

MATERIAL LIST- V-155 sh 2

<u>ITEM</u>	<u>QUAN.</u>	<u>STOCK NO.</u>	<u>DESCRIPTION</u>
1.	20'	PB-705X52	8"x0.322" w.t. Bare steel pipe, Grade X52, API 5L, PO # _____
2.	4	EL-700X52	8" 45° Weld elbow, Std. weight, Grade Y52
3.	2	FL-564	4" Type "E" gasket, ANSI-300
4.	2	FL-575	4" R.F. Blind flange, ANSI-300
5.	2	PL-025	1/4" Pipe plug, Square head, Solid, 3,000#
6.	2	SA-210	1"x8" Weld saddle
7.	2	TE-707X52	8"x8"x4" Weld tee, Std. weight, Grade Y52
8.	2	VA-210	1" WKM Ball valve #1F-B138-CS2-43-S2-WR, Threaded, 3,000#
9.	2	VA-583	4" Ballon WxF Ball Valve FG# 4RUS33WF, ANSI-300, 720#
10.	1	VA-716	8" Ballomax Ball Valve, WxW, FG# BMW740PLRPCB14S, (WOG=740psig)
11.	2	H-34	1"x1/4" Steel hexagon bushing, 3,000#
12.	16	H-66	3/4"x3 3/4" Cap screw
13.	2	H-114	1"x3" Mueller Save-A-Valve body only #63492, 1440 PSIG
14.	16	H-266	3/4" Heavy hex nut
15.	2	NONE	Special pipe leg (Fab shop fabricate)ref sh 3/3 Detail 1 or 1a
16.	1	CS-455	Locking padlock, Bronze, Bohannon #620A
17.	2	H-155	8" UHMW Polyethylene pipe guide

MATERIAL LIST- Pipe supports sh 3

Reference sh 3/3 for pipe support material list options

FAB SHOP TEST	
STEP 1	
TEST PRESSURE	TEST MEDIUM
100 P.S.I.G.	NITROGEN
TEST DURATION	LEAK SURVEY BY
1 HR	
DATE	TIME
STEP 2	
CERTIFICATION PRESSURE	TEST PRESSURE
500 P.S.I.G.	750 P.S.I.G.
TEST MEDIUM	TEST DURATION
NITROGEN	4 HOURS
DATE COMPLETED	BY
	CONTRACTOR
ATTESTED	CASCADE NATURAL GAS CORP.

Reuse V164Pas No Rev built by Fab shop previously
Reference 011Ken R117Ken Site plan

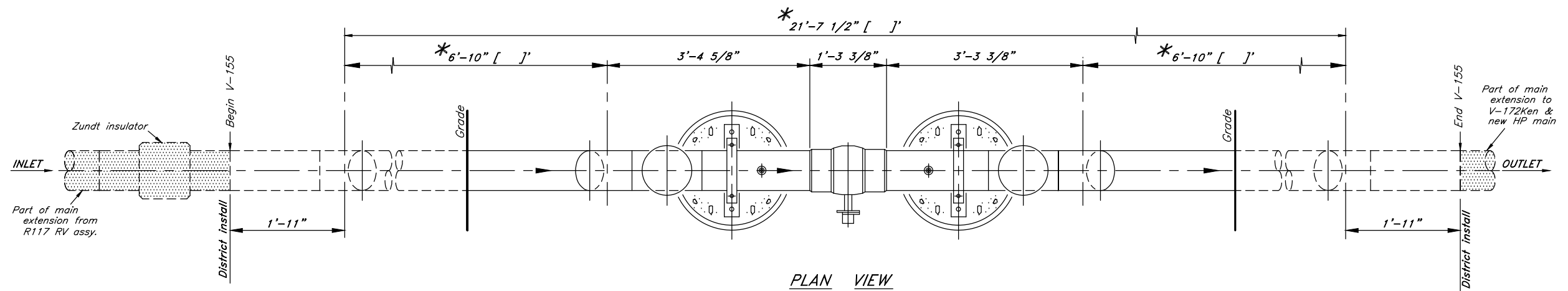
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Eng.	JF	Meas.	N/A
Drawing Number	V155Ken 13		

