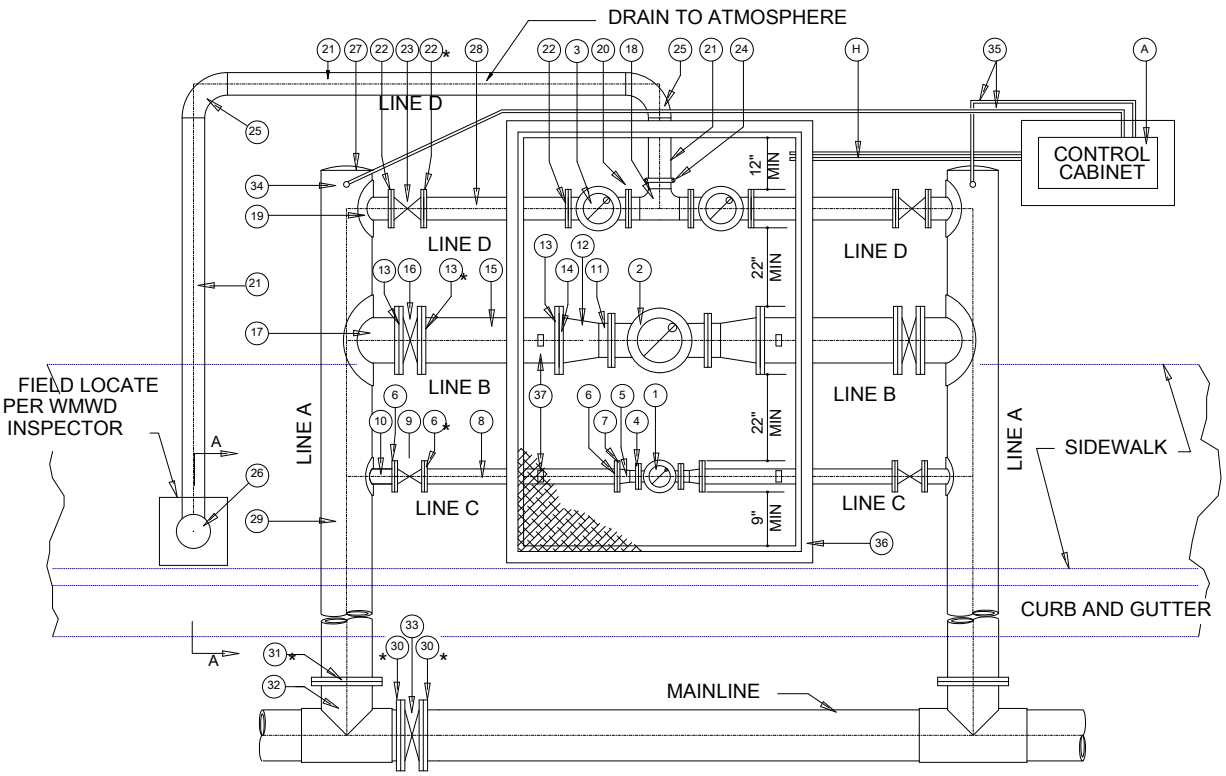
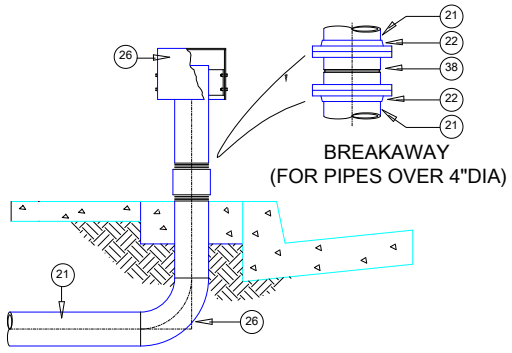


PRESSURE REDUCING STATION

TYPICAL LAYOUT

N T S

* SHIP LOOSE



SECTION A A

TABLE I

STATION SIZING (1) SIZE "P"	"S"	MAX.CAP.	PRES.RELIEF VALVE	BRANCH LINE SIZE "A"	"B"	"C"	"D"
2" X 4"		1008	3"	8"	6"	4"	4"
2" X 6"		2008	4"	10"	8"	4"	6"
3" X 8"		3560	6"	14"	12"	4"	8"
3" X 10"		5360	8"	16"	14"	4"	12"
4" X 12"		7800	8"	18"	16"	6"	12"

