

WATER SYSTEMS

STANDARD DETAIL DRAWINGS INDEX

- W-100: TYPICAL WATER VALVE LOCATIONS (MINIMUM)
- W-113: WATER MANIFOLD CONNECTION TYPICAL 1" - 2"
- W-200: STANDARD WATER VALVE SETTING DETAIL
- W-205: VALVE OPERATOR EXTENSION DETAIL
- W-300: STANDARD FIRE HYDRANT ASSEMBLY DETAIL
- W-405: BLOW-OFF ASSEMBLY
- W-500: 2" COMBINATION AIR VALVE ASSEMBLY
- W-605: STANDARD 1" WATER SERVICE CONNECTION
- W-608: STANDARD 2" WATER SERVICE CONNECTION
- W-609A/B: 3" WATER SERVICE 3" METER
- W-610: 6" MASTER METER CONNECTION
- W-611: 8" MASTER METER CONNECTION
- W-700: CONCRETE THRUST BLOCKING DETAILS
- W-805: REDUCED PRESSURE BACKFLOW ASSEMBLY (2½" UP)
- W-900: DOUBLE CHECK VALVE ASSEMBLY (¾" - 2")
- W-905: DOUBLE CHECK DETECTOR ASSEMBLY (2½" UP)



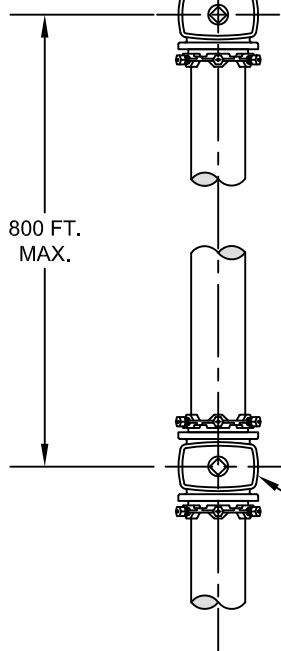
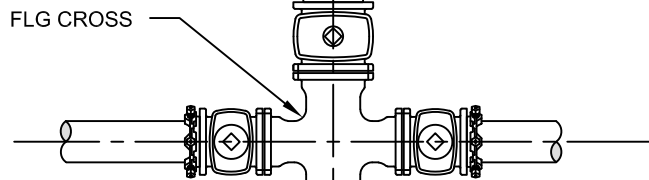
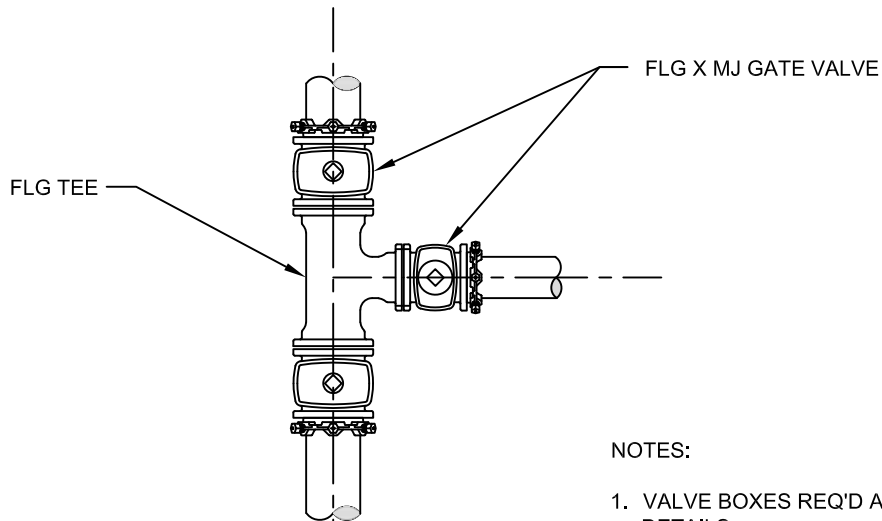
City of Newport
169 SW Coast Hwy
Newport, Oregon 97365
(541) 574-3366 Fax: (541) 265-3301

STANDARD DETAIL DRAWING INDEX

DETAIL NO.

W-010

11/08/2022



NOTES:

1. VALVE BOXES REQ'D AT EACH VALVE. SEE APPROPRIATE DETAILS.
2. VALVES/BOXES SHALL CONFORM TO CITY STANDARDS.
3. TAPPING TEES WITH VALVE MAY BE USED AT SOME LOCATIONS UPON PRIOR APPROVAL.
4. ALL MJ FITTINGS SHALL BE EQUIPPED WITH APPROVED RESTRAINT GLANDS REQ'D AT EACH VALVE AND NEARBY FITTING.

INLINE VALVES SHALL BE RESTRAINED MJ X MJ GATE VALVES.



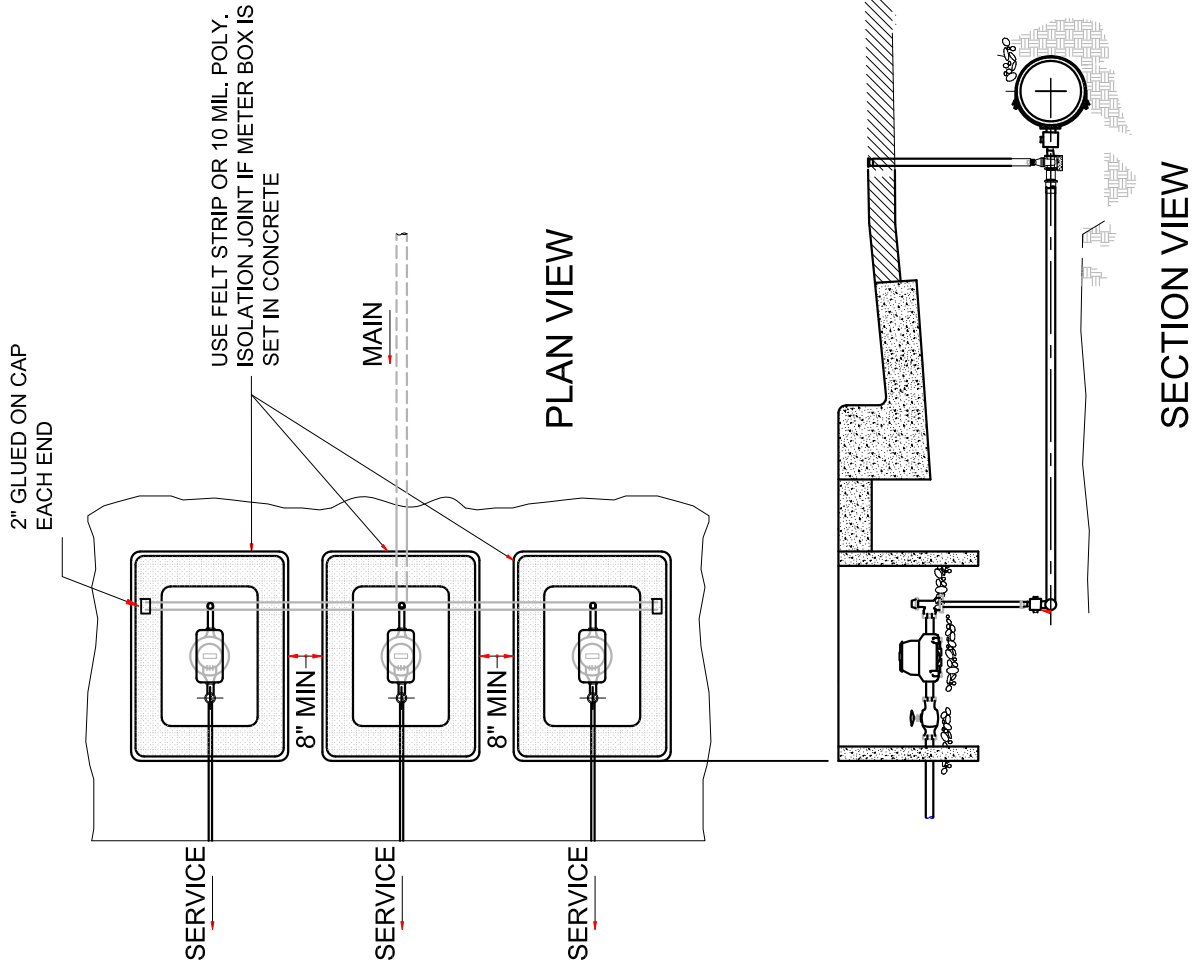
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

TYPICAL WATER VALVE LOCATIONS (MINIMUM)

DETAIL NO.

W-100

11/30/2021



NOTES:

1. SEE W-604 FOR FOR 1" SERVICE STANDARD DRAWING.
2. CITY STAFF INSTALLS SERVICE LINES 2" AND SMALLER IN ROW
3. SPACE METER BOXES SO THAT CONCRETE BETWEEN BOXES IS SOLID.



