

INITIAL INSTALLATION FIELD SETTINGS		
OPERATING REGULATOR LOCKUP	55	P.S.I.G.
STANDBY REGULATOR LOCKUP	50	P.S.I.G.
R/V SET POINT	58	P.S.I.G.
MAXIMUM ALLOWABLE SETTINGS		
OPERATING REGULATOR LOCKUP	56	P.S.I.G.
R/V SET POINT	60	P.S.I.G.
SYSTEM PRESSURES		
INLET MAOP	500	P.S.I.G.
DESIGN	500	P.S.I.G.
OUTLET MAOP	60	P.S.I.G.
DESIGN	60	P.S.I.G.

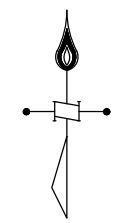
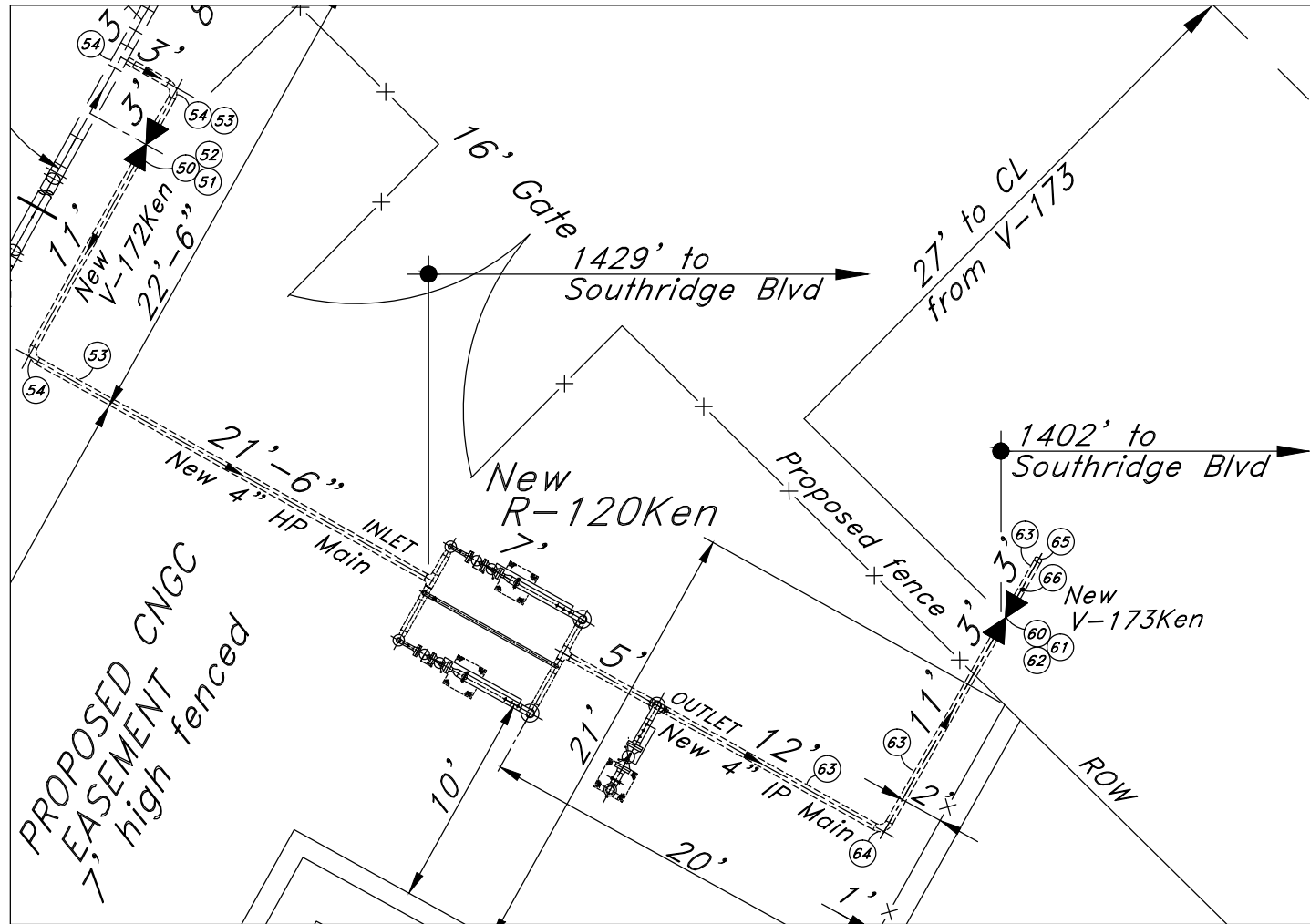
MATERIAL LIST- V-172Ken with 4" HP Main