(1) STATION SIZE REFERS TO NOMINAL DIAMETERS OF THE PRV'S
"P"= PRIMARY PRV SIZE FOR NORMAL DOMESTIC FLOWS
"S"= SECONDARY PRV SIZE FOR GREATER THAN NORMAL FLOWS

NOTE:

THE ENGINEER OF DESIGN MUST SUBMIT TO THE DISTRICT, A SPECIFIC DESIGN BASED ON THE TYPICAL LAYOUT FOR EACH INSTALLATION FOR REVIEW AND AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION AND SUBMITTALS FOR PIPING, GAUGES, AND CHART RECORDER.

APPROVED DATE: January 1, 2011

DIRECTOR OF ENGINEERING

STANDARD DRAWING

TYPE "A"
PRESSURE REDUCING STATION
(TYPICAL LAYOUT)

STD. DWG. NO.

W-1560
1 OF 4

GENERAL NOTES

1. THE REQUIRED PRESSURE REDUCING STATION CAPACITY AND SIZE SHALL BE DETERMINED BY DISTRICT.
2. ALL MATERIALS, MATERIALS TESTING AND INSPECTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DISTRICT STANDARDS. FAILURE TO MEET THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION.
3. DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL SHORE ALL EXCAVATIONS IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS.
5. UNLESS OTHERWISE APPROVED BY DISTRICT, VAULTS AND ELECTRICAL EQUIPMENT SHALL BE LOCATED TO SET BEHIND EXISTING OR FUTURE CURBS.
6. DETAILS OF VAULTS FOR ALL PRV STATION SIZES SHALL BE SUBMITTED TO DISTRICT FOR APPROVAL.
7. THE DESIGN SHOWN IS TYPICAL AND SYMMETRICAL, THE DISTRICT WILL INDICATE WHICH FEATURES SHALL BE MODIFIED.
8. ELECT/TELE/TV CONDUITS ETC. SHALL BE LOCATED TO CLEAR THE PRESSURE REDUCING VALVE FACILITIES.
9. THE DISTRICT, AT ITS OPTION, MAY REQUIRE THAT A SOLENOID CONTROL VALVE (120V AC) BE ADDED TO PRV PILOTRY FOR PRV/TANK SHUT-OFF CONTROL.
10. REFER TO STANDARD DWG. NO. W-1562 FOR ELECTRICAL EQUIPMENT DETAILS.
11. ALL EXPOSED PIPING SHALL BE PRIMED AND FIELD PAINTED PER DISTRICT SPECIFICATION, ALL BURIED PIPING, SHALL BE CEMENT MORTAR COATED (CMC) OR ASPHALT WRAPPED (AW) PER DISTRICT SPECIFICATION.
12. ONE (1) PIPE SUPPORT SHALL BE FURNISHED AND INSTALLED UNDER LINES B, C AND D WITHIN PRV VAULT.
13. PRESSURE CLASS TO BE DETERMINED BY THE DISTRICT.

MECHANICAL MATERIALS LIST

(1) PRIMARY ("P", SEE TABLE 1) SIZE PRESSURE REDUCING, AND CHECK VALVE FLANGED ENDS, STAINLESS STEEL TRIM, EPOXY LINED, W/POSITION INDICATOR, CLA-VAL MODEL 91G-01 ABKC-X101 (AT THE DISTRICT'S OPTION A SOLENOID VALVE CONTROL SHALL BE ADDED TO THE PRV PILOTRY) OR OTHER MODEL AS INDICATED BY THE DISTRICT.

(2) SECONDARY ("S" SEE TABLE 1) SIZE PRESSURE REDUCING, PRESSURE SUSTAINING, CHECK VALVE, FLANGED ENDS, STAINLESS STEEL TRIM, EPOXY LINING, POSITION INDICATOR, CLA-VAL MODEL 92G-02 BKC-X101 (AT THE DISTRICT'S OPTION A SOLENOID VALVE CONTROL SHALL BE ADDED TO THE PRV PILOTRY) OR OTHER MODEL AS INDICATED BY THE DISTRICT.