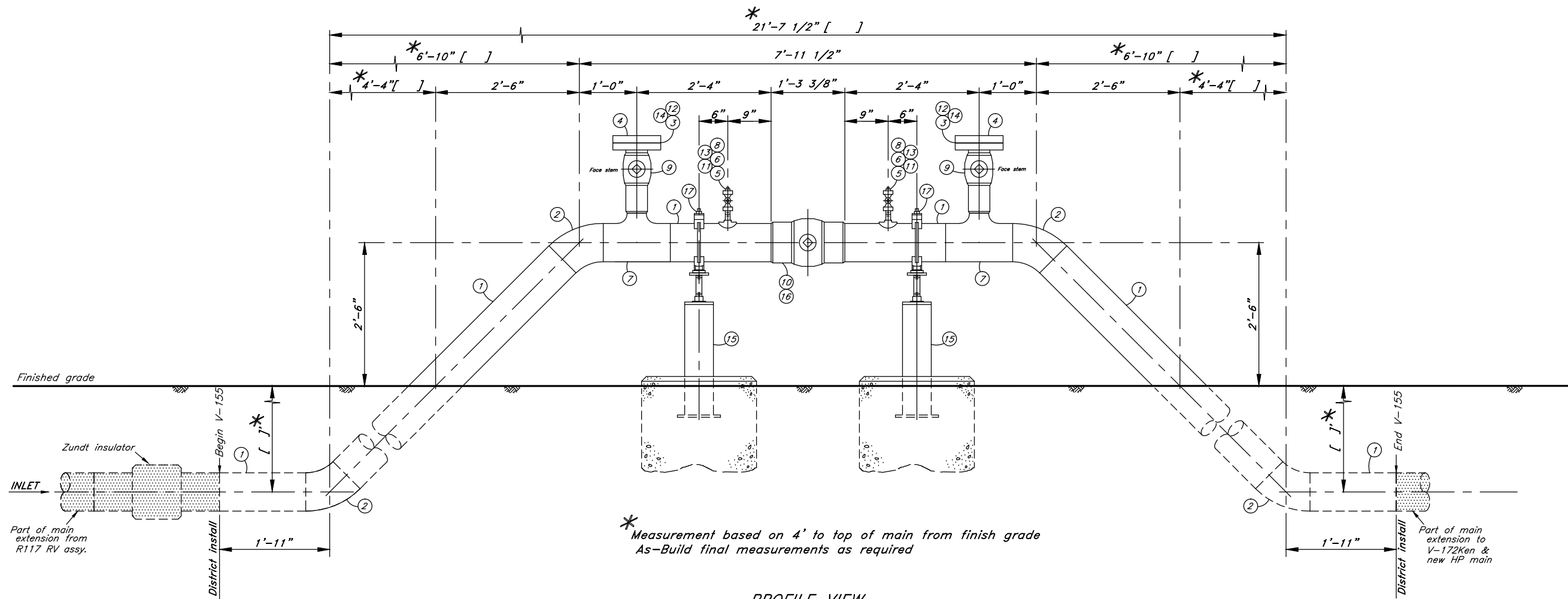


WO# 214539
CASCADE NATURAL GAS CORPORATION
 8113 W Grandridge Blvd Kennewick, WA 99336
 V-155 8" HP Outlet Valve R-117
 6300 Brinkley Rd Kennewick, WA

Note: All underground bare steel pipe to be field wrapped during installation.



PLAN VIEW



* Measurement based on 4' to top of main from finish grade
As-Build final measurements as required

PROFILE VIEW

Reuse V164Pas No Rev built by Fab shop previously
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1/2 SIZE DRAWING- Scaled to 1/2 indicated

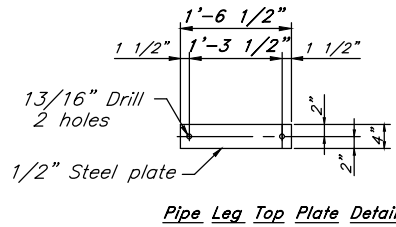
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Date	12-2-14	Check	N/A	
Eng.	JF	Meas.	N/A	
Drawing Number	V155Ken 23			

