

4. AFTER RELEASE FROM THE HEALTH DEPARTMENT, BOTH VALVES

TO BE LEFT OPEN WITH VALVE BOX INSTALLED ON BOTH VALVES.

6. TAPPING SADDLE OR SLEEVE (PER CURRENT CITY PRODUCT LIST) IS

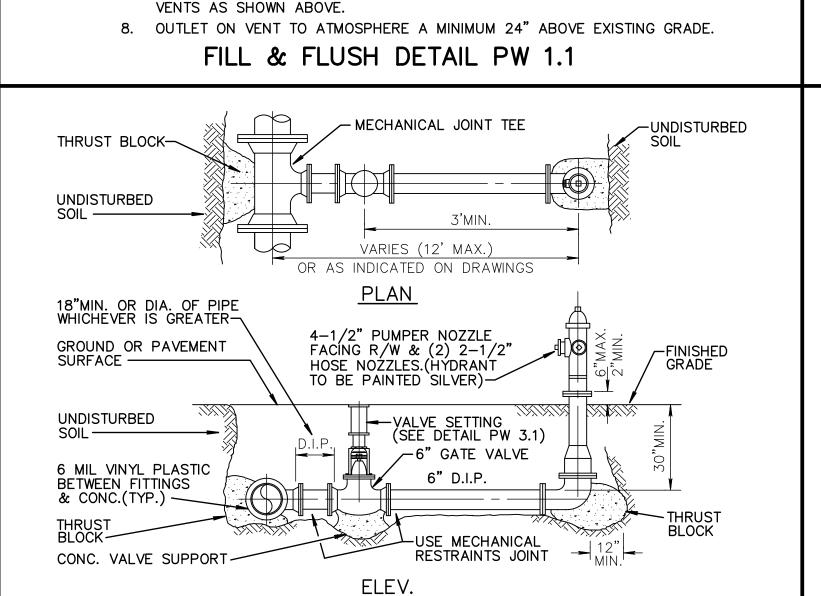
REQUIRED ON EXISTING MAIN.

5. PRESSURE TEST PUMP MAY CONNECT TO SERVICE LINE, FIRE HYDRANTS

OR BLOWOFF. NO EXTRA TAPS ARE PERMITTED SOLELY FOR TESTING

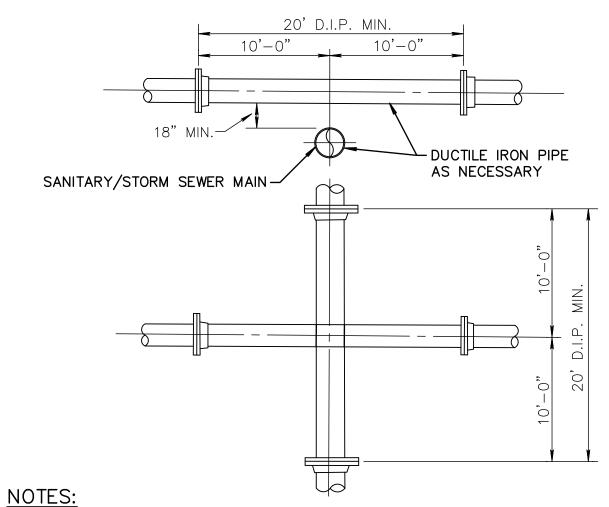
PURPOSES UNLESS PRECEEDING ARE NOT PRESENT IN TEST SECTION.

