

POTABLE WATER STANDARD DETAILS INDEX

DATE MODIFIED

PW-1.1	POTABLE WATER DESIGN NOTES (1 OF 2)	2/2020
PW-1.2	POTABLE WATER DESIGN NOTES (2 OF 2)	2/2020
PW-2.1	POTABLE WATER CONSTRUCTION NOTES (1 OF 4)	2/2020
PW-2.2	POTABLE WATER CONSTRUCTION NOTES (2 OF 4)	2/2020
PW-2.3	POTABLE WATER CONSTRUCTION NOTES (3 OF 4)	2/2020
PW-2.4	POTABLE WATER CONSTRUCTION NOTES (4 OF 4)	2/2020
PW-3	FIRE HYDRANT ASSEMBLY	2/2020
PW-4	POTABLE WATER VALVE AND VALVE BOX (4" - 16" VALVE SIZES)	2/2020
PW-5	TAPPING VALVE AND SLEEVE	2/2020
PW-6	AIR RELEASE VALVE AND PIT	2/2020
PW-7	WATER SERVICE (METER SIZES 3/4" - 1")	2/2020
PW-8	MULTIPLE WATER SERVICES CONNECTION DETAIL FOR COMMERCIAL USE ONLY BUILDING # _____ UNITS _____ - _____	2/2020
PW-9	WATER SERVICE W/ BACKFLOW PREVENTER (METER SIZES 1" - 2")	2/2020
PW-10	WATER SERVICE LATERAL (METER SIZES 1" - 2")	2/2020
PW-11	WATER SERVICE W/ BACKFLOW PREVENTER (METER SIZES 3" - 8")	2/2020
PW-12	POTABLE WATER BLOW-OFF ASSEMBLY	2/2020
PW-13	PVC TO HDPE RESTRAINED JOINT	2/2020
PW-14	FIRE LINE BACKFLOW PREVENTER (REDUCED PRESSURE) 3" - 8"	2/2020
PW-15	DOUBLE CHECK OR REDUCED PRESSURE 2" BACKFLOW PREVENTER	2/2020
PW-16	CONDUIT CROSSING RAILROAD OR ROADWAY	2/2020
PW-17	CONDUIT CROSSING RAILROAD OR ROADWAY	2/2020
PW-18	STORM DRAINAGE PIPE OR SANITARY SEWER MAIN CONFLICT	2/2020
PW-19	STORM DRAINAGE PIPE OR SANITARY SEWER MAIN CONFLICT	2/2020
PW-20	MAIN INSTALLATION BETWEEN DRAINAGE INLET AND SIDEWALK	2/2020
PW-21	NON-STANDARD WATER METER BOX (METER 3" AND LARGER SIZES)	2/2020
PW-22	3" - 8" WATER METER BOX	2/2020
PW-23	THROUGH FRAME PEDESTRIAN LOADING ACCESS SINGLE DOOR	2/2020
PW-24	THROUGH FRAME PEDESTRIAN LOADING ACCESS DOUBLE DOOR	2/2020
PW-25	ACCESS DOOR CROSS REFERENCE CHART	2/2020
PW-26	TEMPORARY JUMPER CONNECTION	2/2020
PW-27	CONTRACTORS' INSTALLATION REQUIREMENTS FOR 2" TEMPORARY METER	2/2020
PW-28	LOCATOR TAPE / TRACER WIRE INSTALLATION FOR WATER MAIN, PIPELINES	2/2020
PW-29	TECHNICAL SPECIFICATIONS FOR M.J. DUCTILE IRON PIPE FITTINGS	2/2020
PW-30	METER BOX LAYOUT	2/2020
PW-31	STANDARD AIR RELEASE VALVE ASSEMBLY ABOVE GROUND VERTICAL PIPE LAYOUT	2/2020



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER DETAILS

DATE
02/2020

DETAIL NUMBER
INDEX

POTABLE WATER DESIGN NOTES (1 OF 2)

1. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 3/4" OR LARGER, DOUBLE RESIDENTIAL SERVICES SHALL BE 1", AND COMMERCIAL SERVICES SHALL BE 1" OR LARGER. NO 1 1/2" SERVICES ARE ALLOWED. POLYETHYLENE TUBING SHALL BE USED, IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS: POLYETHYLENE TUBING SHALL BE CTS 3408 HIGH DENSITY TUBING, BLUE IN COLOR, AND RATED FOR A MINIMUM OF 200 P.S.I. WITH SDR OF 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.T.M. D1248, D3350, D2239, D2737, N.S.F. 14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. ACCEPTABLE MANUFACTURERS: ENDOT ENDOTRACE OR APPROVED EQUAL.
2. WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1,000 FEET.
3. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
4. APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
 - A. RESILIENT SEATED GATE VALVES EQUAL TO OR LESS THAN 24" DIAMETER (AWWA C-515), AMERICAN FLOW CONTROL OR APPROVED EQUAL.
 - B. BUTTERFLY VALVES GREATER THAN 24" (AWWA C-504)
 - C. TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE
5. TYPICALLY, A MINIMUM OF ONE FIRE HYDRANT SHALL BE LOCATED AT EVERY INTERSECTION. OTHER FIRE HYDRANTS SHALL BE LOCATED SO AS TO PRODUCE A MAXIMUM 250.0 FEET AND/OR MEETING THE LATEST NFPA CODE HOSE LAY ALONG THE STREET FOR ALL RESIDENTIAL BUILDINGS. ALL BUILDINGS WITH FIRE PROTECTION SPRINKLER SYSTEM, THE FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 50.0 FEET OF UNOBSTRUCTED DISTANCE TO AN APPROVED FIRE HYDRANT LOCATION BY THE FIRE MARSHALL AND OR PUBLIC UTILITIES ENGINEER.
6. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY, IN CITY RIGHT OF WAY.
7. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY. TRACER WIRE TO BE INCLUDED.
8. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.
9. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S LATEST FIRE (WATER) FLOW CODE. ALL DEDICATED FIRE LINES SHALL BE INDEPENDENT OF ALL OTHER DOMESTIC WATER SERVICES.
10. MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION.
11. WATER SERVICES SHALL BE NORMALLY DOUBLE 3/4" OR LARGER SERVICES LOCATED AT SIDE LOT LINES. INSTANCES WHERE SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2.0' FROM SIDE LOT LINES.
12. THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER DESIGN NOTES

DATE
02/2020

DETAIL NUMBER
PW-1.1

POTABLE WATER DESIGN NOTES (2 OF 2)

13. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
14. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED).
15. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
16. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
17. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER PER CURRENT FDEP / FAC RULES.
18. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER PER CURRENT FDEP/FAC RULES.
19. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.
20. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
21. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
22. WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC WORKS DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.
23. ALL FITTINGS SHALL MEET REQUIREMENTS OF NSF61, LOW LEAD CONTENT.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER DESIGN NOTES

DATE
02/2020

DETAIL NUMBER
PW-1.2

POTABLE WATER CONSTRUCTION NOTES (1 OF 4)

1. THE CITY'S PUBLIC WORKS DEPARTMENT SHALL BE GIVEN A MINIMUM OF 5 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.
2. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID.
3. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
6. 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AND TRACER WIRE, AS WELL.
7. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2"x4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNEL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.
8. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
9. ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
10. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC WORKS PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
11. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET.
12. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY, WITHIN CITY RIGHT OF WAY.
13. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
14. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR DIP PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY. TRACER WIRE TO BE INCLUDED.
15. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER CONSTRUCTION NOTES

DATE
02/2020

DETAIL NUMBER
PW-2.1

POTABLE WATER CONSTRUCTION NOTES (2 OF 4)

16. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST. BACKFLOW PREVENTION SHALL BE REQUIRED.
17. DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE RESTRAINT JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE.
18. DEAD END MAINS SHALL HAVE A FLUSHING DEVICE (MINIMUM 2") LOCATED IN A METER VAULT AT END OF MAIN.
19. MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION.
20. WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
21. ALL WATER SERVICES SHALL BE MARKED WITH AN "A" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT.
22. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X ↑" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN.
23. ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CONTRACTOR AND WITNESSED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS OR TAPPINGS SHALL REQUIRE A MINIMUM OF 5 BUSINESS DAYS, DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC WORKS DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY.
24. LARGE COMMERCIAL WATER AND RECLAIMED WATER METERS GREATER THAN 3" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY. IN ADDITION ALL METERS AND VAULTS 3" AND GREATER SHALL BE INSTALLED BY THE OWNER/ DEVELOPER/ CONTRACTOR. THE FEE COLLECTED BY THE CITY IS FOR MATERIALS ONLY. ALL METERS, 2" AND LESS, SHALL BE INSTALLED BY THE CITY.
25. THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.
26. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER CONSTRUCTION NOTES

DATE
02/2020

DETAIL NUMBER
PW-2.2

POTABLE WATER CONSTRUCTION NOTES (3 OF 4)

27. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS 6" AND LARGER IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC WORKS REPRESENTATIVE OR A CITY UTILITY INSPECTOR.
28. WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC WORKS DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.
29. THE PHYSICAL TAKING OF EACH AND EVERY WATER SAMPLE FOR BACTERIOLOGICAL TESTING SHALL BE OBSERVED BY THE CITY'S DESIGNATED SITE INSPECTOR. THIS SHOULD NOT IMPACT THE PROJECT SINCE THE CONTRACTOR MUST ALREADY COORDINATE FLUSHING ACTIVITY WITH THE INSPECTOR. ALL SAMPLE FORMS SHALL BE COMPLETELY FILLED OUT BY THE SAMPLING COMPANY AND TESTING COMPANY IN ORDER TO BE ACCEPTED. WHEN THE PUBLIC WORKS OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (I.E. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE INDICATES THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC WORKS OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST.
30. ALL WORK PERFORMED ON THE POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A STATE CERTIFIED UNDERGROUND UTILITY CONTRACTOR OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
31. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED).
32. NEWLY CONSTRUCTED POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES. BACKFLOW PREVENTION SHALL BE REQUIRED.
33. FIRE HYDRANTS MAY NOT BE INSTALLED WITHIN 20' OF ANY ELECTRICAL TRANSFORMER
34. ALL H.D.P.E. PIPE UTILIZED FOR WATER, FORCE MAIN AND/OR RECLAIMED WATER MAIN EXTENSIONS SHALL BE S.D.R. 11 WITH #10 COPPERHEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
35. ALL VALVES 2" AND LARGER SHALL BE STANDARD 2" RESILIENT SEATED GATE VALVES (CORP STOPS ARE NOT ACCEPTABLE). AMERICAN FLOW CONTROL VALVES ARE PREFERRED.
36. ALL PVC PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR DEFORMATION. FITTINGS SHALL BE P.V.C. AND MANUFACTURED OF THE SAME DESIGN AS THE PVC PIPE.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER CONSTRUCTION NOTES

DATE
02/2020

DETAIL NUMBER
PW-2.3

POTABLE WATER CONSTRUCTION NOTES (4 OF 4)

37. PVC FITTINGS 4-INCH THROUGH 36-INCH SHALL BE P.V.C. (OR D.I.P.WITH PROTECTO 401) INJECTION-MOLDED OR FABRICATED AS SPECIFIED, MADE OF MATERIALS MEETING OR EXCEEDING THE REQUIREMENTS OF CELL CLASS 12454-B MATERIAL AS DEFINED IN ASTM D1784. FABRICATED FITTINGS SHALL BE MANUFACTURED WITH PIPE THAT MEETS OR EXCEEDS AWWA C-905 STANDARD, AND SHALL BE FIBERGLASS REINFORCED TO A PRESSURE RATING OF 165 PSI. ALL P.V.C. OR MECHANICAL JOINT FITTINGS MUST COMPLY WITH OR EXCEED ANSI/AWWA C907, UNI-B-14 STANDARDS AS THEY APPLY TO THE APPROPRIATE SIZE RANGE AND METHOD OF MANUFACTURE.
38. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
39. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
40. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
41. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
42. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
43. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
44. AT THE UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
45. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR DIP PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.

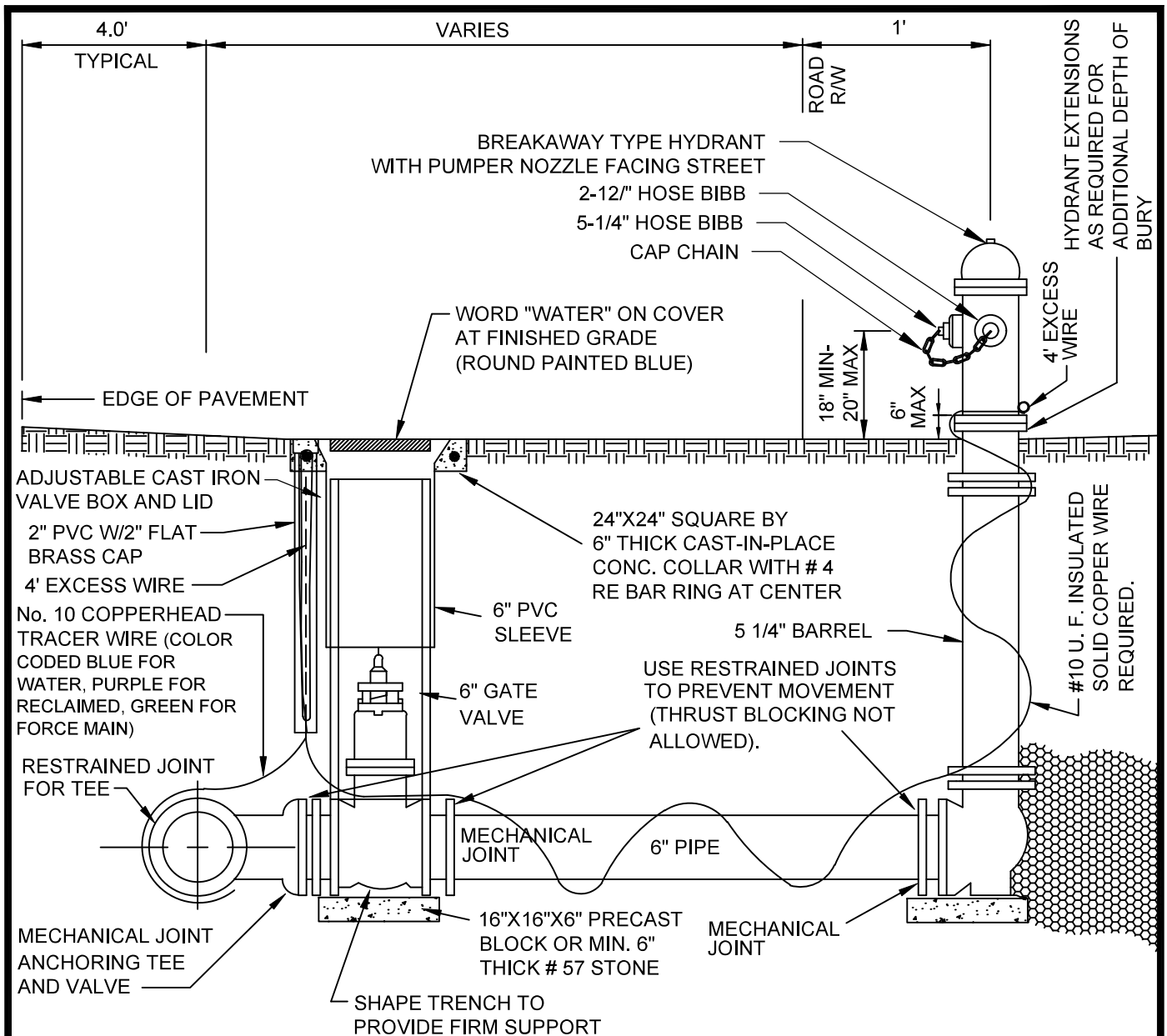


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER CONSTRUCTION NOTES

DATE
02/2020

DETAIL NUMBER
PW-2.4



NOTES:

1. HYDRANTS SHALL BE OF THE NON-DRAINING TYPE. OWNER SHALL FLOW TEST AFTER INSTALL.
2. HYDRANTS TO BE PAINTED EMERGENCY YELLOW AT THE MANUFACTURE-EPOXY OR POLYURETHANE. BONNETS TO BE PAINTED PER CITY PRESSURE RATING AFTER FLOW TEST.
3. HOSE BIBBS TO BE AMERICAN STANDARD THREADS.
4. RESTRAINED JOINTS REQUIRED. THRUST BLOCKS ARE NOT PERMITTED.
5. ADJUSTABLE TRENCH ADAPTOR ASSEMBLY REQUIRED FOR ALL VALVES GREATER THAN 3' DEEP.
6. INSTALL AT SIDE LOT LINES OR AT CORNERS OF ROADWAY INTERSECTIONS (TYPICAL).
7. CONTINUOUS TRACER WIRE TO BE COLOR CODED "BLUE" FOR WATER, LAID ON TOP IN TRENCH.
8. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARE (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MINIMUM 316 STAINLESS STEEL GRADE.
9. THE INTERNAL UPPER AND LOWER STEM SHALL BE MINIMUM OF 304 STAINLESS STEEL GRADE.

