

THIS DETAIL CONSTITUTES MINIMUM STANDARDS. DESIGN ENGINEERS SHALL PROVIDE STANDARDS EQUAL TO OR GREATER THAN THESE.

WATER METER ON THIS SIDE OF RPZ\*\*

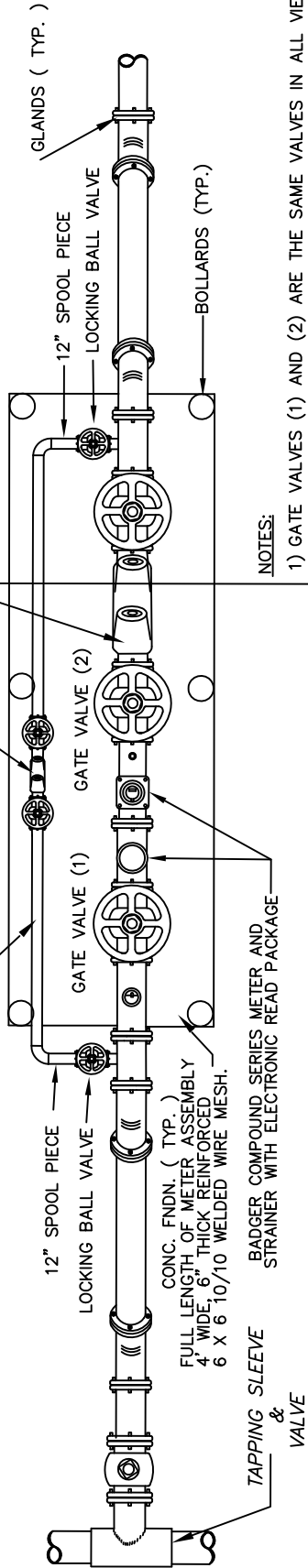
- NOTES:**
- 1) TO BE INSTALLED A MINIMUM OF 12" (INCHES) TO A MAXIMUM OF 30" (INCHES) OVER FINAL FINISHED GRADE, AS MEASURED TO THE LOWEST POINT OF THE RPZ ASSEMBLY, AND NO CLOSER THAN 12" (INCHES) TO ANY FIXED STRUCTURE.
  - 2) ALL PIPING FOR ASSEMBLY SHALL BE TYPE "K" COPPER OR BRASS
  - 3) UNPROTECTED CONNECTIONS ARE PROHIBITED BETWEEN BACKFLOW PREVENTER AND METER.
  - 4) ADJUSTABLE PIPE STANDS WHERE REQUIRED.
  - 5) BACKFLOW UNIT REQUIRES INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division).
  - 6) ALL ABOVE GROUND PIPING INCLUDING ASSEMBLY WILL BE PAINTED RUSTOLEUM FEDERAL SAFETY BLUE, OR PER CITY ORDINANCE 66-66H.

\*\* ASSEMBLY TO BE INSTALLED AS CLOSE AS POSSIBLE TO METER ON CUSTOMER'S PROPERTY.

FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	3/4" TO 2" REDUCED PRESSURE BACKFLOW ASSEMBLY	SHEET: W-01
DRAWN: JAF		DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-01.DWG

REDUCED PRESSURE BACKFLOW ASSEMBLY,  
 SUPPLIED WITH AMMONIA & CLORINE RESISTANT  
 SEATS AND SILICONE RUBBER SEALS. UL LISTED AS  
 REQUIRED BY CITY ORDINANCE AND AWWA M-14.  
 AWWA AND USFCFCCR APPROVED.

BYPASS TO BE SIZED BY DESIGN ENGINEER TO  
 PROVIDE A MINIMUM OF DOMESTIC FLOWS,  
 HOWEVER THE MINIMUM SIZE SHALL BE 2"