ITEM	QUANTITY	STOCK NO.	DESCRIPTION
50.	1	VA-581	4" Ballomax WxW Ball Valve Fig. #4BMW740RP c/w three silicon plugs
51.	1	H-36	Ametek roadway valve box #5-155-24
52.	1	H-210	High head extension kit
53.	40'	PFBE-550X42	4"x0.188"w.t., FBE coated steel pipe, API 5L, Gr X42, DRL, ERW, PO#
54.	3	EL-555X52	4" 90° Weld elbow, Gr X52

MATERIAL LIST- V-173Ken with 4" IP Main

ITEM	QUANTITY	STOCK NO.	DESCRIPTION
60.	1	VA-575	4" Ballomax WxW Ball Valve Fig. #4BMW285RP c/w three silicon plugs
61.	1	H-36	Ametek roadway valve box #5-155-24
62.	1	H-210	High head extension kit
63.	30'	PFBE-550X42	4"x0.188"w.t., FBE coated steel pipe, API 5L, Gr X42, DRL, ERW, PO#
64.	1	EL-555	4" 90° Weld elbow, Std. wght. Gr B
65.	1	CA-551	4" Weld cap, Std. wght.
66.	1	NP-210	1"x3" Save-A-Valve nipple, Mueller #H-17491300, w/ steel cap, 1440 PSIG

MATERIAL LIST- R-120 Reg see sh 3/4



PLOT PLAN
1/8"=1'-0"

SE 1/4 Sec. 17, T-8-N, R-29-E
Benton County Kennewick, WA

NOTE

- 5' Minimum separation is preferred, contact Engineering if this is not practical.
- Padlock relief block valve in OPEN position, By-pass valve in CLOSED position.

Field Test- R120- Inlet Main & Outlet Mains

Test through all new 4" HP main upstream of R-120, including through V-172 and R-120. Test through all new 4" IP main downstream of R-120, including through V-173. All fittings to be welded on pipe and included in the test prior to testing. All valves to be in the open position with a blind flange installed atop the relief stack block valve.

STEP 1

PRESSURE TEST	
TEST PRESSURE	100 P.S.I.G.
TEST MEDIUM	NITROGEN
TEST DURATION	1 HR HOURS
BY	
DATE COMPLETED	

STEP 2

PRESSURE TEST	
CERTIFICATION PRESSURE	500 P.S.I.G.
TEST PRESSURE	750 P.S.I.G.
TEST MEDIUM	NITROGEN
TEST DURATION	4 HOURS
DATE COMPLETED	
BY	
CONTRACTOR	CASCADE NATURAL GAS CORP.
ATTESTED	

1/2 SIZE DRAWING- Scaled to 1/2 indicated

PRELIMINARY
WO# 214539

INLET CERTIFIED FOR 500 P.S.I.G.

Scale	As-Noted	Drawn	SB	CASCADE NATURAL GAS CORPORATION 8113 W Grandridge Blvd Kennewick, WA 99336
Date	2-26-15	Check	N/A	
Eng.		Meas.	N/A	
Dwg. Name	R120Ken 14			R-120 Secondary Regulator 6300 Brinkley Rd Kennewick, WA