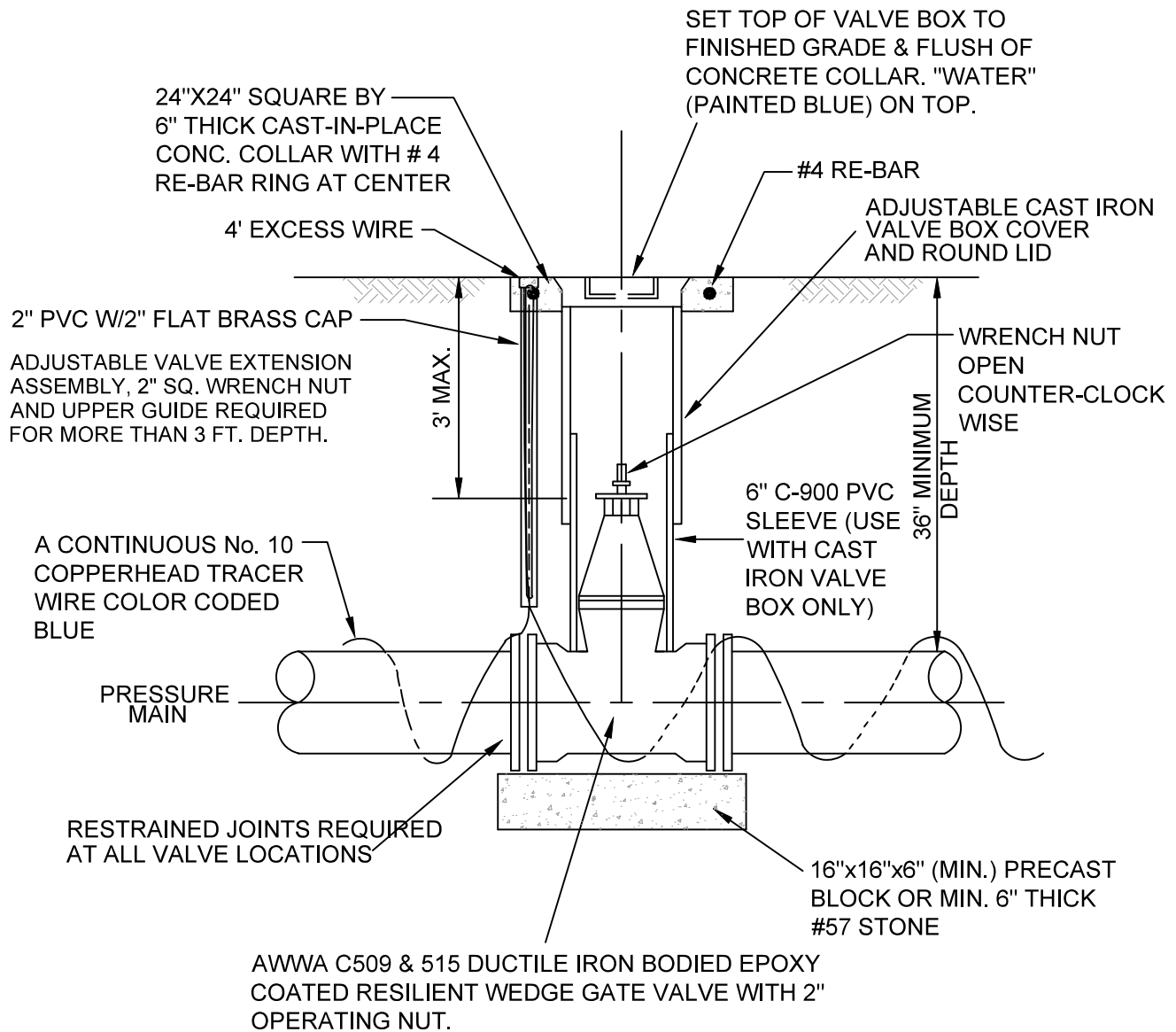


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

FIRE HYDRANT ASSEMBLY

DATE
02/2020

DETAIL NUMBER
PW-3



NOTES:

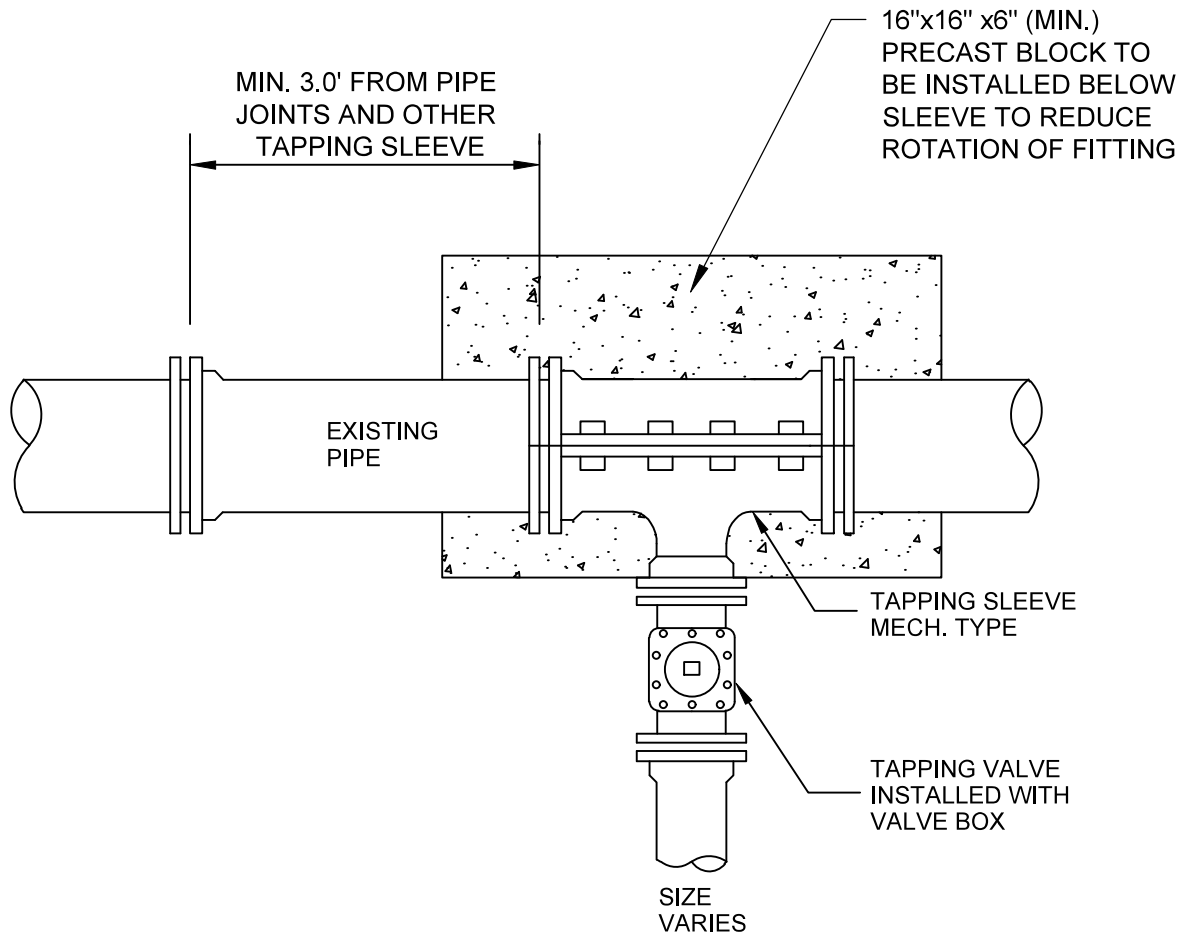
1. BOLT VALVES TO TEE OR CROSS WHEREVER AND WHENEVER APPLICABLE.
2. A CONTINUOUS TRACER WIRE TO BE COLOR CODED "BLUE" FOR WATER, LAYED ON TOP IN TRENCH
3. GATE VALVE WEDGE SHALL BE COMPLETELY ENCAPSULATED WITH EPDM RUBBER.
4. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARE (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MIN. 316 STAINLESS STEEL GRADE.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
POTABLE WATER VALVE AND VALVE BOX
(4" - 16" VALVE SIZES)

DATE
02/2020

DETAIL NUMBER
PW-4



NOTES:

1. EPOXY COATED STEEL, STAINLESS STEEL SLEEVES WITH 316 STAINLESS STEEL BOLTS ARE PERMITTED WITH ALL TYPES OF PIPE MATERIALS.
2. INSTALL REQUIRED RESTRAINED JOINTS. IN NO INSTANCE SHALL THRUST BLOCKS BE ALLOWED.
3. ALL TAPPING OF MAINS SHALL BE PERFORMED BY OWNER / DEVELOPER AND WITNESSED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. ALL MATERIALS TO BE PROVIDED BY DEVELOPER / CONTRACTOR.
4. ALL VALVES 2" OR GREATER SHALL BE GATE VALVES. CORPORATION STOPS ARE NOT ALLOWED ON VALVES 2" OR GREATER EXCEPT ON BLOW-OFFS.

