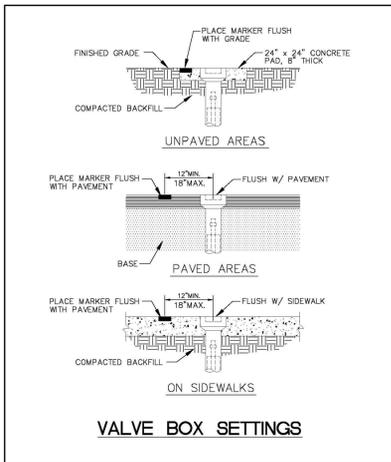
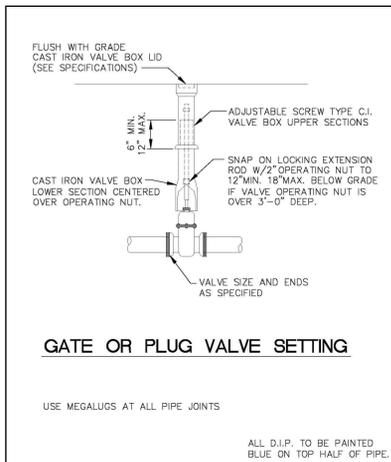


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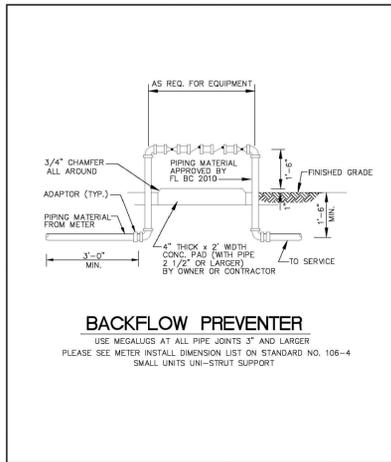
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	VALVE BOX SETTINGS
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 04-2003		DWG. NO.
		<b>102-1</b>
SCALE: N.T.S.		

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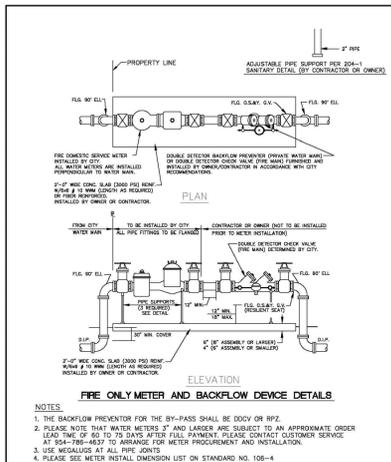
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	GATE OR PLUG VALVE SETTINGS
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 04-2003		DWG. NO.
		<b>103-1</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	BACKFLOW PREVENTER
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 04-2003		DWG. NO.
		<b>106-1</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	FIRE ONLY METER AND BACKFLOW DEVICE
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 04-2003		DWG. NO.
		<b>106-3</b>
SCALE: N.T.S.		

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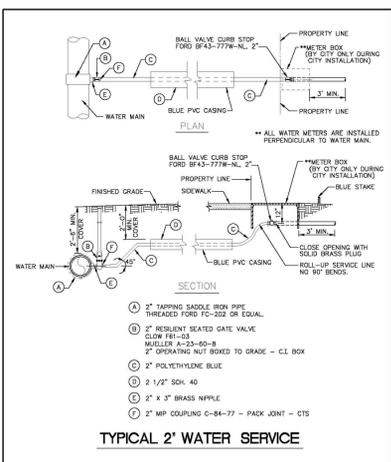
FIRE METERS - OS & Y VALVES, GASKETS, SPOOL & METER				
SIZE	VALVES (2)	GASKETS (4)	METER	TOTAL LENGTH
3"	16"	20	26 1/8"	42 5/8"
4"	18"	22	28"	45 1/2"
6"	21"	24	34"	59 3/8"
8"	23"	26	41 5/8"	74 13/16"
10"	26"	28	50"	82 1/2"