7. SETUP FOR ALL DOUBLE VALVE CONNECTIONS TO INCLUDE ATMOSPHERE



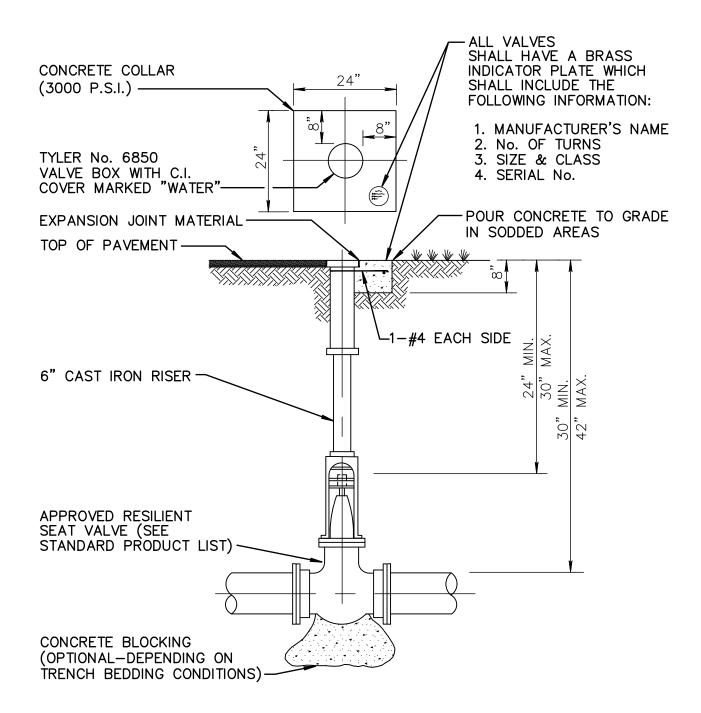
- 1. HYDRANT SHALL BE INSTALLED PLUMB AND TRUE IN UNOBSTRUCTED LOCATION. (7.5' CLEARANCE ON THREE SIDES, 4' CLEARANCE AT REAR, WITH 3' ACCESS LANE)
- 2. NO BARREL EXTENSION SHALL BE PERMITTED WITHOUT PRIOR CONSENT OF CITY ENGINEER.
- 3. VALVE SHALL BE PLACED ADJACENT TO MAIN, TIED TO TEE.
- 4. ANCHOR TEES AND FITTINGS ARE PERMITTED.
- 5. HYDRANT SHALL BE MUELLER CENTURION, AMERICAN B-84B, CLOW MEDALLION OR KENNEDY K81A WITH TRAFFIC BREAKAWAY FLANGE AND 5-1/4" VALVE.
- 6. HYDRANTS SHALL NOT ENCROACH IN SIDEWALKS, ROADWAYS, OR BIKE PATHS.
- 7. ON RUNS LONGER THAN 20 FEET A SECOND VALVE IS REQUIRED AT THE HYDRANT.
- 8. ALL HYDRANT INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF DELRAY BEACH FIRE PREVENTION CODE SEC. 96.05.
- 9. IN CERTAIN SITUATIONS, PROTECTIVE BOLLARDS MAY BE REQUIRED AS DIRECTED BY THE ENGINEERING DEPT. (SEE BOLLARD DETAIL PW 5.2)
- 10. FIRE HYDRANTS INSTALLED BUT NOT YET IN SERVICE SHALL BE COVERED
- WITH A BURLAP, OR PLASTIC SACK, OR HAVE OUT OF SERVICE RING IN PLACE.
- 11. ALL HYDRANT LEADS GREATER THAN 20-FEET MUST HAVE AUTOMATIC FLUSHER INSTALLED AT HYDRANT END (HYDROGUARD HG-1 STANDARD).

TYPICAL FIRE HYDRANT INSTALLATION PW 5.1



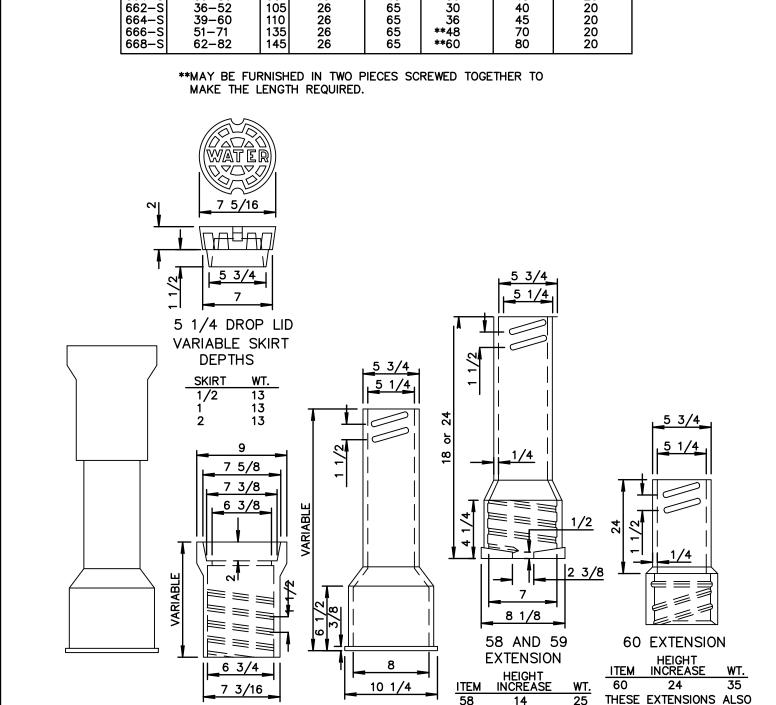
- 1. STORM AND SANITARY SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM POINT OF CROSSING WITH NO LESS THAN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P., AND THE MINIMUM VERTICAL SEPARATION SHALL BE 6 INCHES. WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER A WATER MAIN, THE CRITERIA FOR MINIMUM 18" VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STARTED ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE CLASS 52 D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
- 2. MAINTAIN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN, AS A MINIMUM.
- 3. FORCE MAIN CROSSING WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND THE OUTSIDE OF THE WATER MAIN WITH WATER MAIN CROSSING OVER FORCE MAIN.
- 4. SEWER SERVICE LATERALS SHALL CROSS UNDER WATERMAINS WITH A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES. IF EIGHTEEN (18) INCHES VERTICAL SEPARATION CANNOT BE MAINTAINED, THEN THE WATERMAIN SHALL BE D.I.P. AND THE SANITARY LATERAL C-900 SDR18 OR BETTER AND THE MINIMUM SEPARATION SHALL BE SIX (6)
- 5. WHEN IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER THE SEWER SERVICE LATERAL A MINIMUM VERTICAL SEPARATION OF AT LEAST TWELVE (12) INCHES MUST BE MAINTAINED. THE WATERMAIN SHALL BE D.I.P. AND THE SEWER LATERAL SHALL BE C-900 SDR-18 OR BETER.