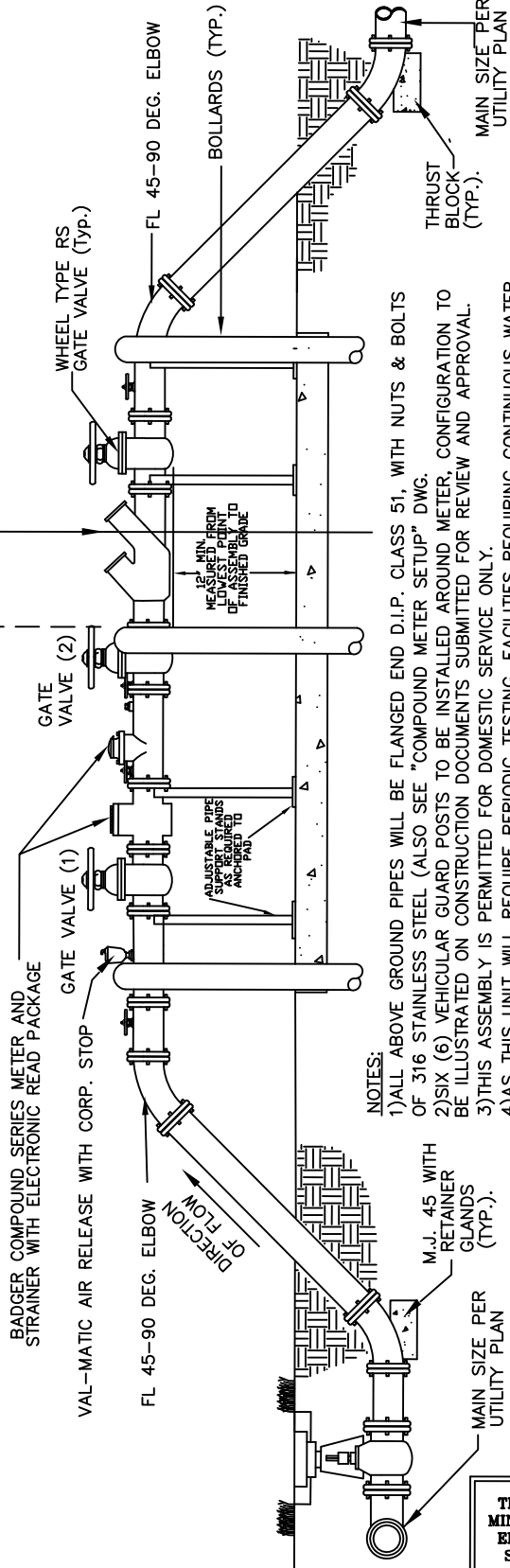


**NOTES:**

- 1) GATE VALVES (1) AND (2) ARE THE SAME VALVES IN ALL VIEWS.
- 2) THE BACKFLOW ASSEMBLY SHALL BE ASSEMBLED AFTER GATE VALVE (2).

**OWNERS RESPONSIBILITY**

**CITY'S RESPONSIBILITY**



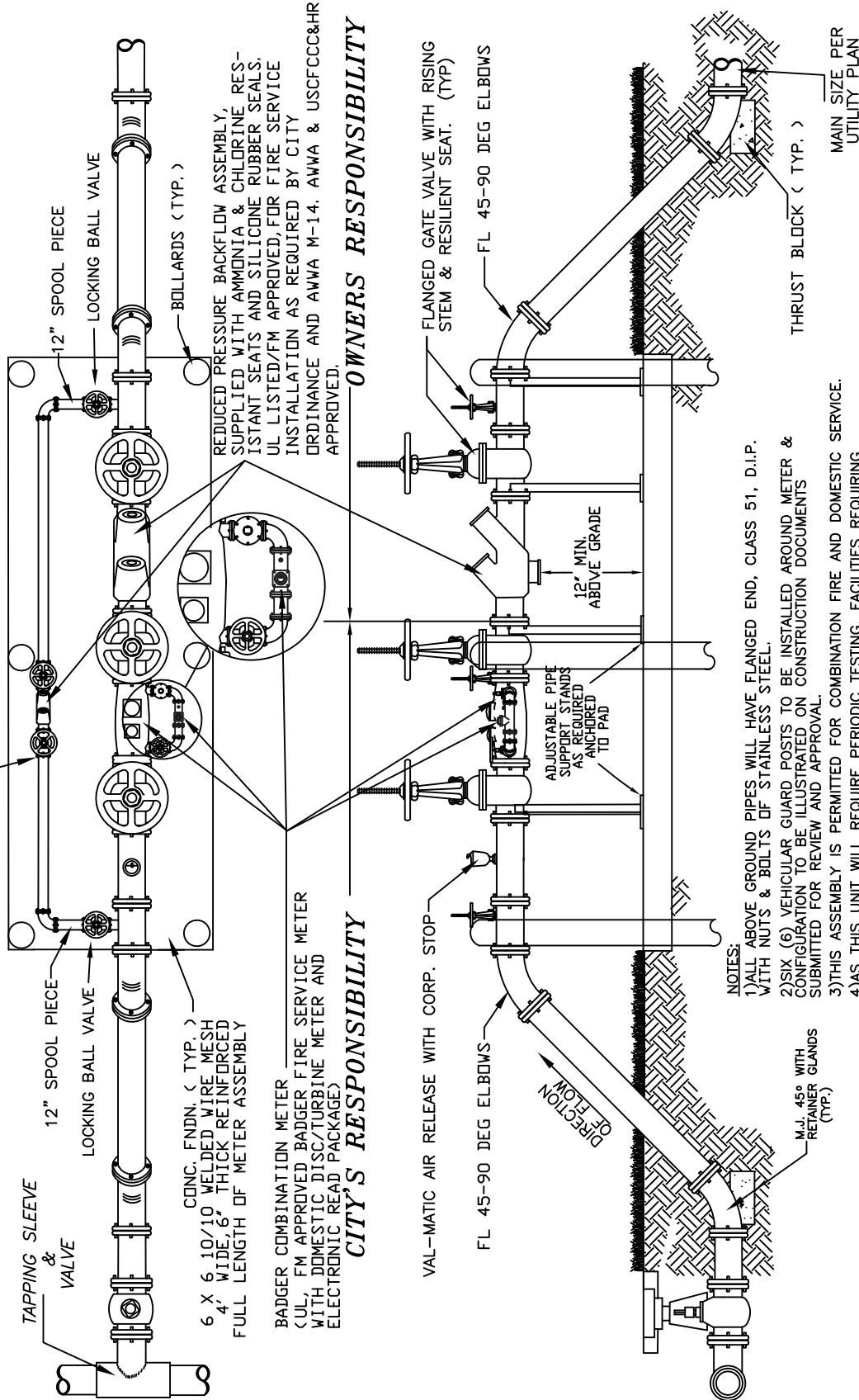
**NOTES:**

- 1) ALL ABOVE GROUND PIPES WILL BE FLANGED END D.I.P. CLASS 51, WITH NUTS & BOLTS OF 316 STAINLESS STEEL (ALSO SEE "COMPOUND METER SETUP" DWG.
- 2) SIX (6) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND METER, CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
- 3) THIS ASSEMBLY IS PERMITTED FOR DOMESTIC SERVICE ONLY.
- 4) AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS OR FULL SIZE BYPASSES TO PREVENT SERVICE INTERRUPTIONS.
- 5) BACKFLOW UNITS REQUIRE INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division)
- 6) BYPASS LINE SHALL BE USED ONLY DURING REPAIR, TESTING, MAINTENANCE, REPLACEMENT, OR EMERGENCY OF THE DOMESTIC METER/BACKFLOW ASSEMBLY
- 7) CITY WILL REQUIRE DEDICATION OF ALL ABOVE GROUND MATERIAL AND EQUIPMENT BACK TO THE CITY WATER MAIN.
- 8) ALL PLANTINGS SHALL BE A MINIMUM OF 3' FROM EDGE OF SLAB, AND PROVIDE A 3" ACCESS OPENING.
- 9) ALL ABOVE GROUND PIPING INCLUDING ASSEMBLY WILL BE PAINTED RUSTOLEUM FEDERAL SAFETY BLUE OR AS PER CITY ORDINANCE 66-66H
- 10) PROVIDE LINE SIZE GATE VALVE AT HOT TAP TO CITY WATER MAIN