FIRE SERVICE METERS - TEE'S OS & Y VALVES, GASKETS & METERS				
SIZE	TEES (2)	VALVES (2)	GASKETS (4)	METER
4" x 1"	4" x 3"-26"	18"	3/4"	35"
6" x 1 1/2"	6" x 4"-32"	21"	3/4"	45"
8"	8" x 4"-32"	24"	3/4"	55"
10" x 2"	10" x 6"-44"	28"	3/4"	68"

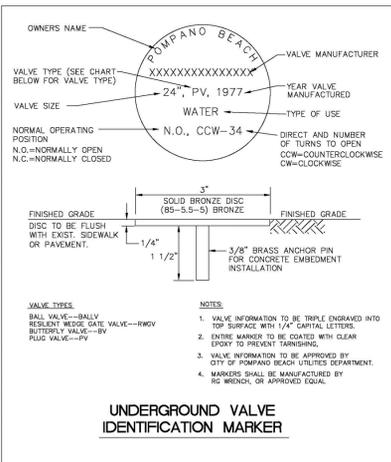
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	METER INSTALL DIMENSION LIST
BY DATE	CITY OF POMPAÑO BEACH	DATE: FEB. 2008
S.S. 04-2003		DWG. NO.
		<b>106-4</b>
SCALE: N.T.S.		

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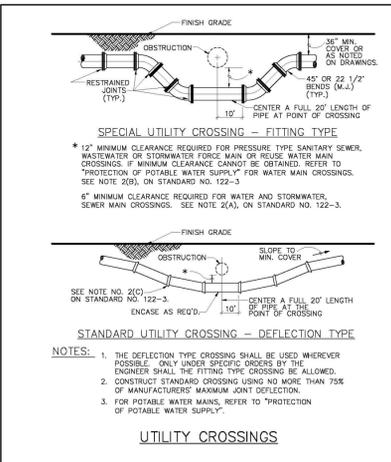
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	TYPICAL 2" WATER SERVICE
BY DATE	CITY OF POMPAÑO BEACH	DATE: APRIL 2004
S.S. 04-2003		DWG. NO.
		<b>107-2</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	UNDERGROUND VALVE IDENTIFICATION MARKER
BY DATE	CITY OF POMPAÑO BEACH	DATE: FEB. 1998
S.S. 04-2003		DWG. NO.
		<b>115-1</b>
SCALE: N.T.S.		

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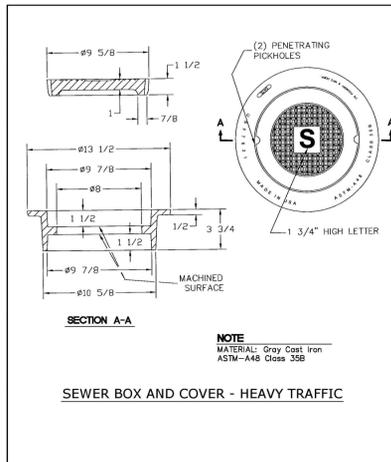


ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	UTILITY CROSSINGS
BY DATE	CITY OF POMPAÑO BEACH	DATE: JAN. 2012
S.S. 01/12		DWG. NO.
		<b>122-1</b>
SCALE: N.T.S.		

ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	POTABLE WATER SUPPLY NOTES
BY DATE	CITY OF POMPAÑO BEACH	DATE: JAN. 2012
S.S. 01/12		DWG. NO.
		<b>122-2</b>
SCALE: N.T.S.		