(3) LINE "D" SIZE PRESSURE RELIEF AND CHECK VALVE, FLANGED ENDS, STAINLESS STEEL TRIM, EPOXY LINING, DELRIN SLEEVE, CLA-VAL MODEL 650-01BDLKCG.

(4) "P" SIZE WELD NECK, STD WT STEEL

(5) "P" SIZE X "C" SIZE ECCETRIC REDUCER, STD WT, INSTALLED TOP FLAT WITH "C" END GROOVED FOR VICTAULIC FLANGE.

(6) "C" SIZE SLIP-ON FLANGE

(7) "C" SIZE GROOVE X FLANGE ADAPTOR, VICTAULIC STYLE 741

(8) "C" SIZE CML/CMC WSP, 10 GA, ADD 12" CTF

(9) "C" SIZE FLG'D RS GATE VALVE

(10) "C" SIZE SIDE OUTLET, 10 GA CML/CMC, W/COLLAR PER AWWA M-11

(11) "S" SIZE WELD NECK FLANGE, STD WT STEEL

	APPROVED DATE: January 1, 2011 Joseph Beardsley DIRECTOR OF ENGINEERING	STANDARD DRAWING TYPE "A" PRESSURE REDUCING STATION (GEN NOTES AND MAT LIST)	STD. DWG. NO. W-1560 2 OF 4

MECHANICAL MATERIALS LIST (CONT.)

12	"S" SIZE X "B" SIZE ECCENTRIC REDUCER, STD WT, INSTALLED TOP FLAT WITH "B" END GROOVED FOR VICTAULIC FLANGE
13	"B" SIZE SLIP-ON FLANGE
14	"B" SIZE GROOVE X FLANGE ADAPTOR, VICTAULIC STYLE 741 OR 742
15	"B" SIZE CML/CMC WSP, 10 GA, ADD 12" CTF
16	"B" SIZE FLANGED RS GATE VALVE (12" DIA AND UNDER) OR FLANGED BUTTERFLY VALVE (OVER 12" DIA)
17	"B" SIZE SIDE OUTLET, 10 GA CML/CMC, W/COLLAR PER AWWA M-11
18	"D" SIZE STD WT TEE, W/6" LONG GROOVED END PIPES WELDED TO RUNS AND BRANCH
19	"D" SIZE SIDE OUTLET, 10 GA CML/CMC, W/COLLAR PER AWWA M-11
20	"D" SIZE GROOVE X FLANGE ADAPTOR, VICTAULIC STYLE 741 OR 742
21	"D" SIZE, STD WT, STEEL PIPE, OUTSIDE WRAPPED BELOW GRADE OR FIELD PAINTED WHERE EXPOSED (PE OR GROOVED AS REQUIRED)
22	"D" SIZE SLIP-ON FLANGE
23	"D" SIZE GROOVE X FLANGE ADAPTOR, VICTAULIC STYLE 741 OR 742
24	"D" SIZE GROOVE COUPLING VICTAULIC STYLE 77
25	"D" SIZE 90°, LR BEND, STD WT STEEL, OUTSIDE WRAPPED
26	"D" SIZE GROOVE COUPLING VICTAULIC STYLE 77
27	"A" SIZE DISHED HEAD, 10 GA STEEL CML/CMC
28	"D" SIZE CML/CMC WSP, 10 GA, ADD 12" CTF
29	"A" SIZE CML/CMC WSP, 10 GA, ADD 12"CTF
30	MAINLINE SIZE SLIP-ON FLANGE
31	"A" SIZE SLIP-ON FLANGE
32	"A" SIZE FLANGED SIDE OUTLET, 10 GA CML/CMC, W/WRAPPER PER AWWA M-11.
33	MAINLINE SIZE FLANGED RS GATE VALVE (12" ∅ AND UNDER) OR FLANGED BUTTERFLY VALVE (OVER 12"∅)
34	1"∅ 3000# COUPLING W/1"∅ CORP STOP AND BRONZE REDUCER BUSHING TO 1/2"∅ BRASS COMPRESSION COUPLING.
35	1/2"∅ TYPE K COPPER TUBING, PRESSURE SENSING LINE TO CONTROL CABINET.
36	6'W X 8'H X 6'D PRECAST CONCRETE VAULT W/BOTTOM SECTION, FULL OPEN TORSION HINGED, STEEL PARKWAY LID, (TRAFFIC LID MAY BE ADDED AT THE OPTION OF THE DISTRICT) SUITABLE FOR PRESSURE REDUCING STATION SIZES 2" X 4" AND 2" X 6", LARGER SIZE STATIONS SHALL BE SIZED BASED UPON THE MINIMUM CLEARANCE DIMENSIONS INDICATED ON THE PRV "TYPICAL LAYOUT" (WMWD STD W-1560) BOTTOM SECTION SHALL HAVE 6"∅ DRAIN HOLE AND BE SET ON MIN 6" THICK BED OF 1" GRAVEL.
37	3/4"∅ 3000# COUPLING WITH 3/4"∅ CORP STOP (JONES J-50), BRONZE REDUCER BUSHING AND 4" FACE LIQUID FILLED PRESSURE GAUGE, WIKA 213.40 LM, 0-200 PSI DOWN STREAM AND 0-300 PSI UPSTREAM.
38	"D" SIZE, 6" LONG MACHINED GROOVE, BREAK-OFF RISER, LONG BEACH IRON WORKS PART NO. LB403.

