

Plotted By: Schultz, Ryan Sheet: Set: OAKWOOD PLAZA Layout: C-408 UTILITY DETAILS July 12, 2024 01:49:28am K:\WEB\_LDEV\L47507131-Dicks\_House\_of\_Sports\CAD\Plan\Drawings\C-401 UTILITY DETAILS.dwg  
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**WATER SYSTEM NOTES:**

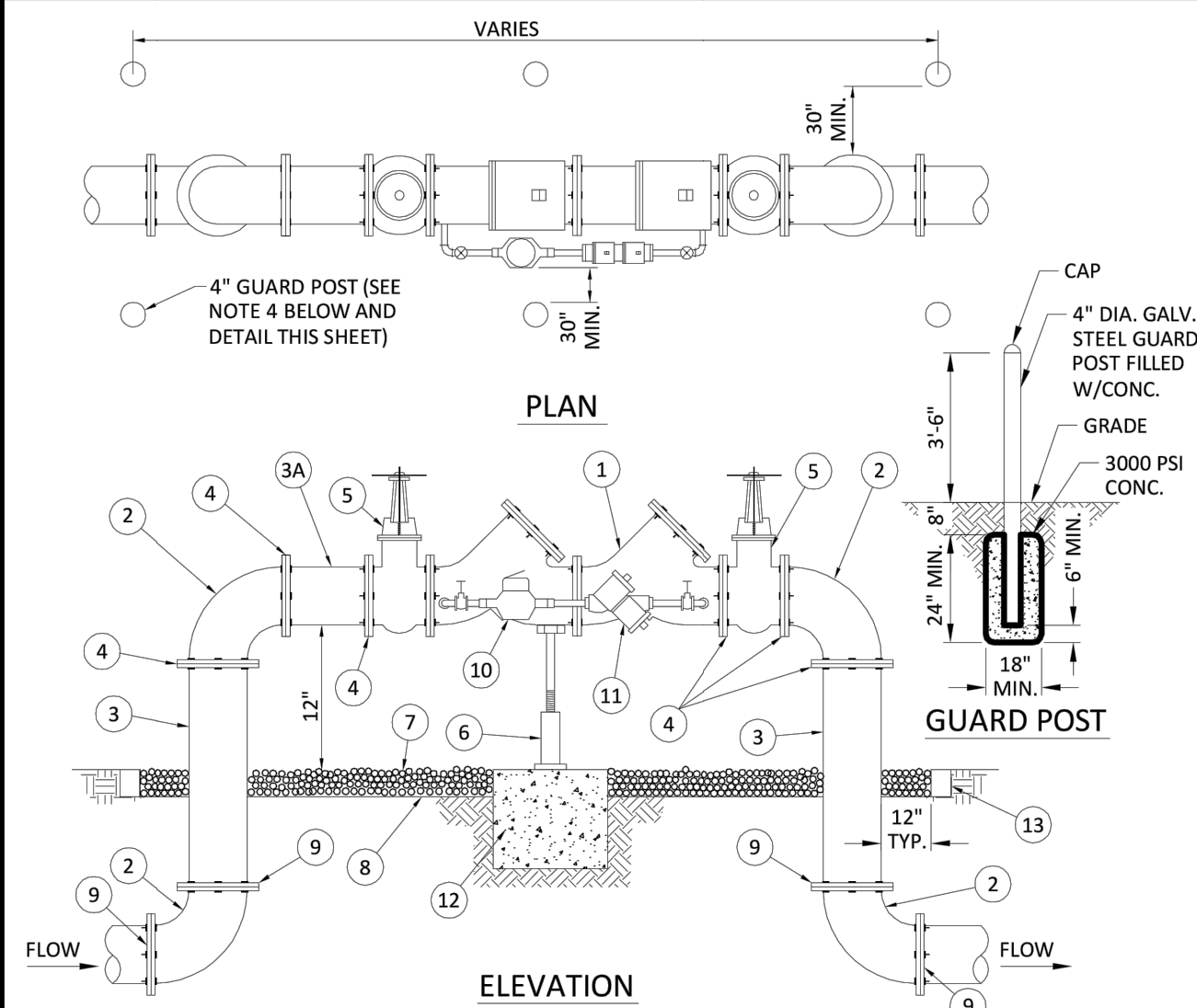
- 1. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE.
- 2. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(5)].
- 3. AT ALL UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE, OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER 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. [FAC 62-555.314(2)]. EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)].
- 4. NEW UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT TO BE DUCTILE IRON PIPE (D.I.P.) WHEN CROSSING BELOW SANITARY SEWER MAINS.
- 5. POLYETHYLENE ENCASEMENT MATERIAL SHALL BE USED TO ENCASE ALL BURIED DUCTILE IRON PIPE, FITTINGS, VALVES, RODS, AND APPURTENANCES IN ACCORDANCE WITH AWWA C105, METHOD A. THE POLYETHYLENE TUBING SHALL BE CUT TWO FEET LONGER THAN THE PIPE SECTION AND SHALL OVERLAP THE ENDS OF THE PIPE BY ONE FOOT. THE POLYETHYLENE TUBING SHALL BE GATHERED AND LAPPED TO PROVIDE A SNUG FIT AND SHALL BE SECURED AT QUARTER POINTS WITH POLYETHYLENE TAPE. EACH END OF THE POLYETHYLENE TUBING SHALL BE SECURED WITH A WRAP OF POLYETHYLENE TAPE.
- 6. THE POLYETHYLENE TUBING SHALL PREVENT CONTACT BETWEEN THE PIPE AND BEDDING MATERIAL, BUT IS NOT INTENDED TO BE A COMPLETELY AIRTIGHT AND WATERTIGHT ENCLOSURE. DAMAGED POLYETHYLENE TUBING SHALL BE REPAIRED IN A WORKMANLIKE MANNER USING POLYETHYLENE TAPE, OR THE DAMAGED SECTION SHALL BE REPLACED. POLY WRAP WILL NOT BE PAID FOR AS A SEPARATE BID ITEM. IT SHALL BE CONSIDERED TO BE A PART OF THE PRICE BID FOR WATER MAINS.
- 7. FIRE HYDRANT BARRELS SHALL BE ENCASED IN POLY WRAP UP TO THE GROUND SURFACE AND THE WEEP HOLES SHALL NOT BE COVERED BY THE POLY WRAP.
- 8. GATE VALVES FOR USE WITH PIPE LESS THAN THREE INCHES (3") IN DIAMETER SHALL BE RATED FOR TWO HUNDRED (200) PSI WORKING PRESSURE, NON-SHOCK, BLACK PATTERN, SCREWED BONNET, NON-RISING STEM, BRASS BODY, AND SOLID WEEDGE. THEY SHALL BE STANDARD THREADED FOR PVC PIPE AND HAVE A MALLEABLE IRON HANDWHEEL. GATE VALVES 3" THROUGH 16" IN DIAMETER SHALL BE RESILIENT SEAT AND BIDIRECTIONAL FLOW ONLY. VALVES FOR SPECIAL APPLICATIONS WILL REQUIRE CITY UTILITY APPROVAL.
- 9. VALVE BOXES AND COVERS FOR ALL SIZE VALVES SHALL BE OF CAST IRON CONSTRUCTION AND ADJUSTABLE SCREW-ON TYPE. THE LID SHALL HAVE CAST IN THE METAL THE WORD "WATER" FOR THE WATER LINES. ALL VALVE BOXES SHALL BE SIX INCH (6") NOMINAL DIAMETER AND SHALL BE SUITABLE FOR DEPTHS OF THE PARTICULAR VALVE. THE STEM OF THE BURIED VALVE SHALL BE WITHIN TWENTY-FOUR INCHES (24") OF THE FINISHED GRADE UNLESS OTHERWISE APPROVED BY THE CITY.
- 10. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM WATER SYSTEM NOTES DRAWING NO. W-01  
APPROVED: XXX

**WATER SYSTEM NOTES (CONTINUED):**

- 11. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.
- 12. ALL PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C900 LATEST REVISION AND CLASS DR 18. ALL DIP WATER MAINS SHALL BE DUCTILE IRON PRESSURE CLASS 350, WITH WALL THICKNESS COMPLYING WITH CLASS 52. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-02 AND BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
- 13. FITTINGS SHALL BE DUCTILE IRON, MEETING ANSI/AWWA C153/A21.53-00 SPECIFICATIONS, WITH 350 PSI MINIMUM WORKING PRESSURE. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. ALL DUCTILE IRON PIPE AND FITTINGS MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
- 14. ALL DUCTILE IRON PIPE TO BE MECHANICAL JOINTS, WRAPPED IN POLY. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.
- 15. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.
- 16. ALL TRENCHING, PIPE LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTING MUST COMPLY WITH THE CITY OF HOLLYWOOD SPECIFICATIONS.
- 17. THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 30" (DIP) OR 36" (PVC).
- 18. MINIMUM HORIZONTAL SEPARATION BETWEEN STORM STRUCTURES AND WATER MAINS SHALL BE 3'.
- 19. MAXIMUM DEFLECTION PER EACH JOINT SHALL BE 50% OF MANUFACTURES RECOMMENDATION (MAXIMUM) WHERE DEFLECTION IS REQUIRED.
- 20. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH WATER MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, WATER MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 18" MINIMUM VERTICAL SEPARATION. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
- 21. PIPE JOINT RESTRAINT SHALL BE PROVIDED BY THE USE OF DUCTILE IRON FOLLOWER GLANDS MANUFACTURED TO ASTM A 536-80. TWIST-OFF NUTS SHALL BE USED TO ENSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINING DEVICES SHALL HAVE A WORKING PRESSURE OF 250 PSI MINIMUM, WITH A MINIMUM SAFETY FACTOR OF 2:1, AND SHALL BE EBA IRON INC., MEGALUG OR APPROVED EQUAL JOINT RESTRAINTS SHALL BE PROVIDED AT A MINIMUM OF THREE JOINTS (60 FEET) FROM ANY FITTING.
- 22. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM WATER SYSTEM NOTES DRAWING NO. W-02  
APPROVED: XXX