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 ENGINEERS SHALL PROVIDE  
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 GREATER THAN THESE.**

<b>FOR:</b>	<b>UTILITIES ENGINEERING DIVISION</b>	<b>CITY OF NAPLES</b>
<b>DATE:</b> SEPT 2010	<b>3" AND LARGER        DOMESTIC METER ASSEMBLY</b>	<b>SHEET:</b> W-02
<b>DRAWN:</b> JAF		<b>DIR:</b> WATER
<b>SCALE:</b> N.T.S.		<b>DWG.</b> W-02.DWG
	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	

BYPASS TO BE SIZED BY DESIGN ENGINEER TO PROVIDE A MINIMUM OF DOMESTIC FLOWS. HOWEVER THE MINIMUM SIZE SHALL BE 2" FOR ALL METERS UP TO 4" & 3" FOR ALL METERS LARGER THAN 4"



REDUCED PRESSURE BACKFLOW ASSEMBLY, SUPPLIED WITH AMMONIA & CHLORINE RESISTANT SEATS AND SILICONE RUBBER SEALS. UL LISTED/FM APPROVED, FOR FIRE SERVICE INSTALLATION AS REQUIRED BY CITY ORDINANCE AND AWA M-14. AWA & USC FCC&HR APPROVED.

**OWNERS RESPONSIBILITY**

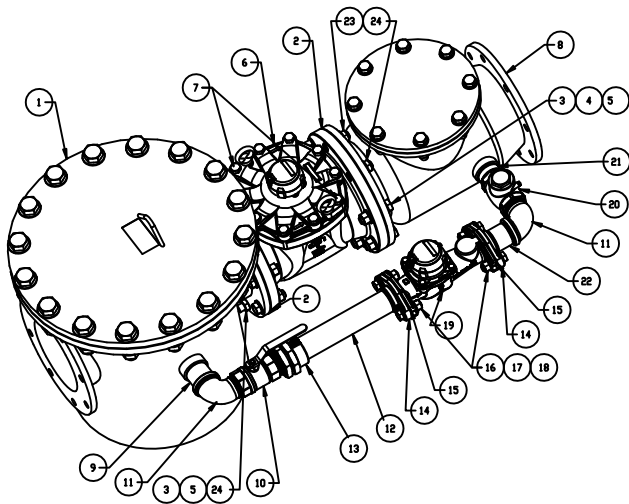
**CITY'S RESPONSIBILITY**

THIS DETAIL CONSTITUTES MINIMUM STANDARDS. DESIGN ENGINEERS SHALL PROVIDE STANDARDS EQUAL TO OR GREATER THAN THESE.

- NOTES:**
- 1) ALL ABOVE GROUND PIPES WILL HAVE FLANGED END, CLASS 51, D.I.P. WITH NUTS & BOLTS OF STAINLESS STEEL.
  - 2) SIX (6) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND METER & CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
  - 3) THIS ASSEMBLY IS PERMITTED FOR COMBINATION FIRE AND DOMESTIC SERVICE.
  - 4) AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS OR FULL SIZE BYPASSES TO PREVENT SERVICE INTERRUPTIONS.
  - 5) BACKFLOW UNIT REQUIRES INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division).
  - 6) CITY REQUIRES DEDICATION OF ALL ABOVE GROUND MATERIAL AND EQUIPMENT BACK TO THE CITY WATER MAIN.
  - 7) ALL PLANTS SHALL BE A MINIMUM OF 3' TALL & 3' FROM EDGE OF SLAB AND PROVIDE A 3' ACCESS OPENING.
  - 8) ALL ABOVE GROUND PIPING INCLUDING ASSEMBLY WILL BE PAINTED RUSTOLEUM FEDERAL SAFETY BLUE, OR AS PER CITY ORDINANCE 66-66H
  - 9) BYPASS LINE SHALL BE USED ONLY DURING REPAIR, TESTING, MAINTENANCE, REPLACEMENT, OR EMERGENCY OF THE DOMESTIC METER/BACKFLOW ASSEMBLY

<b>FOR:</b>	<b>UTILITIES ENGINEERING DIVISION</b>	<b>CITY OF NAPLES</b>
<b>DATE:</b> SEPT 2010	<b>3" AND LARGER COMBINATION</b>	<b>SHEET: W-03</b>
<b>DRAWN:</b> JAF	<b>FIRE &amp; DOMESTIC METER ASSEMBLY</b>	<b>DIR: WATER</b>
<b>SCALE:</b> N.T.S.	<b>380 RIVERSIDE CIRCLE, NAPLES, FL. 34102</b>	<b>DWG. W-03.DWG</b>