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

FAB SHOP TEST- R-120
REGULATOR
STEP 1

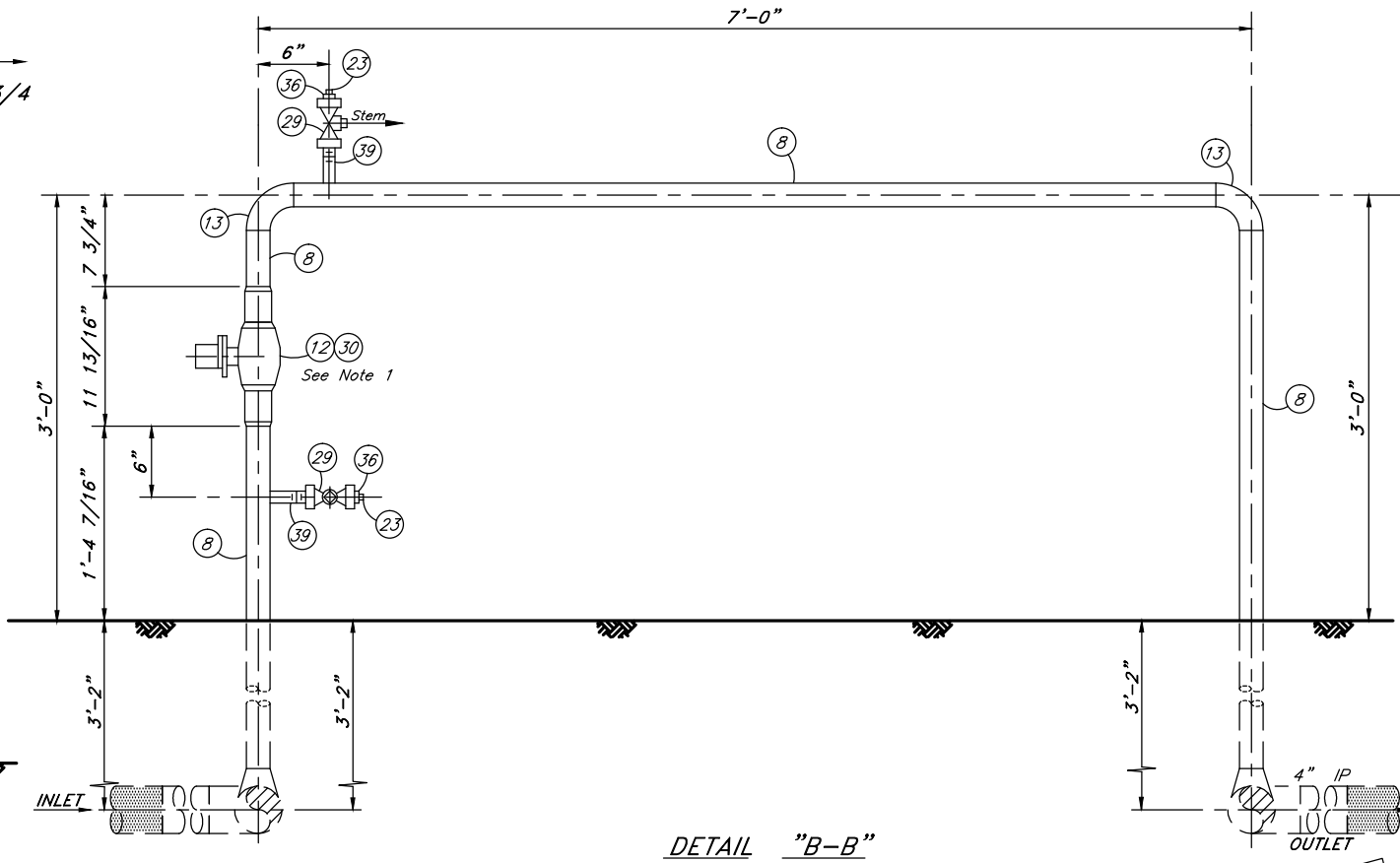
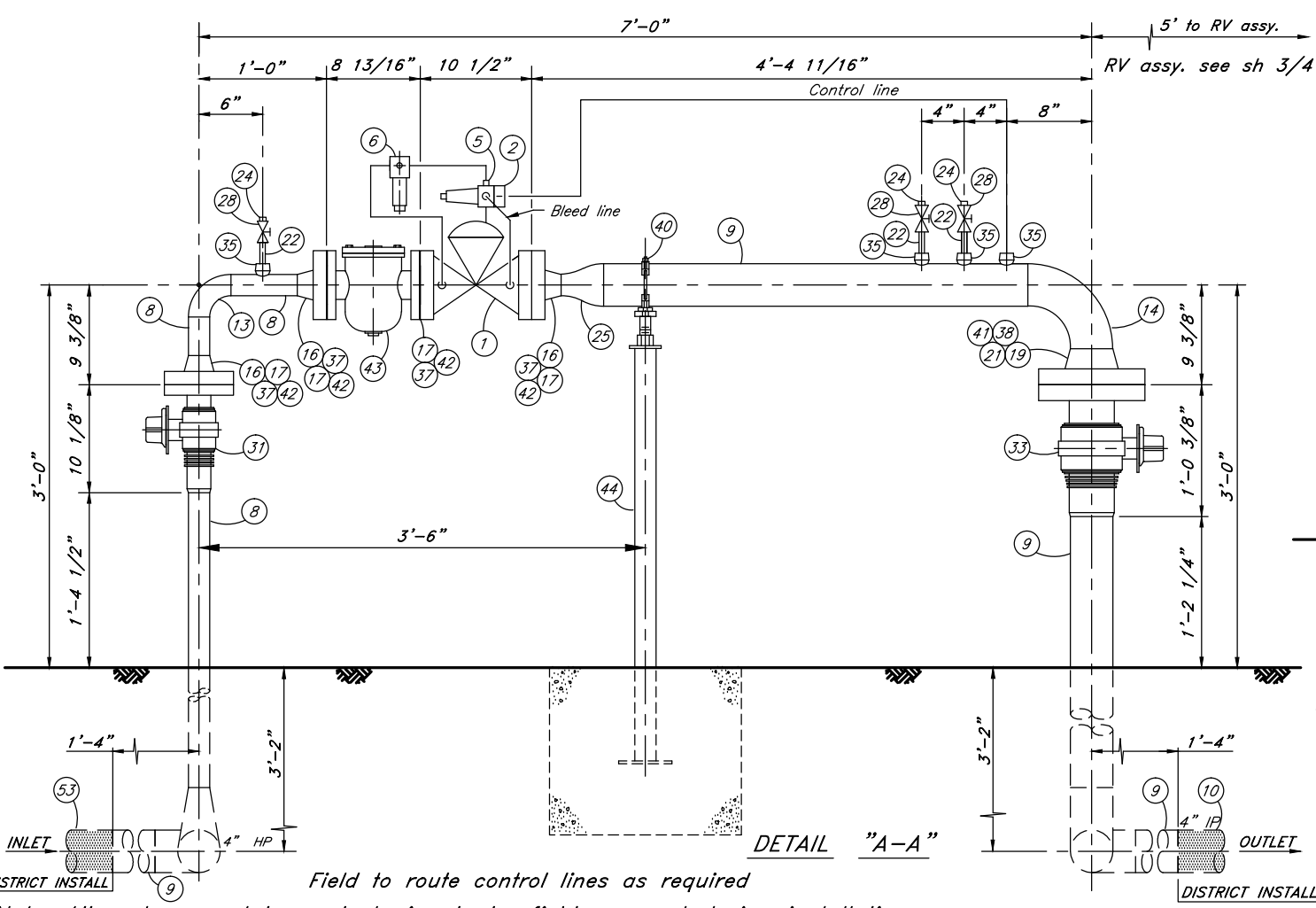