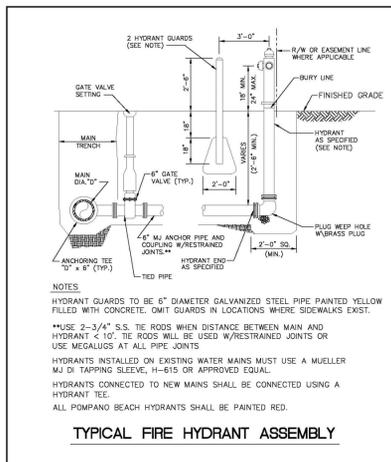
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	POTABLE WATER SUPPLY NOTES
BY DATE	CITY OF POMPAÑO BEACH	DATE: JAN. 2012
S.S. 01/12		DWG. NO.
		<b>122-3</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	SEWER BOX AND COVER HEAVY TRAFFIC
BY DATE	CITY OF POMPAÑO BEACH	DATE: FEB. 2012
S.S. 10/08/11		DWG. NO.
		<b>210-3</b>
SCALE: N.T.S.		

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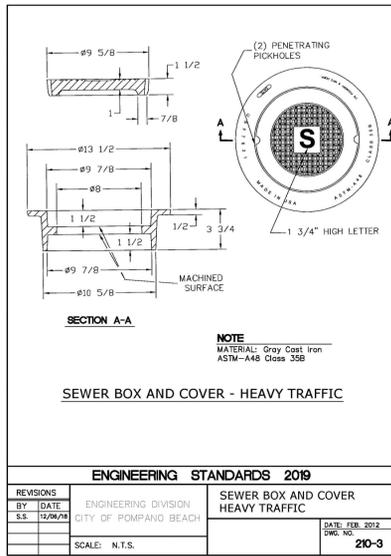
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	FIRE HYDRANT ASSEMBLY
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 10-2002		DWG. NO.
		<b>109-1</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	POTABLE WATER SUPPLY NOTES
BY DATE	CITY OF POMPAÑO BEACH	DATE: JAN. 2012
S.S. 01/12		DWG. NO.
		<b>122-2</b>
SCALE: N.T.S.		

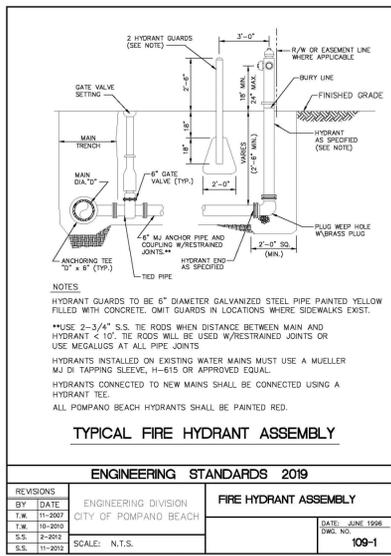
ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	POTABLE WATER SUPPLY NOTES
BY DATE	CITY OF POMPAÑO BEACH	DATE: JAN. 2012
S.S. 01/12		DWG. NO.
		<b>122-3</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	SEWER BOX AND COVER HEAVY TRAFFIC
BY DATE	CITY OF POMPAÑO BEACH	DATE: FEB. 2012
S.S. 10/08/11		DWG. NO.
		<b>210-3</b>
SCALE: N.T.S.		

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ENGINEERING STANDARDS 2019		
REVISIONS	ENGINEERING DIVISION	FIRE HYDRANT ASSEMBLY
BY DATE	CITY OF POMPAÑO BEACH	DATE: JUNE 1998
S.S. 10-2002		DWG. NO.
		<b>109-1</b>
SCALE: N.T.S.		