# STANDARD BADGER RECORDALL METERS AND REGISTERS WITH ITRON RADIO READ PACKAGE AND NSF61 APPROVED FSAA W/ DISC BYPASS

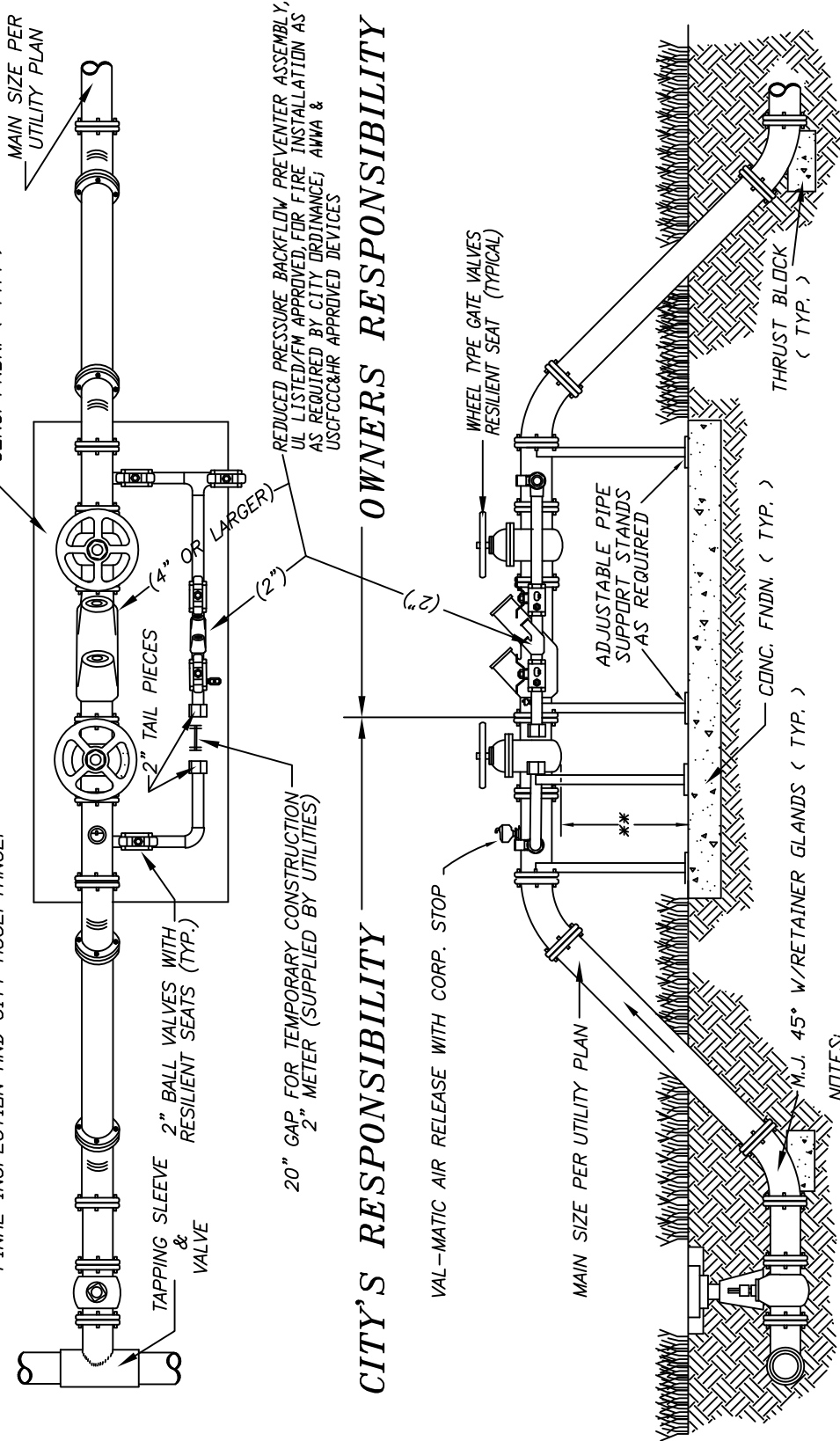


ITEM NO.	PART
1	STRAINER
2	GASKET
3	BOLTS
4	NUTS
5	WASHERS
6	CI TURBO SERIES METER
7	REGISTER-MAIN LINE TURBO
8	CHECK VALVE,MAIN LINE
9	NIPPLES
10	BALL VALVE
11	ELBOW
12	HALF NIPPLE
13	COUPLER
14	FLANGES
15	O-RING
16	BOLTS
17	NUTS
18	WASHERS
19	DISC SERIES METER
20	CHECK VALVE-BYPASS
21	NIPPLES
22	NIPPLES
23	STUDS(6"&8"ONLY)
24	JAM NUTS (6"&8"ONLY)
25	WASHER
31	TEE
32	PIPE PLUG
33	NIPPLE
34	NIPPLE

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ENGINEERS SHALL PROVIDE  
STANDARDS EQUAL TO OR  
GREATER THAN THESE.

FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	<b>4" AND LARGER COMBINATION FIRE &amp; DOMESTIC METER ASSEMBLY</b>	SHEET: W-04
DRAWN: JAF		DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-04.DWG

NOTE: ASSEMBLY NOT TO BE REMOVED AND SPOOL PIECE INSTALLED FOR FINAL CONNECTION UNTIL AFTER TESTING, BACTERIAL CLEARANCE, FINAL INSPECTION AND CITY ACCEPTANCE.



- NOTES:
- 1) ALL ABOVE GROUND PIPE WILL HAVE FLANGED END D.I.P. CLASS 51
  - 2) ALL NUTS & BOLTS SHALL BE 316 STAINLESS STEEL
  - 3) ASSEMBLY IS REQUIRED TO BE FLUSHED, CHLORINATED AND BACTERIAL CLEARED BEFORE PLACEMENT IN SERVICE.
  - 4) BACKFLOW UNIT REQUIRES INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division).
  - 5) CONTRACTOR IS REQUIRED TO PROVIDE 8' OF 3/8 CHAIN AT TIME OF INSTALLATION.
  - 6) INSPECTIONS ARE REQUIRED FOR SYSTEM TIE-IN AND ASSEMBLY CONNECTION.