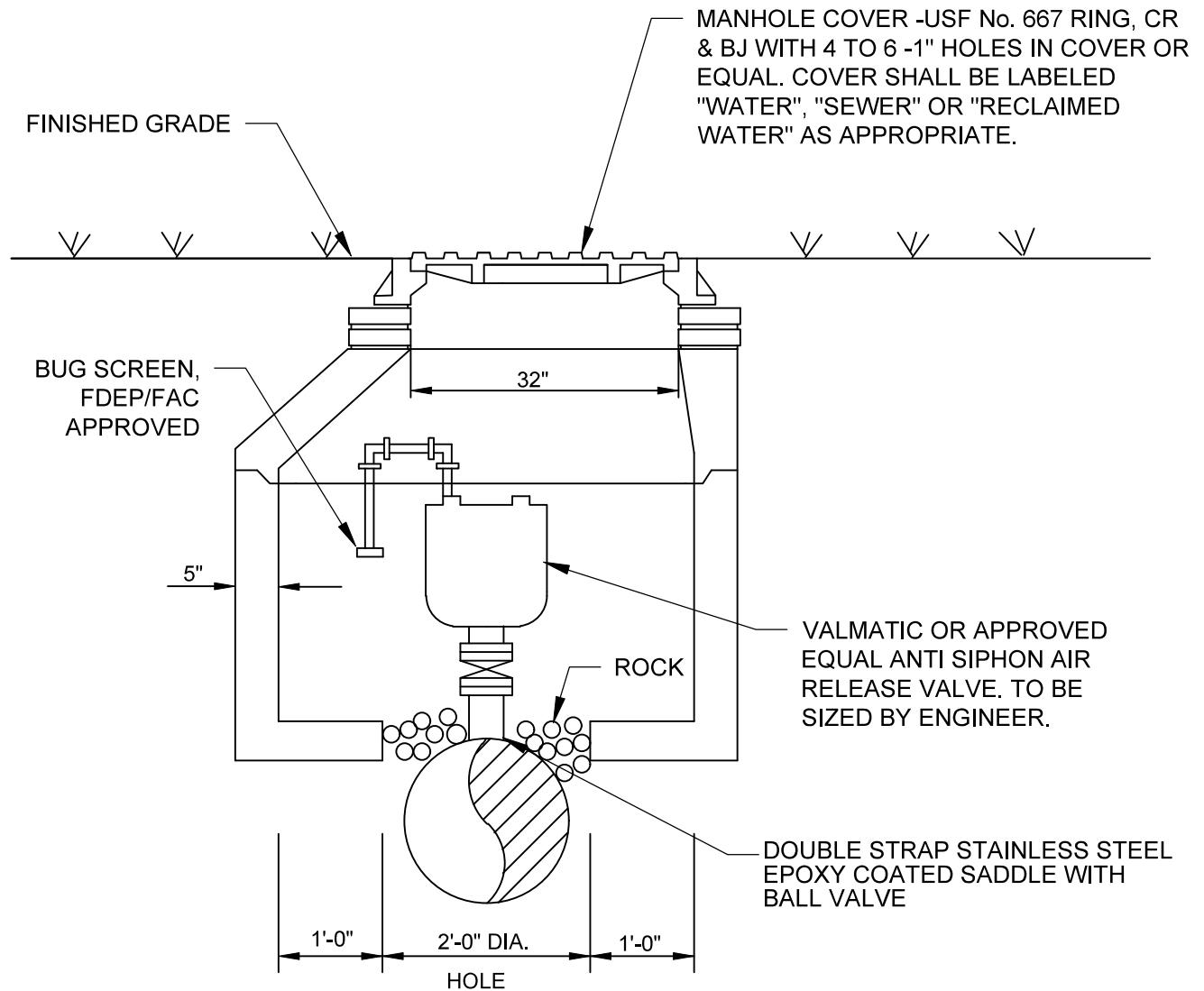


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

TAPPING SLEEVE AND VALVE

DATE
02/2020

DETAIL NUMBER
PW-5



NOTE: USE FOR WATER OR RECLAIMED WATER ALSO

NOTE : ALL AIR RELEASE MANHOLES MUST HAVE MANHOLE COVERS THAT WILL VENT GASES

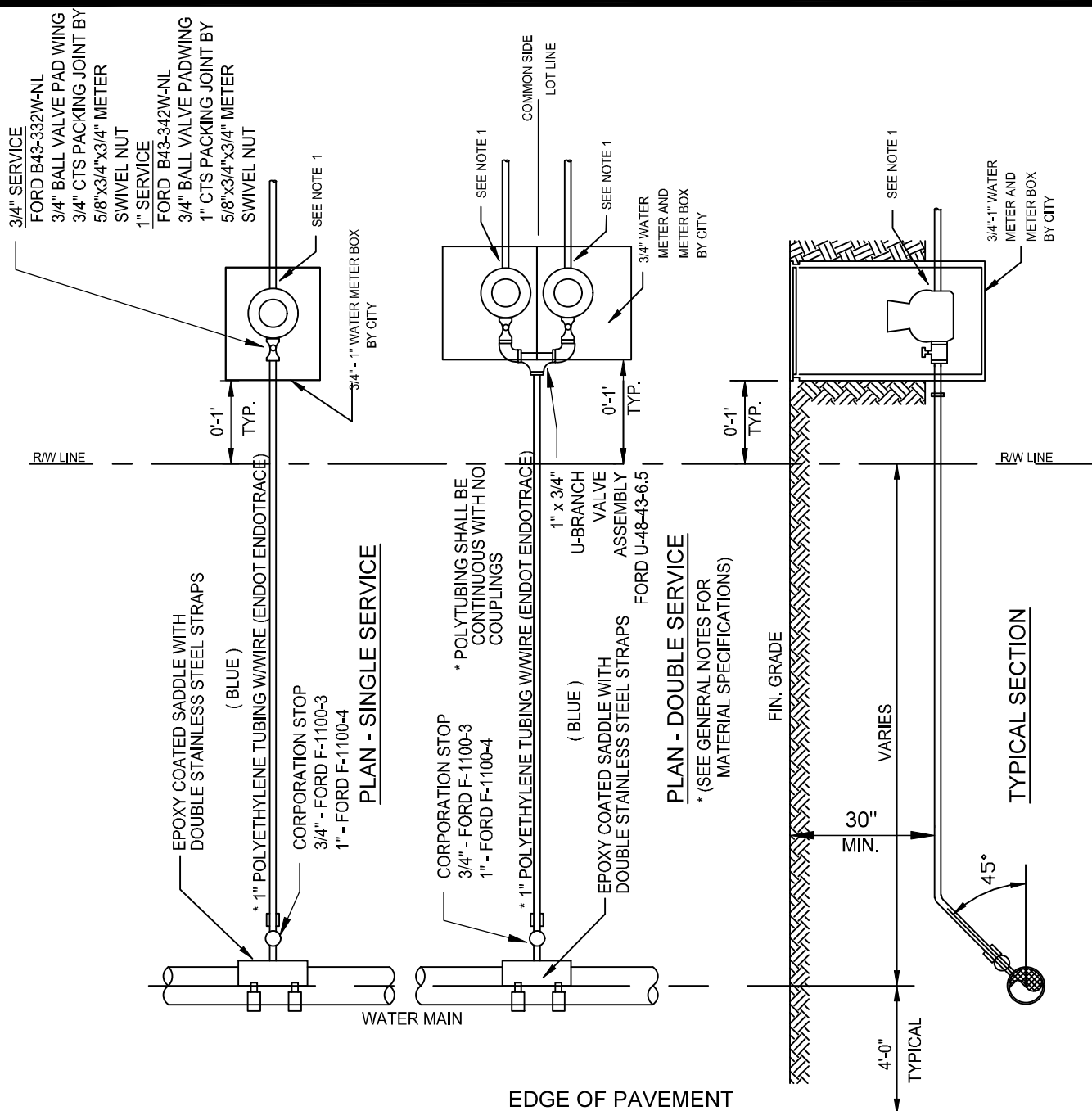


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

AIR RELEASE VALVE AND PIT

DATE
02/2020

DETAIL NUMBER
PW-6

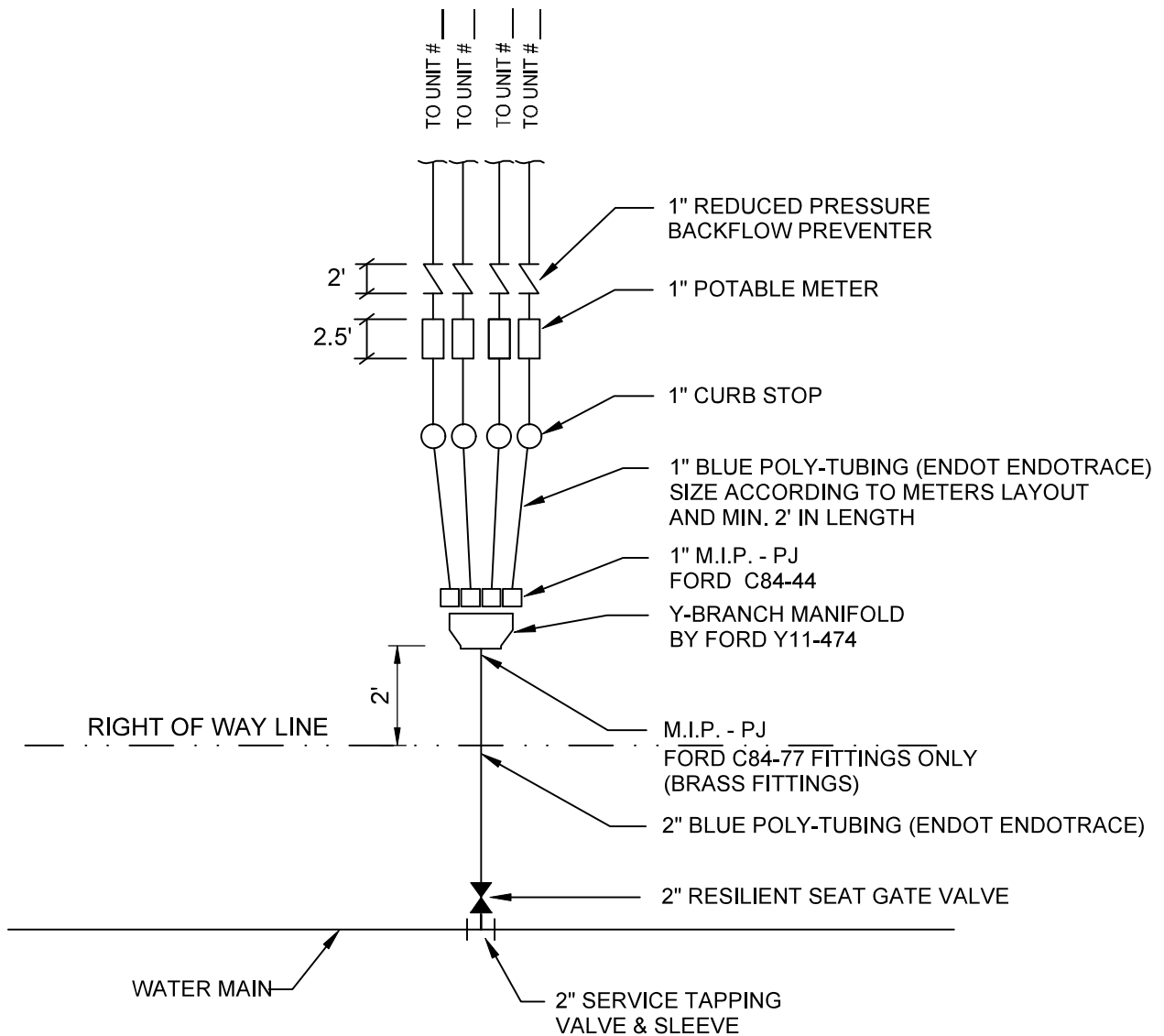


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

WATER SERVICE (METER SIZES 3/4" - 1")

DATE
02/2020

DETAIL NUMBER
PW-7



NOTE:

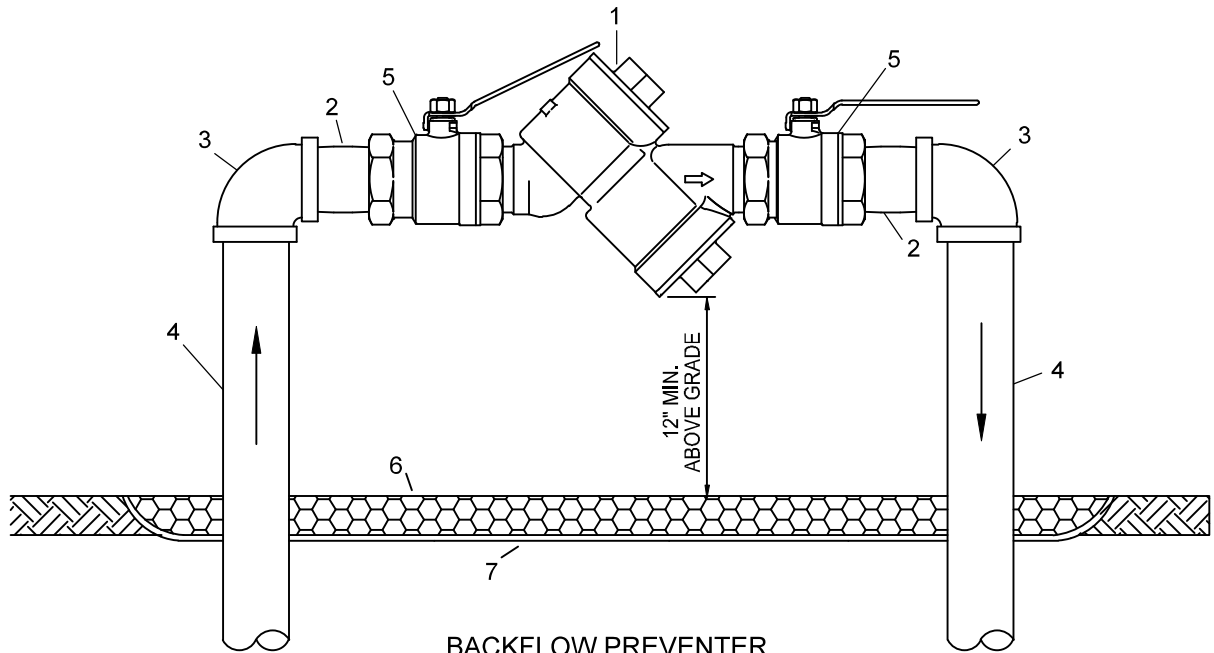
1. Y-BRANCH MANIFOLD AND 2" RESILIENT SEAT GATE VALVE SHALL BE LOCATED ON GRASS AREA WHEREVER AND WHENEVER POSSIBLE.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
MULTIPLE WATER SERVICES CONNECTION DETAIL FOR
COMMERCIAL USE ONLY
BUILDING # ____ UNITS ____ - ____

DATE
02/2020

DETAIL NUMBER
PW-8



BACKFLOW PREVENTER
WITH METER
(REDUCED PRESSURE 1"-2")

M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1	1	1" - 2" BACKFLOW PREVENTER ASSEMBLY
2	2	1" - 2" x NOM. NIPPLES - BRASS
3	2	1" - 2" x 90° ELBOWS - BRASS
4	2	1" - 2" x VARIES RISER - BRASS
5	2	1" - 2" BALL VALVE
6	*	PEA GRAVEL
7	*	PLASTIC LINER

NOTES:

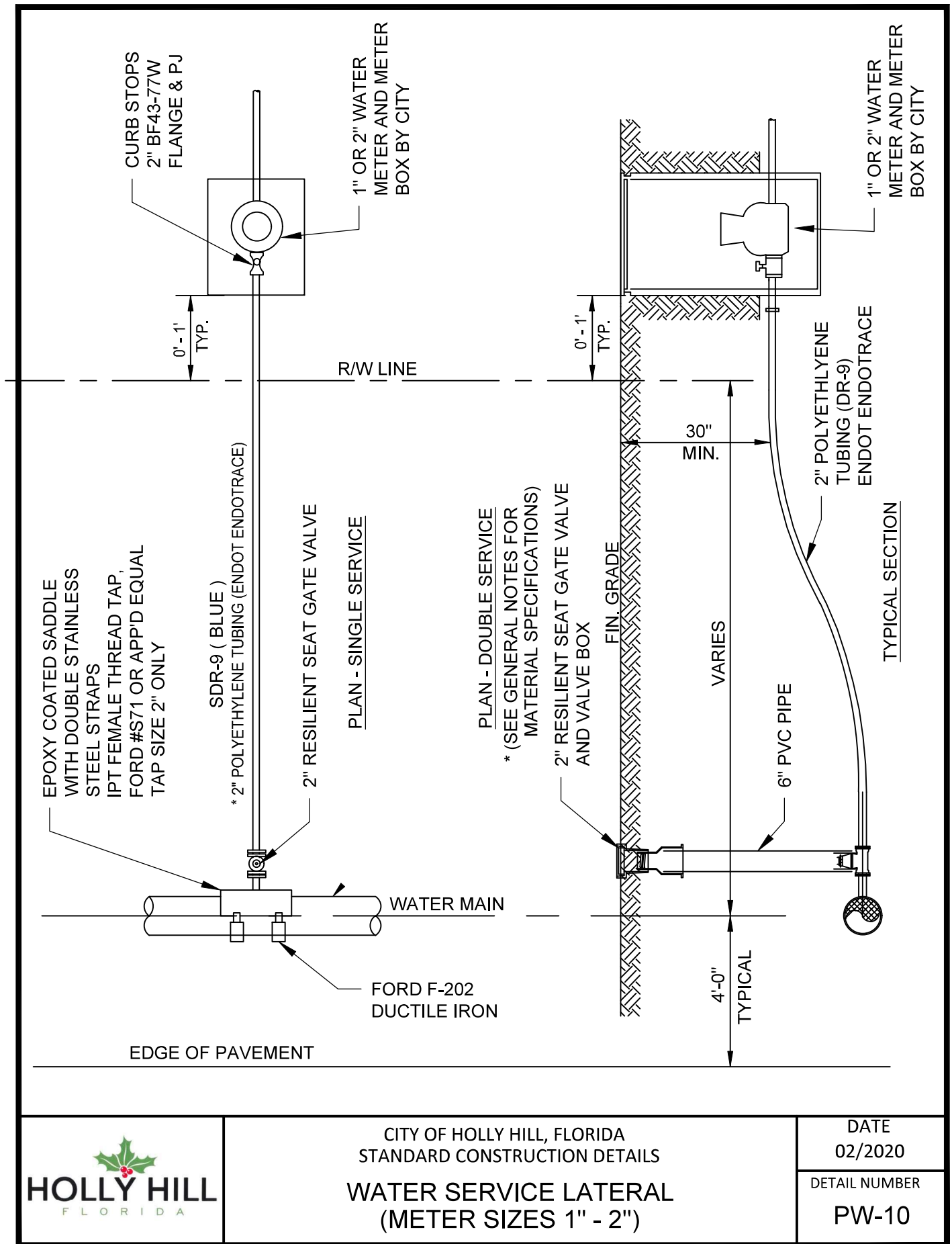
1. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62-555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS-CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.
2. REDUCED PRESSURE BACKFLOW PREVENTERS ARE REQUIRED FOR ALL COMMERCIAL SERVICES AND SHALL BE INSTALLED BY A CERTIFIED TECHNICIAN AT OWNERS EXPENSE.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
WATER SERVICE W/ BACKFLOW PREVENTER
(METER SIZES 1" - 2")

