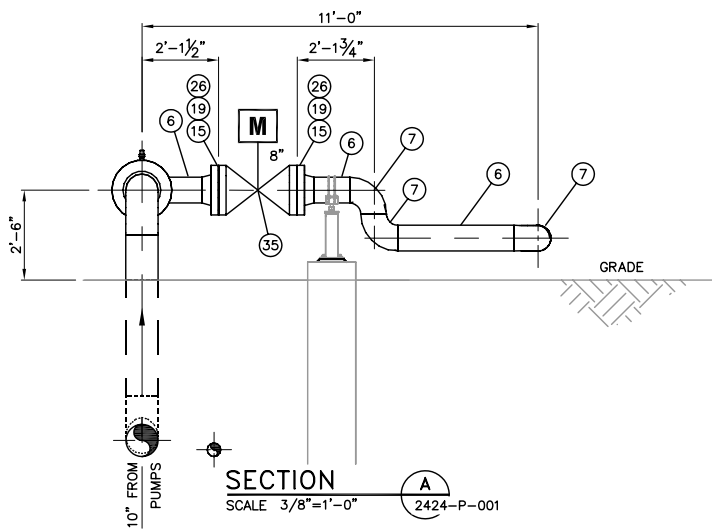
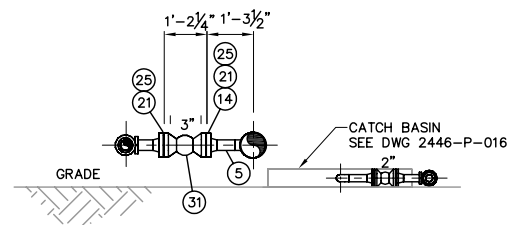