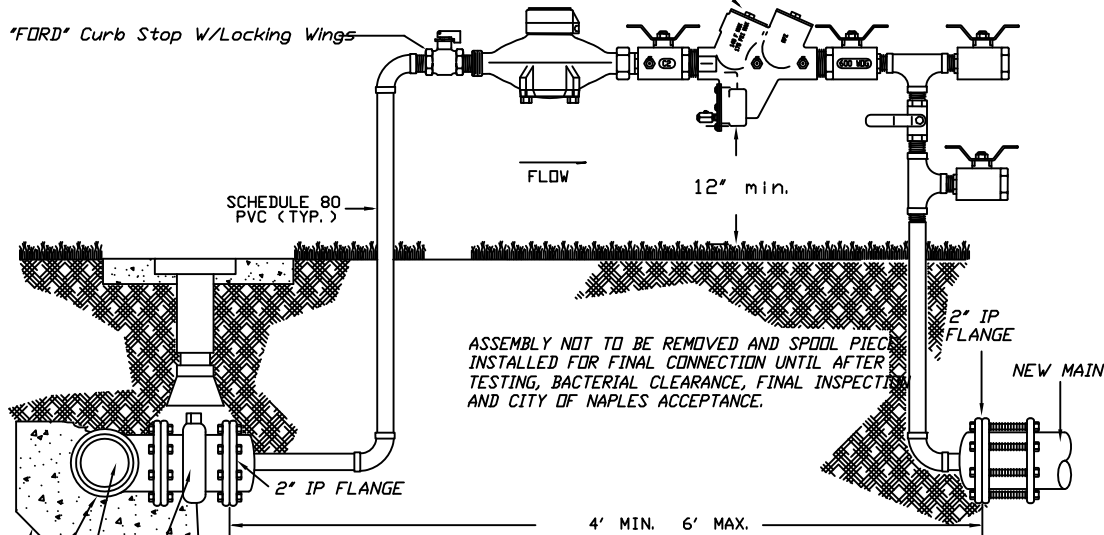
\*\* 12" MINIMUM ABOVE MAXIMUM FLOOD PLANE LEVEL.  
(Dimension Taken From Lowest Point on Assembly)

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FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	TEMPORARY BACKFLOW PREVENTERS &	SHEET: W-05
DRAWN: JAF	CONSTRUCTION TIE-IN ASSEMBLY	DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-05.DWG

REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY SUPPLIED WITH AMMONIA & CHLORINE RESISTANT SEATS AND SILICONE RUBBER SEALS. AWWA & USCFCCC&HR APPROVED

\*FORD\* Curb Stop W/Locking Wings



ASSEMBLY NOT TO BE REMOVED AND SPOOL PIECE INSTALLED FOR FINAL CONNECTION UNTIL AFTER TESTING, BACTERIAL CLEARANCE, FINAL INSPECTION AND CITY OF NAPLES ACCEPTANCE.

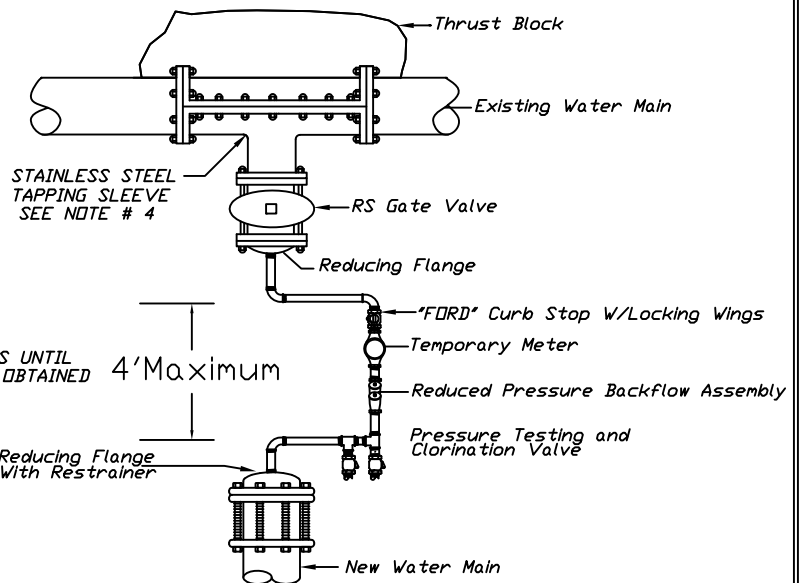
4' MIN. 6' MAX.

**NOTES:**

1. FINAL CONNECTION TO BE WITNESSED BY CITY OF NAPLES UTILITIES DIVISION.
2. BLIND FLANGES TO BE PROPERLY RESTRAINED.
3. INSTALL JUMPER TAP SYSTEM FOR TEMPORARY METER DOWNSTREAM OF BLIND FLANGE FOR PRESSURE AND BACTEE TESTING
4. 4" TO 12" TAPPING SLEEVES SHALL BE STAINLESS STEEL ALL TAPPING SADDLES OVER 12" AND LINE SIZE BORES SHALL BE PERFORMED WITH A DUCTILE IRON SPLIT TAPPING SADDLE OR A STAINLESS STEEL SLEEVE AT CITY'S OPTION.
5. JUMPER ASSEMBLY MUST BE A MINIMUM OF 18" ABOVE FINISHED GRADE.
6. BACKFLOW ASSEMBLY REQUIRES INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division)