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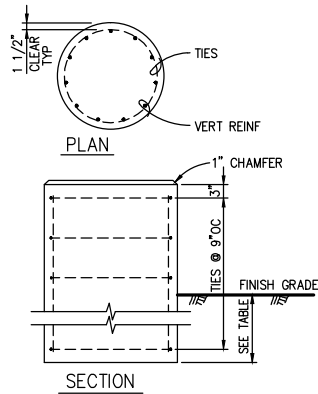
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8" Guide- 6" Pipe Leg Material (1 ea)

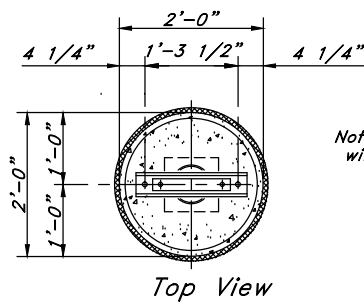
ITEM	QUAN.	STOCK NO.	DESCRIPTION
1.	1'	PB-350	2"x0.154" w.t. Bare steel pipe, Grade B, ASTM A106
2.	2'	PB-653X52	6"x0.280" w.t., Bare steel pipe, Gr X52, API5L
3.	2	H-39	3/4"x2 1/2" Cap screw, ASTM A307, Grade B
4.	1	H-155	8" UHMW Polyethylene pipe guide
5.	2	H-266	3/4" Heavy hex nut, ASTM A194 Grade 2H
6.	2	H-822	3/4" Heavy galvanized lock washer
7.	1	NONE	1 1/4" High strength flat washer, galvanized
8.	1	NONE	3/4"x2" Flat washer, galvanized
9.	1	H-298	1 1/4" - 8 Heavy Hex. nut
10.	1	NONE	1 1/4" - 8x12" Continuous thread steel rod
11.	1	NONE	1/2"x6.625" Dia. Steel plate (Fab shop fabricate)
12.	1	NONE	1/2"x4"x18 1/2" Steel plate (Fab shop fabricate)
13.	1	NONE	1/2"x9"x9" Steel plate (Fab shop fabricate)



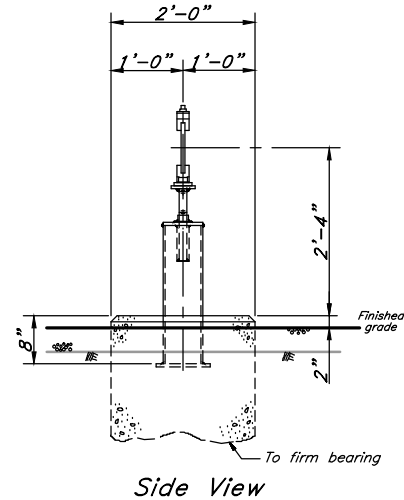
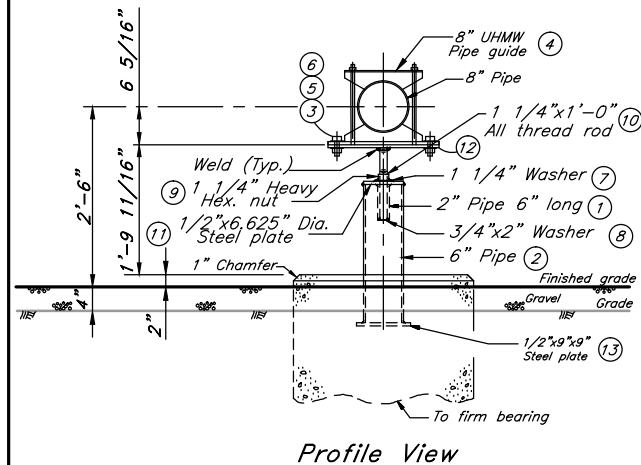
PLAN DIM	VERT REINF	TIES	MAXIMUM LOAD (LBS.)
12" DIA	4 - #5	#3	1,100
18" DIA	4 - #5	#3	2,400
24" DIA	11 - #6	#4	4,400
30" DIA	12 - #7	#4	6,800
36" DIA	13 - #8	#4	9,900
42" DIA	14 - #9	#4	13,400
48" DIA	18 - #9	#4	17,600



NOTES:
 1. FOR SOIL BEARING CAPACITY AND CONCRETE AND REINFORCING STEEL CRITERIA, SEE FOUNDATION PLAN & DETAILS.
 2. FORM SIDEWALLS OF PIER TO A POINT 6" BELOW FINISH GRADE.
 3. IF A SITE SPECIFIC GEOTECHNICAL REPORT IS NOT PROVIDED, EXTEND FOUNDATION TO 3' DEPTH FROM GRADE IN GROUND USING 3' SONOTUBE.