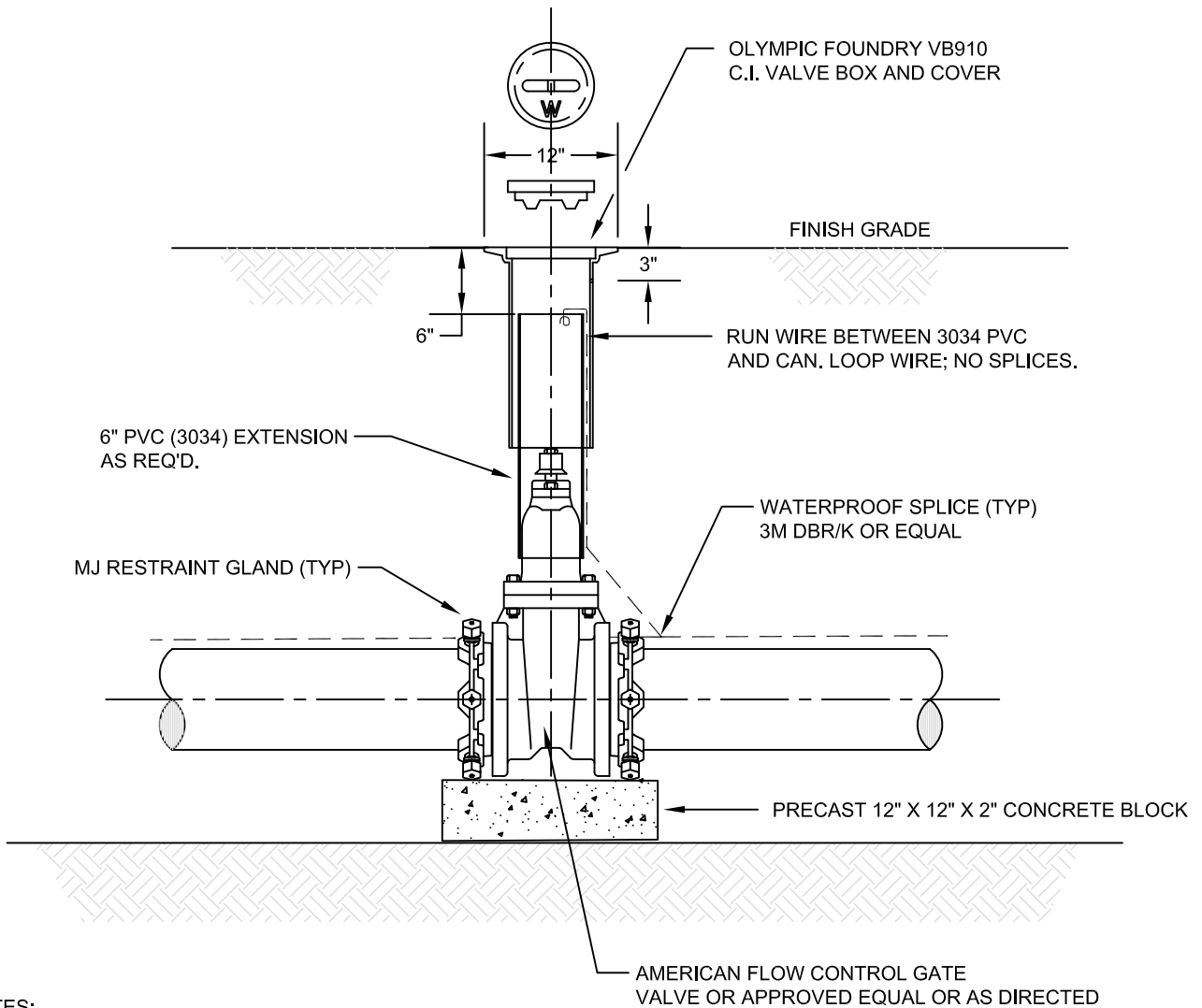
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

**WATER MANIFOLD CONNECTION
 TYPICAL 1" - 2"**

DETAIL NO.

W-113

1/22/2024



NOTES:

1. VALVES SHALL BE INSTALLED PERPENDICULAR TO A PAVED SURFACE OR PLUMB IN UNPAVED AREAS. ADDITIONAL FITTING MAY BE REQUIRED.
2. VALVE BOX SHALL BE CENTERED OVER VALVE OPERATING NUT.
3. PVC EXTENSION SHALL BEGIN AS CLOSE TO VALVE AS POSSIBLE AND SHALL EXTEND TO WITHIN 6" OF GROUND SURFACE.
4. TOP OF VALVE BOX SHALL BE FLUSH WITH FINISH GRADE.
5. VALVE EQUIPPED WITH 2" SQUARE OPERATING NUT LOCATED WITHIN 24" FROM GROUND SURFACE. SEE VALVE OPERATOR EXTENSION DETAIL WHERE REQUIRED.
6. VALVES LARGER THAN 12" SHALL BE INSTALLED ON PRECAST CONCRETE PIER BLOCK. SEE DETAIL G-100 FOR BACKFILL AND PIPE BEDDING REQUIREMENTS.
7. FOR IN-LINE VALVES, INSTALL BELL RESTRAINTS FOR TWO JOINTS EITHER SIDE OF VALVE.
8. USE BUTTERFLY VALVES ON ALL PIPE 8 INCHES OR LARGER EXCEPT FOR LIVE TAPS.
9. LIVE TAPS ON PIPES 8 INCHES AND LARGER MAY BE GATE VALVES.



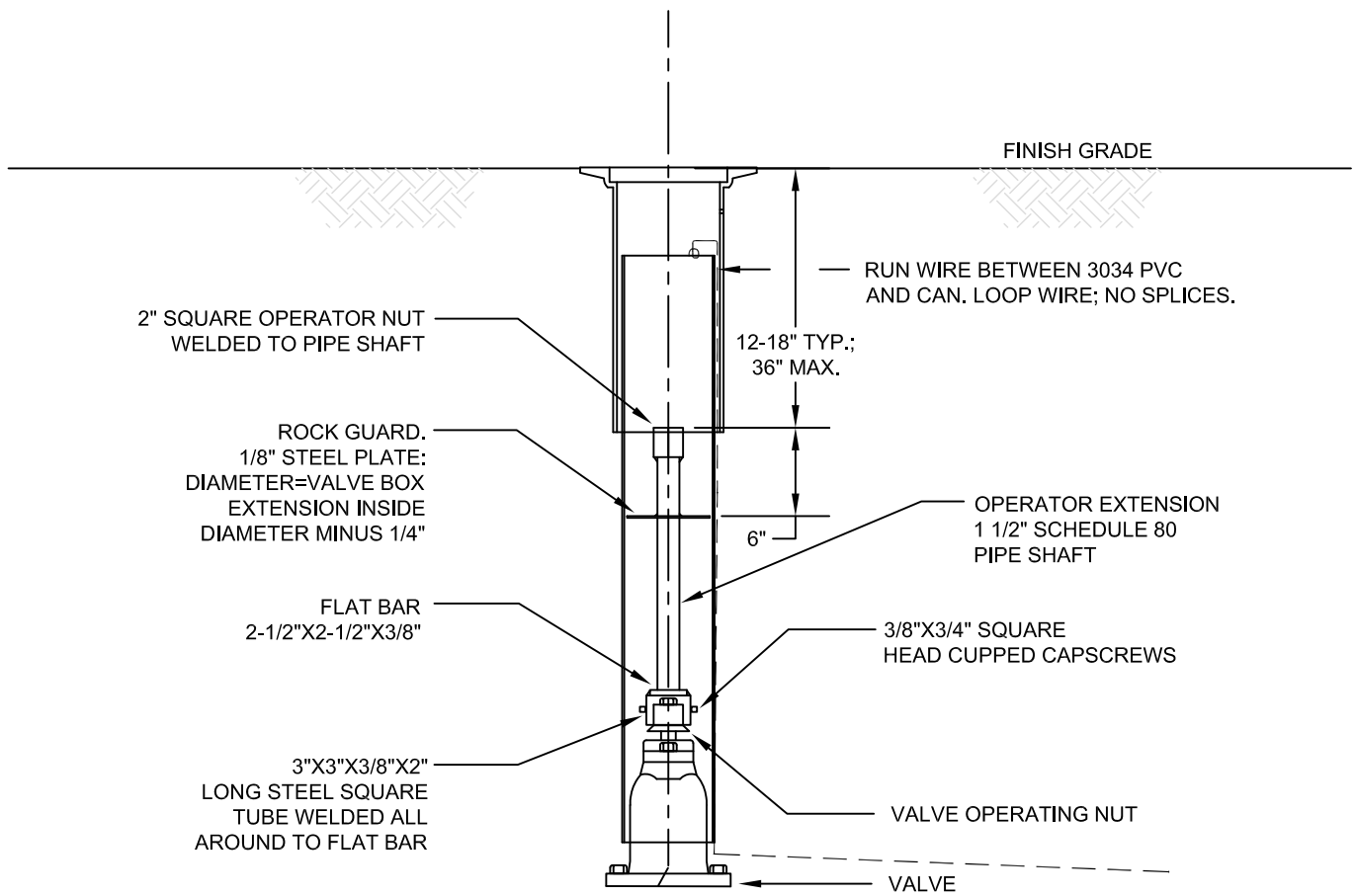
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

STANDARD WATER VALVE
 SETTING DETAIL

DETAIL NO.

W-200

11/30/2021



NOTES:

1. WHERE DEPTH IS OVER 6 FEET, A SECOND ROCK GUARD PLATE IS REQUIRED EQUALLY SPACED BETWEEN THE TOP ROCK GUARD AND THE VALVE NUT.
2. EXTENSION IS REQUIRED WHEN VALVE OPERATING NUT IS GREATER THAN 24 INCHES FROM FINISHED GROUND SURFACE.



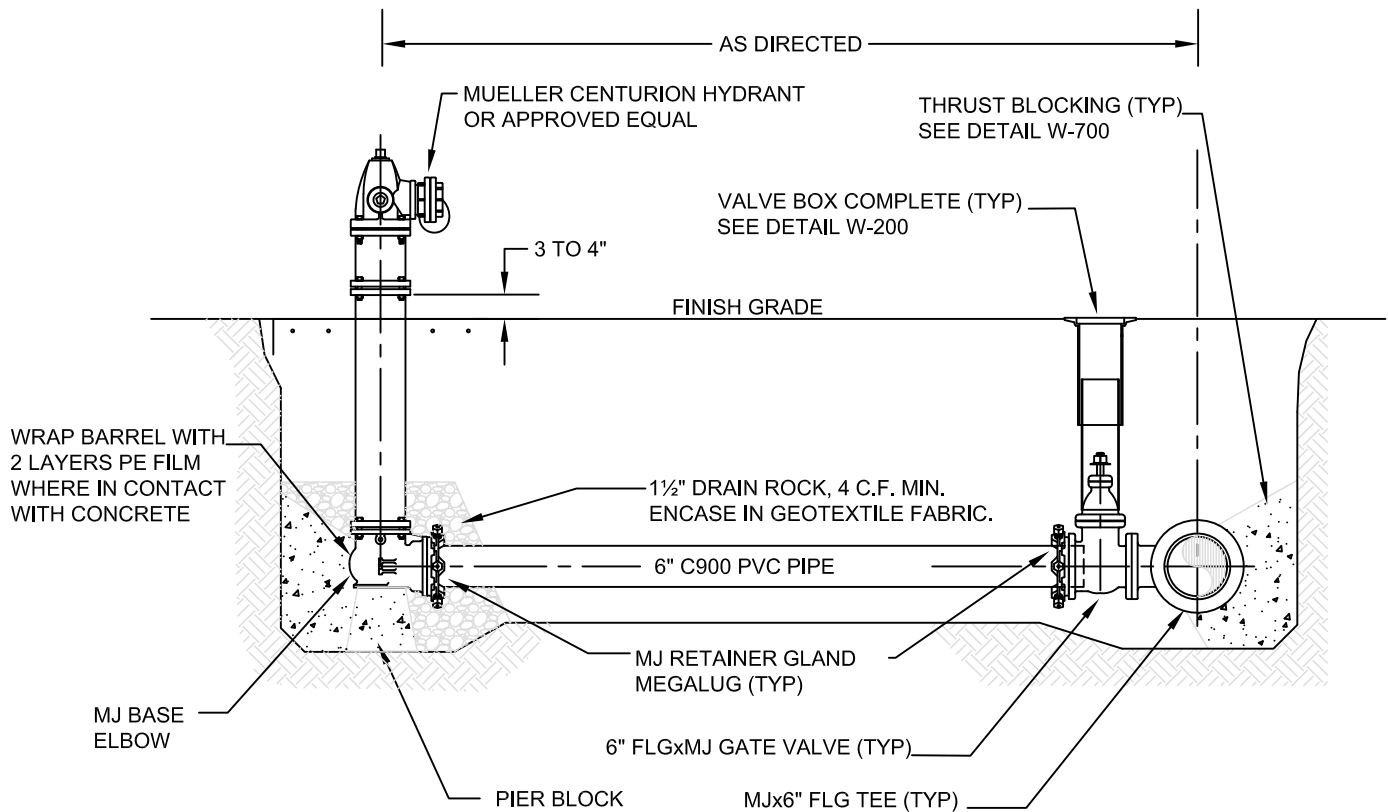
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

VALVE OPERATOR
 EXTENSION DETAIL

DETAIL NO.