GATE VALVE < MAIN LINE HOT TAP >  
EXISTING MAIN  
STAINLESS STEEL SLEEVE

THRUST BLOCK



**NOTES:**

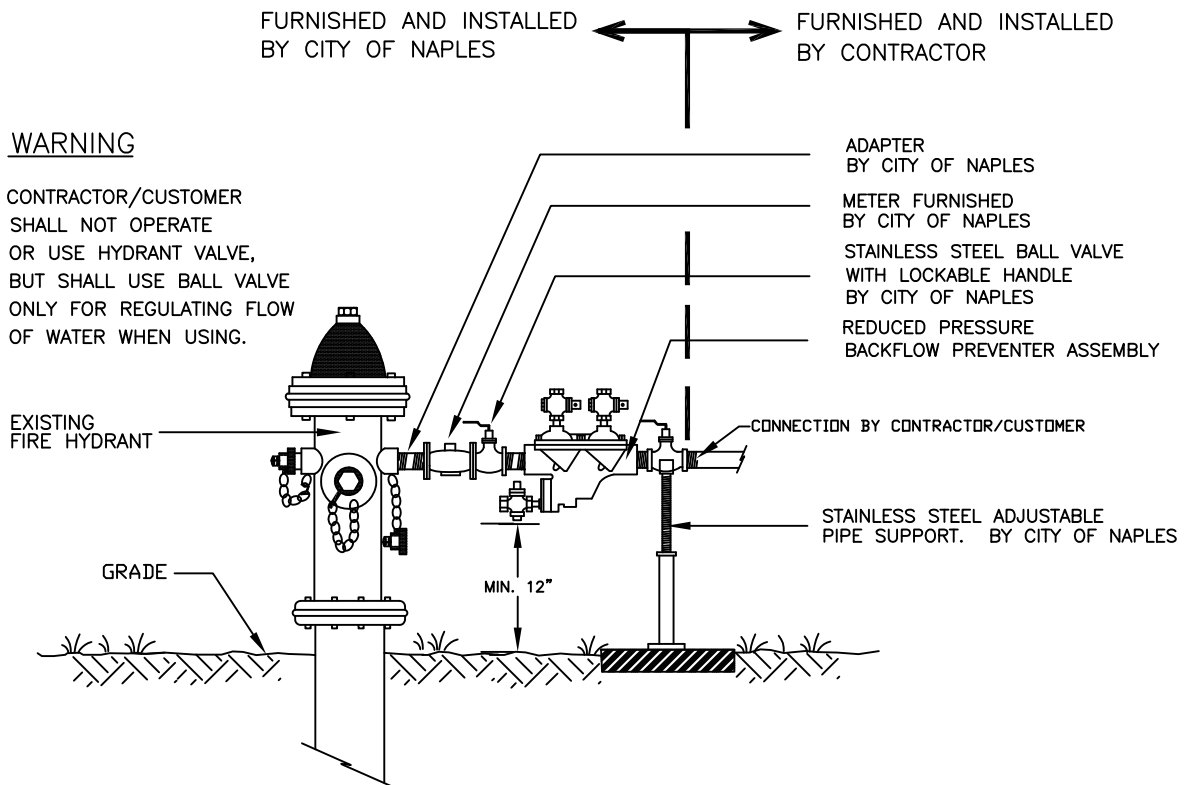
1. DO NOT INSTALL JUMPER PIPE & REMOVE BY-PASS UNTIL ALL TESTING & BACTERIAL CLEARANCE HAS BEEN OBTAINED
2. ALL NEW PIPING SHALL BE PROPERLY RESTRAINED

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FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	TEMP. WATER SERVICE - HOTTAP & JUMPER METER CONNECTION	SHEET: W-06
DRAWN: JAF		DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-06.DWG