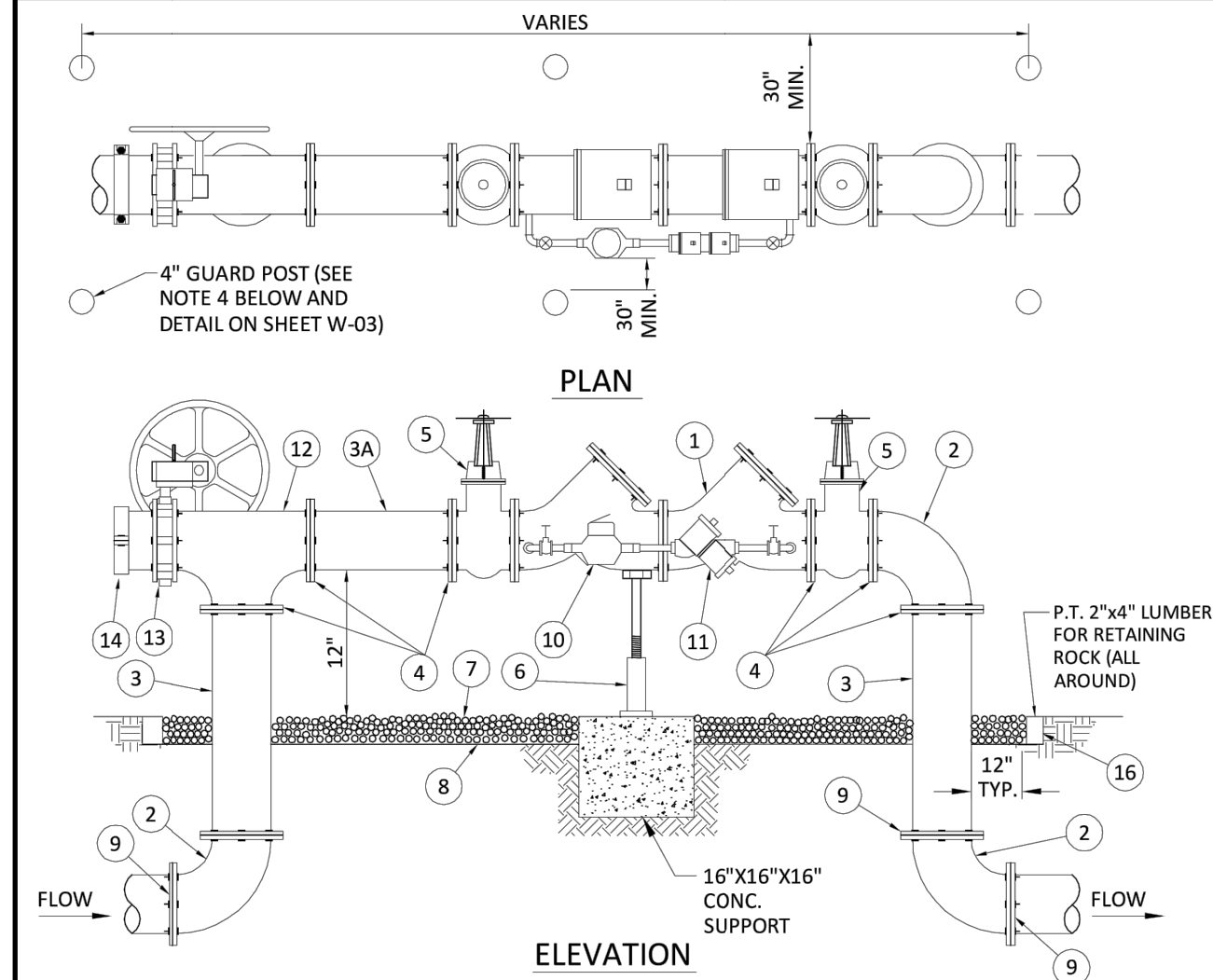


**MATERIALS**

| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION                      |
|------|------|--|------|------|----------------------------------|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 7    | N/A  | PEA GRAVEL (4" DEEP)             |
| 2    | 4    | 4", 6", 8" BEND-90°                      | 8    | N/A  | PLASTIC LINER/WEED STOP (5 MILS) |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 9    | 4    | RESTRAINED JOINTS                |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 10   | 1    | LOW FLOW METER                   |
| 4    | 7    | 4", 6", 8" FLANGE, D.I.P.                | 11   | 1    | VALVE, BYPASS DOUBLE CHECK       |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 12   | 1    | 16"x16"x16" CONC. SUPPORT        |
| 6    | 1    | SCREW JACK/ANCHORED                      | 13   | 1    | P.T. 2"x4" LUMBER ALL AROUND     |

- NOTES:**
1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
  2. ALL PIPING SHALL BE D.I.P. CL 50/S2 AS APPLICABLE TO MINIMUM STANDARDS.
  3. ALL LOW FLOW METER PIPING SHALL BE BRASS OR COPPER.
  4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  5. MAY USE 45° BENDS (SEE DETAIL W-07.2) WHEN WORKING AREA IS NOT LIMITED, AS DIRECTED BY CITY.
  6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE SPRINKLER SERVICE (90° BENDS) DRAWING NO. W-03  
APPROVED: XXX

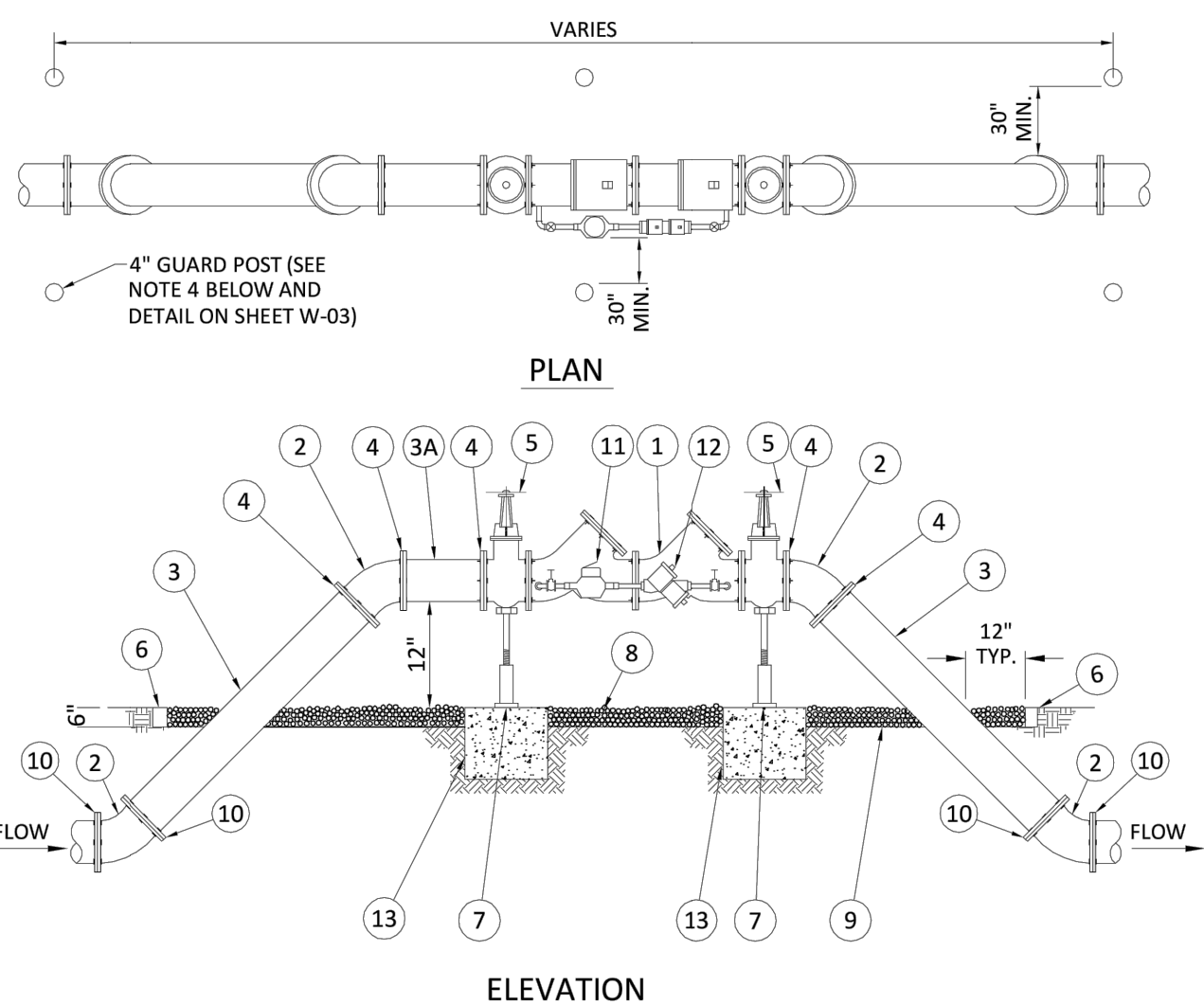


**MATERIALS**

| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION  |
|------|------|--|------|------|--|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 8    | N/A  | PLASTIC LINER/WEED STOP (5 MILS)                                   |
| 2    | 4    | 4", 6", 8" BEND-90°                      | 9    | 4    | RESTRAINED JOINTS  |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 10   | 1    | LOW FLOW METER   |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 11   | 1    | VALVE, BYPASS DOUBLE CHECK   |
| 4    | 10   | 4", 6", 8" FLANGE, D.I.P.                | 12   | 1    | 4", 6", 8" TEE   |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 13   | 1    | 4", 6", 8" BUTTERFLY VALVE (SUPERVISED CLOSED), CHAINED AND LOCKED |
| 6    | 1    | SCREW JACK/ANCHORED                      | 14   | 1    | 4", 6", 8" CAP   |
| 7    | N/A  | PEA GRAVEL (4" DEEP)                     |      |      |  |

- NOTES:**
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  2. ALL PIPING SHALL BE D.I.P. CL 50/S2 AS APPLICABLE TO MINIMUM STANDARDS.
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  4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  5. MAY USE 45° BENDS (SEE DETAIL W-05) WHEN WORKING AREA IS NOT LIMITED, AS DIRECTED BY CITY.
  6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR FOR FIRE SPRINKLER SERVICE W/B.V. CONNECTION (90° BENDS) DRAWING NO. W-04  
APPROVED: XXX