W-205

11/30/2021



NOTES:

1. FIELD VERIFY PIPE LENGTHS AND HYDRANT BARREL LENGTH REQUIRED AT EACH HYDRANT. NO JOINTS ALLOWED WHERE PIPE/STICK LENGTH IS LESS THAN 18 FEET.
2. HYDRANT SHALL BE INSTALLED PLUMB. ADDITIONAL FITTINGS MAY BE REQUIRED.
3. KEEP DRAIN HOLES CLEAR AND FREE TO DRAIN.
4. SEE DETAIL G-100 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.
5. A MINIMUM OF 36" OF CLEAR SPACE AROUND HYDRANTS IS REQUIRED PER UNIFORM FIRE CODE (NO POSTS, WALLS, SIGNS, ETC.).
6. HYDRANT PUMPER PORT SHALL FACE ROAD OR DIRECTION OF ACCESS.
7. ALL PIPE JOINTS SHALL BE RESTRAINED BELL AND SPIGOT.
8. WHEN WRAPPING PIPE IN PLASTIC FOR POURED-IN-PLACE THRUST BLOCK DO NOT COVER HYDRANT WEEP HOLES WITH CONCRETE.



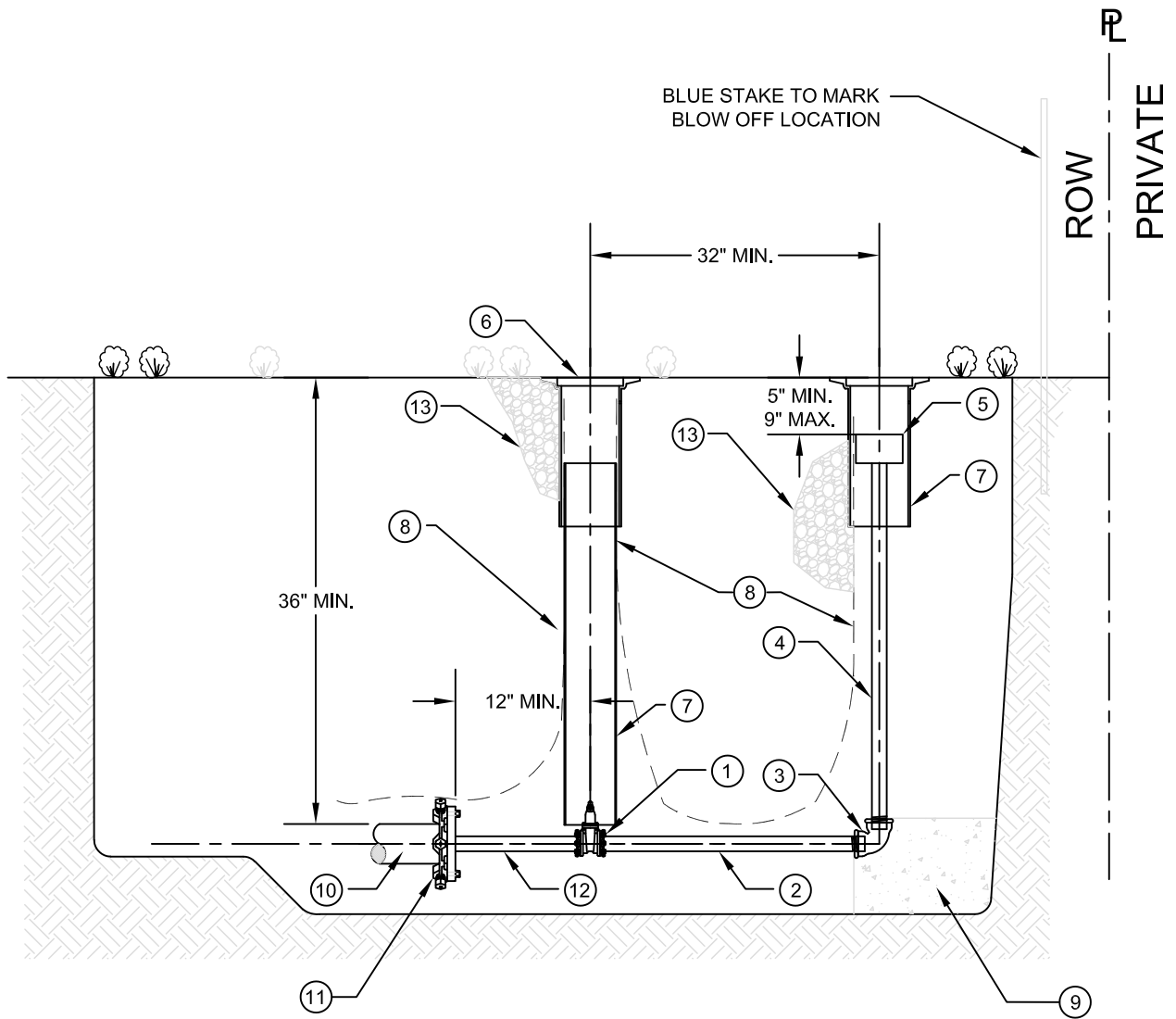
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

STANDARD FIRE HYDRANT
 ASSEMBLY DETAIL

DETAIL NO.

W-300

11/30/2021



ITEM	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	VALVE	2-INCH GATE VALVE (FNPT X FNPT)
2	NIPPLE	2-INCH BRASS NIPPLE - (MNPT X MNPT). L=30-INCH (MIN)
3	ELBOW	2-INCH BRASS 90° BEND (FNPT X FNPT)
4	NIPPLE	2-INCH BRASS NIPPLE SCH 40 - (MNPT X MNPT) - LENGTH AS REQUIRED
5	COUPLING	2-INCH THREADED COUPLING (FNPT X FNPT) - WITH PLUG
6	VALVE BOX	STANDARD VALVE BOX ASSEMBLY - SEE DETAIL W-200
7	VALVE BOX	STANDARD VALVE BOX ASSEMBLY - SEE DETAIL W-200
8	TRACER WIRE	AWG #10 COPPER TRACER WIRE WITH BLUE INSULATION 30 MIL HPDE TERMINATE WITH 24-INCH EXCESS WIRE COILED IN VALVE BOX (TYP)
9	THRUST BLOCK	SEE W-700 FOR THRUST BLOCK DETAILS
10	PIPE	DEAD END - RESTRAINED
11	RESTRAINT	MJ CAP WITH WEDGE ACTION RESTRAINT GLAND, TAP 2-INCH THREADED OUTLET (FNPT)
12	NIPPLE	2-INCH BRASS NIPPLE - (MNPT X MNPT)
13		SEE STANDARD DRAWING G-100 FOR TRENCH AND BACKFILL DETAILS



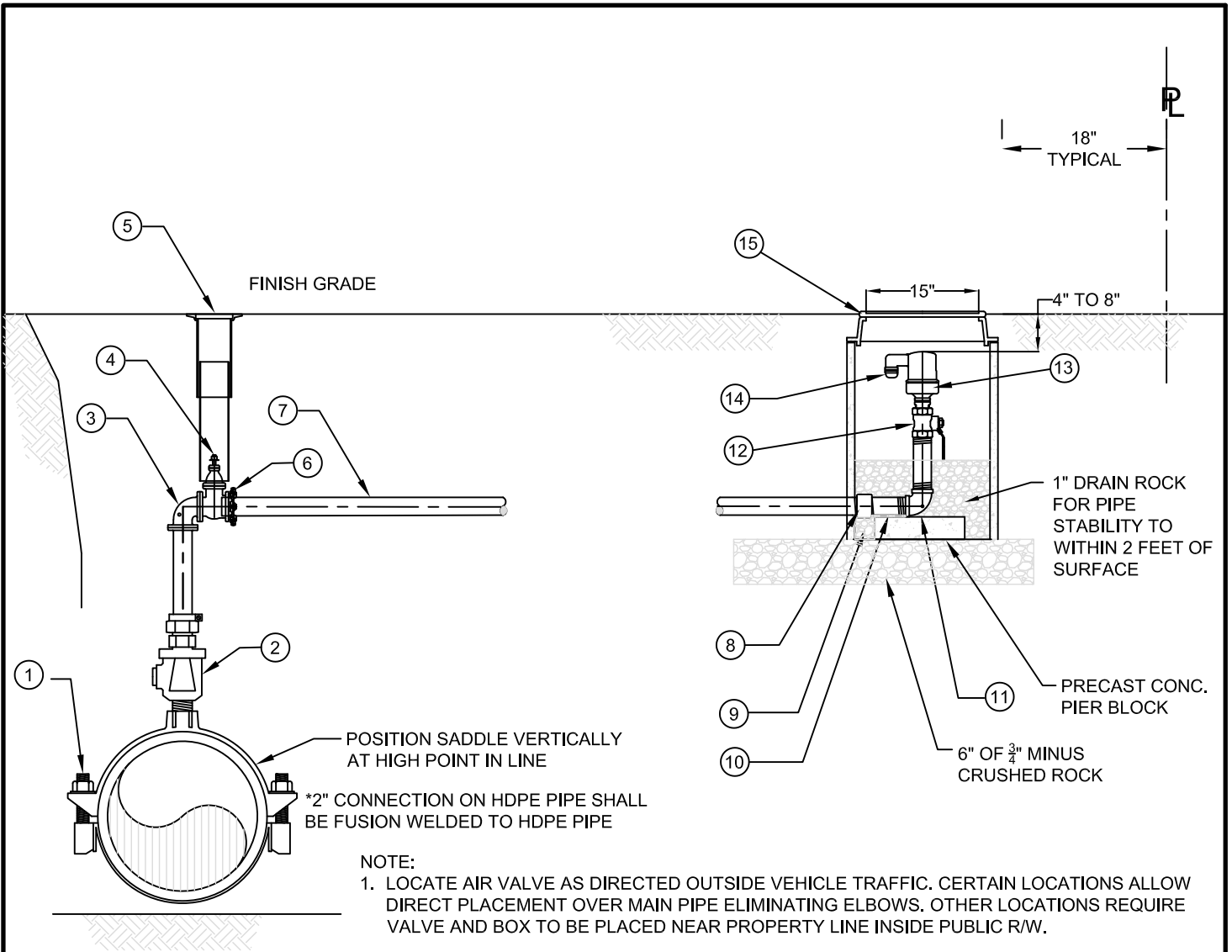
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

BLOW-OFF ASSEMBLY

DETAIL NO.