WATER MAIN & SEWER CONFLICT DETAIL PW 2.1



- 1. WHEN VALVE IS DEEPER THAN 30" AN EXTENSION WITH UNIVERSAL JOINT SHALL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE EXTENSION BOLTS & NUTS SHALL BE 316 STAINLESS STEEL. A 316 STAINLESS STEEL CENTERING PLATE SHALL ALSO BE REQUIRED.
- 2. AT DEAD END OR WHERE MAIN LINES CHANGE DIRECTION, VALVES SHALL BE RESTRAINED USING MECHANICAL JOINT RESTRAINTS, TIERODS, OR OTHER APPROVED RESTRAINT.

TYPICAL GATE VALVE DETAIL 4" THRU 12" PW 3.1

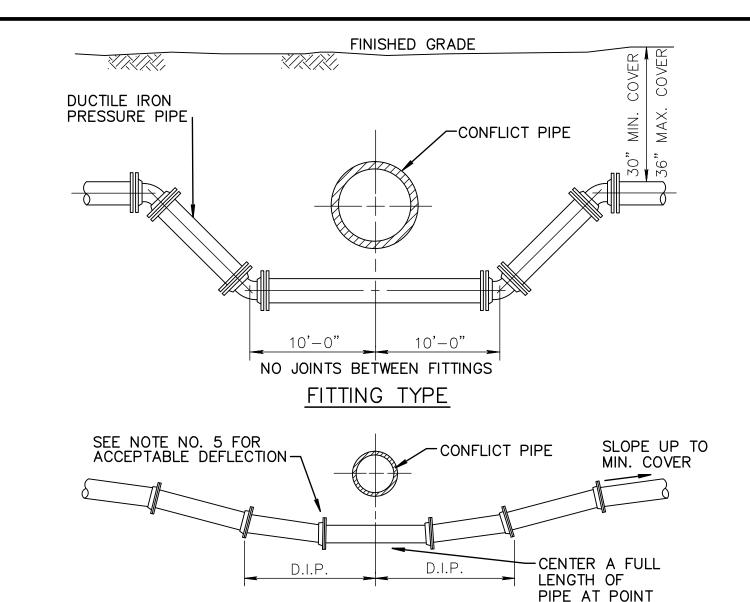


NOTE: LOCKING LIDS WILL NOT BE ACCEPTED.

TOP

EXTENSION IN

CAST IRON VALVE BOXES, TWO-PIECE PW 3.2



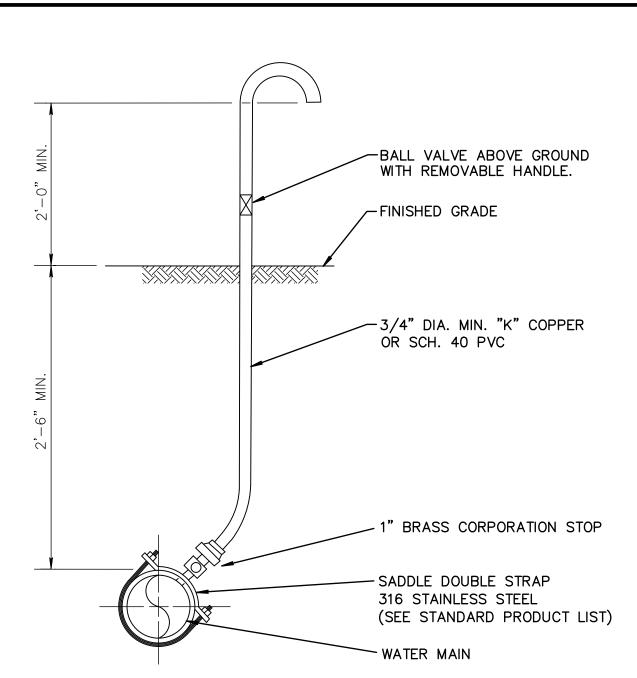
NOTES:

1. THERE SHALL BE IN ALL CASES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.

DEFLECTION TYPE

- 2. WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
- 3. FITTINGS SHALL BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
- 4. THE DEFLECTION TYPE CROSSING IS PREFERRED.
- 5. DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
- 6. REFER TO TYPICAL RESTRAINING DETAIL PP 2.1

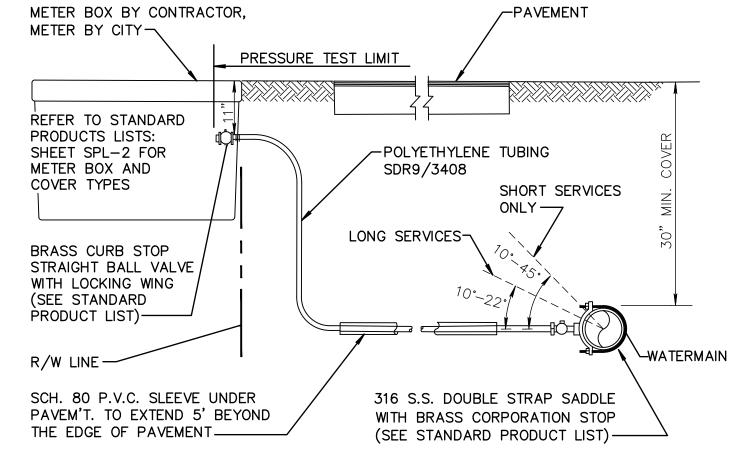
PRESSURE PIPE CONFLICT DETAIL PP 3.1



NOTES:

- SAMPLE POINT SHOULD BE AT SERVICE LINE OR FIRE HYDRANT IF POSSIBLE
- 2. IF SAMPLE POINT IS NOT AT SERVICE LINE OR FIRE HYDRANT, CORP. STOP SHALL BE SHUT OFF AT MAIN AND ALL TUBING SHALL BE REMOVED, AND CORP. STOP SHALL HAVE A BRASS PLUG OR CAP INSTALLED AFTER RELEASE OF WATER MAIN BY PALM BEACH COUNTY HEALTH DEPARTMENT.
- 3. IF AT ALL POSSIBLE SAMPLE POINT SHALL NOT BE LOCATED IN A TRAFFIC
- 4. SAMPLE POINTS SHALL KEEP RUNNING UNTIL HEALTH DEPT. RELEASE AND ALL MAIN LINE VALVES ARE OPENED.

TYPICAL SAMPLE POINT PW 7.1

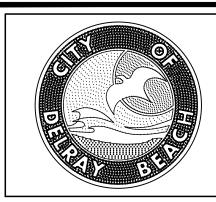


NOTES:

BOX COMPLETE

- SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
- 2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
- ALL METERS REQUIRE A LOCKING BRASS CURB STOP WITH LOCK WING (1"MIN.).
- 4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
- 5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
- CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
- MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
- METER SIZE WILL BE DETERMINED BY PUBLIC UTILITIES DEPT. UPON APPLICATION FOR SERVICE.
- 9. ALL VALVES TO BE BALL VALVES.
- METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
- ALL SERVICES UNDER ROADWAYS ARE TO BE INSTALLED BY TRENCHLESS METHOD, UNLESS OTHERWISE APPROVED.
- ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/CONTRACTOR/DEVELOPER; F EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO THE METER.

TYPICAL SERVICE CONNECTION PW 9.1a



CITY of DELRAY BEACH ENVIRONMENTAL SERVICES DEPARTMENT

434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 Phone: (561) 243-7322 Fax: (561) 243-7060 www.mydelraybeach.com ISAAC KOVNER, P.E Lic. No. 54901

OF CROSSING

ENGINEER'S SEA

	DESIGNED BY	IK					_
\ L	DRAWN BY	00B					1
	CHECKED BY	IK					1
							1
							ì
.E.							ì
	DATE	JAN 2016	REVISION	DATE	DESCRIPTION	BY	_

MARINE WAY (CANAL STREET) WATER MAIN IMPROVEMENTS

PROJECT NO. 2016-061 SHEET NO.

FIT SERIES 6860 THREE-

PIECE VALVE BOXES.

DETAIL SHEET

3 of 3 FILE ID.