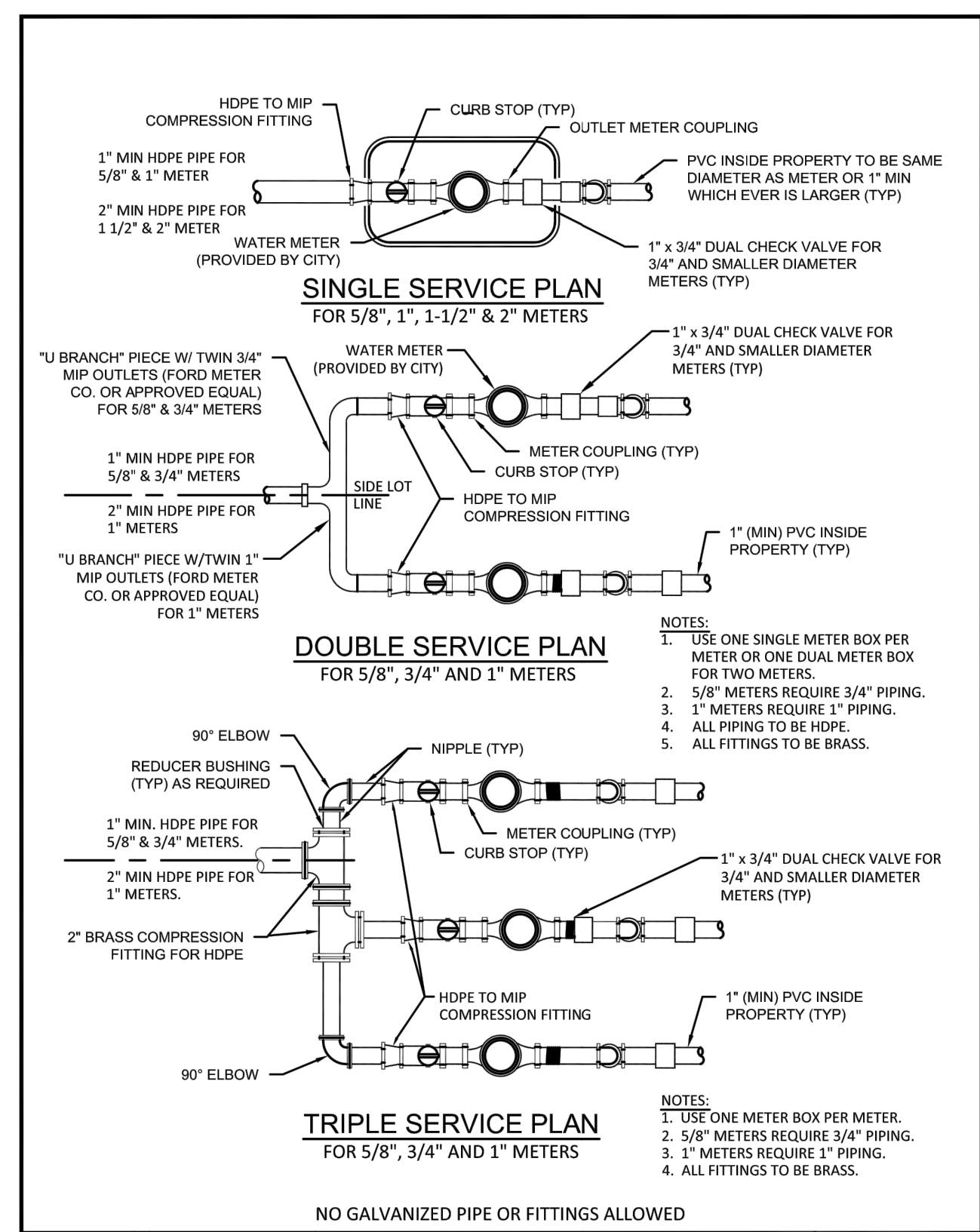


**MATERIALS**

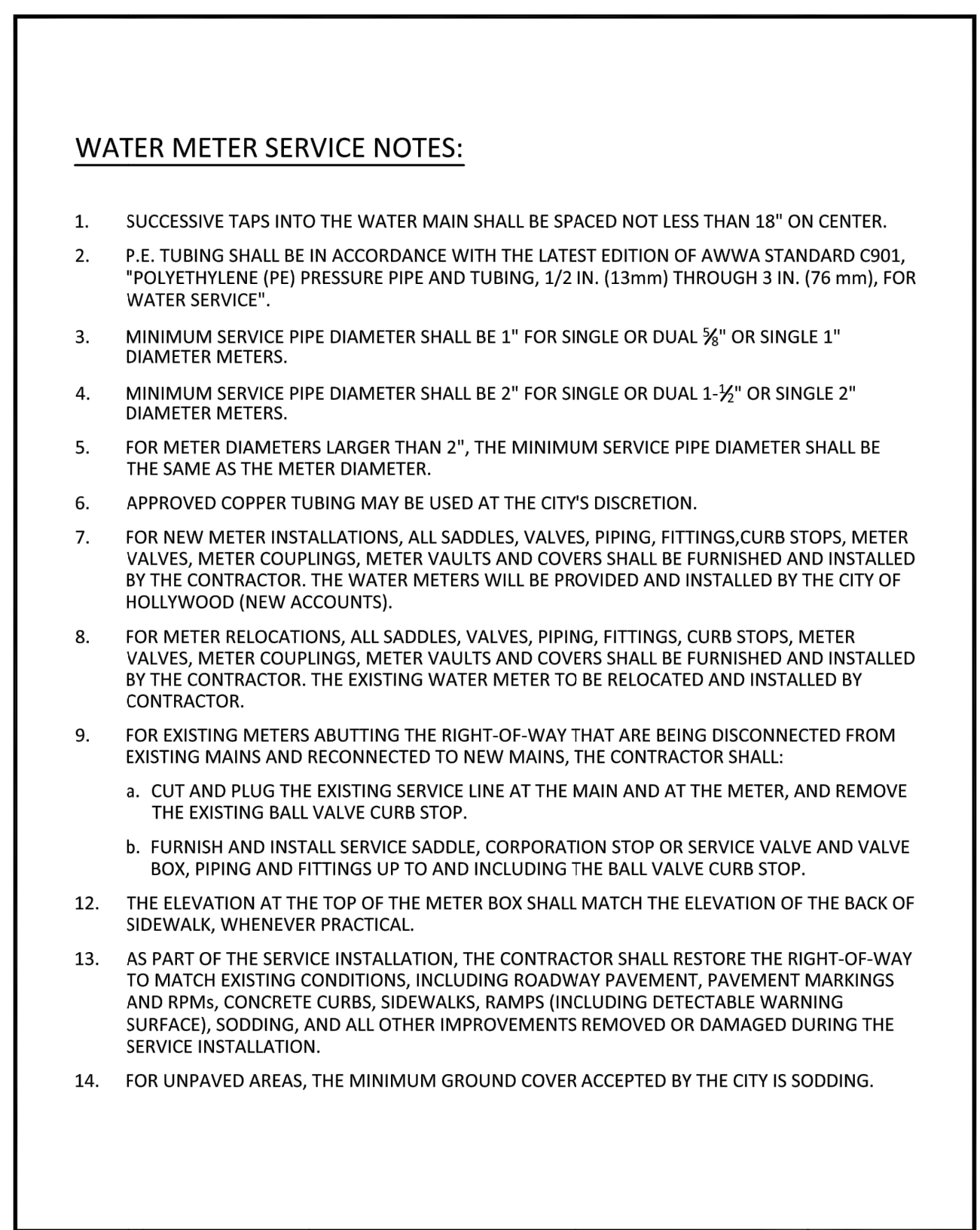
| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION                      |
|------|------|--|------|------|----------------------------------|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 7    | 2    | SCREW JACK/ANCHORED              |
| 2    | 4    | 4", 6", 8" BEND-45°                      | 8    | N/A  | PEA GRAVEL (4" DEEP)             |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 9    | N/A  | PLASTIC LINER/WEED STOP (5 MILS) |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 10   | 4    | RESTRAINED JOINTS                |
| 4    | 7    | 4", 6", 8" FLANGE, D.I.P.                | 11   | 1    | LOW FLOW METER                   |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 12   | 1    | VALVE, BYPASS DOUBLE CHECK       |
| 6    | 2    | P.T. 2"x4" LUMBER ALL AROUND             | 13   | 1    | 16"x16"x16" CONC. SUPPORT        |

- NOTES:**
1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
  2. ALL PIPING SHALL BE D.I.P. CL 50/S2 AS APPLICABLE TO MINIMUM STANDARDS.
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  4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  5. MAY USE 90° BENDS (SEE DETAIL W-03) WHEN WORKING AREA IS LIMITED.
  6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

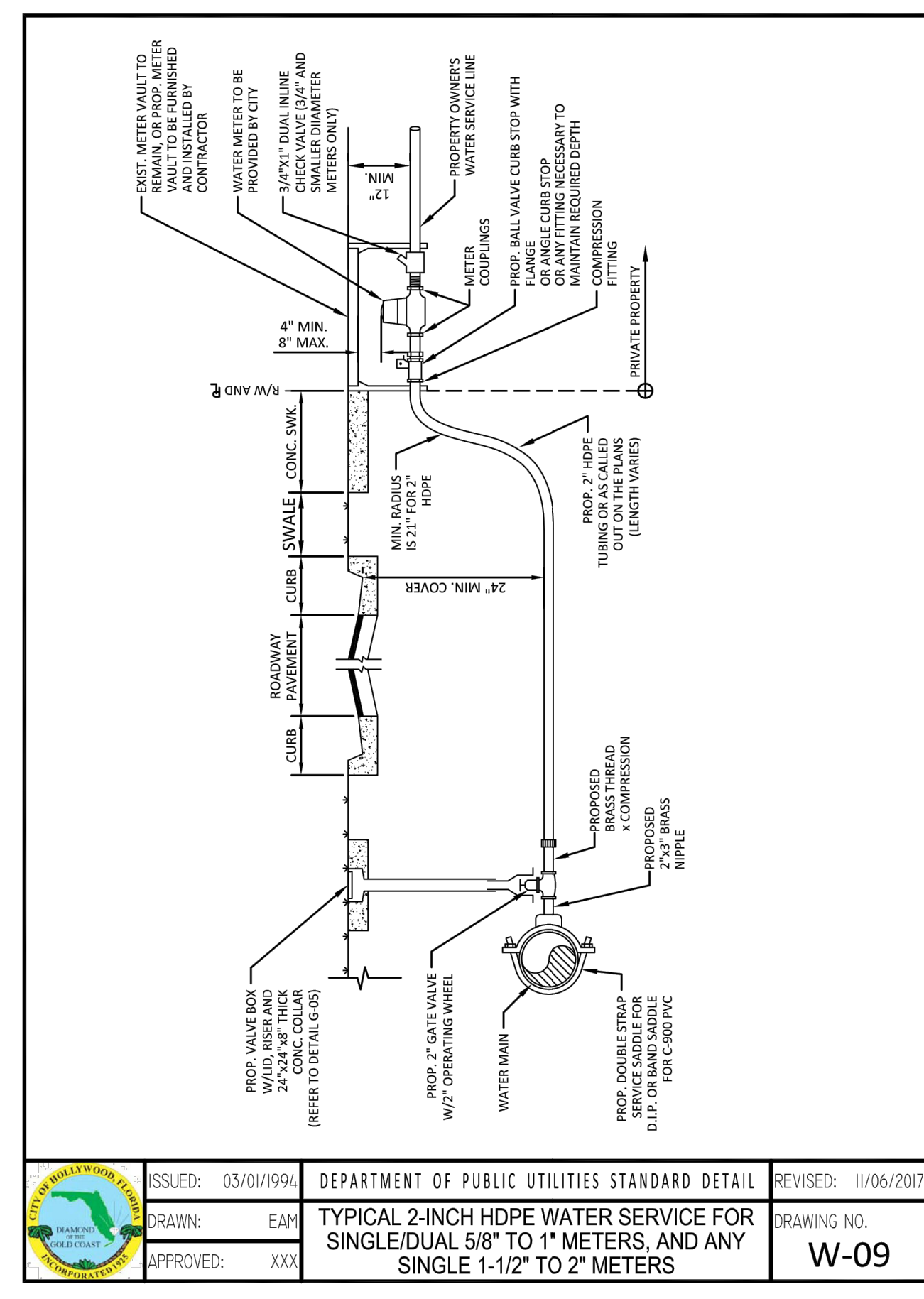
ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE SPRINKLER SERVICE (45° BENDS) DRAWING NO. W-05  
APPROVED: XXX



ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM TYPICAL 5/8", 1", 1-1/2" AND 2" METER INSTALLATION DRAWING NO. W-06  
APPROVED: XXX



ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM WATER METER SERVICE NOTES FOR 5/8" THROUGH 2" METERS DRAWING NO. W-07  
APPROVED: XXX



ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM TYPICAL 2-INCH HDPE WATER SERVICE FOR SINGLE/DUAL 5/8" TO 1" METERS, AND ANY SINGLE 1-1/2" TO 2" METERS DRAWING NO. W-09  
APPROVED: XXX

**Kimley»Horn**  
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445 24TH STREET, SUITE 200, VERO BEACH, FL 32960  
PHONE: 772-794-4100  
WWW.KIMLEY-HORN.COM  
REGISTRY NO. 35106

**GREGORY D. WILFONG**  
No. 63166  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

KHA PROJECT 147507131  
DATE 07/15/2024  
SCALE AS SHOWN  
DESIGNED BY SHB  
DRAWN BY SHB  
CHECKED BY GDW

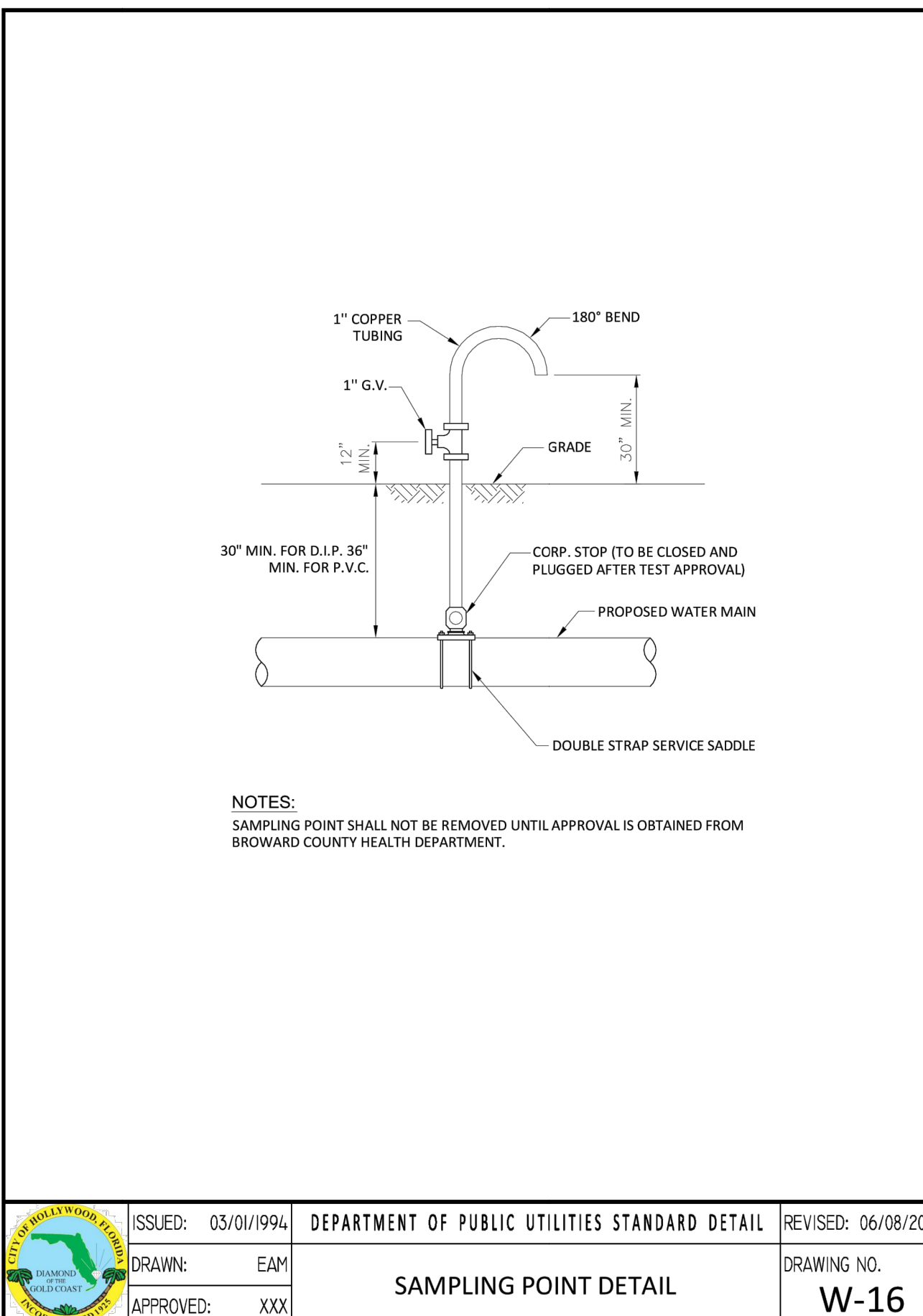
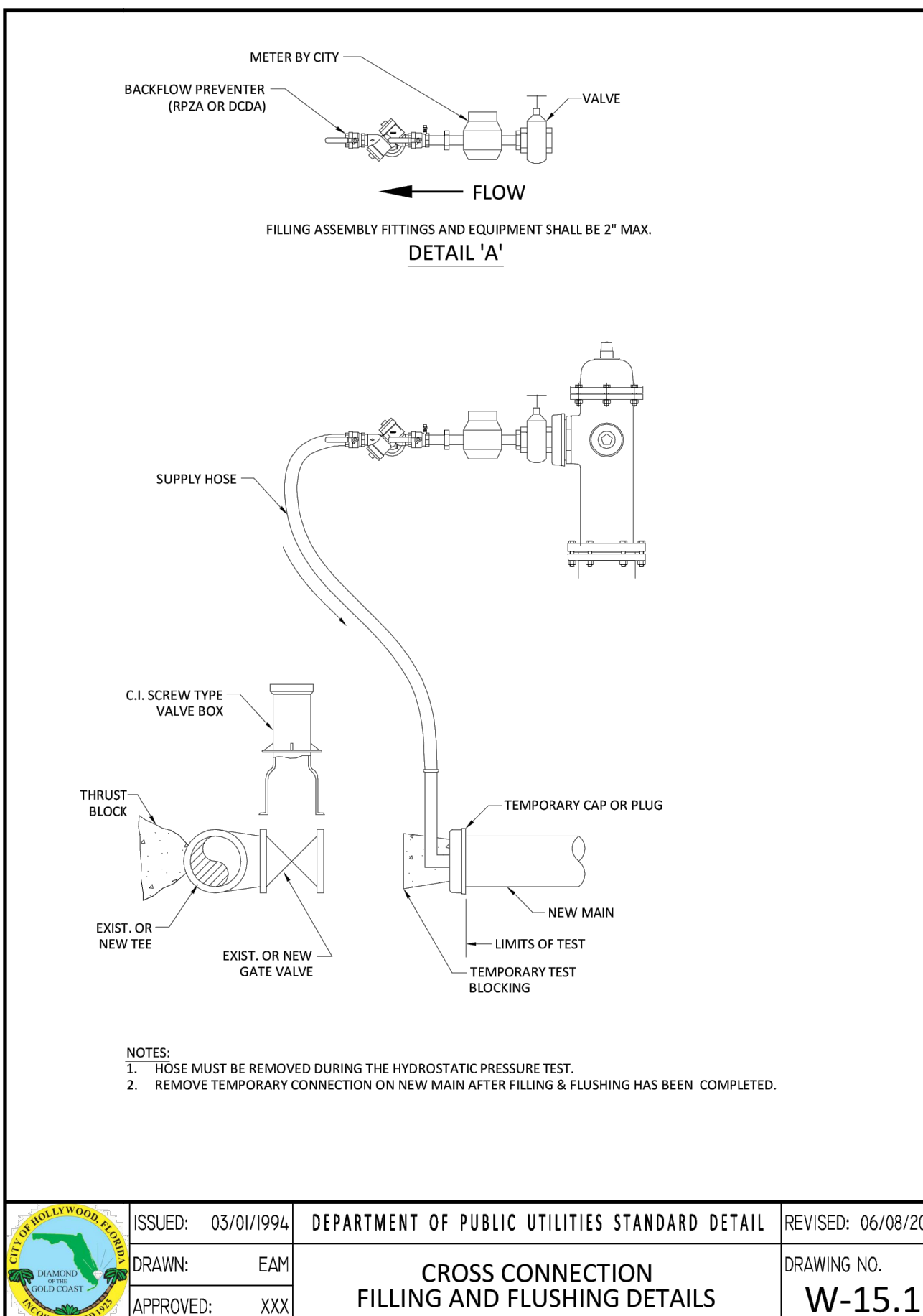
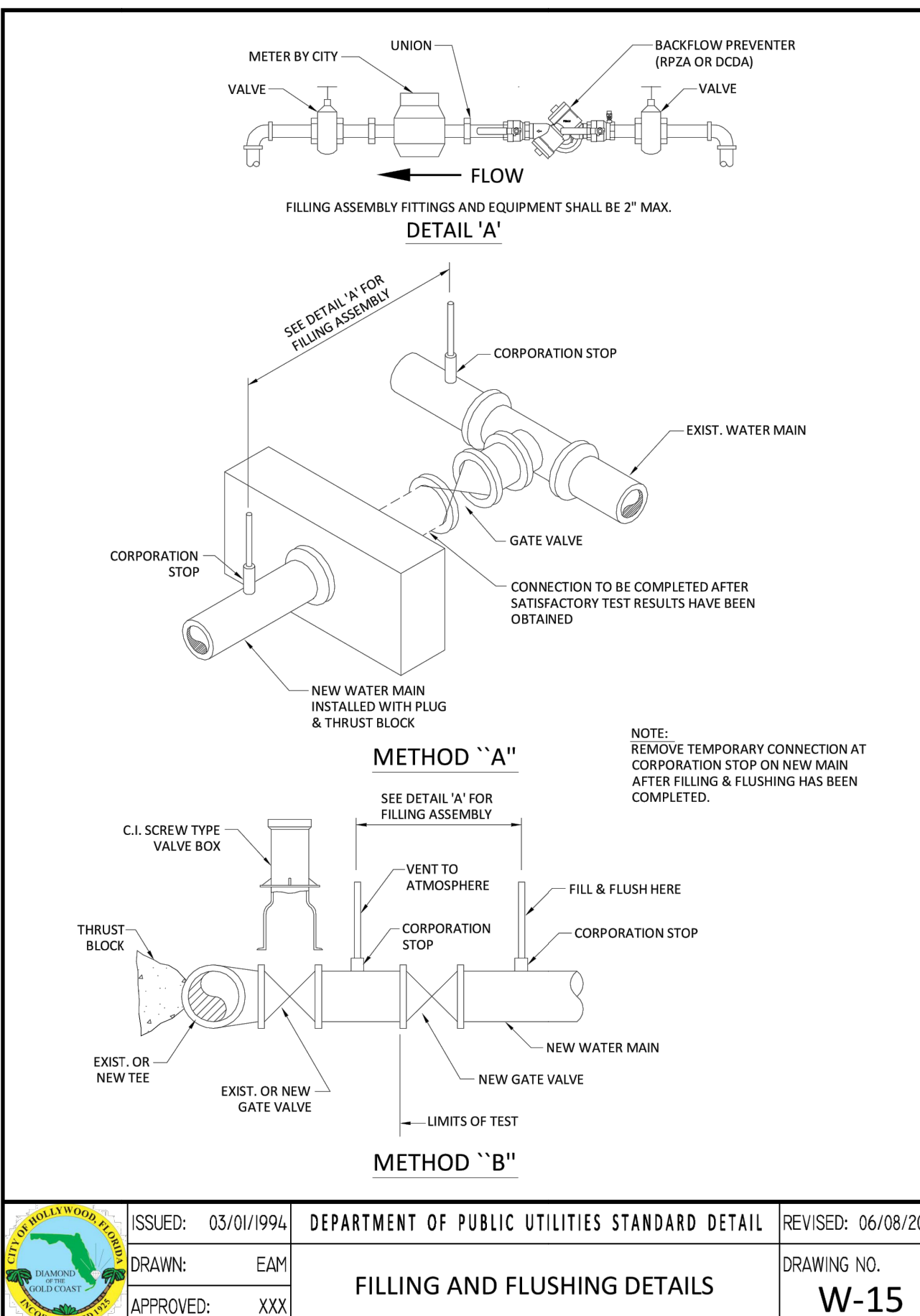
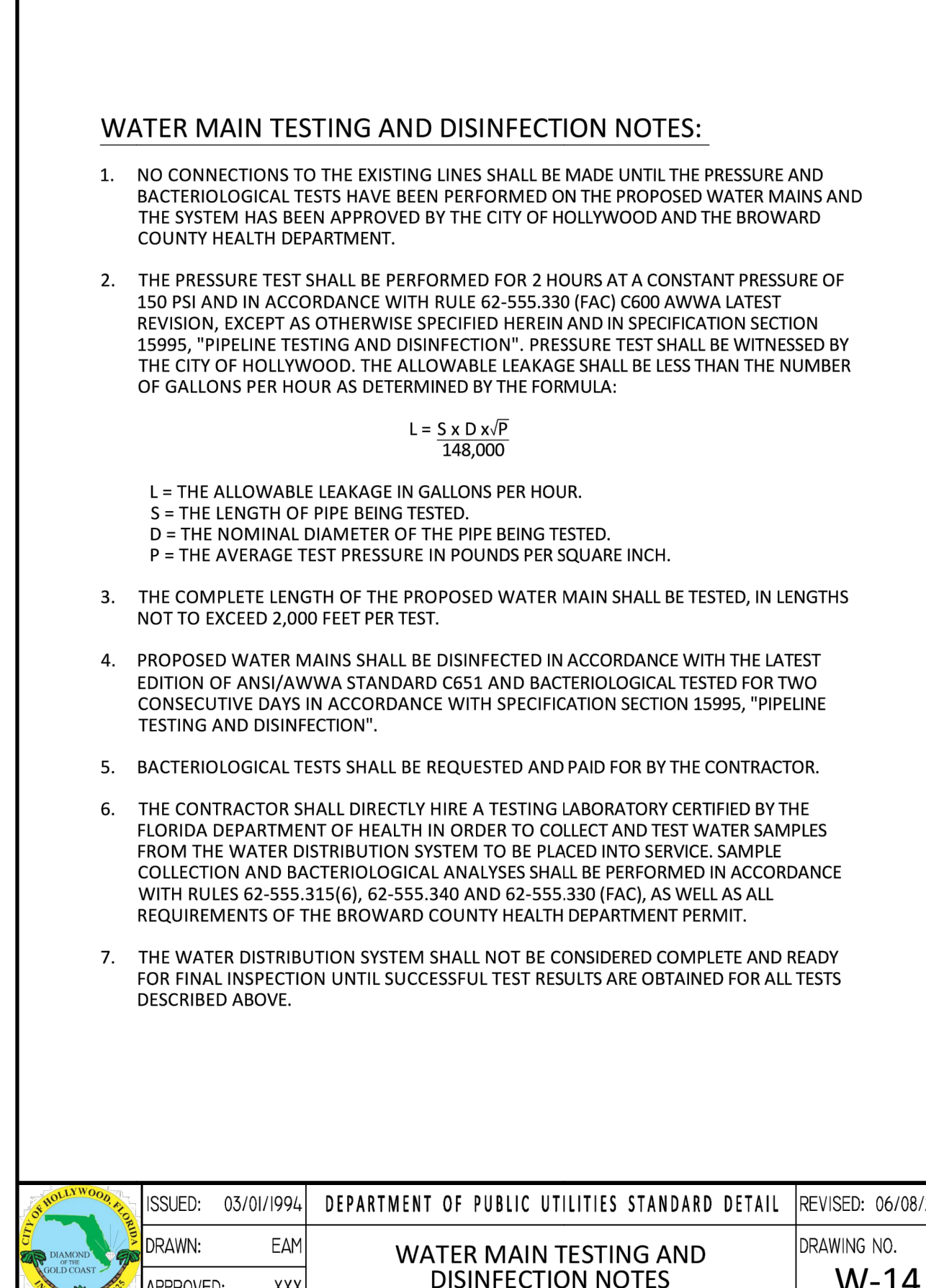
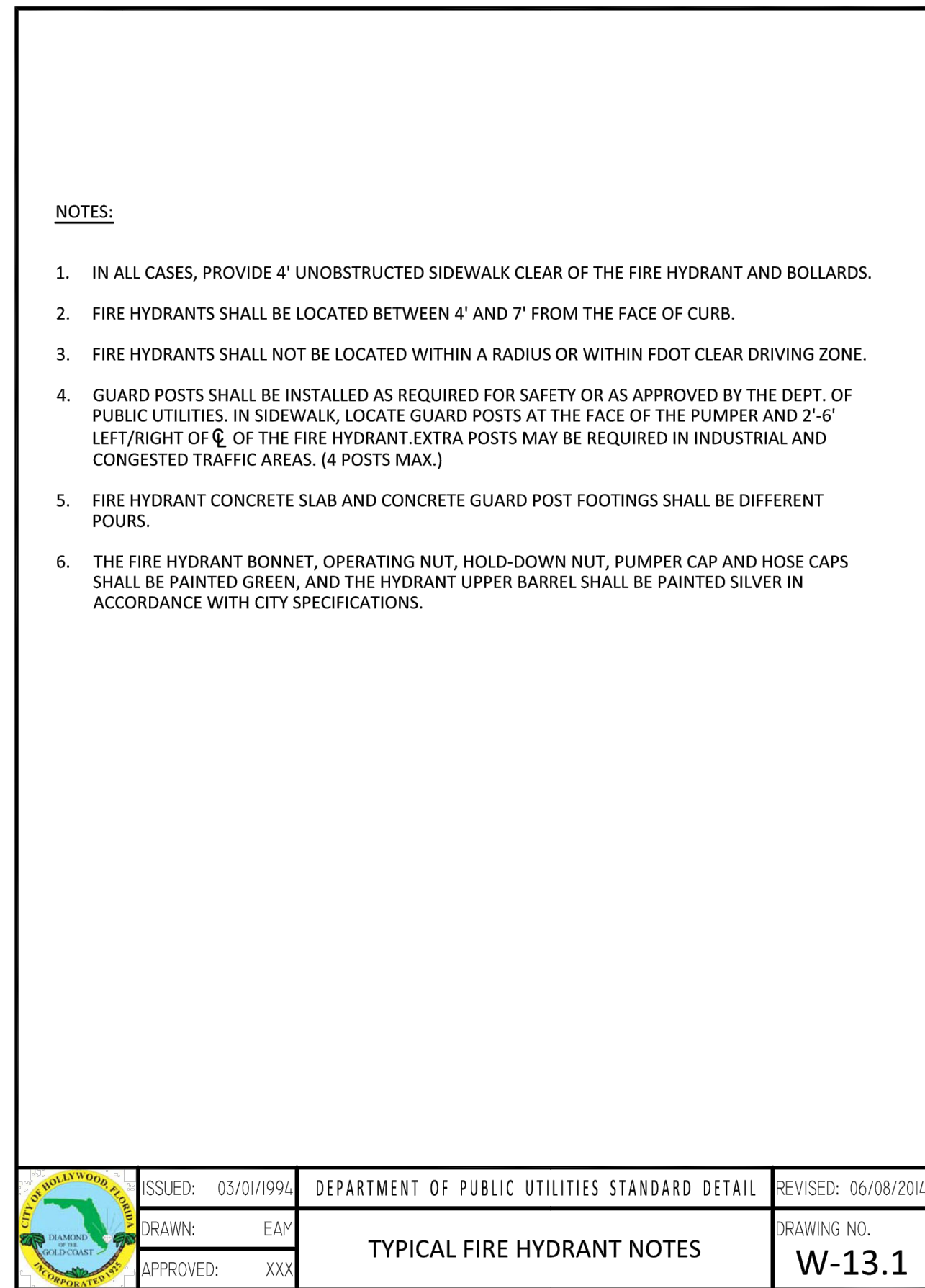
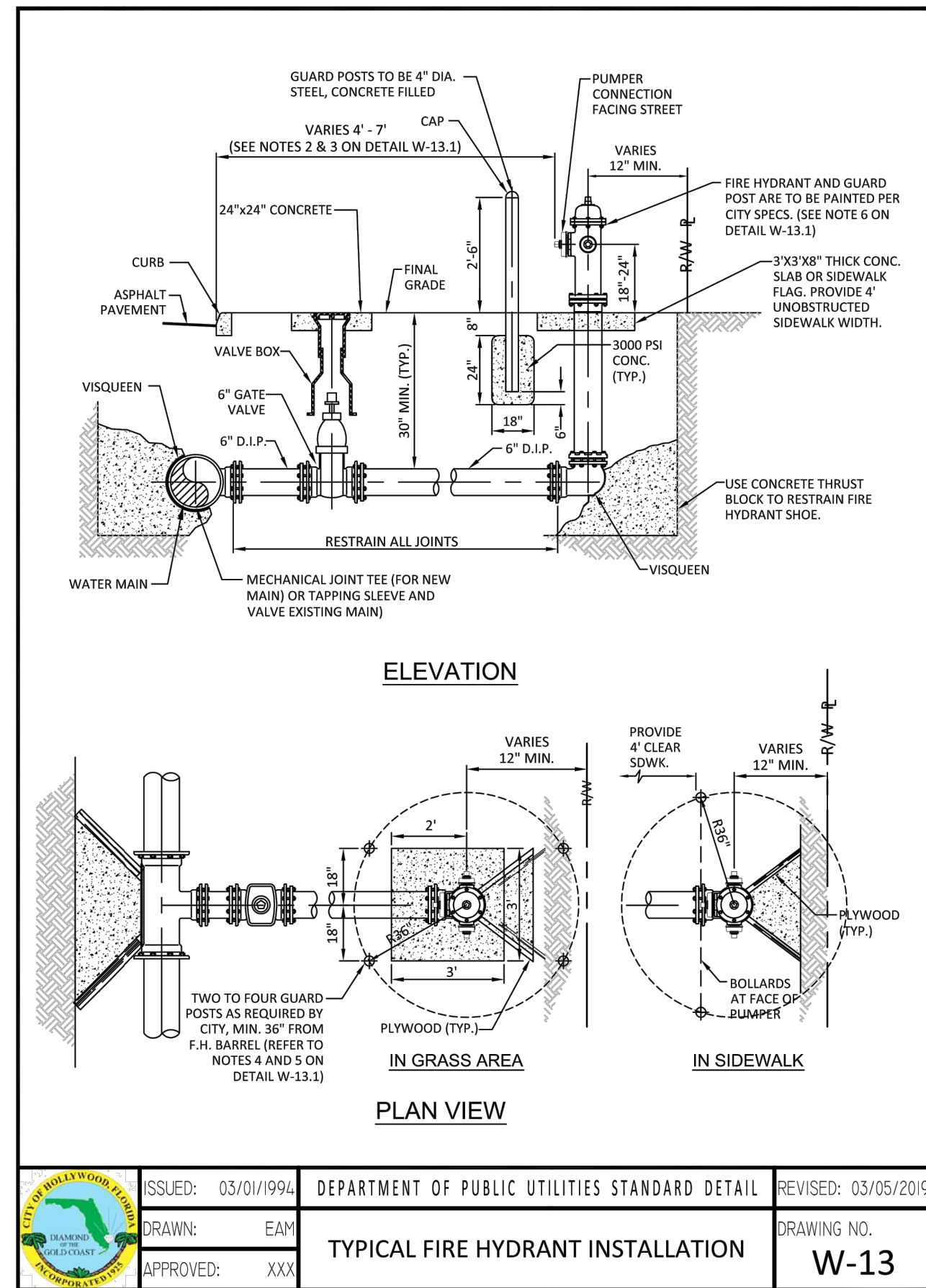
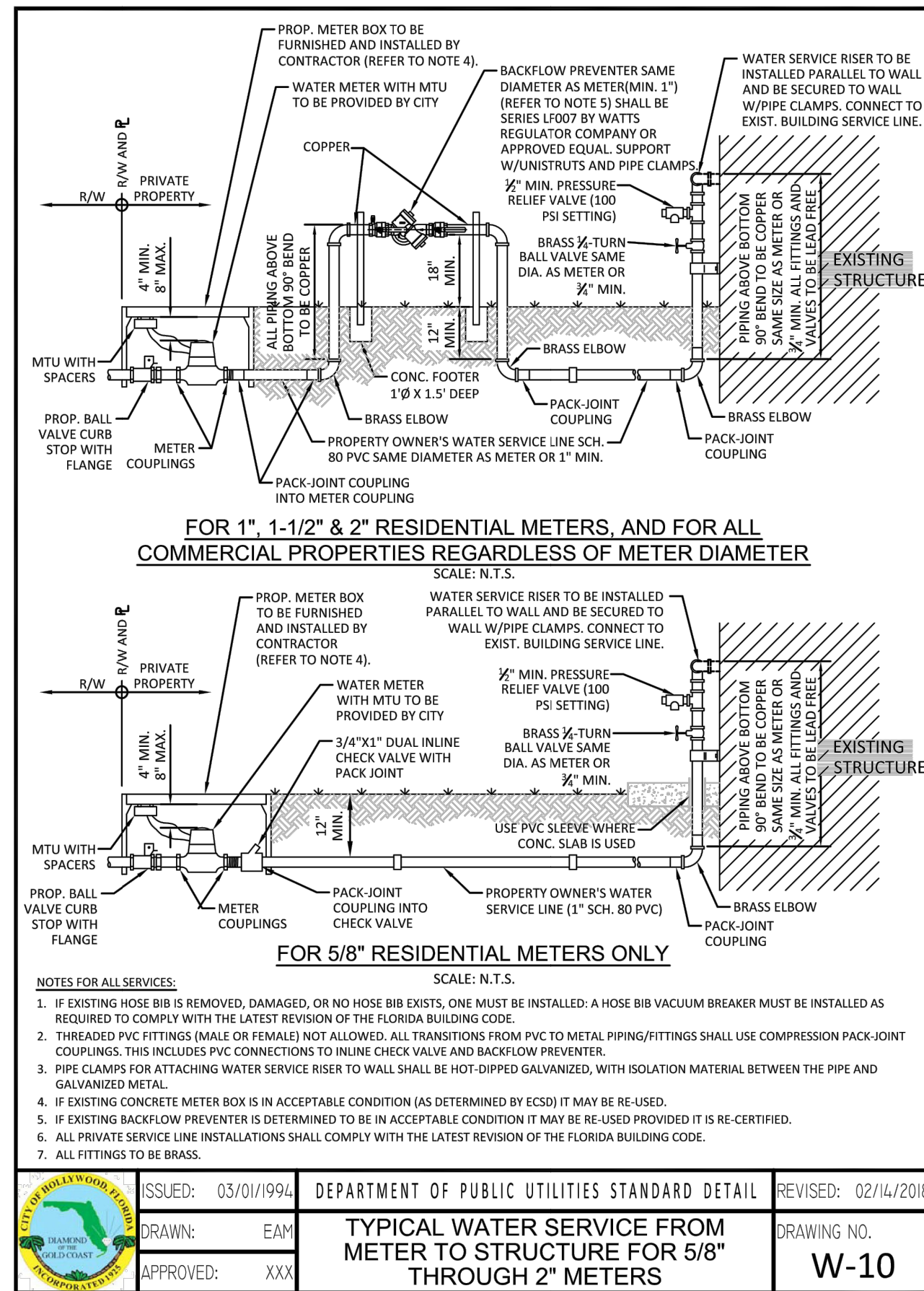
REVISIONS  
NO.  
DATE  
BY