W-405

11/30/2021



ITEM	SIZE	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	AS REQ'D	SADDLE	FORD/ROMAC 202BS; 2" FIP TAP* - TAP AT TOP OF PIPE
2	2"	CORP STOP	MIP X MIP
3	2"	ELBOW	304 STAINLESS STEEL OR BRASS ELBOW
4	2"	GATE VALVE	AWWA C509 RESILIENT WEDGE GATE VALVE, THRD. ENDS, 2" NUT
5	N/A	VALVE BOX	-
6	2"	ADAPTOR	MIP X CTS
7	2"	PIPE	PEX A PIPE, ANDSI/NSF 14/61, MUNICPEX BY REHAU, 200 PSI, CTS FITTING COMPATIBLE
8	2"	ADAPTOR	2" COMPRESSION X MIP ADAPTOR
9	2"	COUPLING	THREADED 304 SS OR BRASS COUPLING, SHORT
10	2"	NIPPLE	THREADED 304 SS OR BRASS NIPPLE, FIELD FIT
11	2"	ELBOW	BRASS 90° ELBOW
12	2"	BALL VALVE	2" STAINLESS STEEL BALL VALVE W/ HAND LEVER
13	2"	COMBO AIR VALVE	COMBINATION AIR VALVE; PVC ARI D-040B VALVE
14	2"	TEE VENT	ALUMINUM T-VENT, 20 MESH SS SCREEN, MORRISON BROS. FIG 155
15	-	METER BOX	OLDCASTLE FIRBERLYTE BOX, PARTS: 2 BOXES FL36, LID FL36GP



City of Newport
169 SW Coast Hwy
Newport, Oregon 97365
(541) 574-3366 Fax: (541) 265-3301

2" COMBINATION AIR VALVE ASSEMBLY

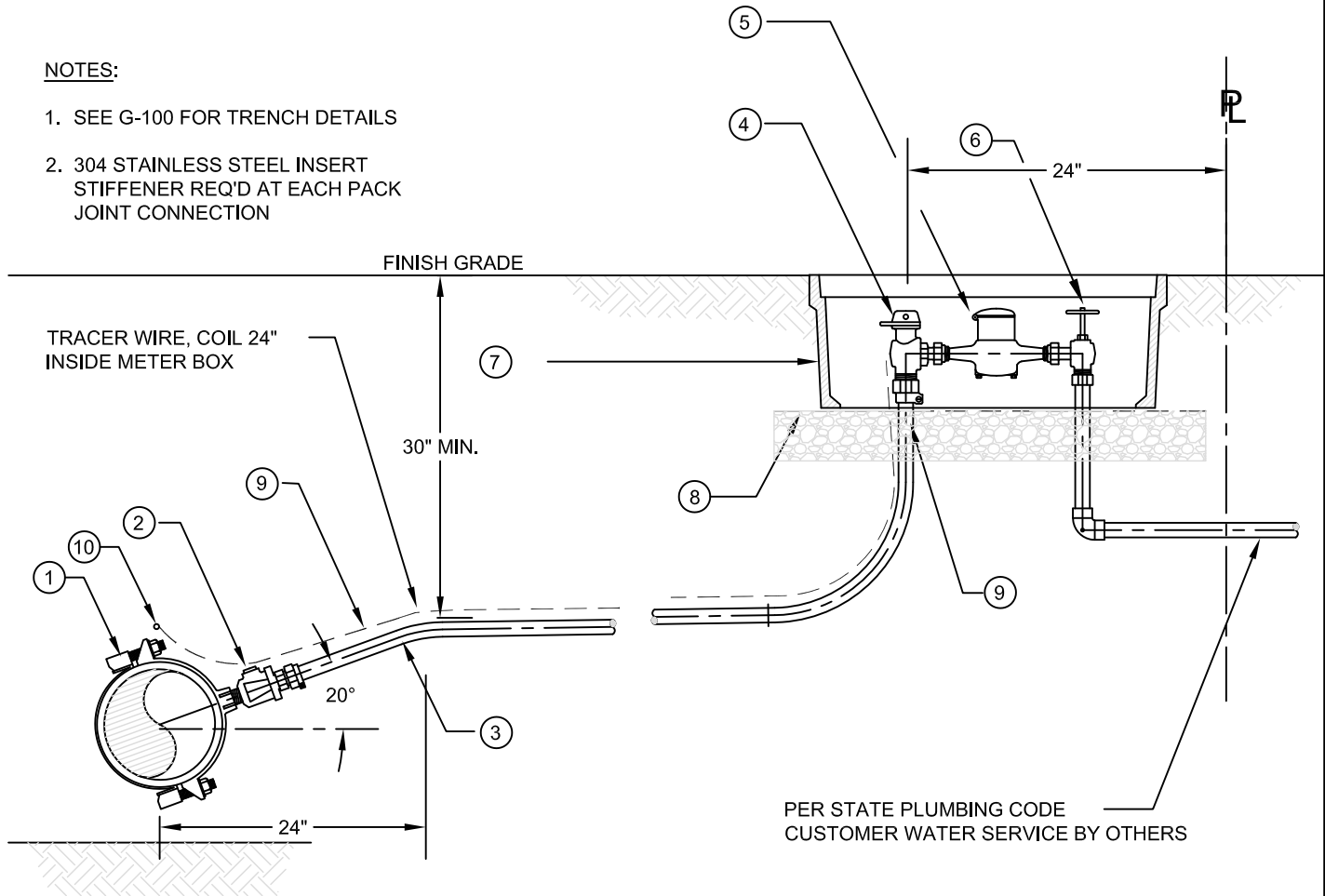
DETAIL NO.

W-500

8/9/2022

NOTES:

1. SEE G-100 FOR TRENCH DETAILS
2. 304 STAINLESS STEEL INSERT STIFFENER REQ'D AT EACH PACK JOINT CONNECTION



ITEM	SIZE	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	AS REQUIRED	SADDLE	FORD/ROMAC 202BS; 1" FIP TAP
2	1"	BALL CORP. STOP	MIP x PEP PJ; FORD FB1101-4 AWWA/CC TAPER THREADED INLET, MUELLER E-25029
3	1"	SERVICE PIPE	PEX A PIPE, ANSI/NSF 14/61, MUNICIPEX BY REHAU 200 PSI, CTS FITTING COMPATIBLE
4		ANGLE BALL METER VALVE	PEP PACK JOINT INLET x METER SWIVEL NUT OUTLET FOR 3/4" METER: FORD BA63-342W-NL, MUELLER E-24259 FOR 1" METER: FORD BA63-444W-NL, MUELLER E-24259
5	AS REQ'D	WATER METER	BY CITY
6	AS REQ'D	SERVICE VALVE ANGLE GLOBE	BY CITY
7	17"x30"x12"	METER BOX	OLD CASTLE BOX PARTS: #FL12TBOX 12 WM; #FL12GP LID WITH RECESSED ANTENNA OPENING
8	24" x 36"	AGGR. BASE	3/4" MINUS, 4" DEPTH
9	10 GA.	TRACER WIRE	10 GA. COPPER WIRE WITH BLUE 30 MIL THICK HDPE INSULATION
10	AS REQ'D	DIRECT BURY TRACER WIRE SPLICE	3M DBR/K DIRECT BURY SPLICE OR EQUAL
ALL PARTS SHALL BE BRASS UNLESS OTHERWISE INDICATED			



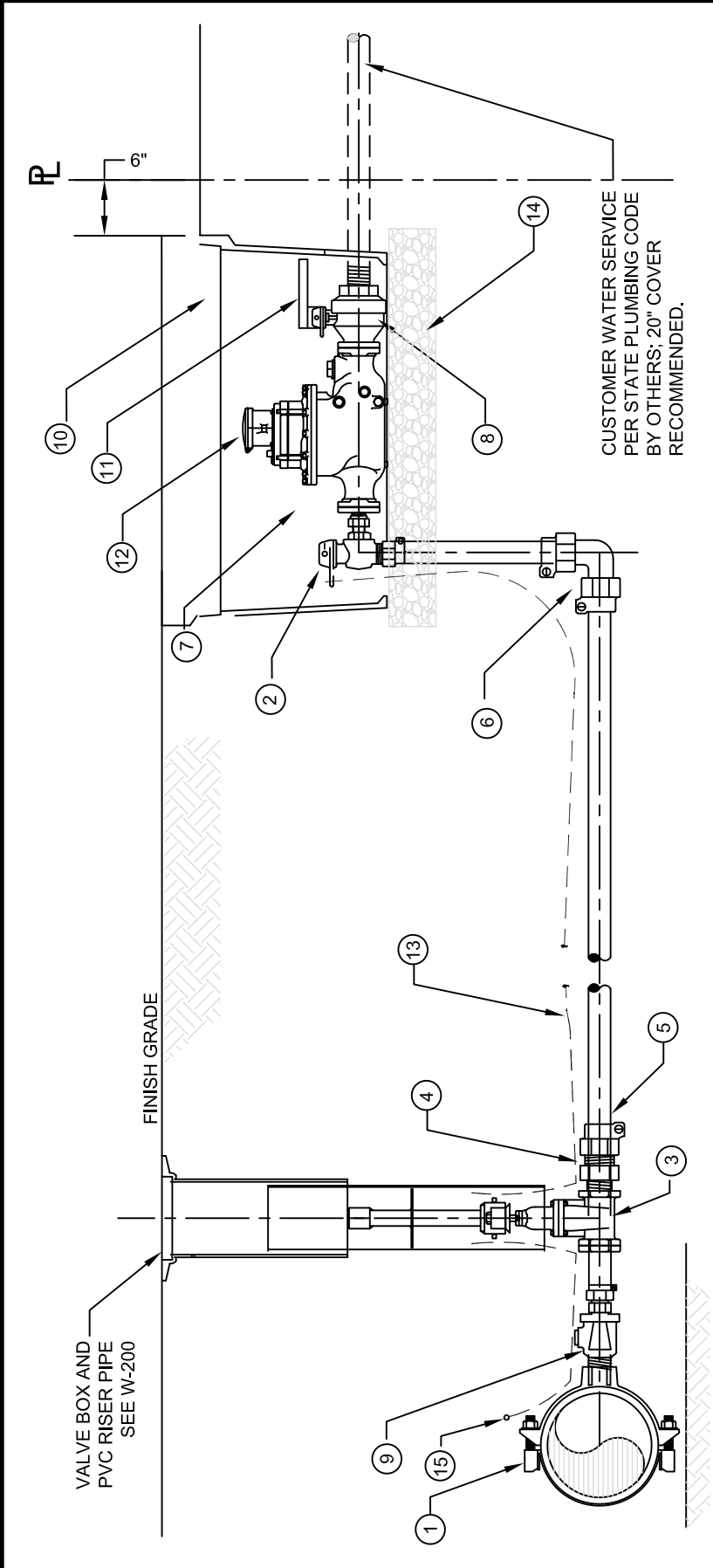
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

**1" WATER SERVICE
 WITH 1" OR 3/4" METER**

DETAIL NO.