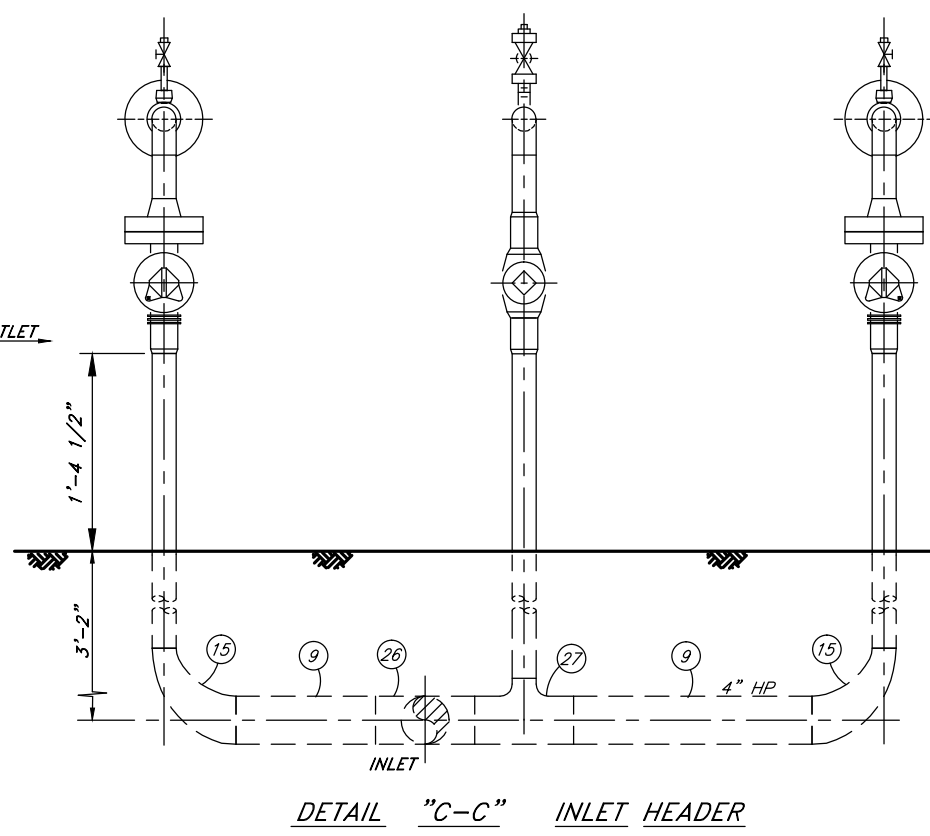
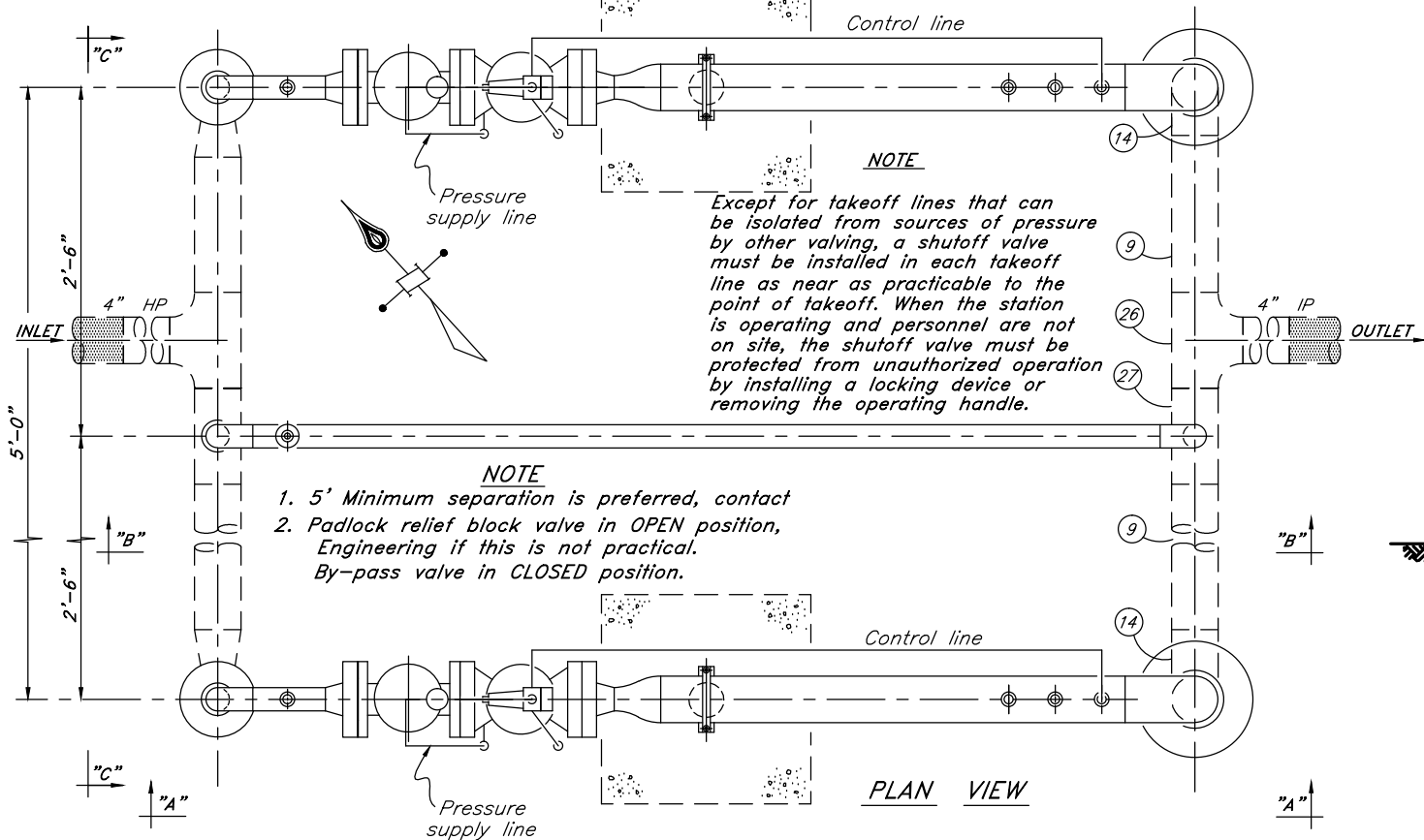
PRESSURE TEST