DATE
02/2020

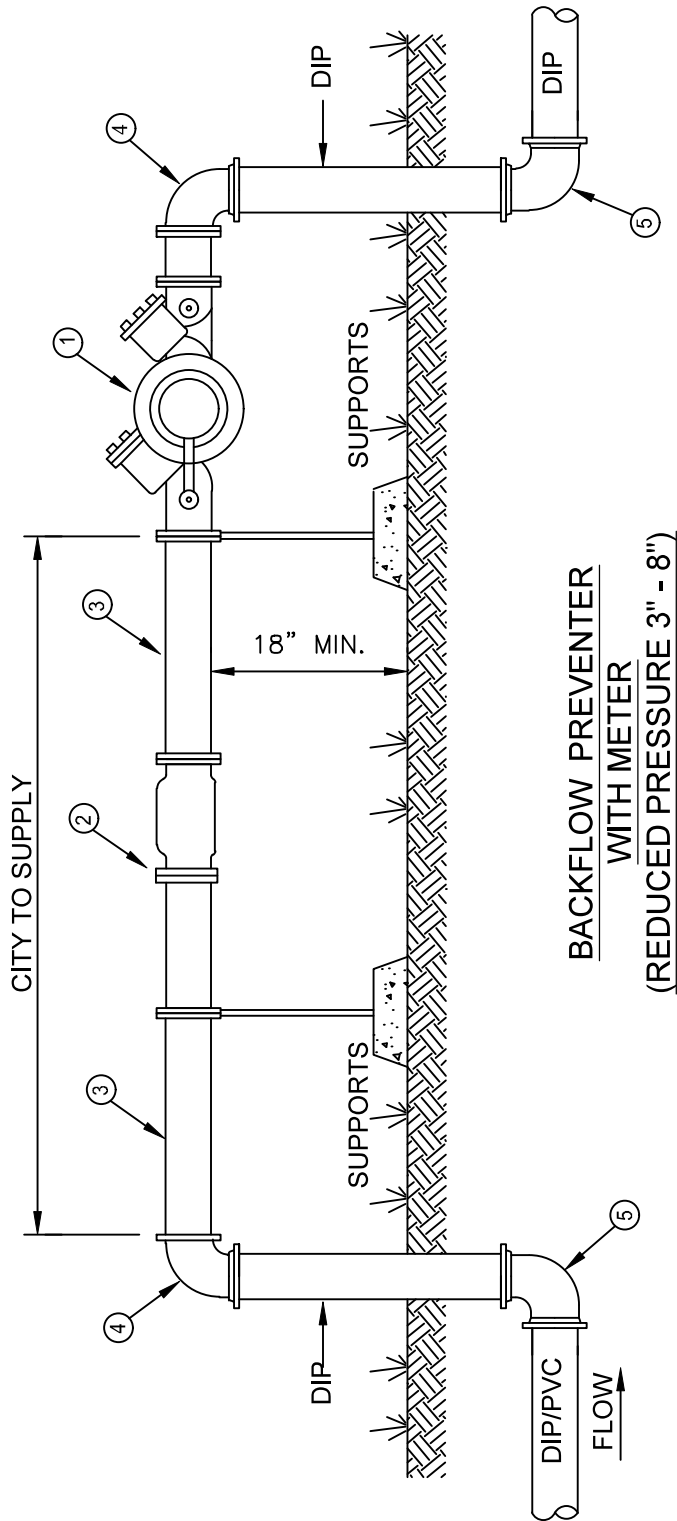
DETAIL NUMBER
PW-9



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
WATER SERVICE LATERAL
(METER SIZES 1" - 2")

DATE
02/2020

DETAIL NUMBER
PW-10



M A T E R I A L S	
ITEM	DESCRIPTION
1	3"-8" BACKFLOW PREVENTER
2	METER W/ STRAINER
3	5 X METER SIZE DIA. SPOOL PIECE
4	90° BEND (FLG. & FLG.)
5	90° BEND (MJ & MJ)

NOTE:

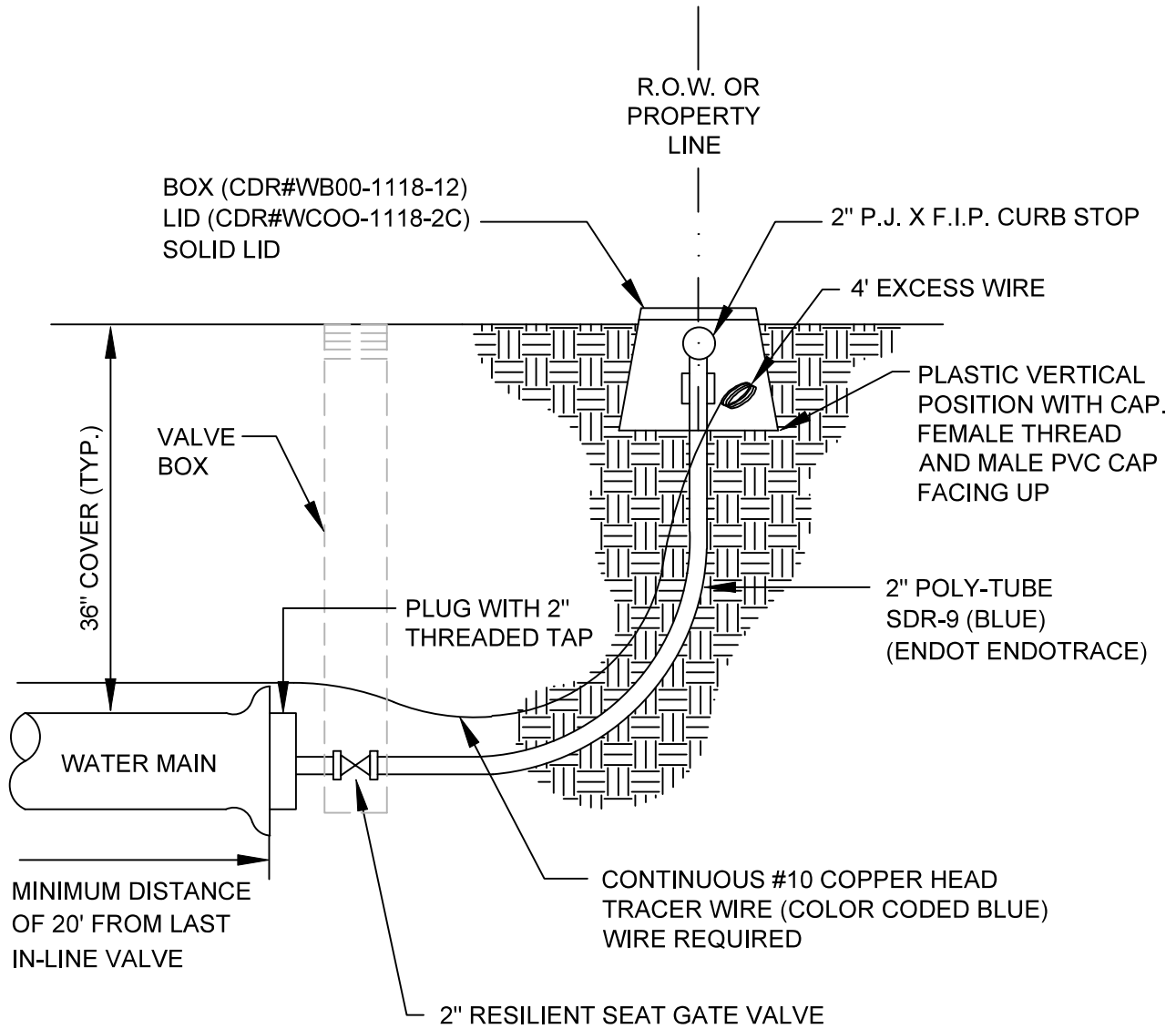
1. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62-555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS-CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**WATER SERVICE W/ BACKFLOW PREVENTER
(METER SIZES 3" - 8")**

DATE
02/2020

DETAIL NUMBER
PW-11



NOTES:

1. BLOW-OFF BOXES FOR POTABLE AND RECLAIMED WATER WILL BE CDR#WBOO-1118-12 (11"X18"X12") THE LID FOR BOTH POTABLE AND RECLAIMED WATER BLOW-OFF BOXES WILL BE CDR #WCOO-1118-2C. THIS LID IS 11" X 18" AND HAS A CAST IRON READER LID. BOTH THE WATER AND THE RECLAIMED WATER BLOW-OFF BOX COMPONENTS SHALL BE NATURAL GRAY IN COLOR.
2. PROVIDE AT LEAST ONE RESTRAINED JOINT IMMEDIATELY UPSTREAM OF BLOW-OFF AS PER LATEST DIPRA RESTRAINED JOINT CALCULATIONS.

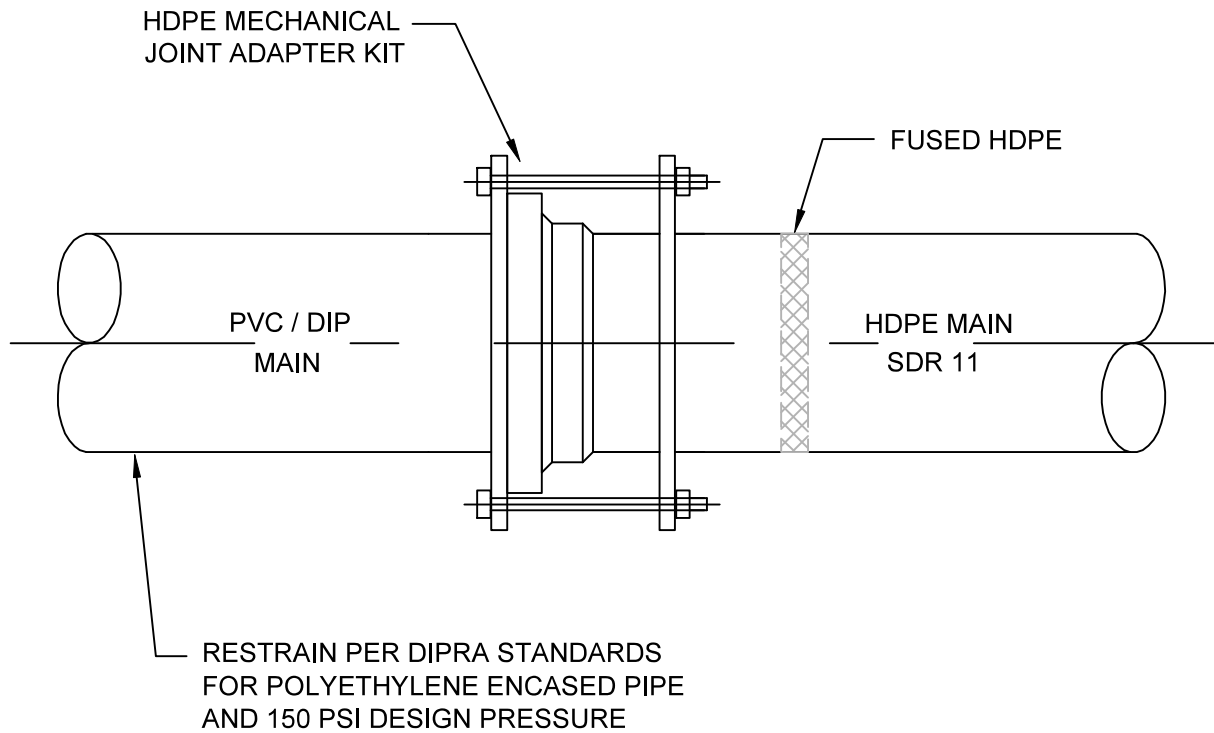


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

POTABLE WATER BLOW-OFF ASSEMBLY

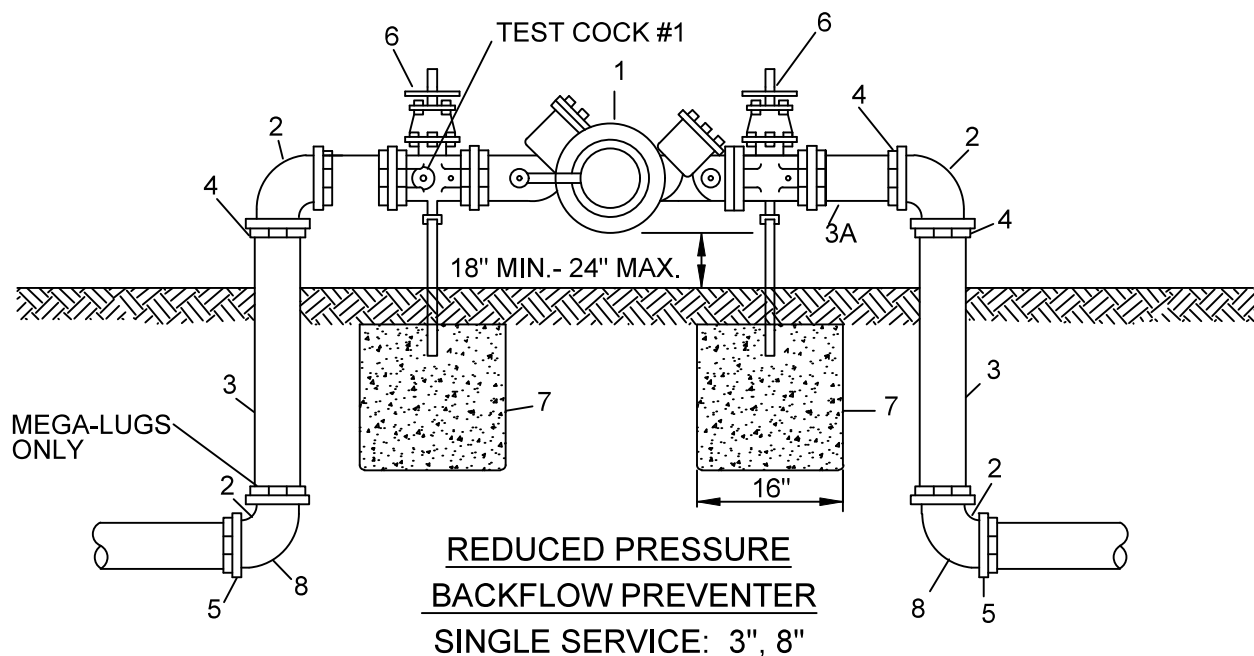
DATE
02/2020

DETAIL NUMBER
PW-12



NOTE:

1. THE MJ ADAPTER KIT CONSIST OF:
 - HDPE MJ ADAPTER WITH METAL INSERT
 - METAL GLAND
 - GASKET
 - ATTACHMENT BOLTS AND NUTS.