W-605

11/30/2021



ITEM	SIZE	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	AS REQ'D	SADDLE	FORD/ROMAC 202BS; 2" FIP TAP
2	2"	ANGLE METER STOP	2" CTS COMPRESS (Q) ANGLE METER STOP; FORD - BFA43-777WQ-NL; MUELLER - B24276N
3	2"	GATE VALVE	AWWA C509 RESILIENT WEDGE GATE VALVE, THRD. ENDS, 2" NUT
4	2"	COMPRESSION FITTING	MIP X CTS
5	2"	SERVICE PIPE	PEX A PIPE, ANS/NSF 14/61, MUNICIPEX BY REHAU, 200 PSI, CTS FITTING COMPATIBLE
6	2"	COMPRESSION FITTING	CTS 90 DEND
7	2"	COMPRESSION FITTING	CTS COMPRESSION X METER FLG ANGLE STOP
8	2"	BALL METER VALVE	METER FLG x FIP; FORD BF13-777W-NL; MUELLER B-24337
9	2"	CORP STOP	MIP X MIP CORPORATION STOP; FORD - FB1100-7-Q-NL; MUELLER - B25028N
10	17"x30"x18"	METER BOX	OLD CASTLE FIRBERLYTE BOX PARTS: BOX FL36T, LID FL36GP
11	N/A	HANDLE	BALL VALVE HANDLE; FORD HB-67S
12		WATER METER	BY CITY
13	10 GAUGE	TRACER WIRE	COPPER WIRE WITH BLUE 30 ML THICK HDPE INSULATION
14	24" X 36"	AGGREGATE BASE	3/4" MINUS; 4" DEPTH
15	AS REQ'D	CONDUCTOR CONNECTION	PRO-TRACE TW CONNECTOR

- NOTES:**
- SEE W-150 FOR TRENCH DETAILS
 - 304 STAINLESS STEEL INSERT STIFFENER REQ'D AT EACH COMPRESSION FITTING

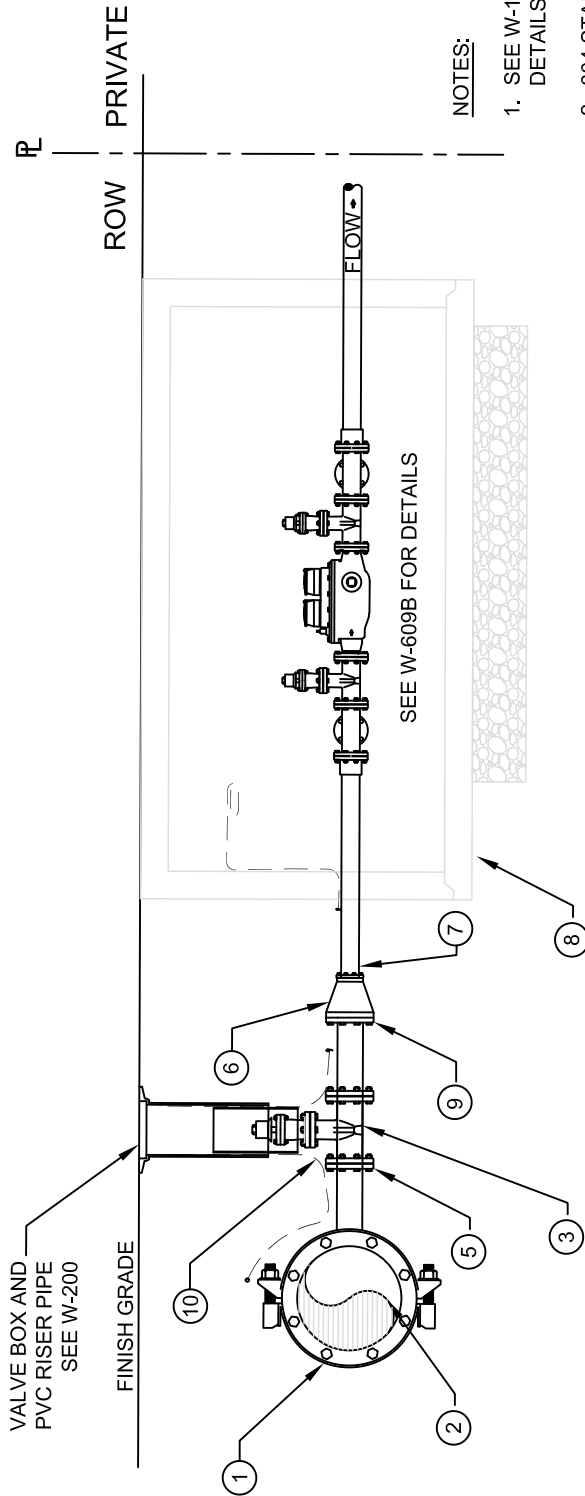
CUSTOMER WATER SERVICE PER STATE PLUMBING CODE BY OTHERS; 20" COVER RECOMMENDED.



City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

STANDARD 2" WATER SERVICE CONNECTION

DETAIL NO.
W-608
11/30/2021



NOTES:

1. SEE W-150 FOR TRENCH DETAILS
2. 304 STAINLESS STEEL INSERT STIFFENER REQ'D AT EACH COMPRESSION FITTING

PROFILE VIEW

ITEM	SIZE	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	AS REQUIRED	SADDLE	###
2	AS DESIGNED	MAIN LINE	###
3	4"	GATE VALVE	4" GATE VALVE
4	4"	SERVICE PIPE	C900
5	4"	RMJ	RESTRAINED MJ FOR DI PIPE
6	4 X 3	REDUCER	4 X 3 FLG DUCTILE IRON REDUCER
7	3"	PIPE	3" DUCTILE IRON SPOOL FLG X PE
8	4 X 6	VAULT	575-LA OLDCASTLE CONCRETE VAULT 4'-2" X 6'-6"
9	4"	PIPE	RMJ FOR C-900 PIPE
10	10 GA	TRACER WIRE	10 GA. COPPER WIRE WITH BLUE 30 MIL THICK HDPE INSULATION
11	###	###	###

City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

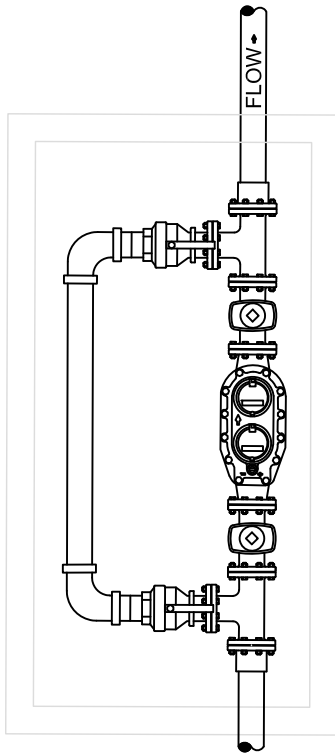
**3" WATER SERVICE
 3" METER**

DETAIL NO.

W-609A

11/30/2021

PLAN VIEW



NOTES:

1. SEE W-150 FOR TRENCH DETAILS
2. 304 STAINLESS STEEL INSERT STIFFENER REQ'D AT EACH COMPRESSION FITTING

ITEM	SIZE	DESCRIPTION	SPECIFICATIONS OR APPROVED EQUAL
1	AS REQUIRED	SADDLE	####
2	AS DESIGNED	MAIN LINE	####
3	4"	GATE VALVE	4" GATE VALVE
4	4"	SERVICE PIPE	C900
5	4"	RMJ	RESTRAINED MJ FOR DI PIPE
6	4 X 3	REDUCER	4 X 3 FLG DUCTILE IRON REDUCER
7	3"	PIPE	3" DUCTILE IRON SPOOL FLG X PE
8	4 X 6	VAULT	575-LA OLDCASTLE CONCRETE VAULT 4'-2" X 6'-6"
9	4"	PIPE	RMJ FOR C-900 PIPE

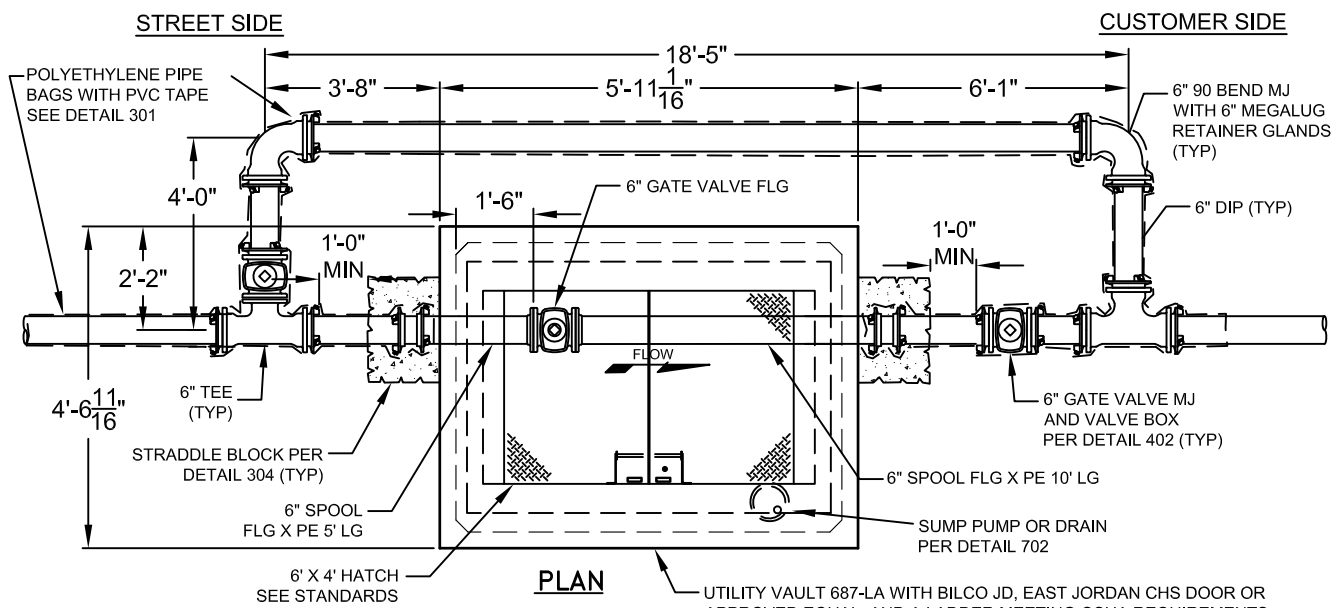
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

3" WATER SERVICE
 3" METER

DETAIL NO.

