ASTM A106 GR.B	1/2	1
FLANGES				
8	ALCF	FLG WN 300# RF STL STD BORE A105	1.1/2	4
9	ALCF	FLG WN 300# RF STL STD BORE A105	1/2	1
10	NITA	FLG SCRDR 150# RF STL A105	1/2	1

ERECTION MATERIALS				
PT NO	SPEC	COMPONENT DESCRIPTION	N.S.	QTY
FITTINGS				
11	SUPP	TWO DIRECTIONAL RESTRAINT SUPPORT SPS-69	1.1/2	1
12	SUPP	SPS-2G GUIDE SUPPORT	1.1/2	1
13	SUPP	SPS-54 AXIAL STOP SUPPORT	1.1/2	1
14	SUPP	SPS-67G1 support	1.1/2	1
GASKETS				
15	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1.1/2	3
16	ALCF	GASKET 300# 1/8" 316 SPRL WND W/FLEXICARB TYPE CG	1/2	2
BOLTS				
17	ALCF	3.9/16 x3/4" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	7/8	12
18	ALCF	2.9/16 x1/2" STUD BOLT A193 GR B7 W/2 A194 GR 2H NUTS	9/16	8
VALVES / IN-LINE ITEMS				
19	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1.1/2	1
20	ALCF	GATE 300# FLANGED RF C.STL F6 TRIM(API TRIM#5) (HIGH TEMP PACKING REQUIRED ON VALVES)	1/2	1

AREA: CETYL		1.1/2"-ALCF-20023	
PIPING GA NO: -	P&ID NO: 1020/1006	STRESS CRITICAL: NA	
OP.TEMP: 490°F	OP.PRESS: 15 psig	TEST MEDIUM: Hydro	
DES.TEMP: 600°F	DES.PRESS: 300 psig	TEST PRESS: 450 psig	
SCALE: NONE	INSUL.TYPE: N5-CELLULAR	INSUL.THK: 1.5 inch	
LINE NO. / FILE NAME: 1.1/2"-ALCF-20023			ISSUE: R3

SIZE-A3