M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1	1	3", 8" VALVE, REDUCED PRESSURE PRINCIPLE
2	4	3", 8" BEND - 90°
3	2	3", 8" ADAPTER, C.I. F - PE
3A	1	3", 8" ADAPTER, C.I. F - PE (OPT.)
4	3	3", 8" ADAPTER FLANGE D.I.P.
5	2	3", 8" ADAPTER FLANGE P.V.C. (DR - 18)
6	2	3", 8" VALVE, GATE, C.I., F-F
7	1 or 2	2" IRON PIPE/CONCRETE FOUNDATION
8	2	MJ 90° MEGALUG OR RESTRAINED JOINT

NOTES:

1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
2. DO NOT INTERCHANGE ITEMS 4 AND 5.
3. ALL COMMERCIAL PROPERTIES ARE REQUIRED BY ORDINANCE TO HAVE A BACKFLOW DEVICE INSTALLED AND ANNUALLY TESTED WITH PASSING RESULTS FORWARDED TO THE CITY PUBLIC UTILITIES DEPARTMENT.
4. FOR FURTHER INFORMATION CONCERNING BACKFLOW PREVENTERS SEE THE CITY'S "MANUAL OF CROSS-CONNECTION CONTROL".
5. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62-555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS-CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.

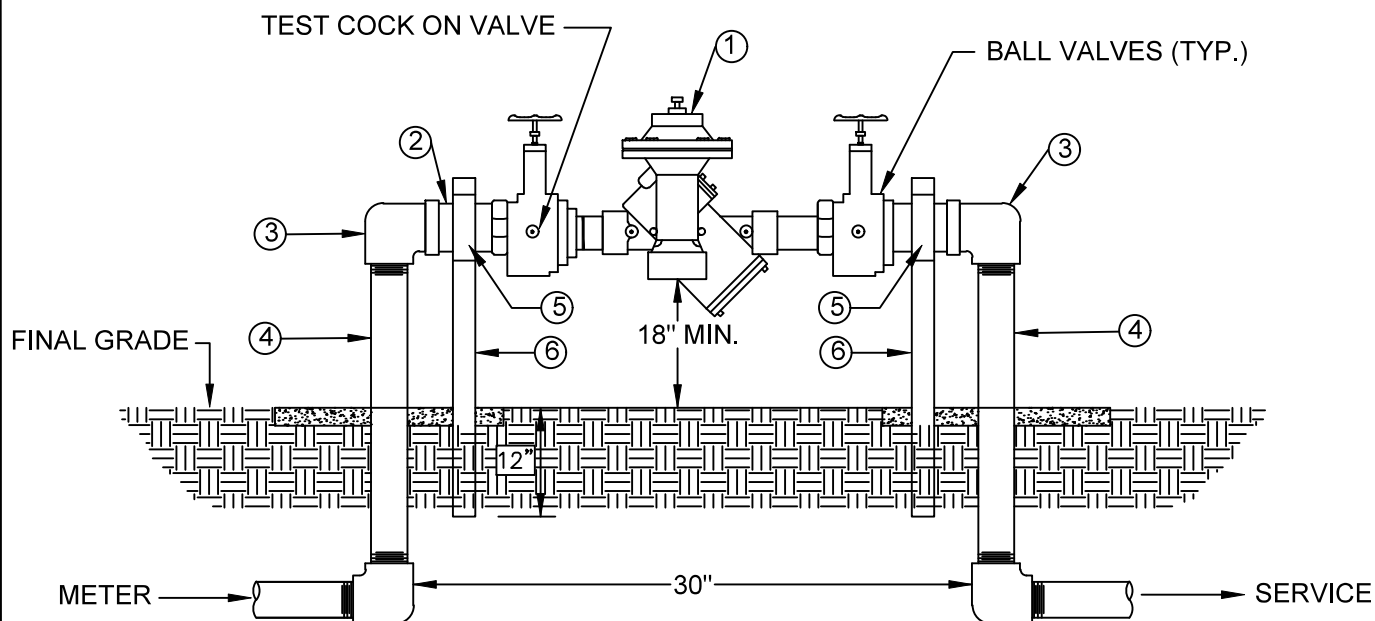


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

**FIRE LINE BACKFLOW PREVENTER
(REDUCED PRESSURE) 3" - 8"**

DATE
02/2020

DETAIL NUMBER
PW-14



M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1.	1	2" BACKFLOW PREVENTER ASSEMBLY
2.	2	2" X NOM. NIPPLES - BRASS
3.	2	2" X 90° ELBOWS - BRASS
4.	2	2" X VARIES RISER - BRASS
5.	2	NON-CORROSIVE CLAMPS
6.	2	NON-CORROSIVE UNI-STRUT OR EQUIVALENT

NOTES:

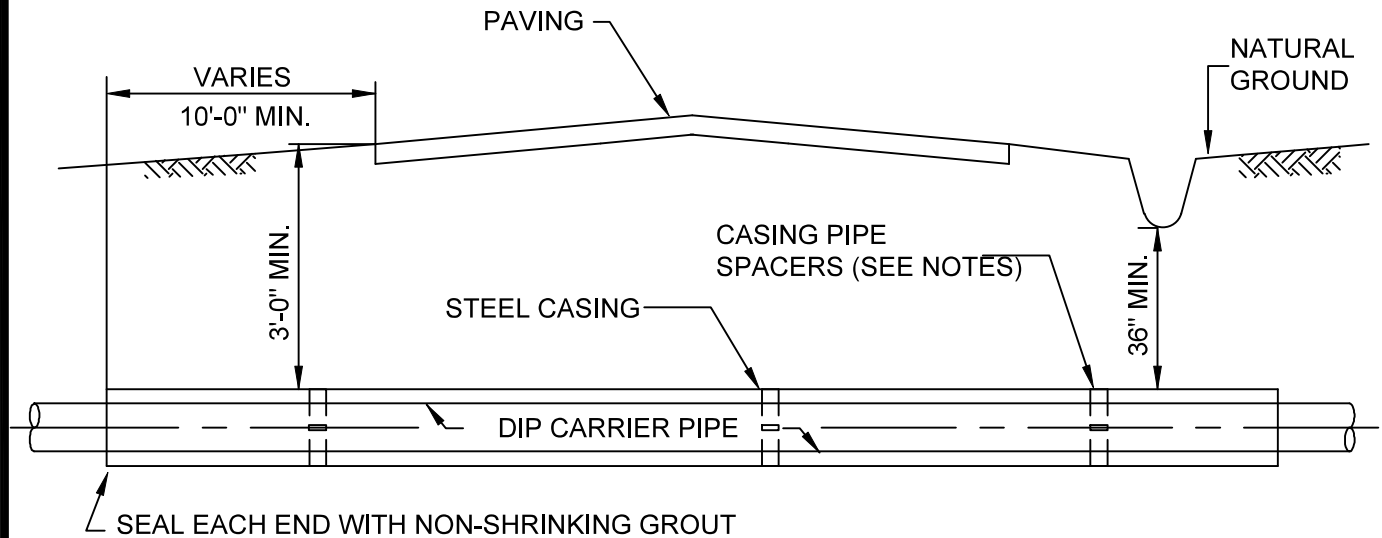
1. INSTALLATION SHOWN ABOVE IS FOR A 2" SERVICE. CHANGE PIPING MATERIALS ACCORDINGLY FOR SERVICE SIZE.
2. DOUBLE CHECK VALVES MAY BE INSTALLED IN UNDERGROUND VAULTS AS WELL.
3. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62-555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS-CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.
4. ALL 2" AND SMALLER BACKFLOW PREVENTER MUST BE STABILIZED WITH CHANNEL OR NON-CORROSIVE UNI-STRUT OR EQUIVALENT AND APPROPRIATE CLAMPS.
5. ALL FITTINGS COMPLIANT WITH NSF61 LOW LEAD.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**DOUBLE CHECK OR REDUCED PRESSURE
2" BACKFLOW PREVENETER**

DATE
02/2020

DETAIL NUMBER
PW-15



NOTES:

1. MINIMUM COVER FOR TOP OF CASING ON ALL CITY STREETS SHALL BE 3.0'.
2. CASING FOR F.E.C. CROSSINGS SHALL BE INSTALLED IN ACCORDANCE WITH F.E.C. REQUIREMENTS.
3. FOR MINIMUM COVER ON ALL STATE AND COUNTY ROADS WITHIN THE CITY LIMITS PLEASE REFER TO THEIR RESPECTIVE AUTHORITIES.
4. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
5. USE POLYETHYLENE CASING SPACERS FOR ALL CARRIER PIPES PER MANUFACTURES RECOMMENDATIONS.
6. ROTATION OF CARRIER PIPE INSIDE THE CASING PIPE WILL NOT BE PERMITTED. MECHANICAL OR FLANGED JOINT PIPE SHALL BE USED TO HELP PREVENT SUCH ROTATION.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF CASING AND CARRIER PIPE INSTALLATION FOR APPROVAL PRIOR TO FABRICATION OF PIPING, CASING, AND APPURTENANCES. CERTIFICATION OF CASING PIPE IS REQUIRED.
8. WELDING OF CASING PIPE TO BE DONE BY CERTIFIED WELDER. ALL ENDS OF CASING PIPE SHALL BE CHAMFERED PRIOR TO ANY WELDING.
9. SEALING END OF CASING PIPE WITH CONCRETE IS REQUIRED.
10. CARRIER PIPE SHALL BE RESTRAINED JOINT THROUGH ENTIRE LENGTH OF CASING PIPE.
11. FOR GRAVITY CARRIER PIPE SYSTEM, ENTIRE ANNULAR SPACE BETWEEN CARRIER PIPE AND CASING PIPE SHALL BE GROUTED.

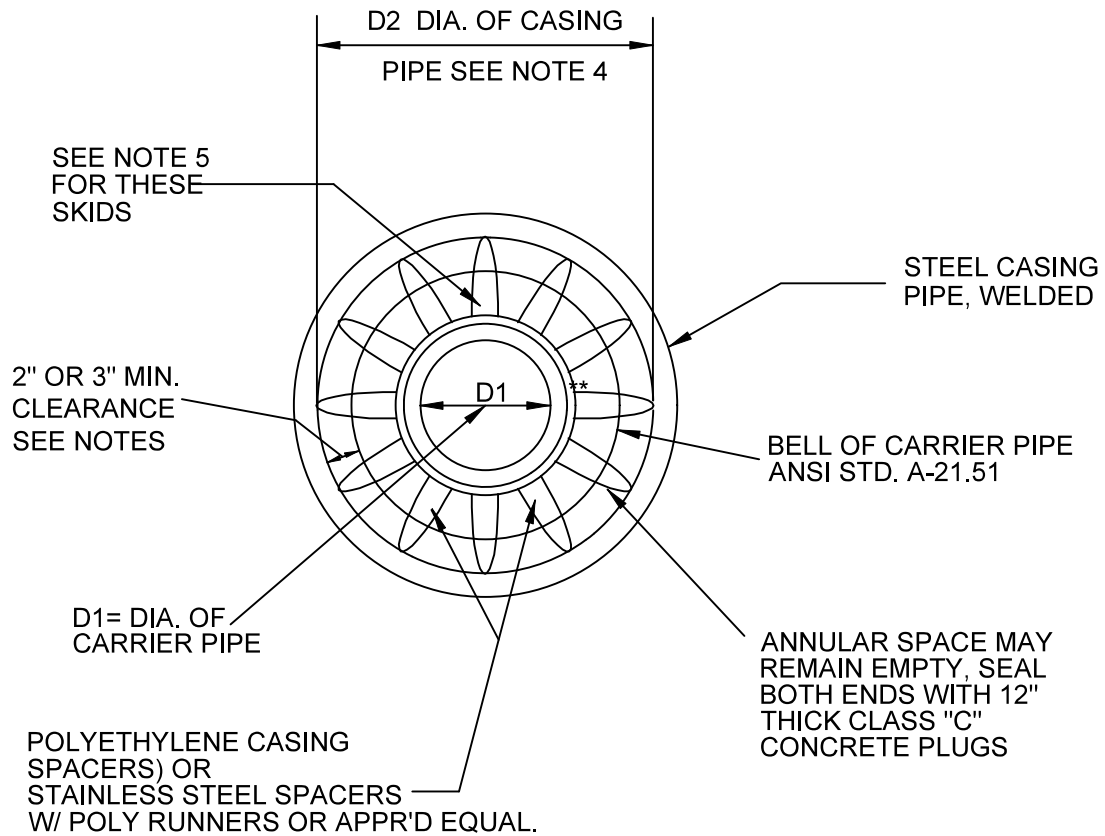


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

**CONDUIT CROSSING
RAILROAD OR ROADWAY**

DATE
02/2020

DETAIL NUMBER
PW-16



CARRIER PIPE AND CASING PIPE SIZES (MIN.)

CARRIER PIPE NOM. DIA. (D1)	4	6	8	10	12	14	16	18	20	24	30	36	42	48
CASING PIPE NOM. DIA. (D2)	14	16	18	22	24	30	30	30	36	36	48	54	60	66
WALL THICKNESS-INCHES (NOTES 4&5)	PER AUTHORITY HAVING JURISDICTION													

NOTES:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF CASING INSTALLATION TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
2. SEAL BOTH ENDS OF CASING W/ 12" BRICK AND NON-SHRINK GROUT (MINIMUM).
3. ROTATION OF CARRIER PIPE INSIDE THE CASING WILL NOT BE PERMITTED.
4. WITHIN THE CITY'S RIGHT-OF-WAY, USE CURRENT FDOT STANDARDS.
5. SPECIALLY DESIGNED SPACERS SHALL BE USED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

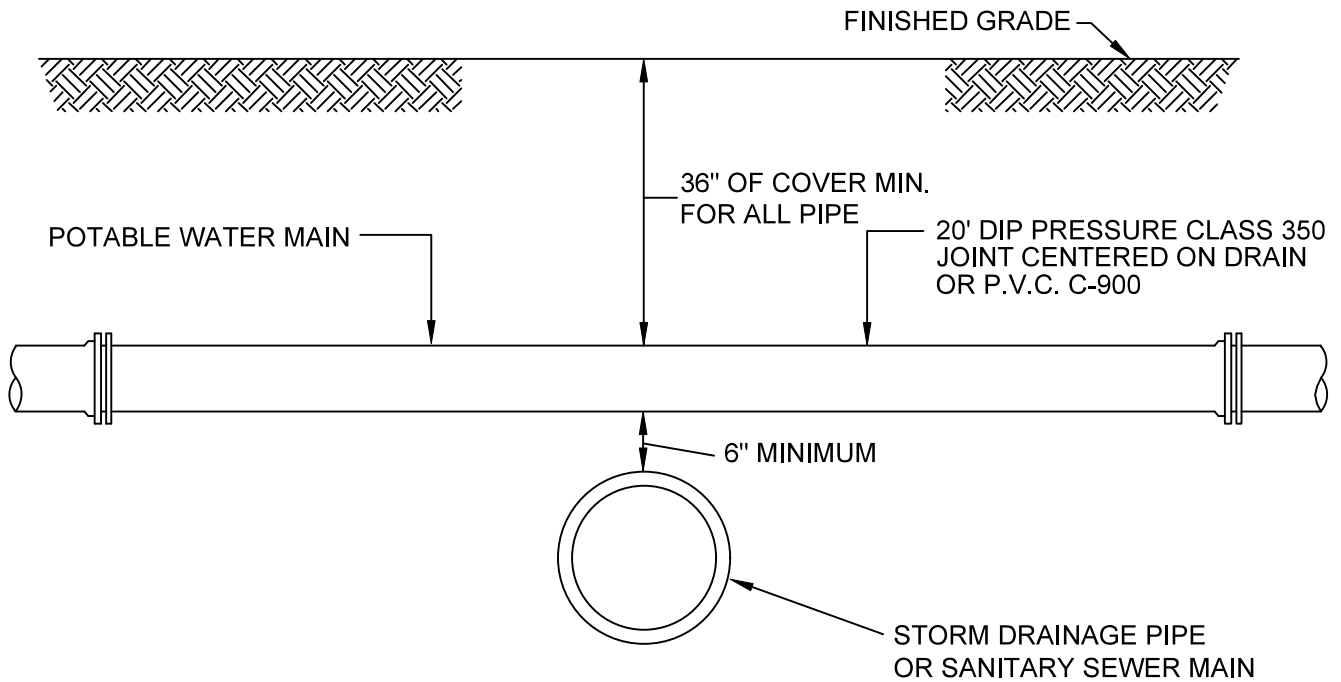


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

CONDUIT CROSSING
RAILROAD OR ROADWAY

DATE
02/2020

DETAIL NUMBER
PW-17



NOTE:

1. THIS DETAIL DOES NOT APPLY TO WATER OR SEWER SERVICES.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

STORM DRAINAGE PIPE OR
SANITARY SEWER MAIN CONFLICT

DATE
02/2020

DETAIL NUMBER
PW-18

FINISHED GRADE

36" MIN. COVER

VARIES

SOLID SLEEVE WITH TRANSITION GASKET

PROP. STORMWATER OR SANITARY SEWER

12"

12"

12" MIN.