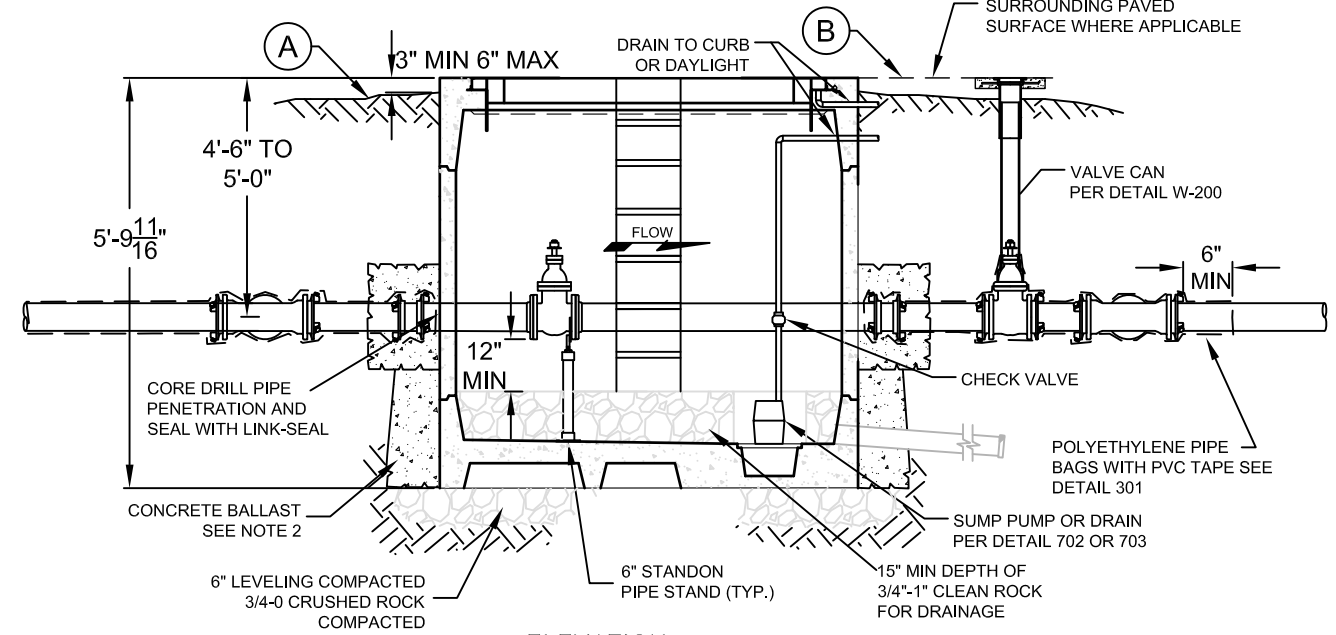
W-609B

11/30/2021



PLAN

UTILITY VAULT 687-LA WITH BILCO JD, EAST JORDAN CHS DOOR OR APPROVED EQUAL, AND A LADDER MEETING OSHA REQUIREMENTS (SEE DETAIL 701). SEE NOTE 1, EXTERIOR TO BE SEALED WITH CRYSTAL SEAL OR APPROVED EQUAL.



ELEVATION

- NOTES:**
1. CONTRACTOR TO SEAL ALL OPENINGS IN VAULT WITH NON SHRINK GROUT.
 2. CONTRACTOR TO INSTALL CONCRETE BALLAST 3 CU YD MIN AROUND BASE OF VAULT IN AREAS WHERE FLOODING OR HIGH GROUND WATER EXISTS.
 3. ALL MATERIALS SHALL BE AS NAMED OR EQUAL. SUBMIT ALTERNATES FOR APPROVAL.
 4. ORS 92.044(7) PROHIBITS LOCATING ANY UTILITY INFRASTRUCTURE WITHIN 1-FT. OF A SURVEY MONUMENT. DEVELOPER SHALL PAY FOR ANY RELOCATION OF SERVICES AND/OR METER BOXES FOUND TO FALL WITHIN 1-FT. OF A SURVEY MONUMENT LOCATION.

- KEYNOTES:**
- A. IN LANDSCAPING: FINISH GRADE SHALL SLOPE AWAY FROM VAULT LID.
 - B. IN PAVEMENT: FINISH GRADE SHALL BE FLUSH WITH SURROUNDING PAVEMENT.



City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

6" MASTER METER CONNECTION

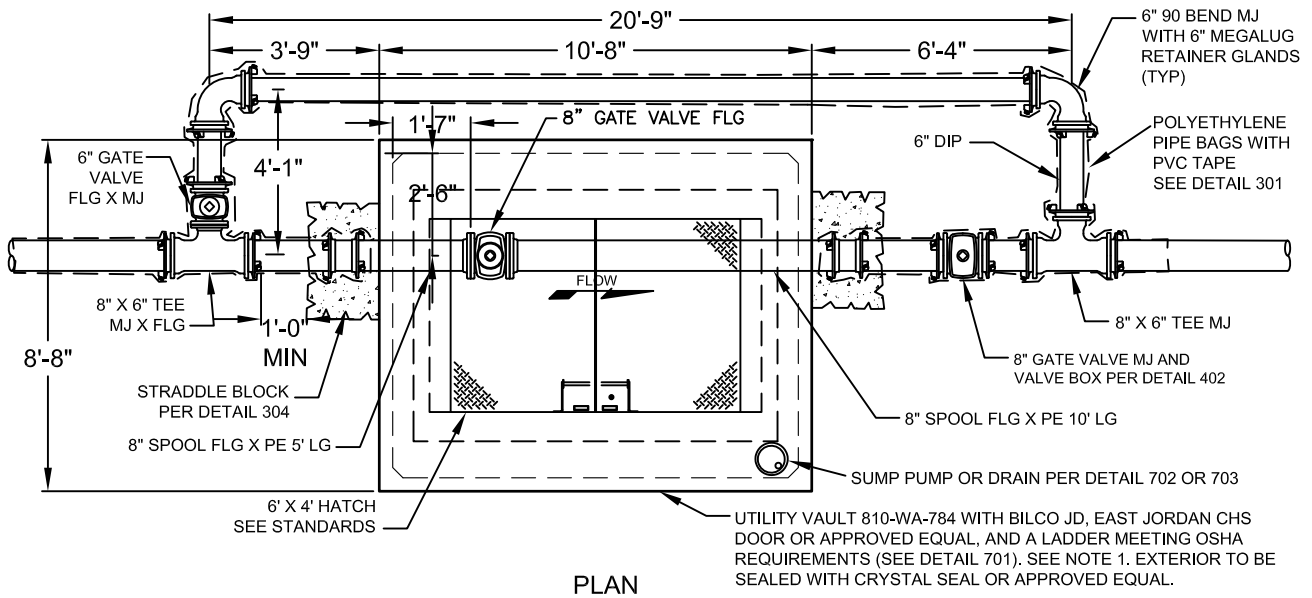
DETAIL NO.

W-610

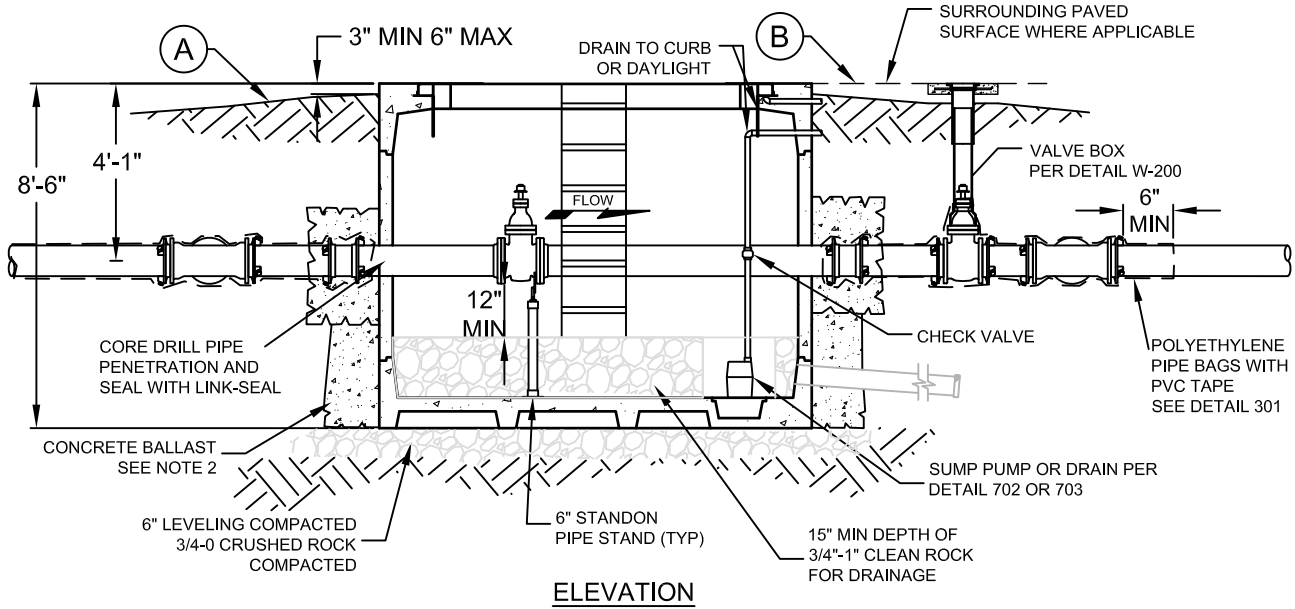
1/22/2024

STREET SIDE

CUSTOMER SIDE



PLAN



ELEVATION

NOTES:

1. CONTRACTOR SEAL ALL OPENINGS IN VAULT WITH NON SHRINK GROUT.
2. CONTRACTOR TO INSTALL CONCRETE BALLAST 3 CU YD MIN AROUND BASE OF VAULT IN AREAS WHERE FLOODING OR HIGH GROUND WATER EXISTS.
3. ALL MATERIALS SHALL BE AS NAMED OR EQUAL. SUBMIT ALTERNATES FOR APPROVAL.
4. ORS 92.044(7) PROHIBITS LOCATING ANY UTILITY INFRASTRUCTURE WITHIN 1-FT. OF A SURVEY MONUMENT. DEVELOPER SHALL PAY FOR ANY RELOCATION OF SERVICES AND/OR METER BOXES FOUND TO FALL WITHIN 1-FT. OF A SURVEY MONUMENT LOCATION.
5. FOR FIRE MAINS, USE _____ VALVE.

