FIRE METERS - OS & Y VALVES, GASKETS & METER (NEPTUNE MACH 10 Ultrasonic Meter)					2" MIN. TRAVEL
SIZE	VALVES (2)	GASKETS (4)	METER w/ Strainer	TOTAL LENGTH	
3" w/ 4" X 3" Reducer **	16"	1/2"	30" **	46 1/2"	
4"	18"	1/2"	27 1/2"	46"	
6"	21"	1/2"	33"	54 1/2"	
8"	23"	1/2"	30"	53 1/2"	
10"	26"	1/2"	41"	67 1/2"	

FIRE &/or Domestic Water SERVICE METERS - TEES, OS & Y VALVES, GASKETS & METERS (NEPTUNE MACH 10 Ultrasonic Meter)					
SIZE	TEES (2)	VALVES (2)	GASKETS (6)	Meter w/ Strainer	TOTAL LENGTH
3" w/ 4" X 3" Reducer **	3" X 3" - 22"	16"	3/4"	30" **	68 3/4"
4"	4" X 3" - 26"	18"	3/4"	27 1/2"	72 1/4"
6"	6" X 4" - 32"	21"	3/4"	33"	86 3/4"
8"	8" X 4" - 36"	23"	3/4"	30"	89 3/4"
10"	10" X 6" - 44"	26"	3/4"	41"	111 3/4"

*All fittings, valves and meters are flanged & all dimensions are from face of flange to face of flange.

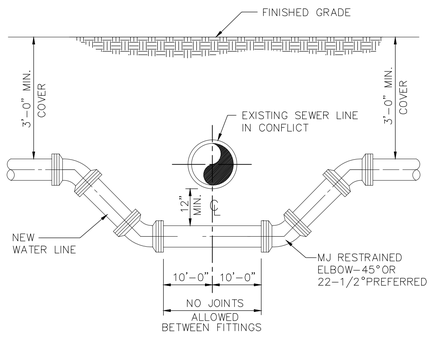
NOTE:
PLEASE NOTE THAT WATER METERS 3" AND LARGER ARE SUBJECT TO AN APPROXIMATE ORDER LEAD TIME OF 60 TO 75 BUSINESS DAYS AFTER FULL PAYMENT. PLEASE CONTACT CUSTOMER SERVICE AT 954-786-4637 TO ARRANGE FOR METER PROCUREMENT AND INSTALLATION. LARGE METERS MUST BE AT MINIMUM ORDERED PRIOR TO INITIAL INSPECTIONS.

ENGINEERING STANDARDS 2022

REVISIONS BY	DATE
T.W.	02-2008
S.S.	11-2016
A.S.	01-2022

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

METER INSTALL DIMENSION LIST
DATE: JAN. 2022
DWG. NO. 106-4



NOTES
WHERE CONDITIONS PERMIT, PIPE DEFLECTION MAY BE USED INSTEAD OF BENDS TO OBTAIN THE MINIMUM CLEARANCE. FACTORY OFFSETS MAY BE USED.

TYPICAL CONFLICT DETAIL

USE MEGALUGS AT ALL PIPE JOINTS

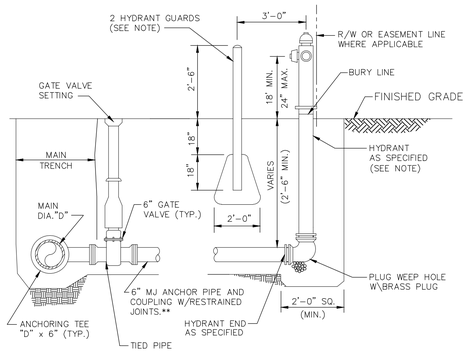
ALL D.I.P. TO BE PAINTED BLUE ON TOP HALF OF PIPE.

ENGINEERING STANDARDS 2022

REVISIONS BY	DATE
S.S.	04-2005
S.S.	01-2012

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

TYPICAL CONFLICT (WATER)
DATE: MAY 2022
DWG. NO. 108-1



NOTES
HYDRANT GUARDS TO BE 6" DIAMETER GALVANIZED STEEL PIPE PAINTED YELLOW FILLED WITH CONCRETE. OMIT GUARDS IN LOCATIONS WHERE SIDEWALKS EXIST.

**USE 2-3/4" S.S. TIE RODS WHEN DISTANCE BETWEEN MAIN AND HYDRANT < 10'. TIE RODS WILL BE USED W/RESTRAINED JOINTS OR USE MEGALUGS AT ALL PIPE JOINTS

HYDRANTS INSTALLED ON EXISTING WATER MAINS MUST USE A MUELLER MJ DI TAPPING SLEEVE, H-615 OR APPROVED EQUAL.

HYDRANTS CONNECTED TO NEW MAINS SHALL BE CONNECTED USING A HYDRANT TEE.