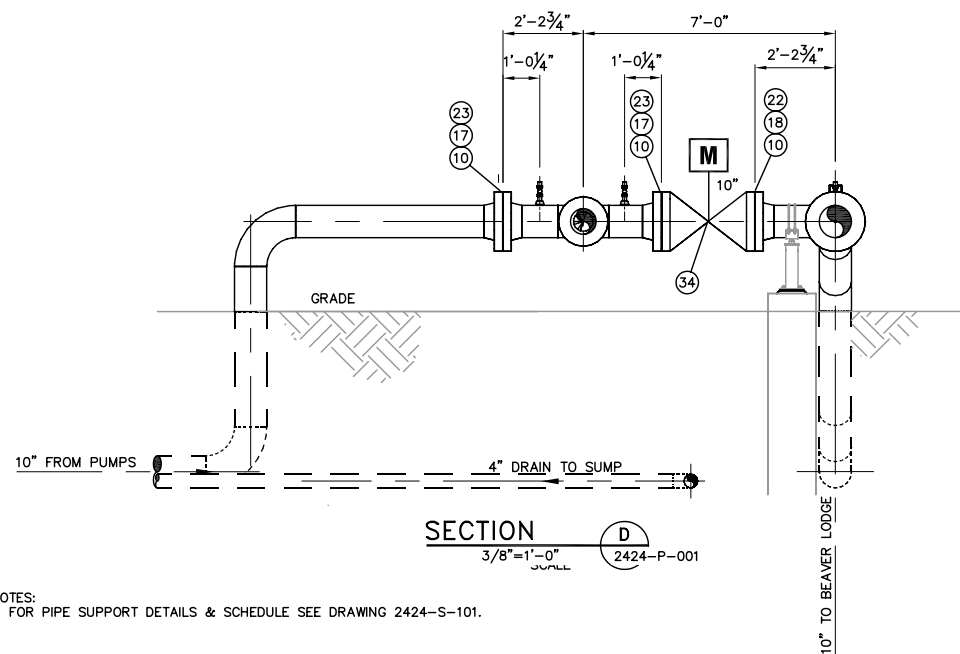
SECTION B
SCALE 3/8"=1'-0" 2424-P-001



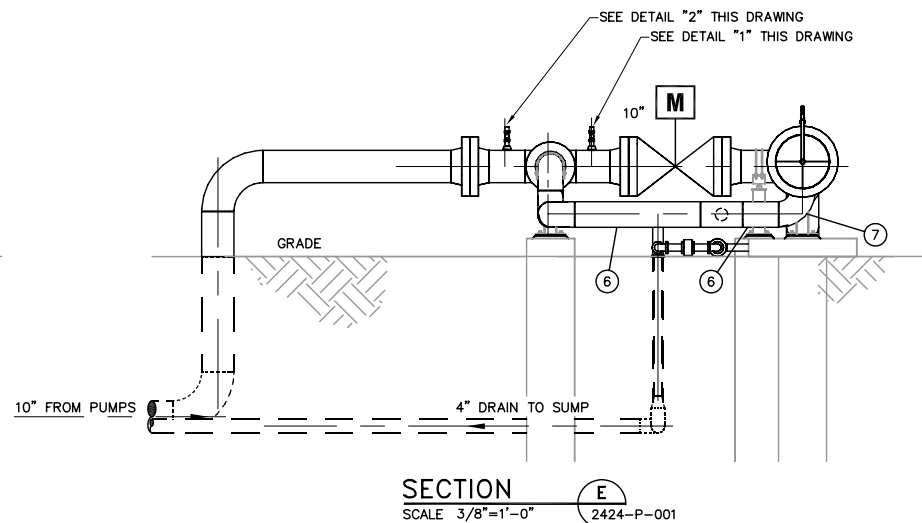
SECTION A
SCALE 3/8"=1'-0" 2424-P-001



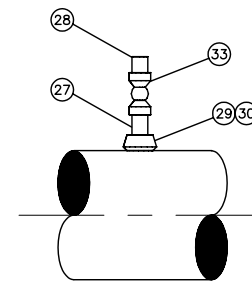
SECTION C
SCALE 3/8"=1'-0" 2424-P-001



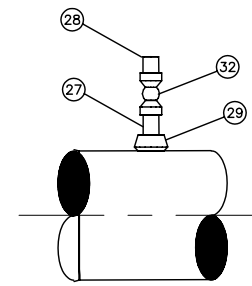
SECTION D
SCALE 3/8"=1'-0" 2424-P-001



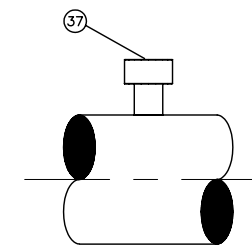
SECTION E
SCALE 3/8"=1'-0" 2424-P-001



DETAIL 1
SCALE N.T.S. (3 PLCS)



DETAIL 2
SCALE N.T.S. (1 PLC)



DETAIL 3
SCALE N.T.S. (1 PLC)

BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	2	10"	HOT BEND; API 5L, 30 DEG BEND, .307 WT., X-52, W/ 2'-0" TANGENTS	6'-7 3/8"
2	1	10"	PIPE, API 5L, .307 WT., X-52, ERW, DRL	7'-2 5/8"
3	1	10"	PIPE, API 5L, STD, GRADE B, ERW, DRL, PE	9'-0"
4	1	14"	PIPE, API 5L, STD, X-42, ERW, DRL, PE	1'-8"
5	1	3"	PIPE, API 5L, STD, GRADE B, SMLS, DRL, PE	6"
6	1	8"	PIPE, API 5L, STD, GRADE B, SMLS, DRL, PE	9'-9 3/4"
7	4	8"	ELL, 90° SR, BUTT WELD, STD, ASTM A-234 WPHY-42	
8	1	14"x10"	REDUCER, ECC., ASTM A-234, BUTT WELD, STD WALL, WPHY-42	
9	1	10"	TEE, ASTM A-234, BUTT WELD, STD WALL, WPB (BARRED W/ 1/8"x1" ASTM A36 FLAT STOCK)	
10	5	10"	FLG, ANSI 600 RFWN, ASTM A-105, STD WALL, WPB	
11	1	10"x8"	TEE, REDUCING, ASTM A-234, BUTT WELD, STD WALL, WPHY-42	
12	2	14"	FLG, ANSI 600 RFWN, ASTM A-234, STD WALL, WPHY-42	
13	1	14"x8"	TEE, REDUCING, ASTM A-234, BUTT WELD, STD WALL, WPB	
14	1	3"	FLG, ANSI 600 RFWN, ASTM A-105, STD WALL, WPB	
15	2	8"	FLG, ANSI 600 RFWN, ASTM A-105, STD WALL, WPB	
16	1	8"x3"	TEE, REDUCING, ASTM A-234, BUTT WELD, STD WALL, WPB	
17	3	1 1/4"	(16) STUD BOLTS FOR 10" 600LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	8 1/4"
18	2	1 1/4"	(16) STUD BOLTS FOR 10" 600LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	10"
19	2	1 1/8"	(12) STUD BOLTS FOR 8" 600LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	7 1/2"
20	1	1 3/8"	(20) STUD BOLTS FOR 14" 600LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	9"
21	2	3/4"	(8) STUD BOLTS FOR 3" 600LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	4 3/4"
22	2	10"	FLANGE INSULATION KIT	
23	3	10"	GASKET, ANSI 600, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING, SOLID INNER RING	
24	1	14"	GASKET, ANSI 600, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING, SOLID INNER RING	
25	2	3"	GASKET, ANSI 600, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING, SOLID INNER RING	
26	2	8"	GASKET, ANSI 600, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING, SOLID INNER RING	
27	4	1"	NIPPLE, ASTM A-106, MNPT, SCH. 160, GRADE B TBE	3"
28	4	1"	PLUG, ASTM A-106, MNPT, SCH. 160, GRADE B	
29	3	10"x1"	THRED-O-LET, ASTM A-105, FNPT, 3000#, GRADE B	
30	1	14"x1"	THRED-O-LET, ASTM A-105, FNPT, 3000#, GRADE B	
31	1	3"	BALL VALVE, ANSI 600, RFFE, FULL PORT, 316 SS BALL AND TRIM, PTFE SEATS, API 6D, FIRE SAFE DESIGN, S/N 642100	1'-2"
32	1	1"	BALL VALVE, SERIES 800 WOG 3000#, FNPT, FULL PORT, 316 SS BALL AND TRIM, SS BODY, PTFE SEATS, API 6D OR ASME B16.34, FIRE SAFE DESIGN	2 1/8"
33	3	1"	BALL VALVE, SERIES 800 WOG 3000#, FNPT, REDUCED PORT, 316 SS BALL AND TRIM, SS BODY, PTFE SEATS, API 6D OR ASME B16.34, FIRE SAFE DESIGN	2 1/8"
34	2	10"	GATE VALVE, ANSI 600, RFFE, FULL CONDUIT, SLAB GATE, FABRICATED STEEL BODY, C.S. ENP GATE, VITON SEATS, API-6D, FIRE SAFE DESIGN	2'-7"
35	1	8"	GATE VALVE, ANSI 600, RFFE, FULL CONDUIT, SLAB GATE, FABRICATED STEEL BODY, C.S. ENP GATE, VITON SEATS, API-6D, FIRE SAFE DESIGN	2'-2"
36	1	14"	CLOSURE, YALE, FIG. 500, ANSI 600	
37	1	2"	THREAD-O-RING W/CAP AND PLUG, TDW MODEL# 06-3793-0000-51 W/DETAIL-B FLAT BOTTOM BEVEL WELD	4"

NOTES:
1. FOR PIPE SUPPORT DETAILS & SCHEDULE SEE DRAWING 2424-S-101.

Rooney Engineering, Inc.
12201 E. Arapahoe Rd.
Centennial, CO 80112
(303) 792-5911

NO	REVISION	DATE	APPR	BY
1	ISSUED FOR AS-BUILT	01/31/08	JRW	ADJ
0	ISSUED FOR CONSTRUCTION	05/23/07	JRW	ADJ

ENBRIDGE PIPELINES (ND)
TRENTON (ND) STATION
10" LAUNCHER
SECTIONS AND BILL OF MATERIAL

PROJECT:
SCALE: AS NOTED DATE: 03/07/07 DRAWN: TJP
CHECK: APPR: DATE:

DWG. NO. 2424-P-002