CITY OF NAPLES  
TYPICAL INSTALLATION DETAIL FOR FIRE HYDRANT  
WITH NO LARGER THAN 2 INCH TEMPORARY WATER SERVICE

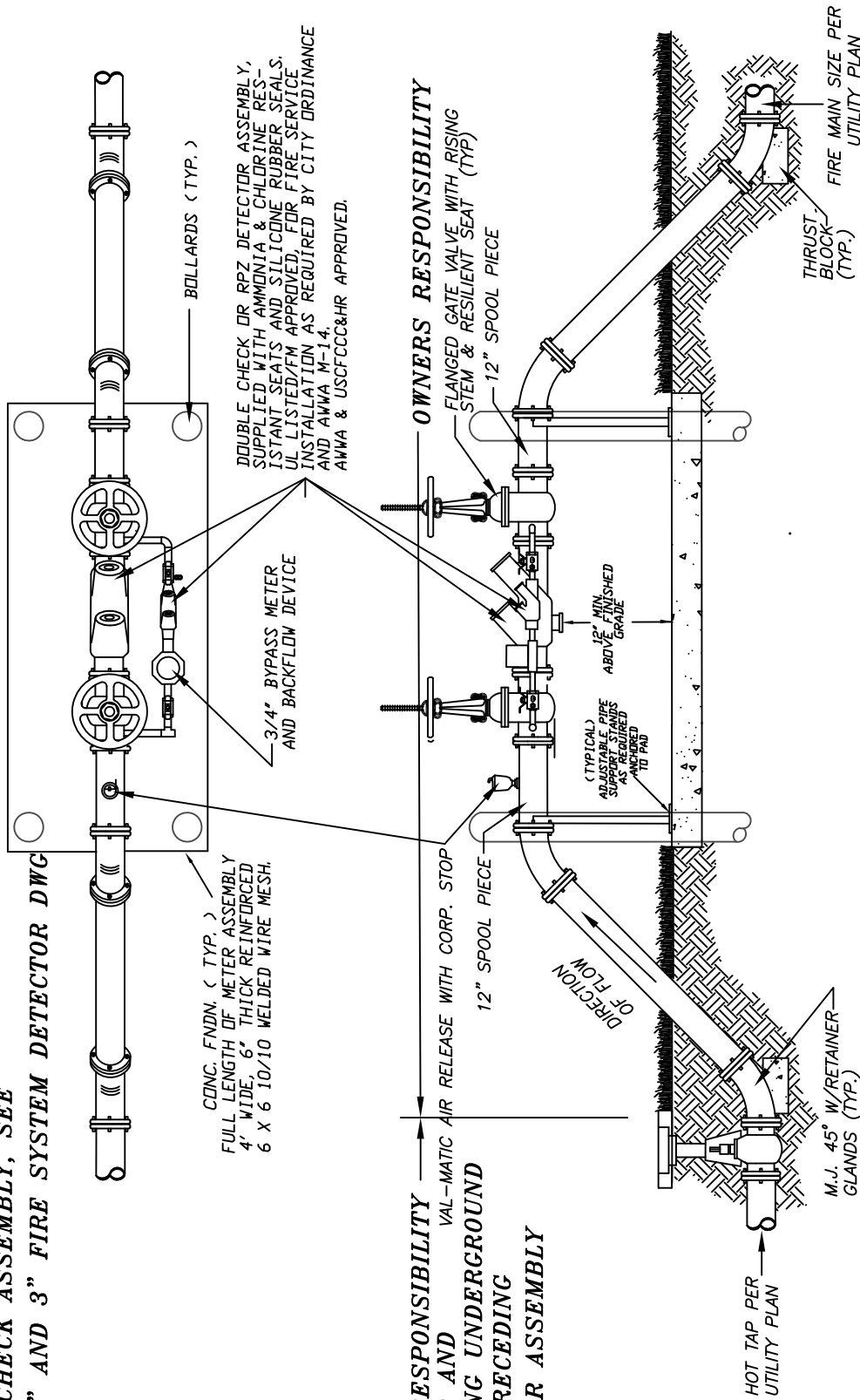
1. CONTRACTOR/CUSTOMER SHALL APPLY AT CITY OF NAPLES WATER COMPANY FOR TEMPORARY WATER SERVICE THREE DAYS PRIOR TO REQUIRED SERVICE DATE.
2. METER, LOCKABLE STAINLESS STEEL BALL VALVE AND PIPE SUPPORT WILL BE FURNISHED AND INSTALLED BY CITY OF NAPLES WATER COMPANY.
3. ALL FITTINGS, PIPING, VALVES AND MATERIALS INCLUDING THE APPROVED REDUCED PRESSURE PREVENTION DEVICE SHALL BE FURNISHED, INSTALLED AND TESTED BY CITY OF NAPLES WATER COMPANY.
4. CONTRACTOR/CUSTOMER SHALL PROVIDE PROTECTION FOR ASSEMBLY FROM DAMAGE.
6. THE CONTRACTOR/CUSTOMER SHALL PROVIDE A LOCK FOR USE WITH BALL VALVE AND SHALL USE ONLY THE BALL VALVE, NOT THE HYDRANT VALVE, FOR CONTROLLING WATER USED FROM THE FIRE HYDRANT.
7. BY APPLYING FOR SERVICE, CONTRACTOR/CUSTOMER AGREES TO TAKE WATER SERVICE FROM CITY OF NAPLES WATER COMPANY IN ACCORDANCE WITH THE APPROPRIATE RATE SCHEDULE AND IN ACCORDANCE WITH COMPANY RULES AND REGULATIONS, OR ANY SUPERSEDING RATE SCHEDULE AND/OR RULES AND REGULATIONS.



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FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	<i>TEMPORARY WATER SERVICE – FIRE HYDRANT CONNECTION</i>	SHEET: W-07
DRAWN: JAF		DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-07.DWG

**FOR 2" AND 3" FIRE SYSTEM DETECTOR CHECK ASSEMBLY, SEE 2" AND 3" FIRE SYSTEM DETECTOR DWG**



CONC. FNDN. ( TYP. )  
 FULL LENGTH OF METER ASSEMBLY  
 4" WIDE, 6" THICK REINFORCED  
 6 X 6 10/10 WELDED WIRE MESH.