EXIST P.V.C. (FULL LENGTH)

RESTRAINED JOINT (TYP.)

MAIN

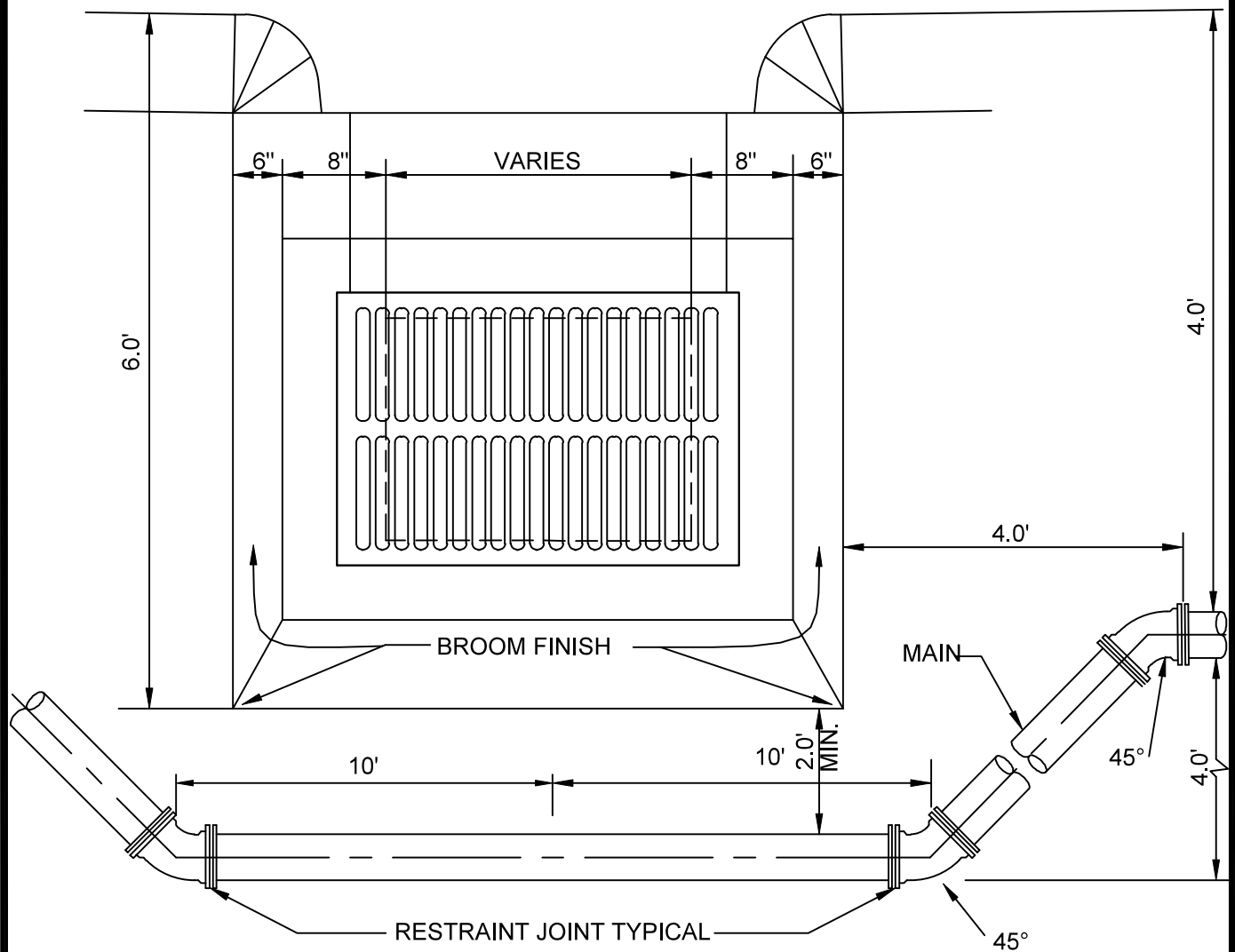
45° DIP OR PVC BENDS (4 REQUIRED)

EXIST PVC (FULL LENGTH) RESTRAINED AS REQUIRED BY MANUFACTURER.

1. LOWERING OF EXISTING WATER MAIN & FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF EXISTING FIELD CONDITIONS PERMIT.
2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.



DETAIL NUMBER
PW-19



NOTES:

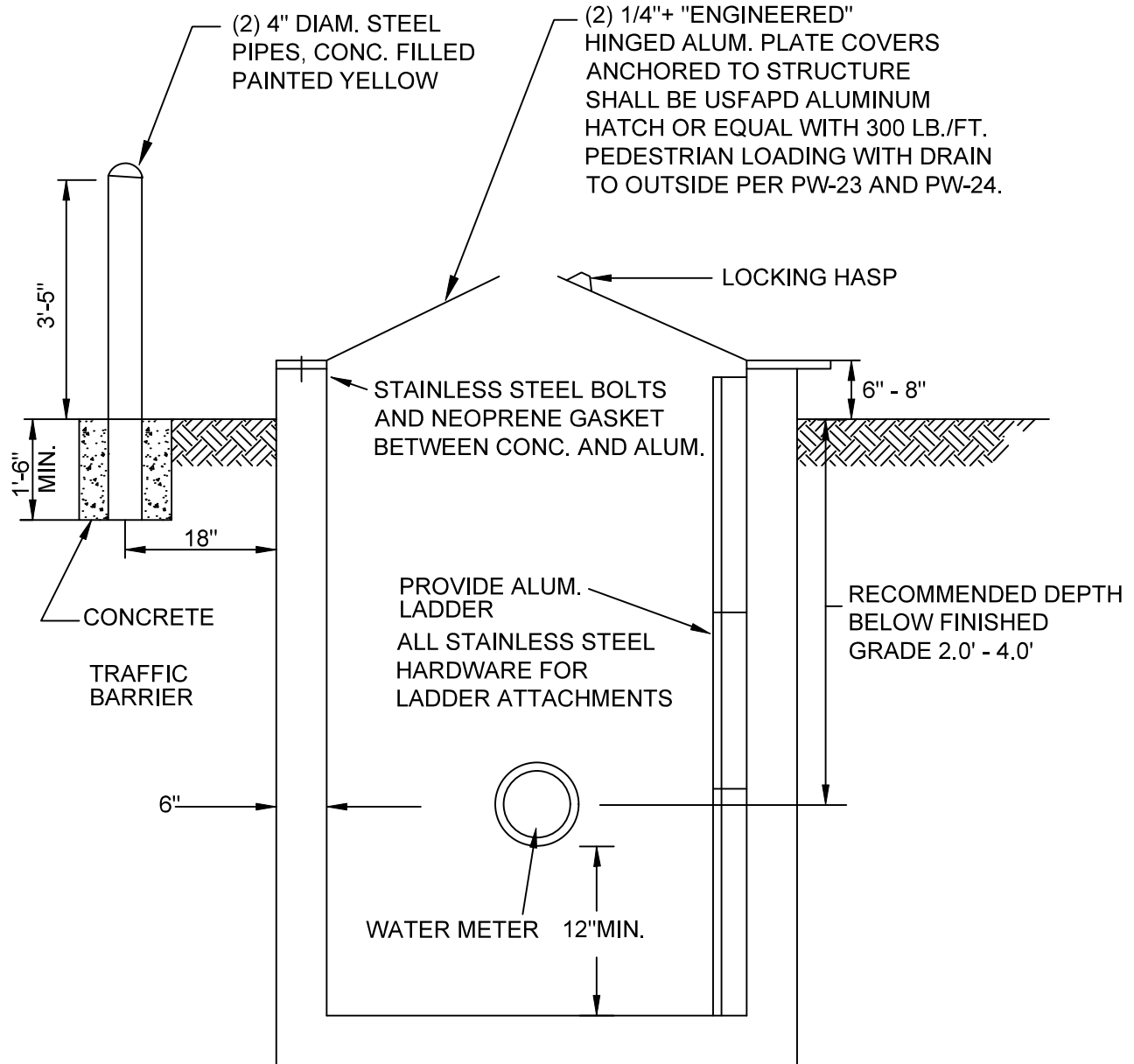
1. MAIN MAY PASS OVER STORM LINE IF 36" OF COVER IS PROVIDED OVER WATER MAIN OR RECLAIMED WATER LINE AND ADEQUATE CLEARANCE IS PROVIDED FROM THE STORM SEWER PIPE.
2. PIPE SHALL BE DEFLECTED AROUND DRAINAGE INLET IN ACCORDANCE WITH THE RESTRAINED JOINT GUIDELINES OF THE DIPRA AND ADAPTED TO PVC PIPE AS NECESSARY.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**MAIN INSTALLATION BETWEEN
DRAINAGE INLET AND SIDEWALK**

DATE
02/2020

DETAIL NUMBER
PW-20



* NON-STANDARD APPLICATION ONLY

NOTES:

1. BOX SHOULD BE SIZED TO MATCH PROPOSED METER SIZE REQUIREMENTS.
2. VERIFY ACTUAL METER BOX DIMENSIONS WITH CITY PRIOR TO ORDERING AND/OR INSTALLATION.
3. THE CITY OF HOLLY HILL WILL PROVIDE AT COST TO THE OWNER PRECAST METER VAULTS FOR WATERLINES 30" OR LESS IN DEPTH.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**NON-STANDARD WATER METER BOX
(METER 3" AND LARGER SIZES)**

DATE
02/2020

DETAIL NUMBER
PW-21

METER		MINIMUM (INCHES) METER BOX SIZES			BROOKS EQUIVALENT
TYPE	SIZE	A	B	C	
TURBINE	3"	60	48	60	SERIES 666 W/6" FLOOR
	4"	60	48	60	"
	6"	60	60	60	"
	8"	60	60	60	"
COMPOUND	3"	60	48	66	"
	4"	60	48	66	"
	6"	60	60	72	"
	8"	60	60	72	"
F.M.	3"	72	48	60	"
	4"	72	48	60	"
	6"	78	66	60	M-88 SERIES W/6" FLOOR & 12" COVER
	8"	84	72	66	

NON-STANDARD APPLICATION ONLY

NOTE:

1. VERIFY ACTUAL METER BOX SIZE WITH CITY PRIOR TO ORDERING.

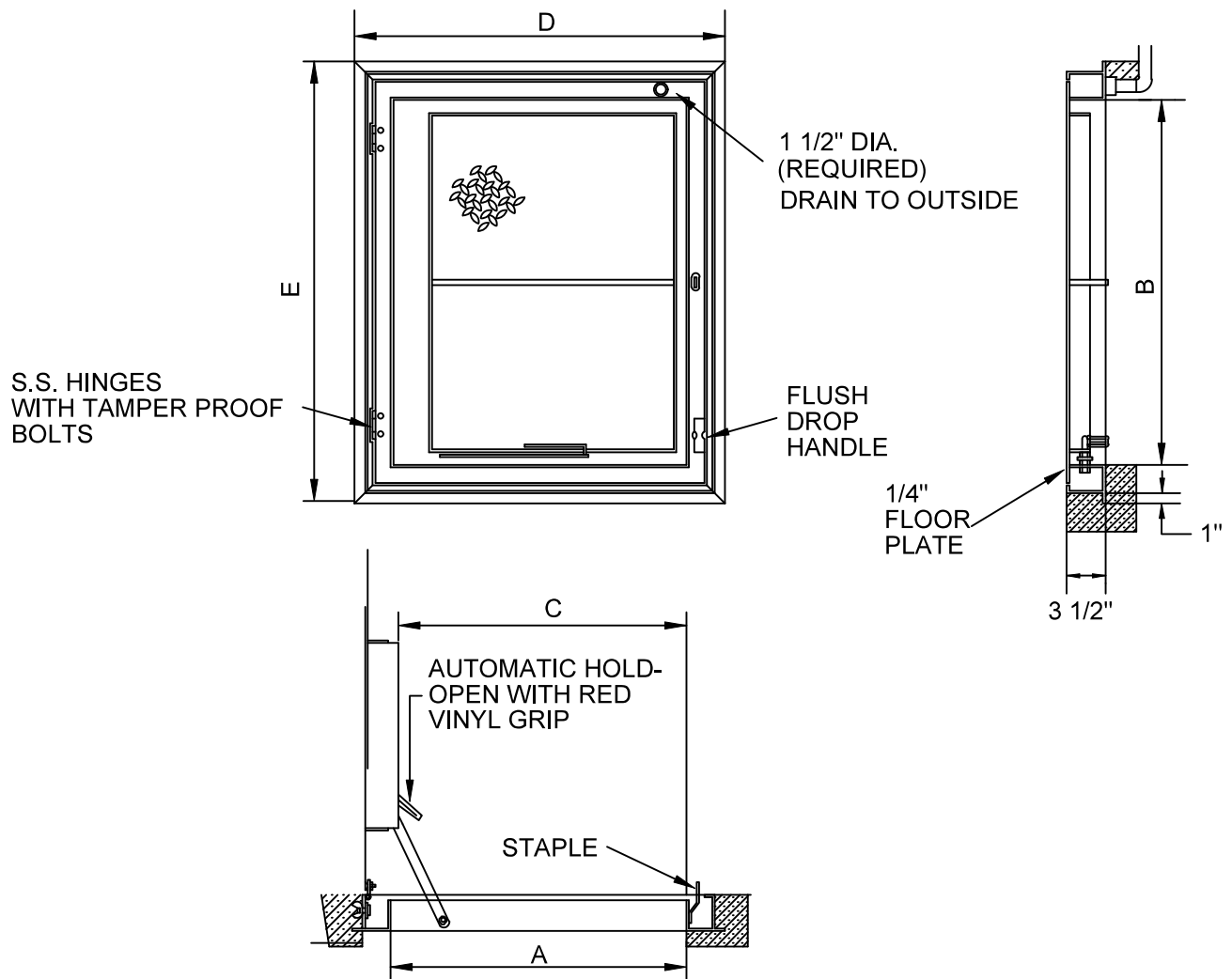


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

3" - 8" WATER METER BOX

DATE
02/2020

DETAIL NUMBER
PW-22



300 P.S.F LOADING								
TYPE	MAT'L THK	SIZE		ACTUAL OPEN		OVERALL SIZE		WEIGHT LBS.
		A	B	A	C	D	E	
TPS	1/4	24	24	24	24	32	32	60
TPS	1/4	24	30	24	30	32	38	70
TPS	1/4	24	36	23	36	32	44	75
TPS	1/4	30	30	29	30	38	38	80
TPS	1/4	30	36	29	36	38	44	90
TPS	1/4	30	48	29	48	38	56	105
TPS	1/4	36	36	34	36	44	44	100
TPS	1/4	36	48	34	48	44	56	120
TPS	1/4	42	42	40	42	50	50	125