- WATER SYSTEM NOTES:**
- Ductile iron water main pipe shall conform to the requirements of A.N.S.I./A.W.W.A. C-151/A.21.51-02 and lined and coated per A.N.S.I./A.W.W.A. C-104/A.214-03. 20" and smaller pipe shall be pressure class 350, 24" and larger, pipe shall be pressure class 250.
  - All P.V.C. mains shall be series 1120, class 150 (DR 18) pressure pipe, conforming to A.N.S.I./A.W.W.A. C-900-97, or latest revision, and shall have push on joints, and iron pipe O.D.
  - Fittings shall be ductile iron meeting A.N.S.I./A.W.W.A. C153/21.00 and shall be coated with 6 to 8 mil. Thickness coal tar epoxy conforming to the requirements of A.N.S.I./A.W.W.A. C-555-01 and C114/A21.03.
  - Tapping valves shall be Mueller H667 or approved equal.
  - Gate valves 3' or less shall be NIBCO T-133 OR T-136 with malleable hand wheels. No substitutions allowed.
  - Tapping sleeves shall be Mueller H615 or approved equal.
  - Restrained joint pipe shall be used for all bands, tees, crosses, plugs, and fire hydrants. Thrust blocks shall not be allowed.
  - All valves shall be furnished with extension type cast iron valve boxes of proper length for pipe depth. All boxes shall conform with A.W.W.A. specifications with a shaft of no less than 5 inches and have the word "WATER" cast in the cover. Base of valve box shall have a flared section to fit over stuffing box of valve.
  - Gate valves 4' or larger shall meet A.W.W.A. C-500-02 specification (latest revision). Valves shall be Mueller Co. or approved equal.
  - All meter service connections shall be bronze from plug valve. No gate valves are to be used (2' or less).
  - Bacteriological tests will be performed by a certified environmental testing laboratory.
  - All connections to existing mains shall be made under the direction of City of Pompano Beach Utilities.
  - Pipe shall be tested under constant pressure of 150 P.S.I. for a minimum test period of 2 hours and shall not exceed the leakage requirements as per A.N.S.I./A.W.W.A. specifications of C-600-99 leakage formula:  $Q = LD \times \text{SQUARE ROOT OF } P/148,000$   
 $Q = \text{ALLOWABLE LEAKAGE, IN GALLONS PER HOUR}$   
 $D = \text{DIAMETER OF THE PIPE TESTED, IN INCHES}$   
 $S = \text{TOTAL LENGTH OF PIPE TESTED, IN FEET}$   
 $P = \text{AVERAGE TEST PRESSURE, IN POUNDS PER SQUARE INCH.}$
  - Fire main shall be tested under constant pressure of 200 P.S.I. and shall be installed by a licensed fire protection contractor.
  - The minimum depth of cover over water mains is 36" except where shown differently on plans.
  - Disinfection of mains shall comply with A.N.S.I./A.W.W.A. C-651-99 standard. Bacteriological sampling points shall be designated on the engineering plans. Minimum one sampling point at each end. Maximum space between sampling points is 1500 feet.
  - There shall be no connection to an existing water main until pressure and bacteriological tests have been conducted and the results are approved and accepted by the City of Pompano Beach Utilities.
  - All service lines 2' or smaller shall be copper tubing, type "K", or plasticized polyethylene 3408, A.S.T.M. D-2737, S.D.R. 9, 200 P.S.I., or SCH. 40 P.V.C.
  - Sanitary sewers and force mains should cross under water mains whenever possible. Sanitary sewers and force mains crossing water mains shall be laid to provide a minimum vertical distance of 18" between the invert of the upper pipe and the crown of the lower pipe whenever possible.
  - Where sanitary sewer force mains must cross a water main with less than 18" vertical separation, both the sewer and water main shall be constructed of ductile iron pipe (DIP) at the crossing. Sufficient lengths of DIP must be used to provide a minimum vertical clearance of 18" with a minimum vertical separation between the water mains and sewer mains, one of the following conditions must be met. The minimum separation between water and sewer mains shall be 3 feet.
  - A minimum 10 foot horizontal separation shall be maintained between any type of sewer and water main in parallel installations whenever possible.