ALL POMPANO BEACH HYDRANTS SHALL BE PAINTED RED.

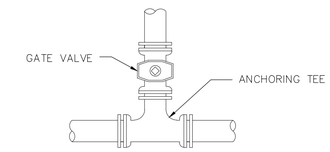
TYPICAL FIRE HYDRANT ASSEMBLY

ENGINEERING STANDARDS 2022

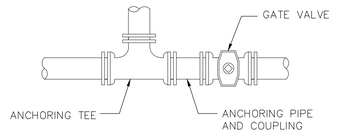
REVISIONS BY	DATE
T.W.	11-2007
T.W.	10-2010
S.S.	2-2012
S.S.	11-2012

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

FIRE HYDRANT ASSEMBLY
DATE: MAY 2022
DWG. NO. 109-1



RESTRAINED VALVE AT TEE (BRANCH)



RESTRAINED VALVE AT TEE (IN LINE)

USE MEGALUGS AT ALL PIPE JOINTS

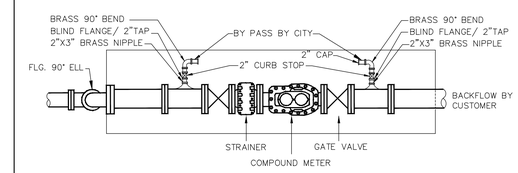
ALL D.I.P. TO BE PAINTED BLUE ON THE TOP HALF OF PIPE.

ENGINEERING STANDARDS 2022

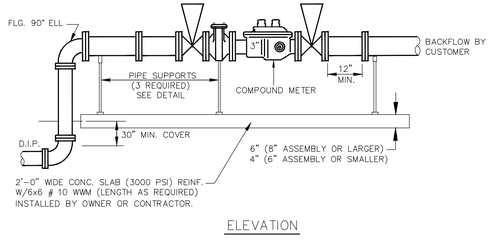
REVISIONS BY	DATE
S.S.	JUNE 2005

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

RESTRAINED VALVE AT TEE
DATE: MAY 2022
DWG. NO. 111-1



PLAN



ELEVATION

DOMESTIC SERVICE ONLY

PLEASE SEE METER INSTALL DIMENSION LIST ON STANDARD NO. 106-4

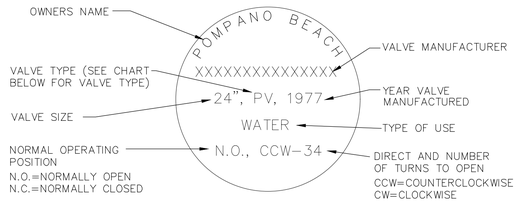
USE MEGALUGS AT ALL PIPE JOINTS

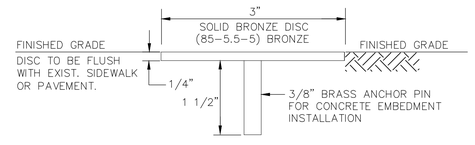
ENGINEERING STANDARDS 2022

REVISIONS BY	DATE
TCW	04-08
S.S.	01-2012
S.S.	11-2012

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

DOMESTIC SERVICE ONLY
DATE: APRIL 2022
DWG. NO. 112-1





VALVE TYPES
BALL VALVE--BALLV
RESILIENT WEDGE GATE VALVE--RWGV
BUTTERFLY VALVE--BV
PLUG VALVE--PV

NOTES:
1. VALVE INFORMATION TO BE TRIPLE ENGRAVED INTO TOP SURFACE WITH 1/4" CAPITAL LETTERS.
2. ENTIRE MARKER TO BE COATED WITH CLEAR EPOXY TO PREVENT TARNISHING,
3. VALVE INFORMATION TO BE APPROVED BY CITY OF POMPANO BEACH UTILITIES DEPARTMENT.
4. MARKERS SHALL BE MANUFACTURED BY RG WRENCH, OR APPROVED EQUAL