TEST PRESSURE	100	P.S.I.G.
TEST MEDIUM	NITROGEN	
TEST DURATION	1 HR	HOURS
LEAK SURVEY BY		
DATE		TIME

STEP 2

PRESSURE TEST

CERTIFICATION PRESSURE	500	P.S.I.G.
TEST PRESSURE	750	P.S.I.G.
TEST MEDIUM	NITROGEN	
TEST DURATION	4	HOURS
DATE COMPLETED		
BY		CONTRACTOR
ATTESTED		CASCADE NATURAL GAS CORP.



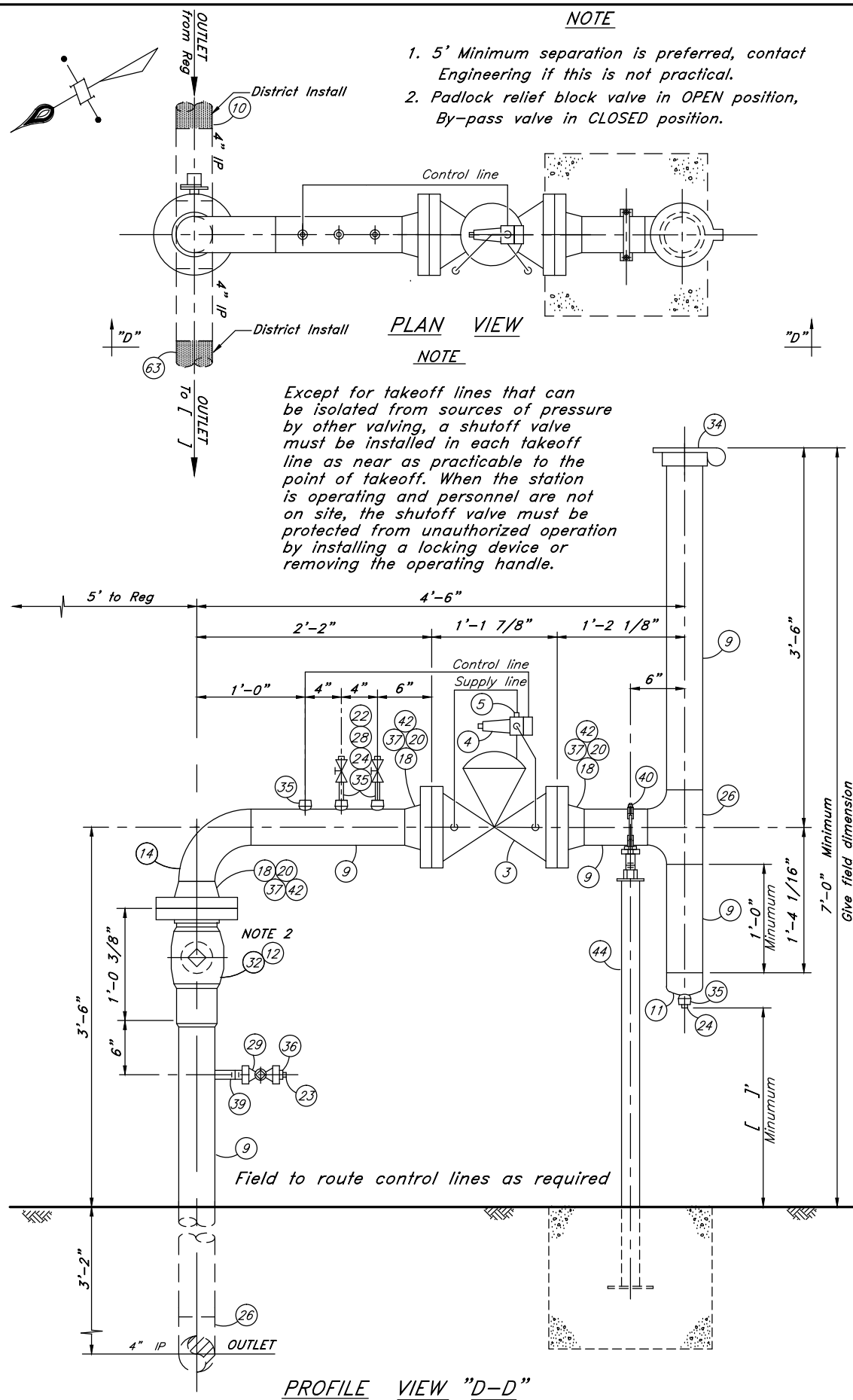
DISTRICT INSTALL
Field to route control lines as required
Note: All underground bare steel pipe to be field wrapped during installation.

1/2 SIZE DRAWING- Scaled to 1/2 indicated

INLET CERTIFIED FOR 500 P.S.I.G.

Scale	1-1/2"=1'-0"	Drawn	SB
Date	2-26-15	Check	
Eng.		Meas.	N/A
Dwg. Name	R120Ken 24		

WO# 214539
PRELIMINARY
CASCADE NATURAL GAS CORPORATION
8113 W Grandridge Blvd
Kennewick, WA 99336
R-120 Secondary Regulator
6300 Brinkley Rd
Kennewick, WA



PLAN VIEW
NOTE

Except for takeoff lines that can be isolated from sources of pressure by other valving, a shutoff valve must be installed in each takeoff line as near as practicable to the point of takeoff. When the station is operating and personnel are not on site, the shutoff valve must be protected from unauthorized operation by installing a locking device or removing the operating handle.

PROFILE VIEW "D-D"

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

FAB SHOP TEST
RELIEF VALVE
STEP 1

PRESSURE TEST	
TEST PRESSURE	100 P.S.I.G.
TEST MEDIUM	NITROGEN
TEST DURATION	1 HR HOURS
LEAK SURVEY BY	
DATE	TIME

STEP 2

PRESSURE TEST	
CERTIFICATION PRESSURE	1 P.S.I.G.
TEST PRESSURE	1 P.S.I.G.
TEST MEDIUM	NITROGEN
TEST DURATION	4 HOURS
DATE COMPLETED	
BY	CONTRACTOR
ATTESTED	CASCADE NATURAL GAS CORP.