**UTILITY DETAILS**

**OAKWOOD SOUTH RETAIL SHOPPING CENTER**  
CITY OF HOLLYWOOD, FL

SHEET NUMBER **C-408**

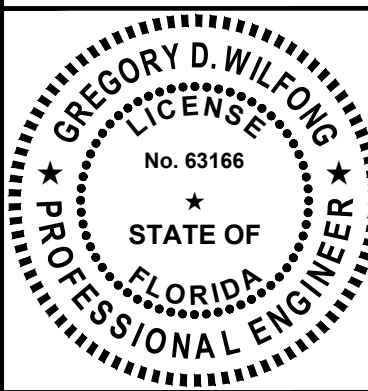
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|             |            |
|-------------|------------|
| KHA PROJECT | 147507131  |
| DATE        | 07/15/2024 |
| SCALE       | AS SHOWN   |
| DESIGNED BY | SHB        |
| DRAWN BY    | SHB        |
| CHECKED BY  | GDW        |

**UTILITY DETAILS**

**OAKWOOD SOUTH RETAIL SHOPPING CENTER**

CITY OF HOLLYWOOD FL

SHEET NUMBER  
**C-409**

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Plotted By: Schulte, Ryan Sheet: Set: OAKWOOD PLAZA Layout: C-410 UTILITY DETAIL July 12, 2024 01:49:45pm K:\WB\_IDEA\147807131-Dick House of Sports CAD\DrawSheets\C-410 UTILITY DETAILS.dwg  
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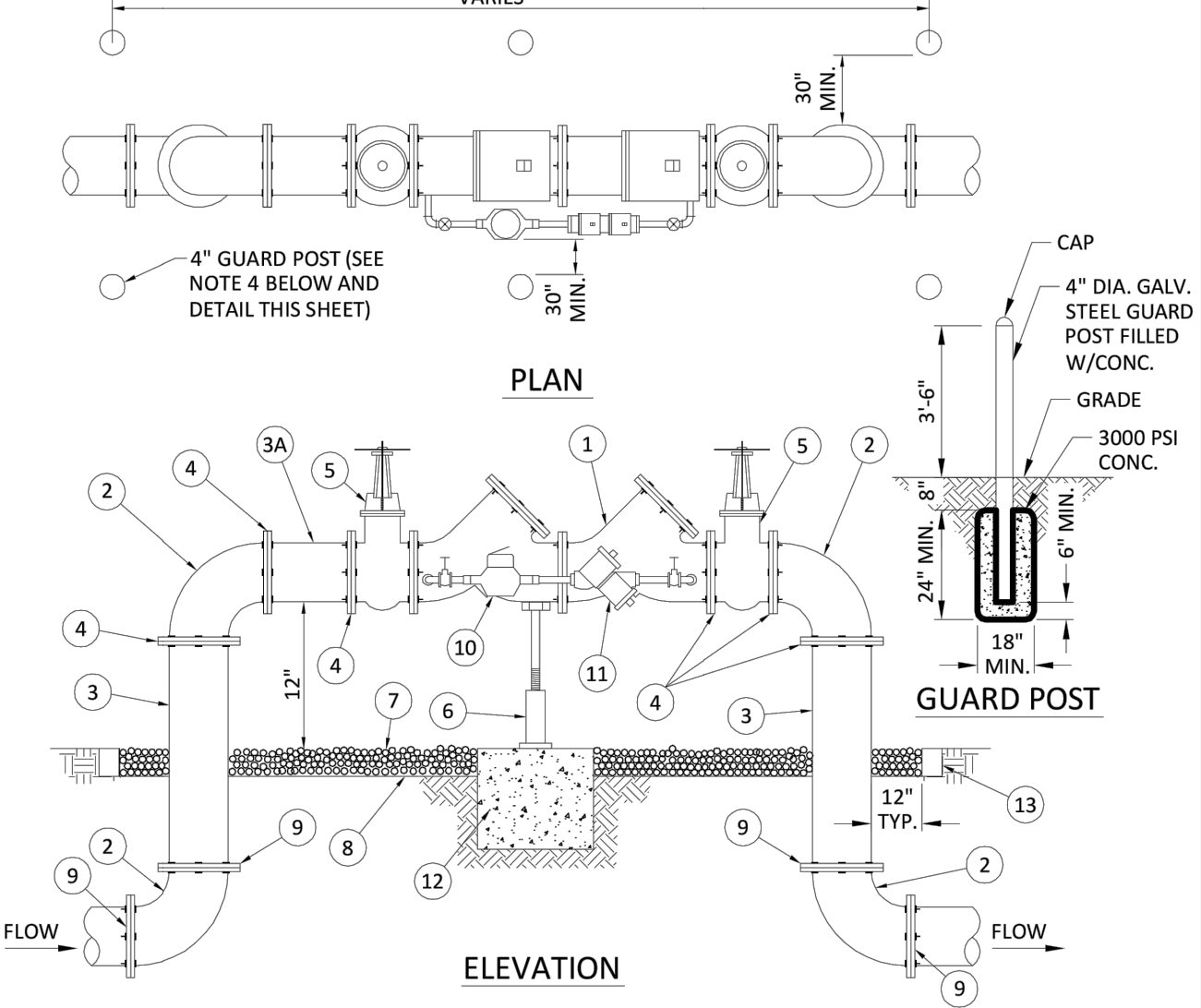
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- 7. FIRE HYDRANT BARRELS SHALL BE ENCASED IN POLY WRAP UP TO THE GROUND SURFACE AND THE WEEP HOLES SHALL NOT BE COVERED BY THE POLY WRAP.
- 8. GATE VALVES FOR USE WITH PIPE LESS THAN THREE INCHES (3") IN DIAMETER SHALL BE RATED FOR TWO HUNDRED (200) PSI WORKING PRESSURE, NON-SHOCK, BLOCK PATTERN, SCREWED BONNET, NON-RISING STEM, BRASS BODY, AND SOLID WEDGE. THEY SHALL BE STANDARD THREADED FOR PVC PIPE AND HAVE A MALLEABLE IRON HANDWHEEL. GATE VALVES 3" THROUGH 16" IN DIAMETER SHALL BE RESILIENT SEAT AND BIDIRECTIONAL FLOW ONLY. VALVES FOR SPECIAL APPLICATIONS WILL REQUIRE CITY UTILITY APPROVAL.
- 9. VALVE BOXES AND COVERS FOR ALL SIZE VALVES SHALL BE OF CAST IRON CONSTRUCTION AND ADJUSTABLE SCREW-ON TYPE. THE LID SHALL HAVE CAST IN THE METAL THE WORD "WATER" FOR THE WATER LINES. ALL VALVE BOXES SHALL BE SIX INCH (6") NOMINAL DIAMETER AND SHALL BE SUITABLE FOR DEPTHS OF THE PARTICULAR VALVE. THE STEM OF THE BURIED VALVE SHALL BE WITHIN TWENTY-FOUR INCHES (24") OF THE FINISHED GRADE UNLESS OTHERWISE APPROVED BY THE CITY.
- 10. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM WATER SYSTEM NOTES DRAWING NO. W-01  
APPROVED: XXX

