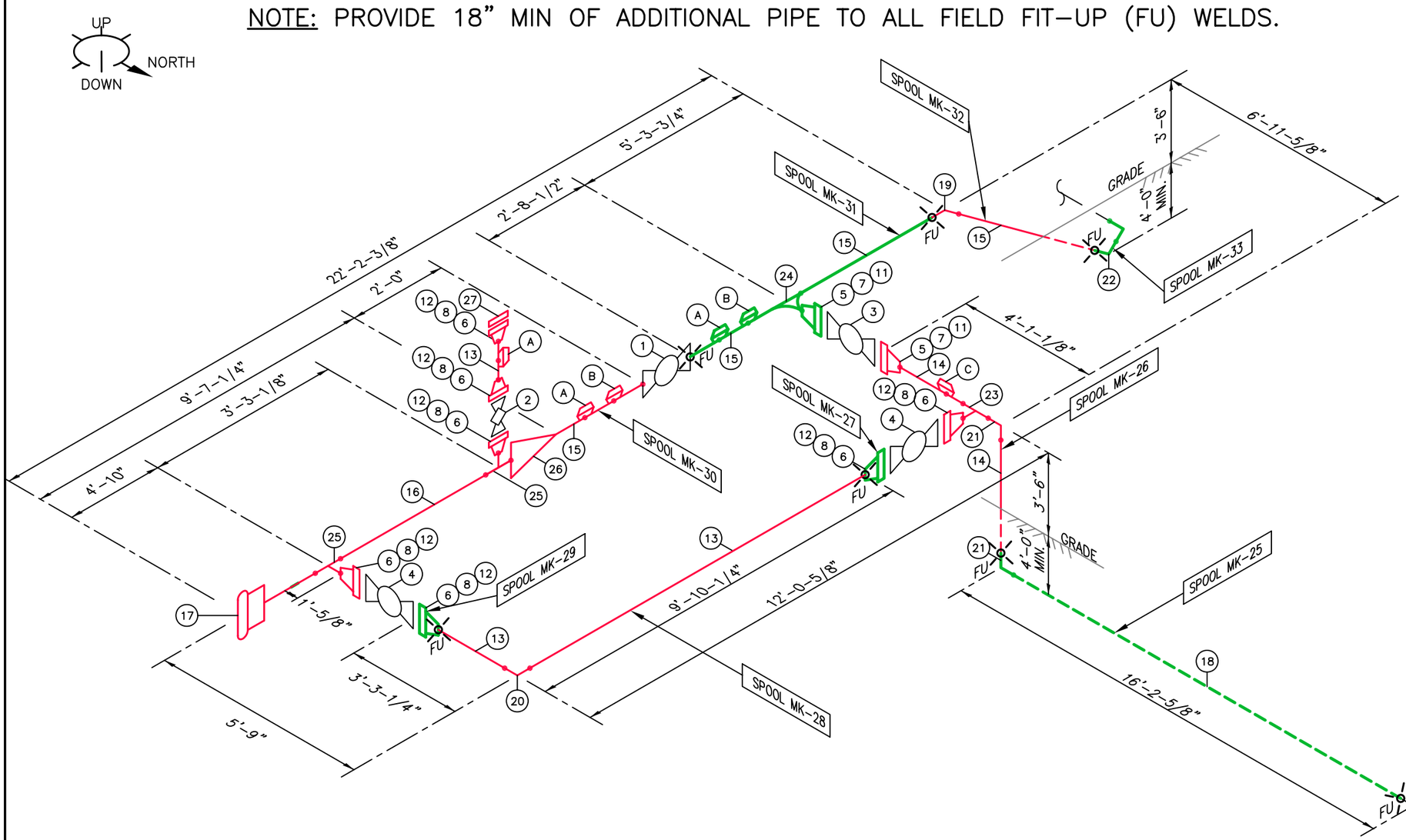
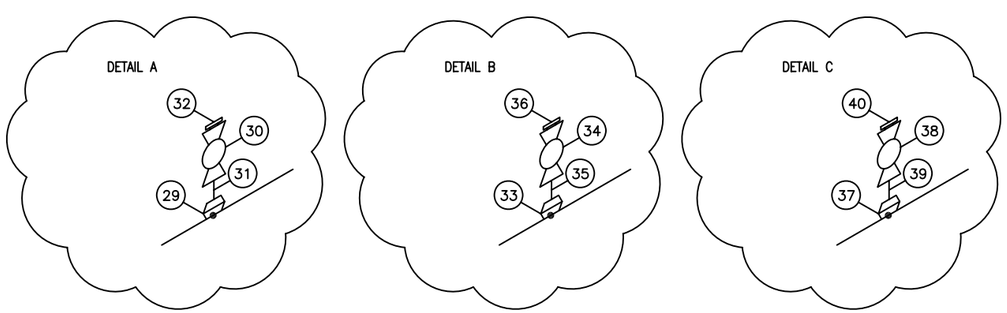
NOTE: PROVIDE 18" MIN OF ADDITIONAL PIPE TO ALL FIELD FIT-UP (FU) WELDS.