MATERIAL LIST

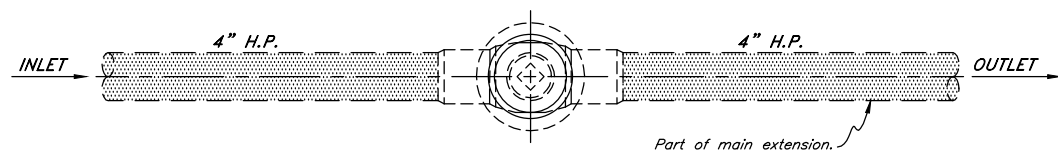
ITEM	QUANTITY	STOCK NO.	DESCRIPTION
1.	2	R-340	2"x1" Mooney Single port Flowgrid Regulator, w/ 100% Throttle plate, Stock No. FG-52, ANSI-300
2.	2	R-361	Mooney Series 20 Pilot c/w blue spring 25-90 P.S.I.G. Stock No. FP-7 (PRV)
3.	1	R-383	4" Mooney Single Port Flowgrid Relief Valve with 100% capacity throttle plate, Stock No. FG-39, ANSI-150
4.	1	R-362	Mooney Series 20 Pilot c/w blue spring 25-90 P.S.I.G. Stock No. FP-7 (BPV)
5.	3	R-370	Mooney Type 24 restrictor
6.	2	R-375	1/4" Mooney Series 30S pilot supply filter, 1500 P.S.I.G.
7.	-	-	-
8.	30'	PB-350	2"x0.154" w.t., Bare steel pipe, Grade B, ASTM-A106, P.O. #
9.	40'	PB-550X52	4"x0.237" w.t., Bare steel pipe, Grade X52, API-5L, P.O. #
10.	20'	PFBE-550X42	4"x0.188" w.t., FBE coated steel pipe, Grade X42, API-5L, P.O. #
11.	1	CA-551	4" Weld cap, Std. wght.
12.	2	CS-455	Standard brass padlock to lock valve
13.	4	EL-360	2" 90° Weld elbow, Std. wght.
14.	5	EL-555	4" 90° Weld elbow, Std. wght.
15.	2	EL-559	4"x2" 90° Weld reducing elbow, Std. wght.
16.	6	FL-351	2" W.N., R.F. flange, ANSI-300
17.	8	FL-353	2" Type "E" gasket, ANSI-300
18.	3	FL-550	4" W.N., R.F. flange, ANSI-150
19.	2	FL-551	4" W.N., R.F. flange, ANSI-300
20.	3	FL-563	4" Type "E" gasket, ANSI-150
21.	2	FL-564	4" Type "E" gasket, ANSI-300
22.	8	NP-104XH	1/2"x3" X.H. Nipple
23.	3	PL-025	1/4" Pipe plug, Square head, Solid, 3,000#
24.	9	PL-101	1/2" Pipe plug, Square head, Solid, 3,000#
25.	2	RE-554	4"x2" Weld reducer, Std. wght., Concentric
26.	4	TE-551	4"x4"x4" Weld tee, Std. wght.
27.	2	TE-555	4"x4"x2" Weld tee, Std. wght.
28.	8	VA-110	1/2" Ball valve, WKM# 1/2R-B136-CS2-43-S2-WR, Threaded, 3,000#
29.	3	VA-210	1" Ball valve, WKM #1F-B138-CS2-43-S2-WR, Threaded, 3,000#
30.	1	VA-382	2" Ballomax WxW Ball Valve Fig. 2BMW74ORP, ANSI-300
31.	2	VA-384	2" Balon WxF Ball Valve Fig. 2RUS33WF, ANSI-300
32.	1	VA-582	4" Balon WxF Ball Valve Fig. 4RUS13WF, ANSI-150
33.	2	VA-583	4" Balon WxF Ball Valve Fig. 4RUS33WF, ANSI-300
34.	1	H-4	4" Weathercap c/w flag
35.	12	H-11	1/2" Bonney Thred-O-Let, 8-3x1/2, 3,000#
36.	3	H-34	1"x1/4" Forged Steel hexagon bushing, 3,000#
37.	88	H-64	5/8"x3" Cap screw
38.	16	H-66	3/4"x3 3/4" Cap screw
39.	3	H-114	1"x3" Mueller Save-A-Valve body only #63492, 1440#
40.	3	H-153	4" UHMW Poly pipe guide
41.	16	H-266	3/4" Heavy hex nut
42.	88	H-268	5/8" Heavy hex nut
43.	2	H-533	2" Keckley Strainer, FxF, #SGFV, ANSI-300
44.	16'	PB-350	2" Pipe support (Fab shop fabricate)