APPROVED DATE: January 1, 2011

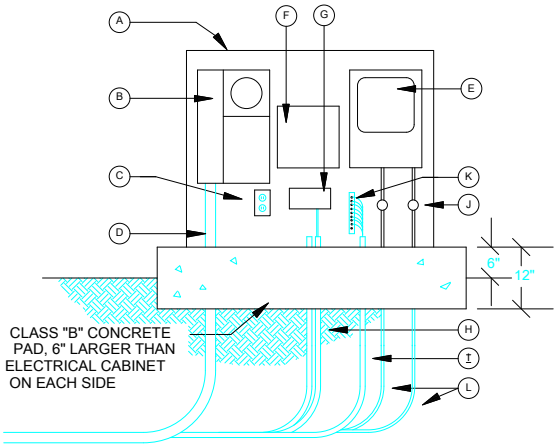
DIRECTOR OF ENGINEERING

STANDARD DRAWING

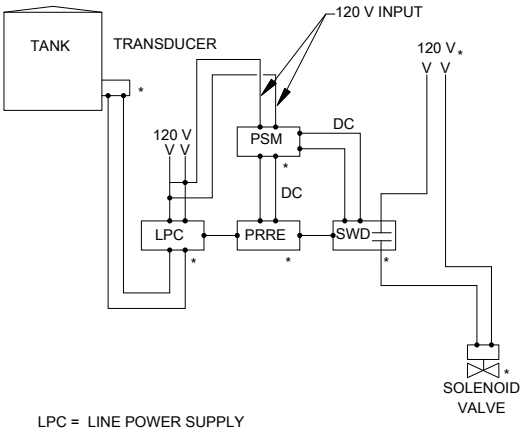
TYPE "A"
PRESSURE REDUCING STATION
(GEN NOTES AND MAT LIST)

STD. DWG. NO.

W-1560
3 OF 4



CONTROL CABINET



LPC = LINE POWER SUPPLY
PRRE = PULSE RATE RECEIVER
SWD = SWITCH DIFFERENTIAL - ADJUSTABLE FOR "ON / OFF"
PSM = POWER SUPPLY MODULE
* = EQUIPMENT REQUIRED IF SOLENOID VALVE CONTROLS OPTION IS SPECIFIED

CONTROL DIAGRAM

NTS

ELECTRICAL GENERAL NOTES

1 THE SERVICE PANEL, SERVICE CONDUIT AMD TERMINATIONS SHALL CONFORM TO THE SERVING UTILITY REQUIREMENTS.

2 THE DIMENSIONS FOR THE SERVICE EQUIPMENT ENCLOSURE ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF ALL EQUIPMENT TO BE PURCHASED AND TO BE INSTALLED IN THE ENCLOSURE PRIOR TO THE PURCHASE OF THE EQUIPMENT ENCLOSURE.