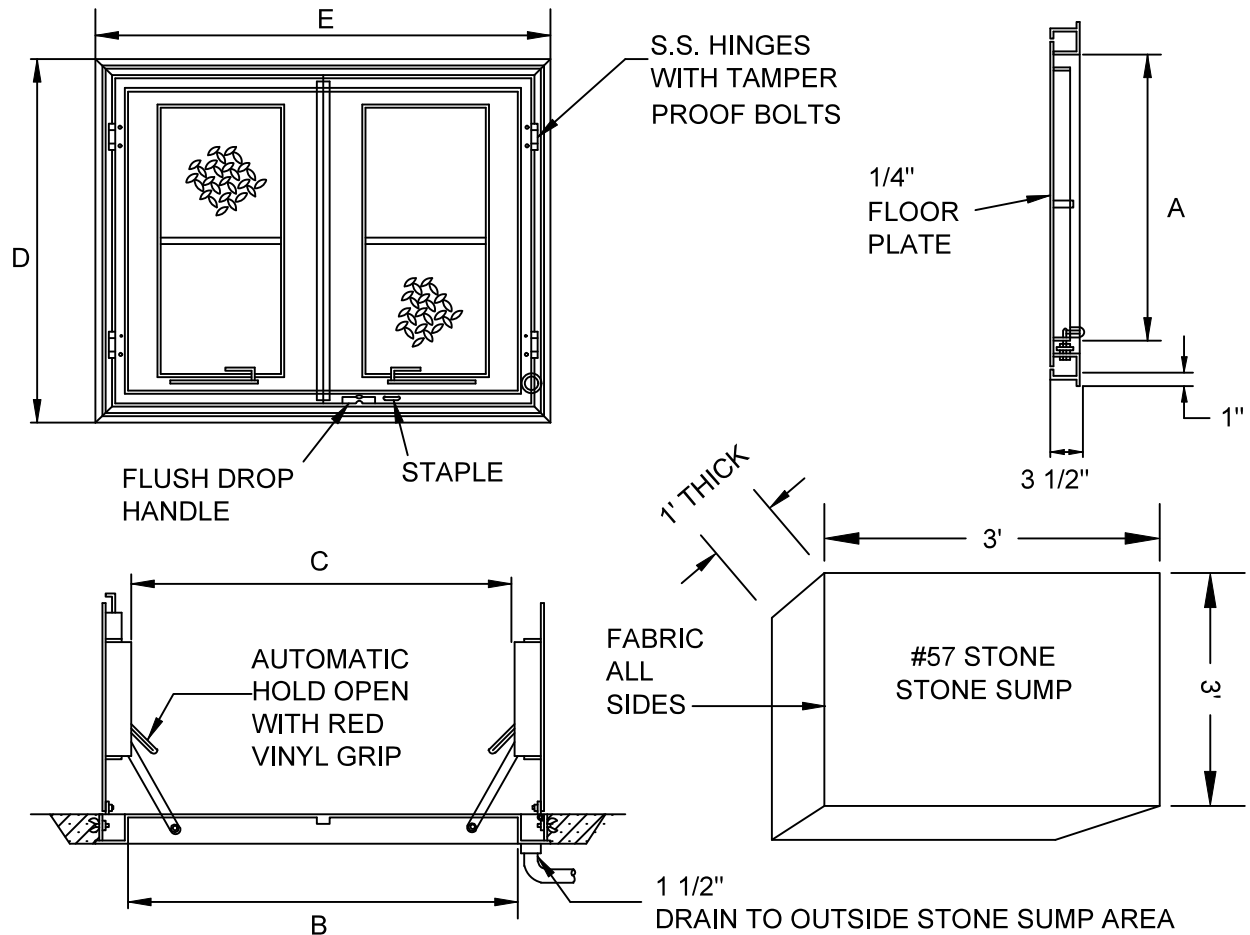
NOTES:

1. HATCH MATERIAL SHALL BE ALUMINUM WITH STAINLESS STEEL BOLTS, NUTS AND HINGES, LOAD RATING OF 300 LBS PER SQ. FOOT WITH A SELF DRAINING HATCH.
2. THE ACCESS DOOR SHALL BE TYPE TPS AS MANUFACTURED BY U.S. FOUNDRY AND MANUFACTURING CORP., MIAMI, FLORIDA.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**THROUGH FRAME PEDESTRIAN LOADING
ACCESS SINGLE DOOR**

DATE
02/2020
DETAIL NUMBER
PW-23



300 P.S.F. LOADING								
TYPE	MAT'L THK	SIZE		ACTUAL OPENING		OVERALL SIZE		LBS.
		A	B	A	C	D	E	
TPD	1/4	30	48	30	47	38	56	110
TPD	1/4	30	54	30	53	38	62	120
TPD	1/4	36	48	36	46	44	44	125
TPD	1/4	36	60	36	57	44	68	145
TPD	1/4	42	48	42	45	50	56	140
TPD	1/4	48	48	48	44	56	56	155
TPD	1/4	48	54	48	50	56	62	165
TPD	1/4	48	72	48	66	56	80	210
TPD	1/4	60	60	60	56	68	68	220

NOTES:

- HATCH MATERIAL SHALL BE ALUMINUM WITH STAINLESS STEEL BOLTS, NUTS AND HINGES, LOAD RATING OF 300 LBS. PER SQ. FOOT WITH A SELF DRAINING HATCH.
- THE ACCESS DOOR SHALL BE TYPE TPS AS MANUFACTURED BY U.S. FOUNDRY AND MANUFACTURING CORP., MIAMI, FLORIDA.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**THROUGH FRAME PEDESTRIAN LOADING
ACCESS DOUBLE DOOR**

DATE
02/2020

DETAIL NUMBER
PW-24

U.S. FOUNDRY MODEL NO.	BILCO MODEL NO	SINGLE LEAF	DOUBLE LEAF	ALUMINUM	TROUGH
TPS 24X24 W/OP	J-1AL	*		*	*
TPS 30X30 W/OP	J-2AL	*		*	*
TPS 30X36 W/OP	J-3AL	*		*	*
TPS 36X36 W/OP	J-4AL	*		*	*
TPS 42X42 W/OP	J-5AL			*	*
TPD 48X48 W/OP	JD-2AL		*	*	*
TPD 48X72 W/OP	JD-3AL		*	*	*
TPD 60X60 W/OP	JD-4AL		*	*	*

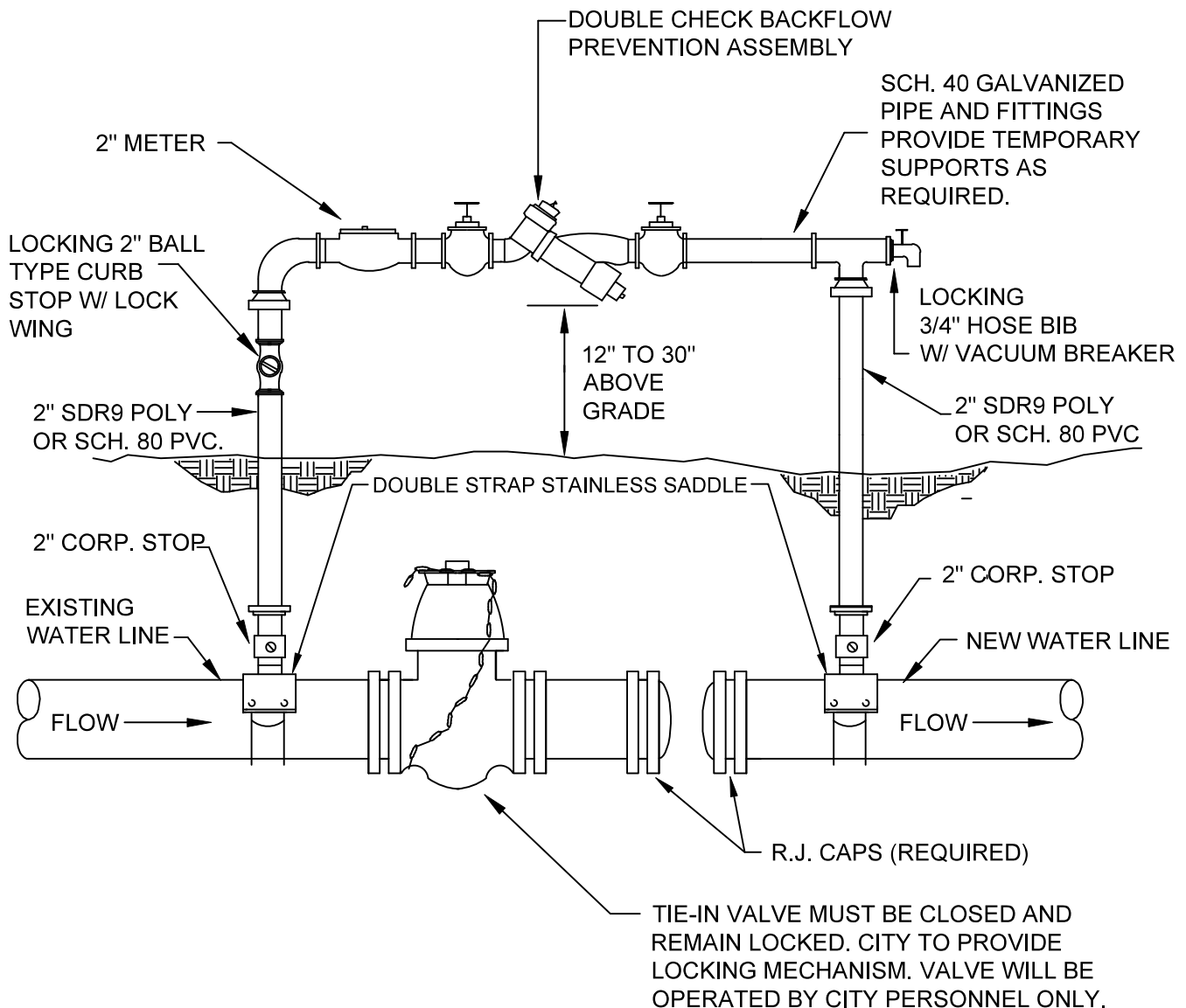


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

ACCESS DOOR
CROSS REFERENCE CHART

DATE
02/2020

DETAIL NUMBER
PW-25



* DIRECT TIE-IN METHOD ALLOWED WHEN TIE-IN UNDER EXISTING PAVEMENT LIMITS.

NOTES:

1. THIS DETAIL SHALL BE UTILIZED ON ALL WATERLINE EXTENSIONS. THE CITY WILL ALLOW A DIRECT CONNECTION TO THE CITY'S DRINKING WATER SYSTEM AT ONLY ONE POINT OF CONNECTION. FINAL SECONDARY TIE-INS SHALL BE PERFORMED AFTER CLEARANCE FROM THE D.E.P.
2. PROVIDE SUPPORT AND/OR PROTECTIVE MEASURES TO PREVENT ABOVE GROUND PIPE BEING BROKEN.

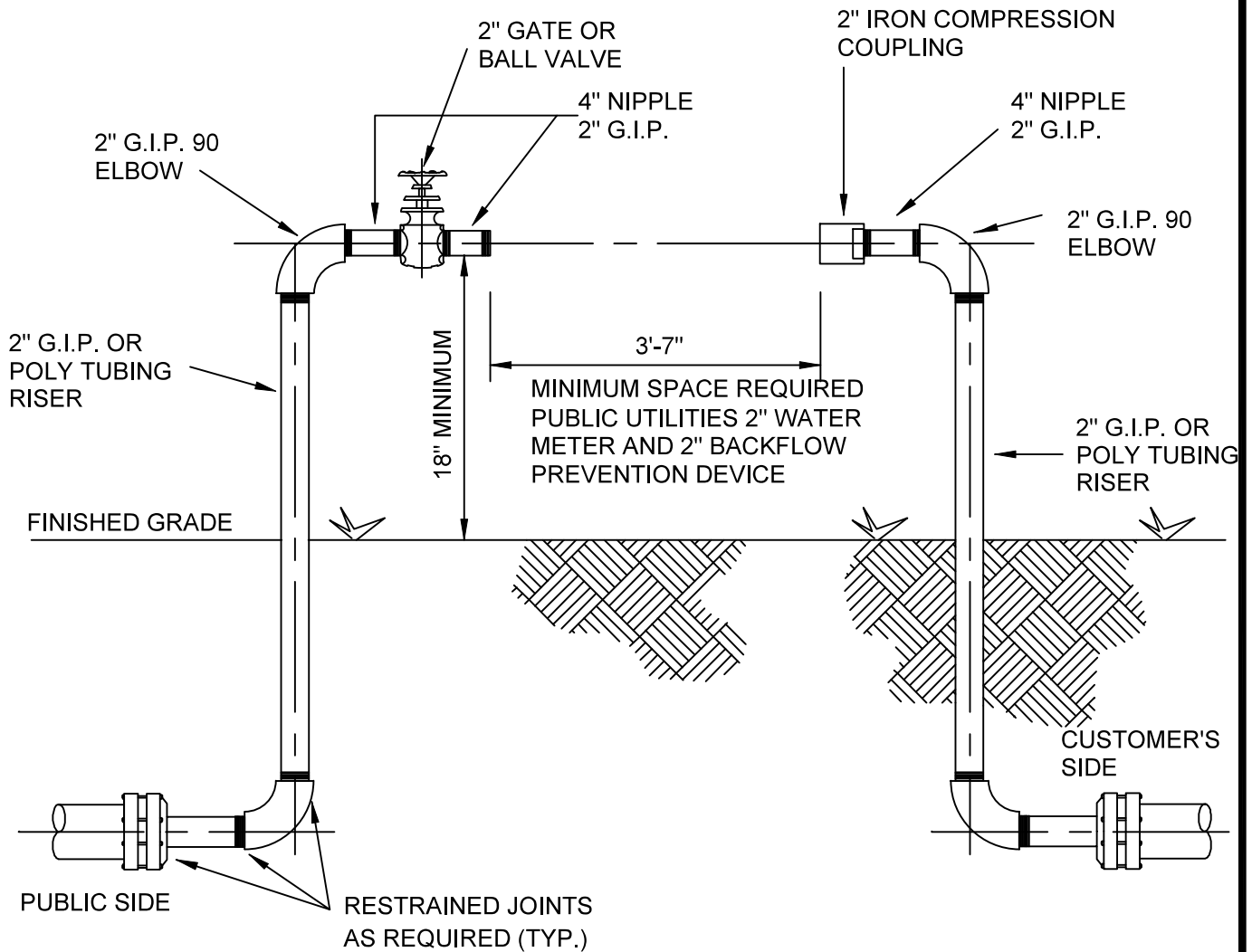


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

TEMPORARY JUMPER CONNECTION

DATE
02/2020

DETAIL NUMBER
PW-26



NOTE:

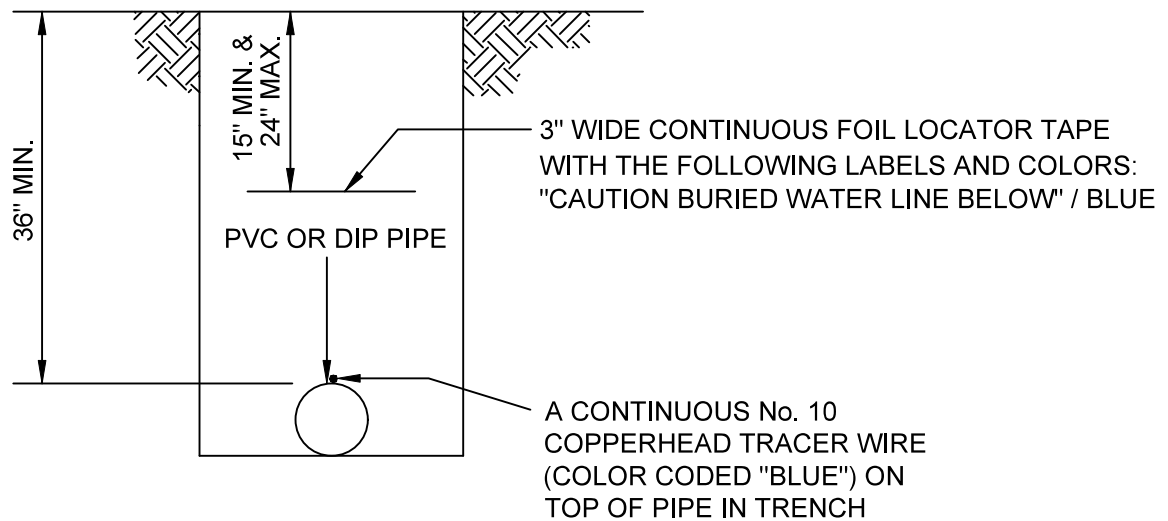
1. PROVIDE SUPPORT OR PROTECTIVE POSTS.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
**CONTRACTORS' INSTALLATION
REQUIREMENTS FOR 2" TEMPORARY METER**

DATE
02/2020

DETAIL NUMBER
PW-27



"TERRA TAPE D" OR SIMILAR

NOTES:

1. A CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC AND METALLIC PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES OUTSIDE P.V.C. SLEEVE, (SEE DETAIL PW-5).
2. ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER PROOF WIRE NUT CAP OR WITH SIMILAR WATER PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3. A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS
LOCATOR TAPE / TRACER WIRE
INSTALLATION FOR WATER MAIN, PIPELINES

DATE
02/2020

DETAIL NUMBER
PW-28

TECHNICAL SPECIFICATIONS FOR MECHANICAL JOINT (M.J.)
DUCTILE IRON PIPE FITTINGS

ALL MECHANICAL JOINT DUCTILE IRON PIPE FITTINGS SHALL BE IN ACCORDANCE WITH ACCEPTABLE STANDARDS AND COMPLY WITH THE FOLLOWING SPECIFICATIONS:

MATERIAL:

A.S.T.M. A536 MINIMUM GRADE 70-50-5 IN ACCORDANCE WITH A.W.W.A. C153 (A.N.S.I. A21.53)

PRESSURE:

CLASS 350 IN ACCORDANCE WITH A.W.W.A. C153 (A.N.S.I. A21.53) 350 PSI WATER WORKING PRESSURE.

TESTING:

IN ACCORDANCE WITH A.W.W.A. C153 (ANSI A21.53). THREE TIMES WATER WORKING PRESSURE (350 PSI). BODY CAPABLE OF WITHSTANDING HYDROSTATIC TEST OF 1050 PSI.

FLOW:

I.D. EQUAL TO I.D. OF CLASS 50/51 DUCTILE IRON PIPE, THUS ALLOWING THE FULL FLOW FEATURE.

LAYING LENGTH:

SHORT BODY (COMPACT)

CEMENT LINING:

IN ACCORDANCE WITH A.W.W.A. C104 (A.N.S.I. A21.4)

MECHANICAL JOINTS

IN ACCORDANCE WITH A.N.S.I./A.W.W.A. C111/A21.11

GASKETS:

SBR IN ACCORDANCE WITH A.W.W.A. C111 A.N.S.I. A21.11

TEE HEAD BOLTS:

COR-TEN IN ACCORDANCE WITH A.W.W.A. C111 (A.N.S.I. A21.11)

ACCEPTABLE MANUFACTURERS:

TYLER, CLOW, GRIFFIN, U.S. PIPE, UNION FOUNDRY, AMERICAN CAST IRON OR APPROVED EQUAL



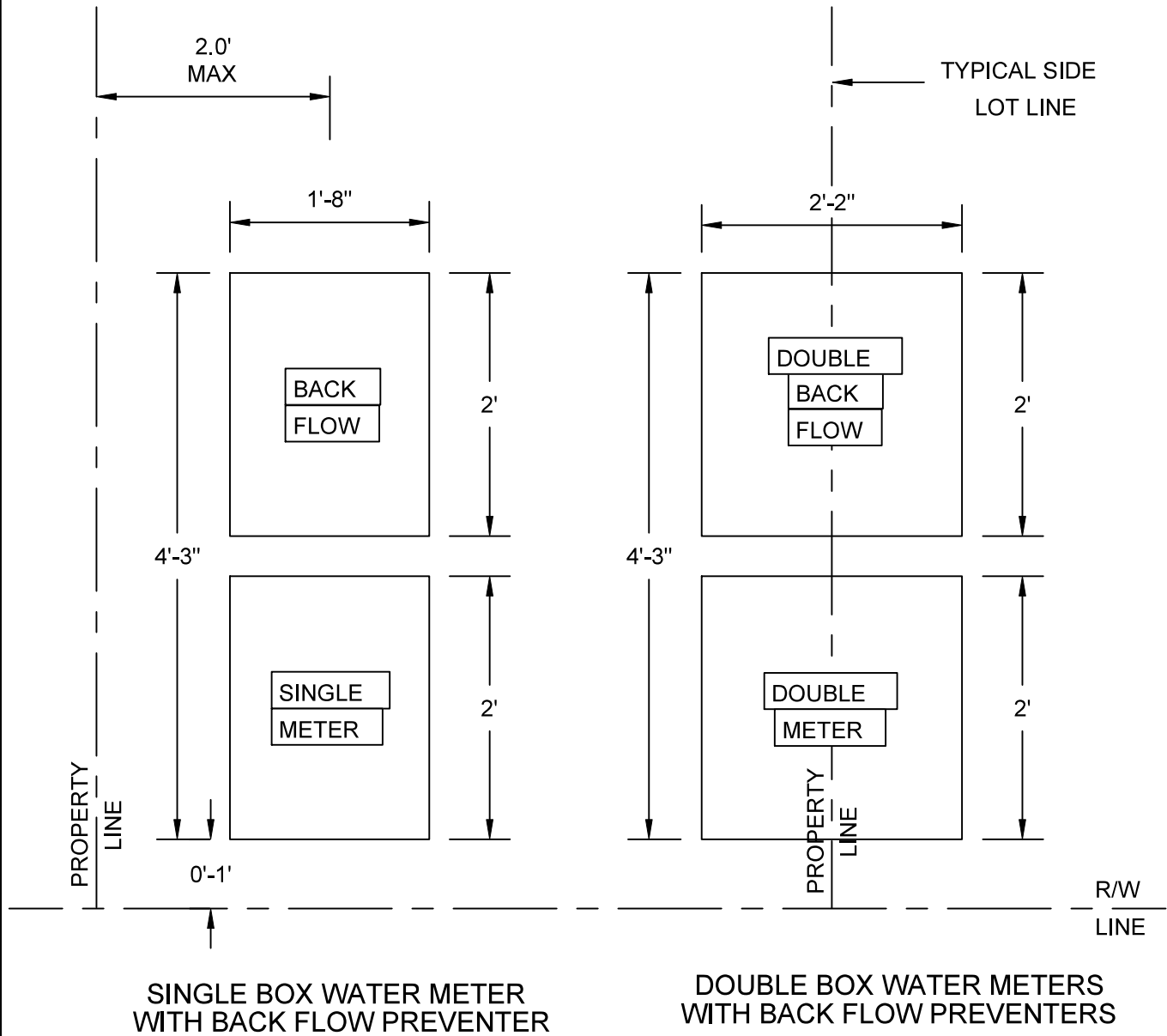
CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

**TECHNICAL SPECIFICATIONS FOR
M.J. DUCTILE IRON PIPE FITTINGS**

DATE
02/2020

DETAIL NUMBER
PW-29

TYPICAL 3/4" WATER SERVICE

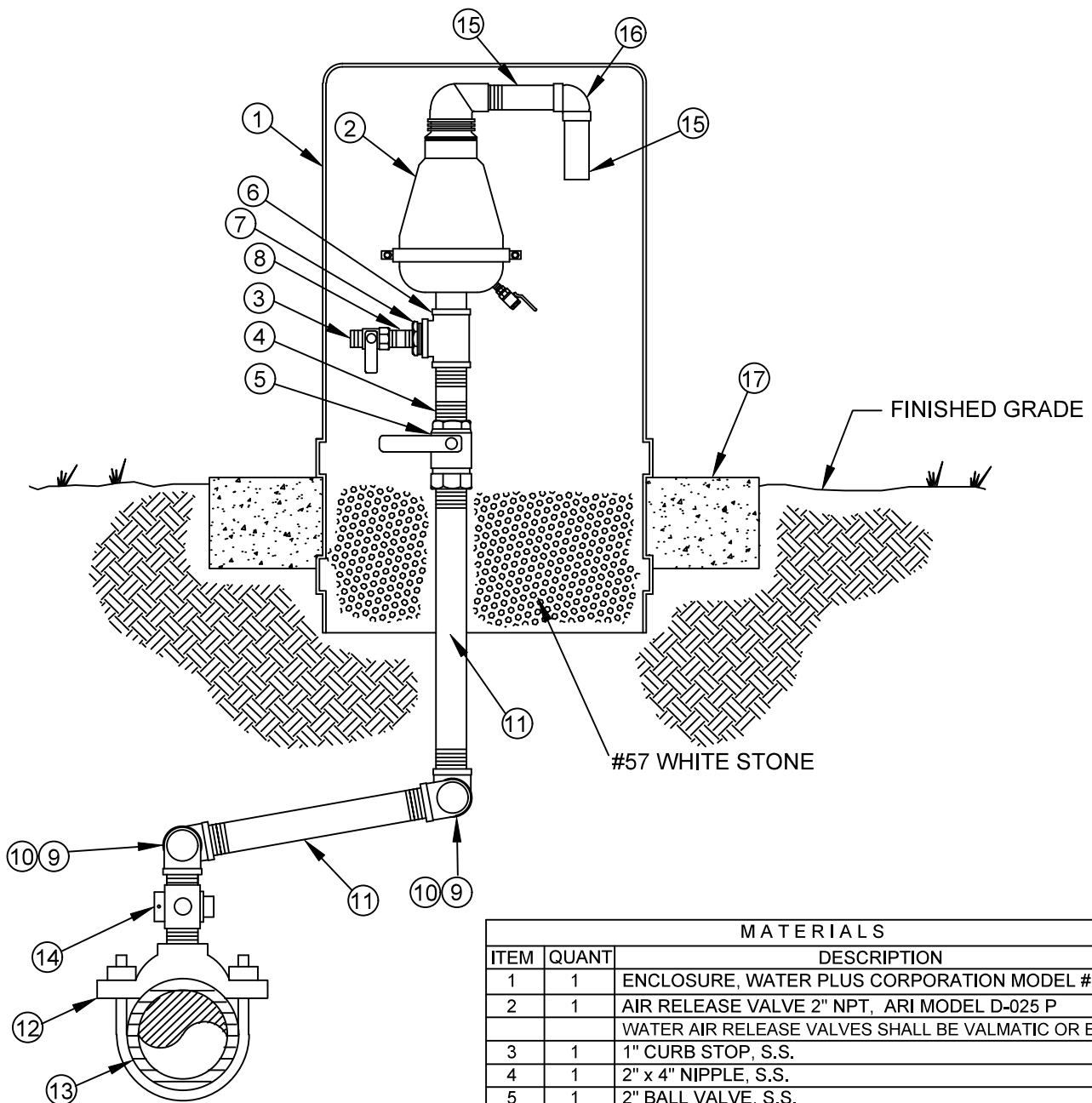


CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

METER BOX LAYOUT

DATE
02/2020

DETAIL NUMBER
PW-30



NOTES:

1. VENTED ENCLOSURE TO BE COLOR CODED BLUE.
2. THE CITY SHALL HAVE THE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL LS-14) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN.

MATERIALS

ITEM	QUANT	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT, ARI MODEL D-025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, S.S.
4	1	2" x 4" NIPPLE, S.S.
5	1	2" BALL VALVE, S.S.
6	1	2" TEE, S.S.
7	1	2" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	4	2" x 90° ELBOW, S.S.
10	2	2" SHORT NIPPLE, S.S.
11	2	2" PIPE, S.S. LENGTH AS REQUIRED
12	1	2" DOUBLE STRAP TAPPING SADDLE, S.S.
13	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
14	1	2" CORPORATION BRASS
15	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
16	1	1-1/2" x 90° ELBOW, PVC
17	1	CONCRETE SLAB AROUND ENCLOSURE



CITY OF HOLLY HILL, FLORIDA
STANDARD CONSTRUCTION DETAILS

**STANDARD AIR RELEASE VALVE ASSEMBLY
ABOVE GROUND VERTICAL PIPE LAYOUT**

DATE
02/2020

DETAIL NUMBER
PW-31