  - The preferred separation between water mains and sewer mains shall be 10 feet. In cases where it is not possible to maintain a 6 foot horizontal separation between the water mains and sewer mains, one of the following conditions must be met. The minimum separation between water and sewer mains shall be 3 feet.
  - The water main must be laid in a separate trench or on an undisturbed earth shall located on one side of the sewer or force main at such elevation that the bottom of the water main is at least 18 inches above the top of the sewer.
  - The sewer or force main is encased in concrete or a watertight carrier pipe.
  - Both the sewer and the water main are constructed of pressure pipe tested to 150 p.s.i.
  - Where it is not possible to maintain a vertical distance of 18" in parallel installations, the water main shall be constructed of DIP and the sanitary sewer or force main shall be constructed of DIP, with a minimum vertical clearance of 6". The water main should be above the sewer. Joints on the water main shall be located as far apart as possible from the joints on the sewer or force main (staggered joints).
  - All crossings shall be arranged so that the sewer pipe joints and the water main pipe joints are equidistant from the point of crossing (pipes centered on the crossing).
  - Where a new pipe conflicts with an existing pipe with less than 18" vertical clearance, the new pipe shall be arranged to meet the crossing requirements above.
  - All DIP shall have adequate protective measures against corrosion and it shall be used only if as determined by the design engineer, based on field conditions.
  - Retainer glands/mechanical joint restraint shall be used only if authorized by the Engineer and shall conform to A.N.S.I./A.W.W.A. standards C 111/A-21.11-00, or latest revision.
  - All glands shall be manufactured from ductile iron as listed by underwriters laboratory for 250 P.S.I. minimum water pressure rating.
  - Glands shall be CLOW Corporation model F-1058, standard fire protection equipment company, or approved equal.
  - Service saddles shall be ductile iron with stainless steel straps. Saddles shall be double strap type. All service saddles shall conform to A.N.S.I./A.W.W.A. C 111/A-21.11-00 and A.S.T.M. A588.
  - All P.V.C. pipe shall be installed in accordance with the Uni-Bell plastic pipe Association's "Guide for installation of P.V.C. pressure pipe for Municipal water distribution system". Water distribution pipe shall be of "BLUE" color. All water main installations shall comply with the color coding requirements of Chapter 62-555.320 F.A.C. (Florida Administrative Code).
  - Detector tape on all P.V.C. mains shall be installed 18" above the water main.
  - All P.V.C. mains must have #6 copper wire, single strand, placed on top of pipe, shall be electrically continuous over the entire length of the pipe, and fastened every 10' with a #12 wire.
  - All DIP shall be installed in accordance with A.N.S.I./A.W.W.A. C-600-99, or latest revision.
  - Pipe deflection shall not exceed 75% of the maximum deflection recommended by the manufacturer.
  - A continuous and uniform bedding shall be provided. Backfill material shall be tamped in layers around the pipe as shown on the plans. Rocks or stones larger than 3/4" diameter found in the trench shall be removed for a depth of at least 6' below the bottom of the pipe.
  - All details and notes on this sheet shall be applicable unless otherwise superseded or noted elsewhere in plans or specifications.
  - All D.I.P. mechanical joint gaskets shall be Viton or approved equal.

REVISIONS	DESCRIPTION
3-31-21	ADDED FIRE HYDRANT DETAIL

DATE	BY	M/G
3-31-21		

**ENGINEERING SURVEYING PLANNING**

**SHAH SIDA DROTOS & ASSOCIATES**

Certificate of Authorization No. LB6456  
3410 North Andrews Avenue Ext. o Pompano Beach, FL 33064  
Ph: 954-943-9433 o FAX: 954-783-4754

FOR THE FIRM:
FOR THE FIRM, <b>Matthew J. Gianni</b> Digitally signed by Matthew J. Gianni Date: 2021.04.01 16:25:50 -0400 MATHIEW J. GIANNI, P.E. FLA. P.E. No. 84229
DATE: <b>DECEMBER, 2020</b>
JOB NO. <b>1008A.02</b>
SHEET <b>CE9</b>

DRC 1220-12000051 5/5/21