BILL OF MATERIALS

ITEM	QTY	SIZE	DESCRIPTION
1	1	10"	GROVE, B5, TRIM D0101, 600#, FP,WE(SCH 40) BALL VALVE W/ OPERATOR
2	1	4"	4x3 TEXSTREAM 9D-L4006R40C, 600# RF, PLUG VALVE
3	1	6"	BALON 6F-T63-RF, 600#, RF, FP TRUNNION BALL VALVE
4	2	4"	BALON 4F-T63-RF, 600#, RF, FP TRUNNION BALL VALVE
5	2	6"	FLANGE, WN, 600, STD, RF, FS, A860 MSS-SP-75 WPHY 52
6	7	4"	FLANGE, WN, 600, STD, RF, FS, A860 MSS-SP-75 WPHY 52
7	2	6"	GASKET, KAMMPRO, LP3 600 5/32 316L-APX2 316-L OR NS
8	7	4"	GASKET, KAMMPRO, LP3 600 5/32 316L-APX2 316-L OR NS
11	24	1"x7 3/4"	BOLTS, STUD, /A 193 GR.B7, W/ 2-HVY HEX NUTS, /A 194 2H
12	56	7/8"x6 3/4"	BOLTS, STUD, /A 193 GR.B7, W/ 2-HVY HEX NUTS, /A 194 2H
13	15'	4"	PIPE, API5L, PSL2, GR. B, .237" W.T. X52
14	12'	6"	PIPE, API5L, PSL2, GR. B, .280" W.T. X52
15	20'	10"	PIPE, API5L, PSL2, GR. B, .365" W.T. X52
16	8'	12"	PIPE, API5L, PSL2, GR. B, .375" W.T. X52
17	1	12"	CLOSURE, 600, HUBER-YALE, FIG. 500
18	20'	6"	PIPE, 0.280 WT, ERW, API5L, PSL2, X52, 16-18 MIL FBE
19	1	10"	SWEEP, 45°, API5L, PLS2, 0.365"WT, X52
20	1	4"	ELBOW, 90, STD, A860 MSS-SP-75 WPHY 52
21	2	6"	ELBOW, 90, STD, A860 MSS-SP-75 WPHY 52
22	1	10"	SWEEP, 90°, API5L, PLS2, 0.365"WT, X52, 16-20 MIL FBE
23	1	6"x4"	TEE, STD, A860 MSS-SP-75 WPHY 52
24	1	10"x6"	TEE, STD, A860 MSS-SP-75 WPHY 52
25	2	12"x4"	TEE, STD, A860 MSS-SP-75 WPHY 52
26	1	12"x10"	REDUCER, CONC, STD, A860 MSS-SP-75 WPHY 52
27	1	4"	FLANGE, BLIND, 600, STD, RF, FS, A860 MSS-SP-75 WPHY 52
DETAIL A: 1/2" THREADOLET DETAIL			
29	3	1/2"	THREADOLET, 3000#, CARBON STEEL
30	3	1/2"	BALL VALVE, BALON SERIES LS, 3000#
31	3	1/2"	INDUSTRIAL PIPE NIPPLE, SHORT HEX, 316 SS, 3000#
32	3	1/2"	PLUG, SQUARE HEAD, 316 SS, 3000#
DETAIL B: 3/4" THREADOLET DETAIL			
33	2	3/4"	THREADOLET, 3000#, CARBON STEEL
34	2	3/4"	BALL VALVE, BALON SERIES LS. 3000#
35	2	3/4"	INDUSTRIAL PIPE NIPPLE, SHORT HEX, 316 SS, 3000#
36	2	3/4"	PLUG, SQUARE HEAD, 316 SS, 3000#
DETAIL C: 1" THREADOLET DETAIL			
37	2	1"	THREADOLET, 3000#, CARBON STEEL
38	2	1"	BALL VALVE, BALON SERIES LS. 3000#
39	2	1"	INDUSTRIAL PIPE NIPPLE, SHORT HEX, 316 SS, 3000#
40	2	1"	PLUG, SQUARE HEAD, 316 SS, 3000#

NO.	DATE	BY	REVISION
1	10/29/10	GB	AS BUILT- ADDED VALVE TO 4" STAND PIPE

AS BUILT

REGISTERED PROFESSIONAL ENGINEER
REG NO. 9918
DAVID P. YEXLEY
SOUTH DAKOTA

PWHT: NO	SEAL WELD: NO	PIPE STRESS ANALYZED: NO
X-RAY: 100%	PIPING SPEC API5L, PSL2, GR.B X52	
DESIGN PSIG:	1440 @ 100 °F	

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

GAS PIPELINE INTERCONNECT ISOMETRIC
SHEET 2 OF 2
DEER CREEK STATION

SCALE	DATE	DRAWN BY	APPROVED BY
NONE	6/2/10	CASSIE PETER	DAVE YEXLEY

DCS-MP-ONG-0004