3 ALL WORK AND EQUIPMENT SHALL CONFORM TO NATIONAL ELECTRICAL CODE REQUIREMENTS AND ANY APPLICABLE LOCAL CODES AND ORDINANCES.

4 SHOP DRAWINGS (INCLUDING ELECTRICAL CONTROL SCHEMATIC) ON ALL EQUIPMENT TO BE INSTALLED, SHALL BE SUBMITTED TO DISTRICT FOR APPROVAL PRIOR TO EQUIPMENT BEING DELIVERED TO SITE.

5 CONDUIT INSTALLED IN CONTACT WITH THE EARTH SHALL BE PVC, SCH. 40.

6 EMT OR RIGID CONDUIT SHALL BE INSTALLED BETWEEN COMPONENT EQUIPMENT WITHIN THE ENCLOSURE.

7 INSTALLATIONS WHERE THE DISTRICT APPROVES THE DELETION OF THE ELECTRICAL CONNECTION REQUIREMENTS, CABINETRY FOR A SEVEN DAY, WIND-UP, 12" DIA, TWO PEN CHART RECORDER INSTALLATION SHALL BE SPECIFIED BY THE DISTRICT AS A REPLACEMENT. (REFER TO STANDARDDRAWINGS FOR TYPE "C" PRV STATION, W-1566 AND W-1567)

8 CONSULT DISTRICT STAFF FOR CURRENT LIST OF APPROVED MANUFACTURES.

ELECTRICAL MATERIALS LIST

Ⓐ 48"W X42"H X 18"D WEATHERPROOF EQUIPMENT ENCLOSURE W/3 POINT LATCH, LOCKABLE DOOR HANDLE AND EQUIPMENT MOUNTING PANEL MOUNTED WITHIN THE ENCLOSURE. AS MANUFACTURED BY HOFFMAN MANUFACTURING CO. PAINT PER W.M.W.D. INSPECTOR.

Ⓑ SERVICE EQUIPMENT W/UNDERGROUND PULL BOX, METER AND BREAKER PANEL.

Ⓒ DUPLEX RECEPTACLE, 120V, 20A, GFI PROTECTED

Ⓓ 2" C.O. SERVICE (CONDUCTORS BY SERVING UTILITY).

Ⓔ 12" ROUND CHART, 2 PEN PRESSURE RECORDER, 120V.

Ⓕ SWITCH DIFFERENTIAL (RELAY), PULSE RATE RECEIVER (SIGNAL CONVERTER) AND POWER SUPPLY MODULE ALL WITHIN A 11"W X 12 3/4"H ENCLOSURE.

Ⓖ POWER SUPPLY TO REMOTE TRANSDUCER.

Ⓗ TWO 3/4" CONDUITS BETWEEN CONTROL CABINET AND PRV* VAULT FOR SOLENOID ACTIVATION WIRING.

Ⓘ PVC CONDUITS TO HOUSE D.B. CABLE FROM PIPE TRENCH TO CONTROL CABINET.

Ⓙ PRESSURE TRANSMITTER, F/A SERIES, MODEL NO. 2508-15A BY BRISTOL BABCOCK INC., SELECTED FOR THE APPROPRIATE PRESSURE RANGESFOR THE HIGH AND LOW SIDE OF THE PRV.

K WIRING TERMINAL STRIP.

Ⓛ 1/2"∅ TYPE K COPPER TUBING, PRESSURE SENSING LINE TO CONTROL CABINET

Ⓜ BALL VALVES (COORDINATE CLASS AND TYPE WITH DISTRICT INSPECTORS).

	APPROVED DATE: January 1, 2011 Joseph Kennedy DIRECTOR OF ENGINEERING	STANDARD DRAWING TYPE "A" PRESSURE REDUCING STATION (ELEC CONTROL CABINET DET)	STD. DWG. NO. W-1560 4 OF 4