1/2 SIZE DRAWING- Scaled to 1/2 indicated

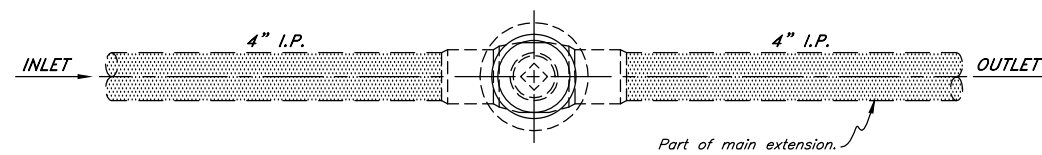
PRELIMINARY

WO# 214539

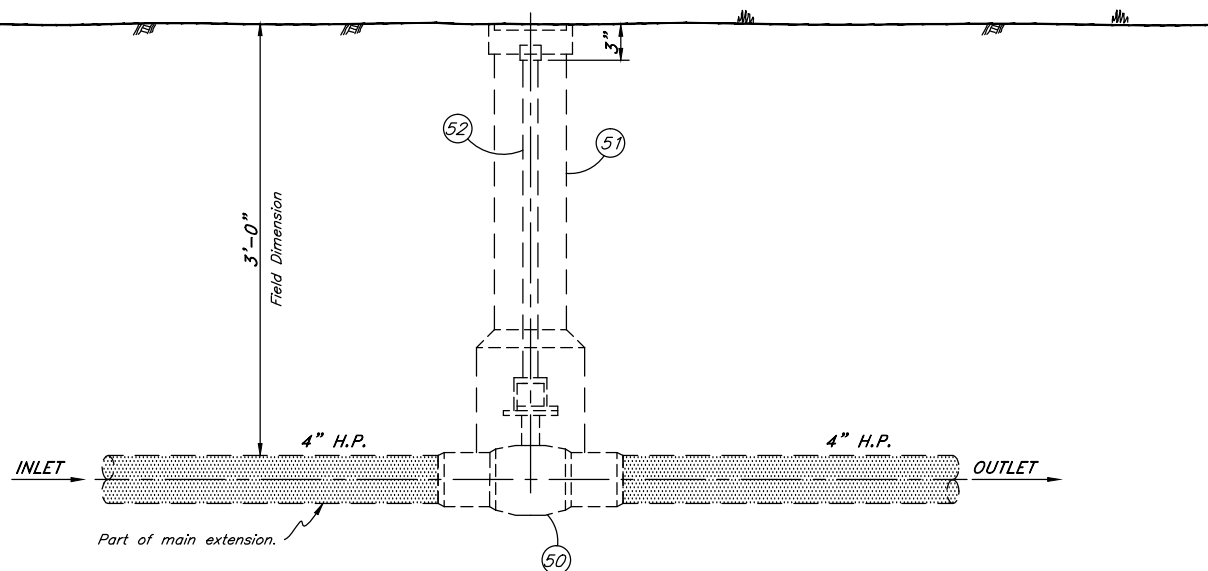
Scale 1-1/2"=1'-0"	Drawn SB	CASCADE NATURAL GAS CORPORATION 8113 W Grandridge Blvd Kennewick, WA 99336 R-120 Secondary Regulator 6300 Brinkley Rd Kennewick, WA
Date 2-26-15	Check	
Eng.	Meas. N/A	
Dwg. Name R120Ken 34		



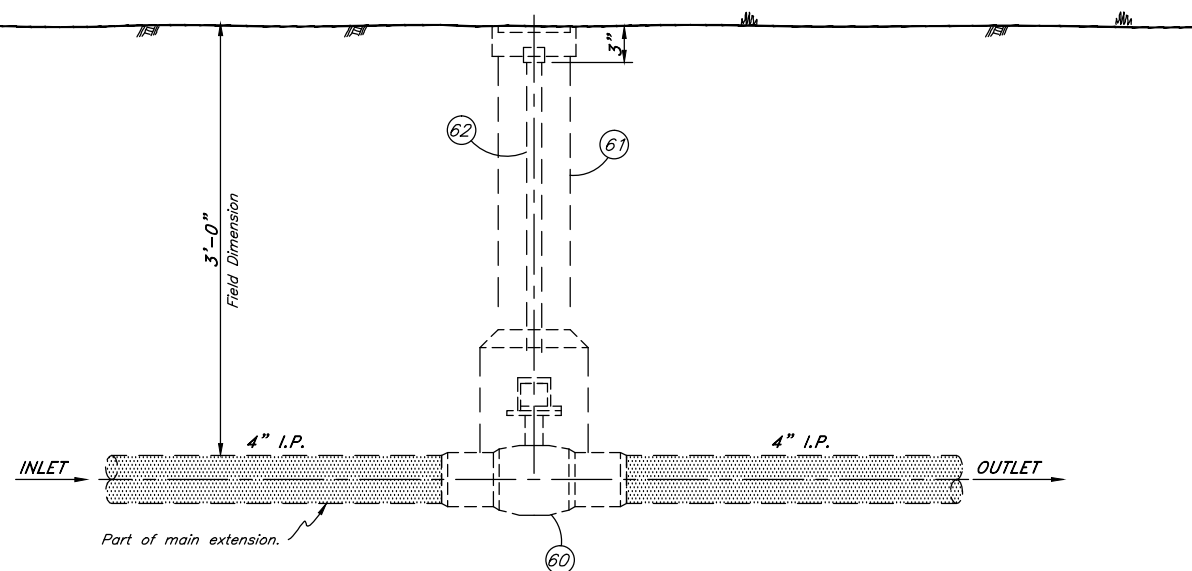
PLAN VIEW V-172Ken



PLAN VIEW V-173Ken



PROFILE VIEW V-172Ken



PROFILE VIEW V-173Ken

NOTE:
 1. Make sure valve operating head is kept free of debris during installation and backfilling.
 2. Weld high head extension to operating head per CP 740. Drawing No. 4490-A

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1/2 SIZE DRAWING— Scaled to 1/2 indicated

PRELIMINARY

WO# 214539

Scale 1 1/2"=1'-0"	Drawn SB	CASCADE NATURAL GAS CORPORATION 8113 W Grandridge Blvd Kennewick, WA 99336 R-120 Secondary Regulator 6300 Brinkley Rd Kennewick, WA
Date 2-26-15	Check N/A	
Eng.	Meas. N/A	
Dwg. Name R120Ken 44		