KEYNOTES:

- A. IN LANDSCAPING: FINISH GRADE SHALL SLOPE AWAY FROM VAULT LID.
- B. IN PAVEMENT: FINISH GRADE SHALL BE FLUSH WITH SURROUNDING PAVEMENT.



City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

8" MASTER METER CONNECTION

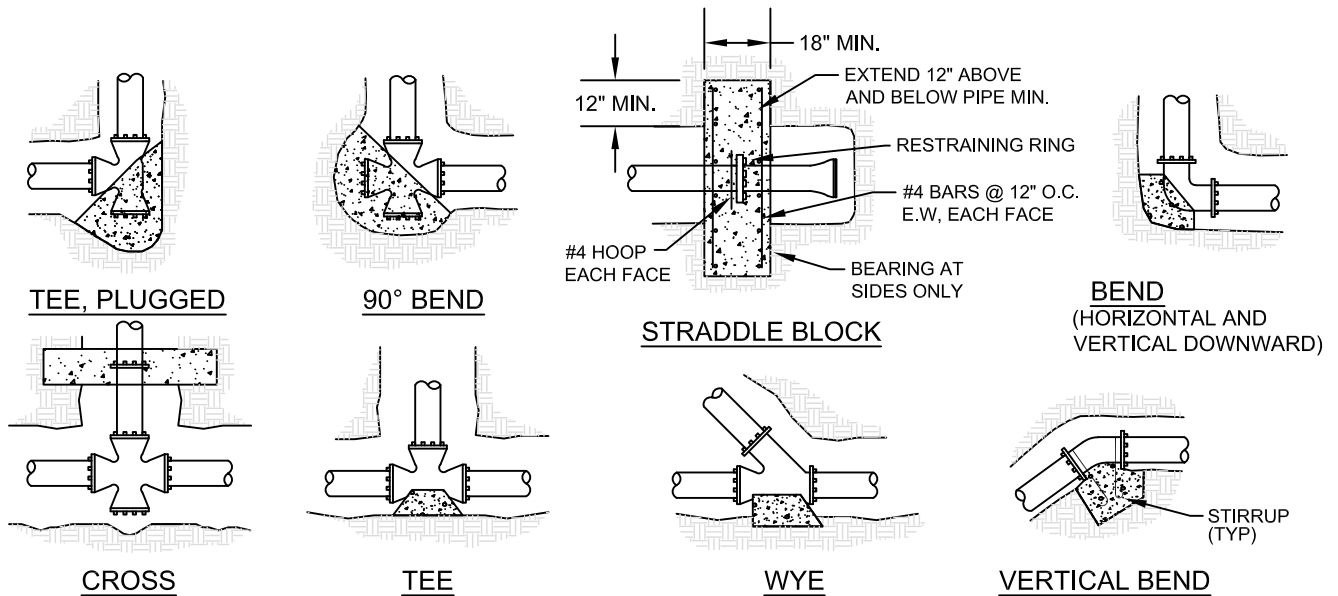
DETAIL NO.

W-611

1/22/2024

(HORIZONTAL & VERTICAL DOWN) BEARING AREA OF THRUST BLOCKS IN SQUARE FEET							(VERTICAL UP) VOLUME OF THRUST BLOCK IN CUBIC YARDS			
FITTING SIZE	TEE, WYE, DEAD END, AND HYDRANT	STRADDLE BLOCK	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
4	1.0	1.0	1.4	0.8	0.4	0.2	0.82	0.45	0.23	0.11
6	2.1	2.1	3.0	1.6	0.9	0.5	1.85	1.00	0.51	0.26
8	3.8	3.8	5.4	2.9	1.5	0.8	3.29	1.78	0.91	0.46
10	5.9	5.9	8.4	4.5	2.3	1.2	5.14	2.78	1.42	0.71
12	8.5	8.5	12.0	6.5	3.3	1.7	7.40	4.01	2.04	1.03
14	11.6	11.6	16.4	8.9	4.5	2.3	10.08	5.45	2.78	1.40
16	15.1	15.1	21.4	11.6	5.9	3.0	13.16	7.12	3.63	1.82
18	19.1	19.1	27.0	14.6	7.5	3.8	16.66	9.02	4.60	2.31
20	23.6	23.6	33.3	18.1	9.2	4.7	20.57	11.13	5.67	2.85
24	34.0	34.0	48.0	26.0	13.3	6.7	29.62	16.03	8.17	4.11

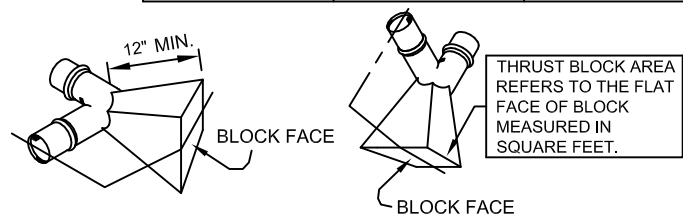
ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. DESIGNER IS CAUTIONED TO ENSURE THAT 2000 PSF BEARING IS AVAILABLE.



NOTES:

1. CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. ALL CONCRETE TO BE 3000 PSI COMPRESSIVE STRENGTH.
3. INSTALL 6 MIL PLASTIC BETWEEN PIPE AND/OR FITTINGS BEFORE POURING CONCRETE BLOCKING.
4. CONCRETE SHALL BE KEPT CLEAR OF ALL JOINTS AND ACCESSORIES.
5. TIE RODS SHALL BE 316 STAINLESS STEEL.
6. BEARING AREA REQ'D AT REDUCERS IS THE DIFFERENCE BETWEEN VALUES FOR DEAD END FOR EACH END SIZE (IE 6x8 = 3.8-2.1 = 1.7 S.F.)
7. **INSTALL BELL & SPIGOT RESTRAINTS AND JOINT RESTRAINTS FOR TWO (2) STICKS OF PIPE LEADING TO AND AWAY FROM THRUST BLOCK. NO RESTRAINED GASKETS PERMITTED.**
8. RESTRAINED JOINTS AND THRUST BLOCKING REQUIRED AT ALL BENDS, TEES, AND CROSSES.

RODS FOR VERTICAL BENDS		
FITTING SIZE	ROD SIZE	EMBEDMENT
10" AND LESS	#5	17"
12"-16" (11.25°)	#5	17"
12"-16" (22.5°)	#7	24"
12" (45°)	#7	24"
14"-16" (45°)	#9	30"



City of Newport
169 SW Coast Hwy
Newport, Oregon 97365
(541) 574-3366 Fax: (541) 265-3301

CONCRETE THRUST BLOCKING STANDARD DETAILS

DETAIL NO.

W-700

10/27/2022

RESTRAINED FLANGE x
COUPLING ADAPTER (TYP)
MEGAFLANGE OR EQUAL.

SEAL W/ NON-
SHRINK GROUT (TYP)

24" MIN

12" MIN

DRAIN TO DAYLIGHT

FLGxFLG ELBOWS
(TYP)

PLAN
NTS

CONCRETE UTILITY VAULT
WITH ACCESS DOORS
AS APPROVED.

3" MIN. (WITH VALVE FULLY OPEN)

FROM METER

EPOXY PAINT
AREA, TYP.
SEE NOTE 7

3" MIN
(TYP)

12" MIN.

DRAIN TO
DAYLIGHT

PROVIDE ADJUSTABLE METAL
PIPE SUPPORTS (2½" DIAM. MIN).

SIDE
NTS

6" MIN. BASE OF
CRUSHED ROCK

SCREEN FLAP GATE,
CHECKVALVE, OR OUTLET

NOTES:

1. ASSEMBLY SHALL NOT BE SUBJECT TO FLOODING.
2. RPBA SHALL BE INSTALLED ABOVE THE 100 YEAR FLOOD LEVEL, UNLESS OTHERWISE APPROVED. DRAIN LINES SHALL BE SIZED TO ACCOMMODATE FULL RELIEF VALVE DISCHARGE FLOW.
3. RPBA'S ARE TYPICALLY INSTALLED ABOVE-GRADE IN WELL-DRAINED AREAS, BUT MAY BE INSTALLED BELOW-GRADE IN VAULT IF AN ADEQUATE AIR-GAPPED, BORE-SIGHTED DRAIN (SLOPE 1/8"/FT.) TO DAYLIGHT IS PROVIDED.
4. CLEARANCES ALSO APPLY WHEN ASSEMBLIES ARE INSTALLED INSIDE BUILDING. DO NOT PLUG OR EXTEND RELIEF VALVES.
5. BRASS OR PLASTIC TEST PORT PLUGS ARE REQUIRED FOR ALL VAULT INSTALLATIONS. PROVIDE PROTECTION FROM FREEZING.
6. ALL EXPOSED PIPE AND FITTINGS SHALL BE DUCTILE IRON, C900 OR 316 STAINLESS STEEL; APPLY WHITE EPOXY PAINT AS DIRECTED BY ENGINEER.
7. RPBA SHALL BE INSTALLED HORIZONTALLY UNLESS DEVICE IS SPECIFICALLY APPROVED FOR VERTICAL INSTALLATION. MAXIMUM HEIGHT OF INSTALLATION SHALL NOT EXCEED 5 FEET UNLESS THERE IS A PERMANENTLY INSTALLED PLATFORM MEETING OSHA STANDARDS TO FACILITATE SERVICING THE ASSEMBLY.
8. LOCATION OF DEVICE SHALL BE AS DIRECTED BY THE CITY. GENERALLY LOCATED AS CLOSE TO MAIN CONNECTION AS POSSIBLE, IMMEDIATELY AFTER WATER METER.