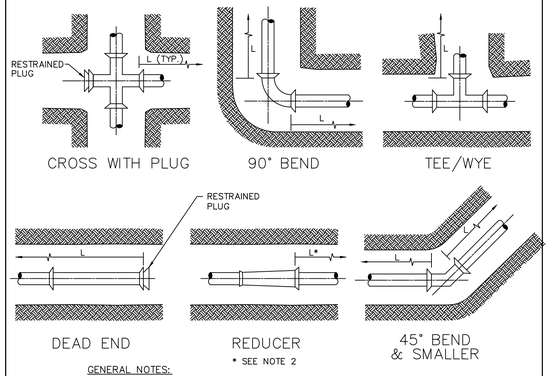
UNDERGROUND VALVE IDENTIFICATION MARKER

ENGINEERING STANDARDS 2022

REVISIONS BY	DATE
S.S.	04-2005
T.W.	11-2007
T.W.	02-2008
S.S.	1-24-12

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

UNDERGROUND VALVE IDENTIFICATION MARKER
DATE: FEB. 2022
DWG. NO. 115-1



GENERAL NOTES:
1. VALUES IN TABLE ARE BASED ON 3' OF COVER, 100 PSI INTERNAL PRESSURE, FOR FORCE MAINS, 150 PSI REUSE WATER LINES, ANSI/AWWA C605 & C150/A21.50 LAYING CONDITION 3, ASTM D2487 SAND-SILT SP SOIL TYPE, AND SAFETY FACTOR OF 2.0. RESTRAINED LENGTHS WERE COMPUTED PER DIPRA "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AND "PVC PIPE THRUST RESTRAINT DESIGN HANDBOOK," EBAA IRON, INC.
2. CONFIRM THE EXACT LENGTH OF RESTRAINING REQUIRED FOR REDUCERS, PIPE ENCASED IN POLYETHYLENE AND ENCROACHING RESTRAINED LENGTHS WITH THE DESIGN ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPER INSTALLATION OF THE RESTRAINED JOINTS TO PREVENT MOVEMENT OF THE PIPE & FITTINGS.
4. IN THE EVENT OF A CONFLICT BETWEEN RESTRAINED LENGTHS SHOWN ON THE TABLE AND RESTRAINED LENGTHS SHOWN ON THE DRAWINGS, THE LONGEST RESTRAINED LENGTH SHALL BE USED.

RESTRAINED JOINT INFORMATION

ENGINEERING STANDARDS 2022

REVISIONS BY	DATE

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

RESTRAINED JOINT INFORMATION
DATE: MAY 2022
DWG. NO. 118-1

PVC HORIZONTAL BENDS AND VERTICAL UP BENDS					
	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)				
PIPE SIZE (IN.)	BENDS 90°	BENDS 45°	BENDS 22.5°	BENDS 11.25°	CROSS WITH PLUG / DEAD END / TEE/WYE
6	26	11	6	3	53
8	33	14	7	4	68
12	46	19	10	5	96

PVC VERTICAL DOWN BEND					
	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)				
PIPE SIZE (IN.)	BENDS 90°	BENDS 45°	BENDS 22.5°	BENDS 11.25°	
6	26	11	6	3	
8	33	14	7	4	
12	46	19	10	5	

DIP HORIZONTAL BENDS AND VERTICAL UP BENDS					
	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)				
PIPE SIZE (IN.)	BENDS 90°	BENDS 45°	BENDS 22.5°	BENDS 11.25°	CROSS WITH PLUG / DEAD END / TEE/WYE
12"	68	28	14	7	144
24"	119	49	24	12	258

DIP VERTICAL DOWN BEND					
	RESTRAINED JOINT LENGTH L (MINIMUM DISTANCE IN FEET FROM FITTING - EACH WAY)				
PIPE SIZE (IN.)	BENDS 90°	BENDS 45°	BENDS 22.5°	BENDS 11.25°	
12"	144	60	29	14	
24"	258	107	51	25	

RESTRAINED JOINT INFORMATION

ENGINEERING STANDARDS 2022

REVISIONS BY	DATE

ENGINEERING DIVISION
CITY OF POMPANO BEACH
SCALE: N.T.S.

RESTRAINED JOINT INFORMATION
DATE: MAY 2022
DWG. NO. 118-2

DRC
PZ25-12000010
03/06/2025

KEITH
301 East Atlantic Blvd.
Pompano Beach, FL 33060
PH: (954) 788-3400
Florida Engineering Business License: CA7928
Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC26000457

Plotted by: bbaldwin On 4/15/2025 5:52 PM

REVISIONS

NO.	DESCRIPTION	DATE

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

ISSUE DATE:	02/25/25
DESIGNED BY:	BB
DRAWN BY:	BB/FA
CHECKED BY:	NW
BID-CONTRACT:	

This item has been digitally signed and sealed by NILES T. WARRICK, P.E. on the date adjacent to the seal.

NILES T. WARRICK LICENSE No. 94320 STATE OF FLORIDA PROFESSIONAL ENGINEER

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

2025.04.15 23:04:47-04'00'

NILES T. WARRICK, P.E.
FLORIDA REG. NO. 94320
(FOR THE FIRM)

CLIENT
PORTMAN HOLDINGS

PROJECT
2400 E ATLANTIC
2400 East Atlantic Blvd.
Pompano Beach, FL

SHEET TITLE
WATER AND SEWER DETAILS

SHEET NUMBER CU-502

PROJECT NUMBER 14267.00

STATUS: DRC SET

Drawing name: H:\14267.00 - 2400 E Atlantic - Portman Holdings\Engineering\Cadd\14267.00-CU-SXX.dwg