**WATER SYSTEM NOTES (CONTINUED):**

- 11. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.
- 12. ALL PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C900 LATEST REVISION AND CLASS DR 18. ALL DIP WATER MAINS SHALL BE DUCTILE IRON PRESSURE CLASS 350, WITH WALL THICKNESS COMPLYING WITH CLASS 52. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-02 AND BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
- 13. FITTINGS SHALL BE DUCTILE IRON, MEETING ANSI/AWWA C153/A21.53-00 SPECIFICATIONS, WITH 350 PSI MINIMUM WORKING PRESSURE. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. ALL DUCTILE IRON PIPE AND FITTINGS MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
- 14. ALL DUCTILE IRON PIPE TO BE MECHANICAL JOINTS. WRAPPED IN POLY. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.
- 15. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.
- 16. ALL TRENCHING, PIPE LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTING MUST COMPLY WITH THE CITY OF HOLLYWOOD SPECIFICATIONS.
- 17. THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 30" (DIP) OR 36" (PVC).
- 18. MINIMUM HORIZONTAL SEPARATION BETWEEN STORM STRUCTURES AND WATER MAINS SHALL BE 3'.
- 19. MAXIMUM DEFLECTION PER EACH JOINT SHALL BE 50% OF MANUFACTURERS RECOMMENDATION (MAXIMUM) WHERE DEFLECTION IS REQUIRED.
- 20. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH WATER MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, WATER MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 18" MINIMUM VERTICAL SEPARATION. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
- 21. PIPE JOINT RESTRAINT SHALL BE PROVIDED BY THE USE OF DUCTILE IRON FOLLOWER GLANDS MANUFACTURED TO ASTM A 536-80. TWIST-OFF NUTS SHALL BE USED TO ENSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINING DEVICES SHALL HAVE A WORKING PRESSURE OF 250 PSI MINIMUM, WITH A MINIMUM SAFETY FACTOR OF 2:1, AND SHALL BE EBAA IRON INC., MEGALUG OR APPROVED EQUAL. JOINT RESTRAINTS SHALL BE PROVIDED AT A MINIMUM OF THREE JOINTS (60 FEET) FROM ANY FITTING.
- 22. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM WATER SYSTEM NOTES DRAWING NO. W-02  
APPROVED: XXX

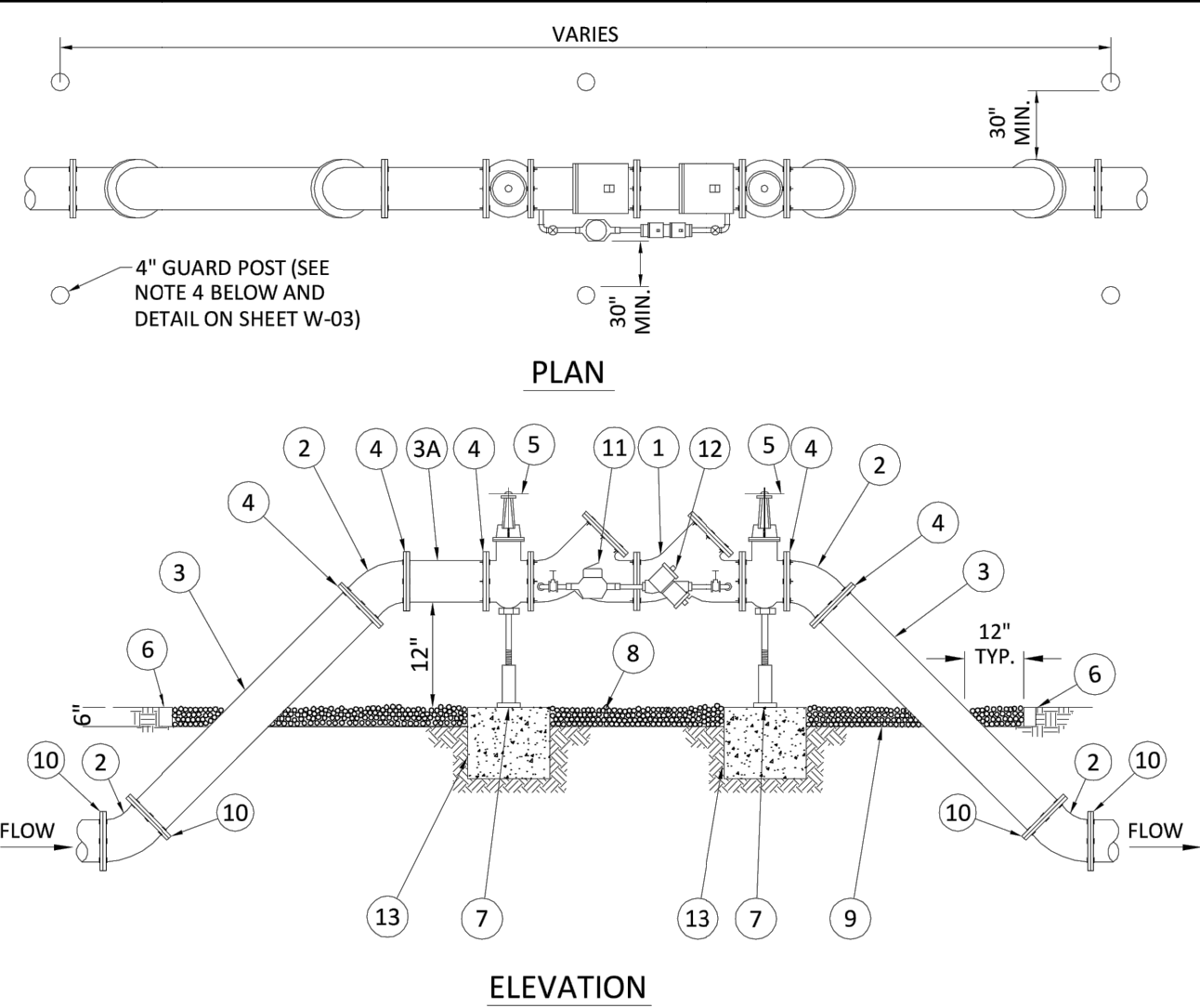


**MATERIALS**

| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION                      |
|------|------|--|------|------|----------------------------------|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 7    | N/A  | PEA GRAVEL (4" DEEP)             |
| 2    | 4    | 4", 6", 8" BEND-90°                      | 8    | N/A  | PLASTIC LINER/WEED STOP (5 MILS) |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 9    | 4    | RESTRAINED JOINTS                |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 10   | 1    | LOW FLOW METER                   |
| 4    | 7    | 4", 6", 8" FLANGE, D.I.P.                | 11   | 1    | VALVE, BYPASS DOUBLE CHECK       |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 12   | 1    | 16" X 16" X 16" CONC. SUPPORT    |
| 6    | 1    | SCREW JACK/ANCHORED                      | 13   | 1    | P.T. 2X4 LUMBER ALL AROUND       |

- NOTES:**
- 1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
  - 2. ALL PIPING SHALL BE D.I.P. CL 50/52 AS APPLICABLE TO MINIMUM STANDARDS.
  - 3. ALL LOW FLOW METER PIPING SHALL BE BRASS OR COPPER.
  - 4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  - 5. MAY USE 45° BENDS (SEE DETAIL W-07) WHEN WORKING AREA IS NOT LIMITED, AS DIRECTED BY CITY.
  - 6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE SPRINKLER SERVICE (90° BENDS) DRAWING NO. W-03  
APPROVED: XXX