Note: Piers to be installed with appropriate rebar.

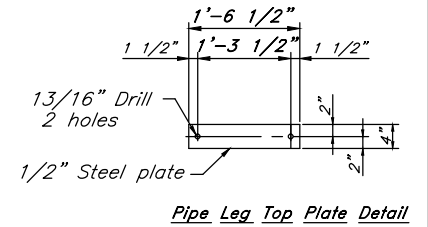


8" GUIDE- 6" PIPE LEG & 24" PIER DETAIL No. 1

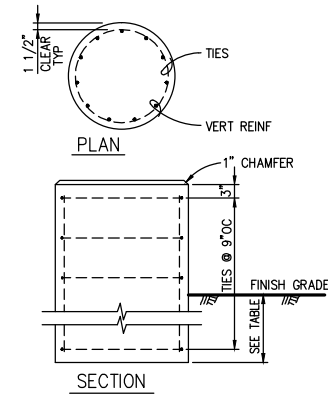
Scale: 3/4" = 1'-0"

8" Guide- 6" Pipe Leg Material (1 ea)

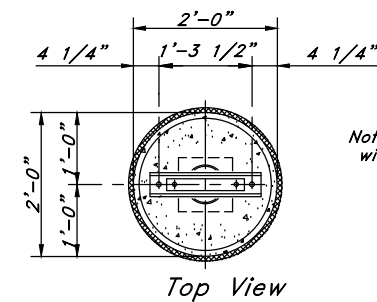
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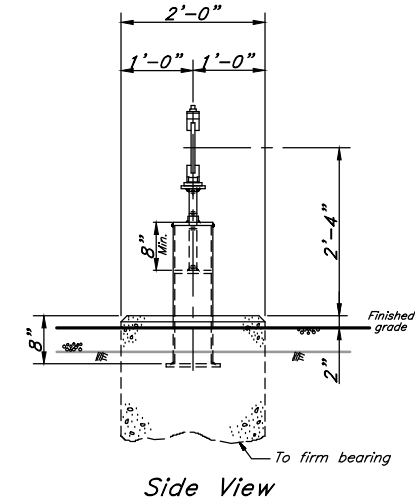
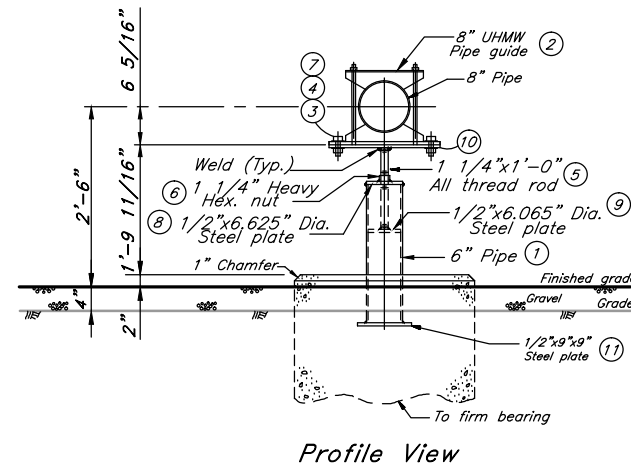
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Scale 3/4"=1'-0"	Drawn SB	CASCADe NATURAL GAS CORPORATION 8113 W Grandridge Blvd Kennewick, WA 99336 V-155 8" HP Outlet Valve R-117 6300 Brinkley Rd Kennewick, WA
Date 12-2-14	Check N/A	
Eng. JF	Meas. N/A	
Drawing Number V155Ken 33		

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