**CITY'S RESPONSIBILITY**  
 - UP TO AND INCLUDING UNDERGROUND VALVE PRECEDING DETECTOR ASSEMBLY

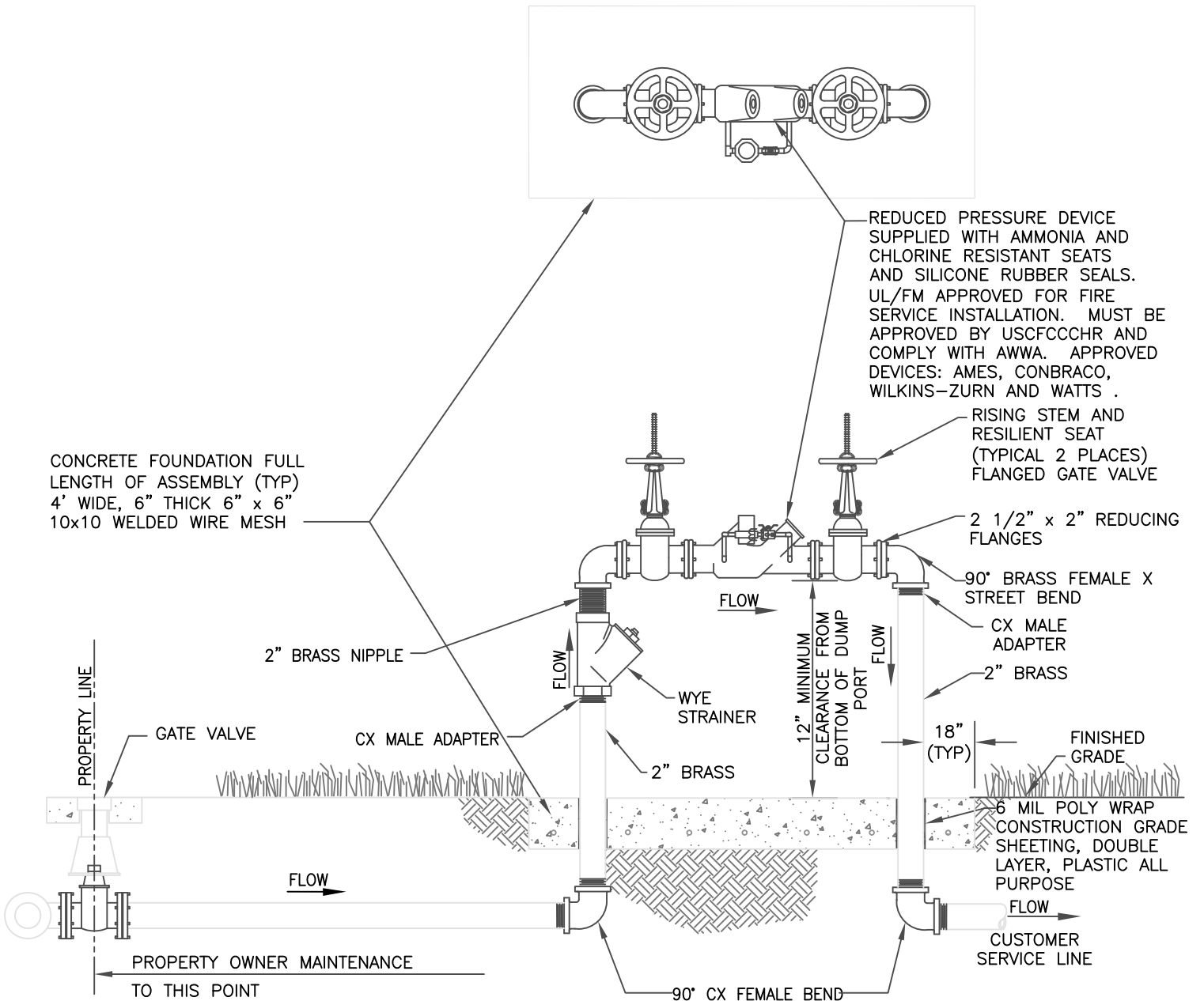
**OWNERS RESPONSIBILITY**  
 - FLANGED GATE VALVE WITH RISING STEM & RESILIENT SEAT (TYP)  
 - 12" SPOOL PIECE

- NOTES:**
- 1) ALL ABOVE GROUND PIPE WILL HAVE FLANGED END D.I.P. CLASS 51 ALL NUTS & BOLTS SHALL BE 316 STAINLESS STEEL.
  - 2) FOUR (4) VEHICULAR GUARD POSTS TO BE INSTALLED AROUND METER. CONFIGURATION TO BE ILLUSTRATED ON CONSTRUCTION DOCUMENTS SUBMITTED FOR REVIEW AND APPROVAL.
  - 3) AS THIS UNIT WILL REQUIRE PERIODIC TESTING, FACILITIES REQUIRING CONTINUOUS WATER SERVICE MAY WISH TO INSTALL PARALLEL UNITS TO PREVENT SERVICE INTERRUPTIONS.
  - 4) BACKFLOW ASSY. WILL BE OWNED & MAINTAINED BY PROPERTY OWNER.
  - 5) CITY WILL REQUIRE DEDICATION OF MATERIAL UP TO AND INCLUDING THE UNDERGROUND ISOLATION VALVE PRECEDING THE DETECTOR ASSEMBLY.
  - 6) BACKFLOW UNIT REQUIRES INITIAL CERTIFICATION BY CITY OF NAPLES WATER DEPARTMENT (Backflow Division).
  - 7) ALL PLANTINGS SHALL BE A MINIMUM OF 3' FROM EDGE OF SLAB, AND PROVIDE A 3' ACCESS OPENING.
  - 8) ALL ABOVE GROUND PIPING INCLUDING ASSEMBLY WILL BE PAINTED RUSTOLEUM FEDERAL SAFETY RED OR PER CITY ORDINANCE 66-66H.
  - 9) FOR 2" AND 3" FIRE SYSTEM DETECTOR CHECK ASSEMBLY W/O FIRE HYDRANT DOWNSTREAM DETAIL DWG., SEE 2" AND 3" FIRE SYSTEM DETECTOR DWG

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FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	<b>FIRE SYSTEM</b>	SHEET: W-08
DRAWN: JAF	<b>DETECTOR CHECK ASSEMBLY</b>	DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-08.DWG





**NOTES:**

- 1) NO FIRE HYDRANT CONNECTIONS OR DOMESTIC SERVICE CONNECTIONS PERMITTED DOWNSTREAM OF ASSEMBLY.
- 2) ASSEMBLY WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER, STARTING FROM THE GATE VALVE AT PROPERTY LINE. PLACE BOLLARDS AROUND ASSEMBLY IF NECESSARY.
- 3) BACKFLOW DEVICE REQUIRES INITIAL CERTIFICATION BY AN APPROVED CERTIFIED TESTER, WITH RESULTS AND ANNUAL TEST RESULTS SUBMITTED TO THE CITY WATER DEPARTMENT.
- 4) ALL PLANTING SHALL BE A MINIMUM OF 3' FROM EDGE OF SLAB, AND SHALL PROVIDE A 3' ACCESS OPENING.
- 5) THIS ASSEMBLY SHALL BE PAINTED WITH RED EPOXY PAINT.
- 6) ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61.
- 7) PROVIDE 3/4" BYPASS WITH FLOW METER.

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FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE: SEPT 2010	2" & 3" FIRE SYSTEM DETECTOR CHECK ASSEMBLY W/O FH DOWNSTREAM	SHEET: W-09
DRAWN: JAF		DIR: WATER
SCALE: N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102	DWG. W-09.DWG