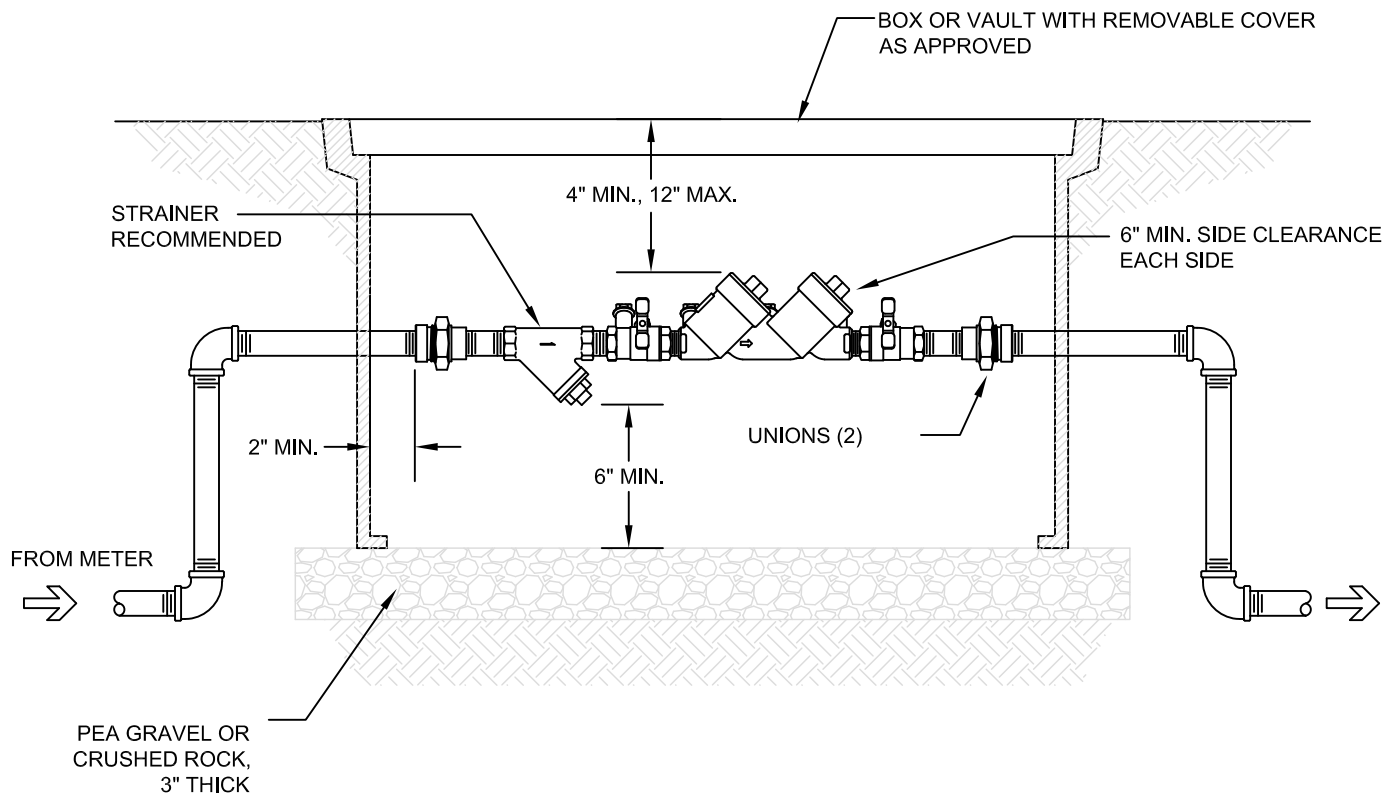
City of Newport
169 SW Coast Hwy
Newport, Oregon 97365
(541) 574-3366 Fax: (541) 265-3301

**REDUCED PRESSURE
BACKFLOW ASSEMBLY
(2½" UP)**

DETAIL NO.

W-805

11/30/2021



NOTES:

1. PROTECTION FROM FREEZING SHALL BE PROVIDED.
2. DCVA'S MAY BE INSTALLED BELOW GRADE IN A BOX OR VAULT WITH BRASS OR PLASTIC PLUGS PROVIDED IN ALL TEST PORTS AND ASSEMBLY IS NOT TO BE SUBJECT TO CONTINUOUS IMMERSION.
3. DCVAs SHALL BE PROVIDED WITH ADEQUATE AIR-GAPPED DRAINAGE. DRAIN SHALL NOT BE CONNECTED TO SANITARY OR STORM DRAIN SYSTEMS.
4. LOCATE AS DIRECTED AS CLOSE TO MAINLINE CONNECTION AS POSSIBLE. GENERALLY LOCATED IMMEDIATELY AFTER WATER METER.
5. MAY BE INSTALLED VERTICALLY IF INTERNALLY SPRING LOADED, HAS NORMAL FLOW UPWARD, AND IS RECOMMENDED BY MANUFACTURER FOR VERTICAL INSTALLATION.
6. CLEARANCES SHALL ALSO APPLY WHEN INSTALLED INSIDE BUILDING.
7. SHALL NOT BE INSTALLED AT A HEIGHT GREATER THAN 5 FEET UNLESS THERE IS A PERMANENTLY INSTALLED PLATFORM MEETING OSHA STANDARDS TO FACILITATE SERVICING THE ASSEMBLY.
8. INSTALLATION OF A BACKFLOW ASSEMBLY MAY CREATE A CLOSED SYSTEM. CONSULT LOCAL PLUMBING CODES FOR PRESSURE RELIEF VALVE AND THERMAL EXPANSION REQUIREMENTS.
9. USE ONLY DEVICES LISTED ON CURRENT LIST OF STATE APPROVED DEVICES.



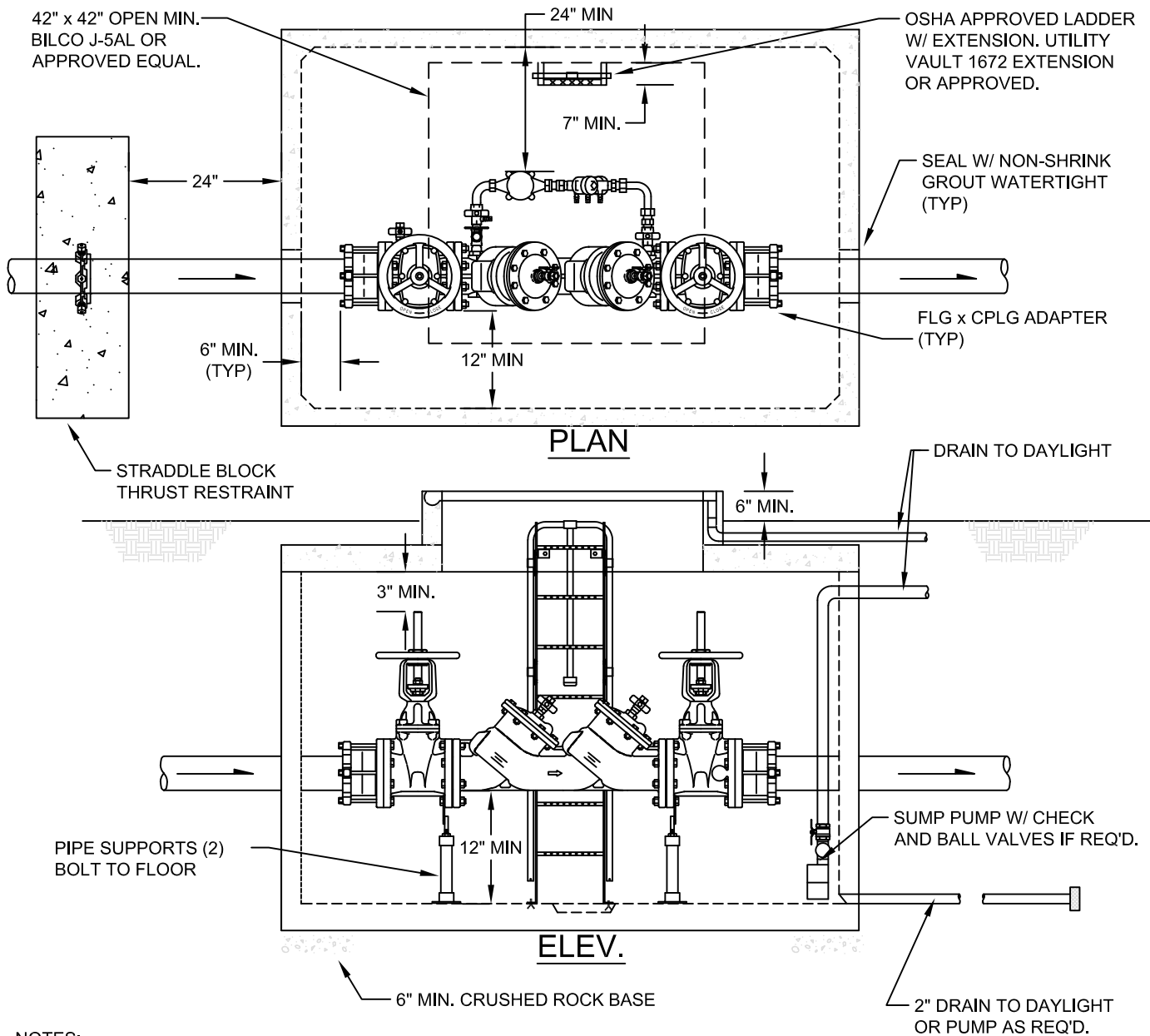
City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

DOUBLE CHECK VALVE
 ASSEMBLY (3/4" - 2")

DETAIL NO.

W-900

11/30/2021



NOTES:

1. FOR FIRE LINE INSTALLATIONS. SUBMIT DETAIL DRAWING AND SPECS FOR APPROVAL.
2. ASSEMBLY SHALL NOT BE SUBJECT TO FLOODING.
3. DCDAs ARE TYPICALLY INSTALLED BELOW-GRADE. DRAIN TO DAYLIGHT OR PUMP AS REQUIRED. PUMP SHALL HAVE MIN. CAPACITY OF 5 GPM. DRAIN SHALL HAVE BACKWATER VALVE AND RODENT SCREEN.
4. BRASS OR PLASTIC PLUGS ARE REQUIRED FOR ALL TESTING PORTS.
5. DOMESTIC SERVICE SHALL NOT BE INSTALLED OFF THE FIRE SERVICE UNLESS APPROVED.
6. VAULTS SHALL BE PRECAST CONCRETE AS REQUIRED.
7. ALL EXPOSED PIPE AND FITTINGS SHALL BE DUCTILE IRON, C900 OR 316 STAINLESS STEEL; APPLY WHITE EPOXY PAINT AS NEEDED.
8. LOCATE AS DIRECTED BY THE CITY. GENERALLY LOCATED AS CLOSE TO MAIN CONNECTION AS POSSIBLE, IMMEDIATELY AFTER WATER METER.



City of Newport
 169 SW Coast Hwy
 Newport, Oregon 97365
 (541) 574-3366 Fax: (541) 265-3301

**DOUBLE CHECK DETECTOR
 ASSEMBLY (2 1/2" UP)**

DETAIL NO.

W-905

11/30/2021