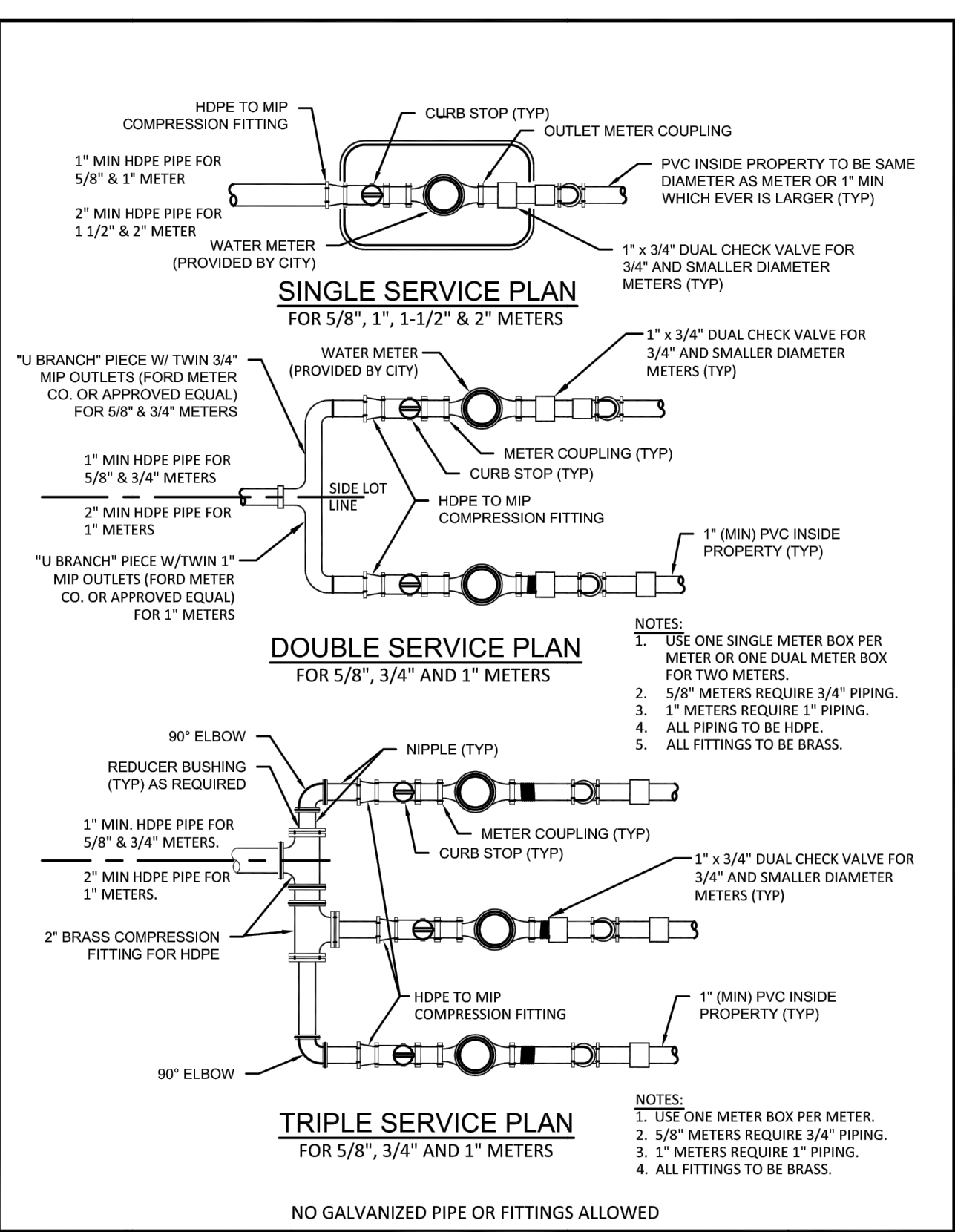


**MATERIALS**

| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION                      |
|------|------|--|------|------|----------------------------------|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 7    | 2    | SCREW JACK/ANCHORED              |
| 2    | 4    | 4", 6", 8" BEND-45°                      | 8    | N/A  | PEA GRAVEL (4" DEEP)             |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 9    | N/A  | PLASTIC LINER/WEED STOP (5 MILS) |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 10   | 4    | RESTRAINED JOINTS                |
| 4    | 7    | 4", 6", 8" FLANGE, D.I.P.                | 11   | 1    | LOW FLOW METER                   |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 12   | 1    | VALVE, BYPASS DOUBLE CHECK       |
| 6    | 2    | P.T. 2"x4" LUMBER (ALL AROUND)           | 13   | 1    | 16" X 16" X 16" CONC. SUPPORT    |

- NOTES:**
- 1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
  - 2. ALL PIPING SHALL BE D.I.P. CL 50/52 AS APPLICABLE TO MINIMUM STANDARDS.
  - 3. ALL LOW FLOW METER PIPING SHALL BE BRASS OR COPPER.
  - 4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  - 5. MAY USE 90° BENDS (SEE DETAIL W-03) WHEN WORKING AREA IS LIMITED.
  - 6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE SPRINKLER SERVICE (45° BENDS) DRAWING NO. W-05  
APPROVED: XXX

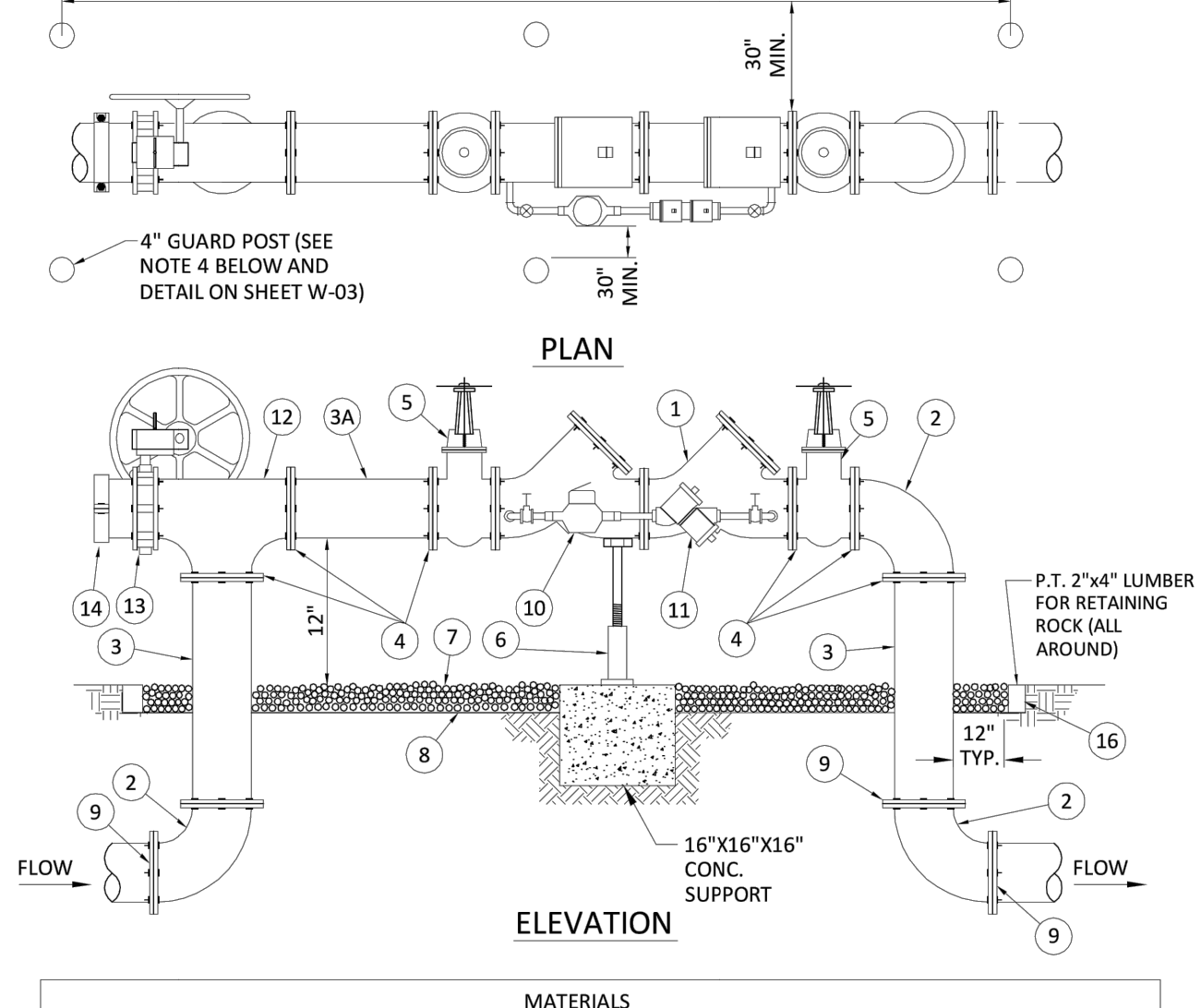


ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM TYPICAL 5/8", 1", 1-1/2" AND 2" METER INSTALLATION DRAWING NO. W-06  
APPROVED: XXX

**WATER METER SERVICE NOTES:**

- 1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
- 2. P.E. TUBING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C901, "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, 1/2 IN. (13mm) THROUGH 3 IN. (76 mm), FOR WATER SERVICE".
- 3. MINIMUM SERVICE PIPE DIAMETER SHALL BE 1" FOR SINGLE OR DUAL 1/2" OR SINGLE 1" DIAMETER METERS.
- 4. MINIMUM SERVICE PIPE DIAMETER SHALL BE 2" FOR SINGLE OR DUAL 1-1/2" OR SINGLE 2" DIAMETER METERS.
- 5. FOR METER DIAMETERS LARGER THAN 2", THE MINIMUM SERVICE PIPE DIAMETER SHALL BE THE SAME AS THE METER DIAMETER.
- 6. APPROVED COPPER TUBING MAY BE USED AT THE CITY'S DISCRETION.
- 7. FOR NEW METER INSTALLATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
- 8. FOR METER RELOCATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
- 9. FOR EXISTING METERS ABUTTING THE RIGHT-OF-WAY THAT ARE BEING DISCONNECTED FROM EXISTING MAINS AND RECONNECTED TO NEW MAINS, THE CONTRACTOR SHALL:
  - a. CUT AND PLUG THE EXISTING SERVICE LINE AT THE MAIN AND AT THE METER, AND REMOVE THE EXISTING BALL VALVE CURB STOP.
  - b. FURNISH AND INSTALL SERVICE SADDLE, CORPORATION STOP OR SERVICE VALVE AND VALVE BOX, PIPING AND FITTINGS UP TO AND INCLUDING THE BALL VALVE CURB STOP.
- 10. THE ELEVATION AT THE TOP OF THE METER BOX SHALL MATCH THE ELEVATION OF THE BACK OF SIDEWALK, WHENEVER PRACTICAL.
- 11. AS PART OF THE SERVICE INSTALLATION, THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO MATCH EXISTING CONDITIONS, INCLUDING ROADWAY PAVEMENT, PAVEMENT MARKINGS AND RPMs, CONCRETE CURBS, SIDEWALKS, RAMPS (INCLUDING DETECTABLE SURFACE), SODDING, AND ALL OTHER IMPROVEMENTS REMOVED OR DAMAGED DURING THE SERVICE INSTALLATION.
- 12. FOR UNPAVED AREAS, THE MINIMUM GROUND COVER ACCEPTED BY THE CITY IS SODDING.

ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM WATER METER SERVICE NOTES FOR 5/8" THROUGH 2" METERS DRAWING NO. W-07  
APPROVED: XXX

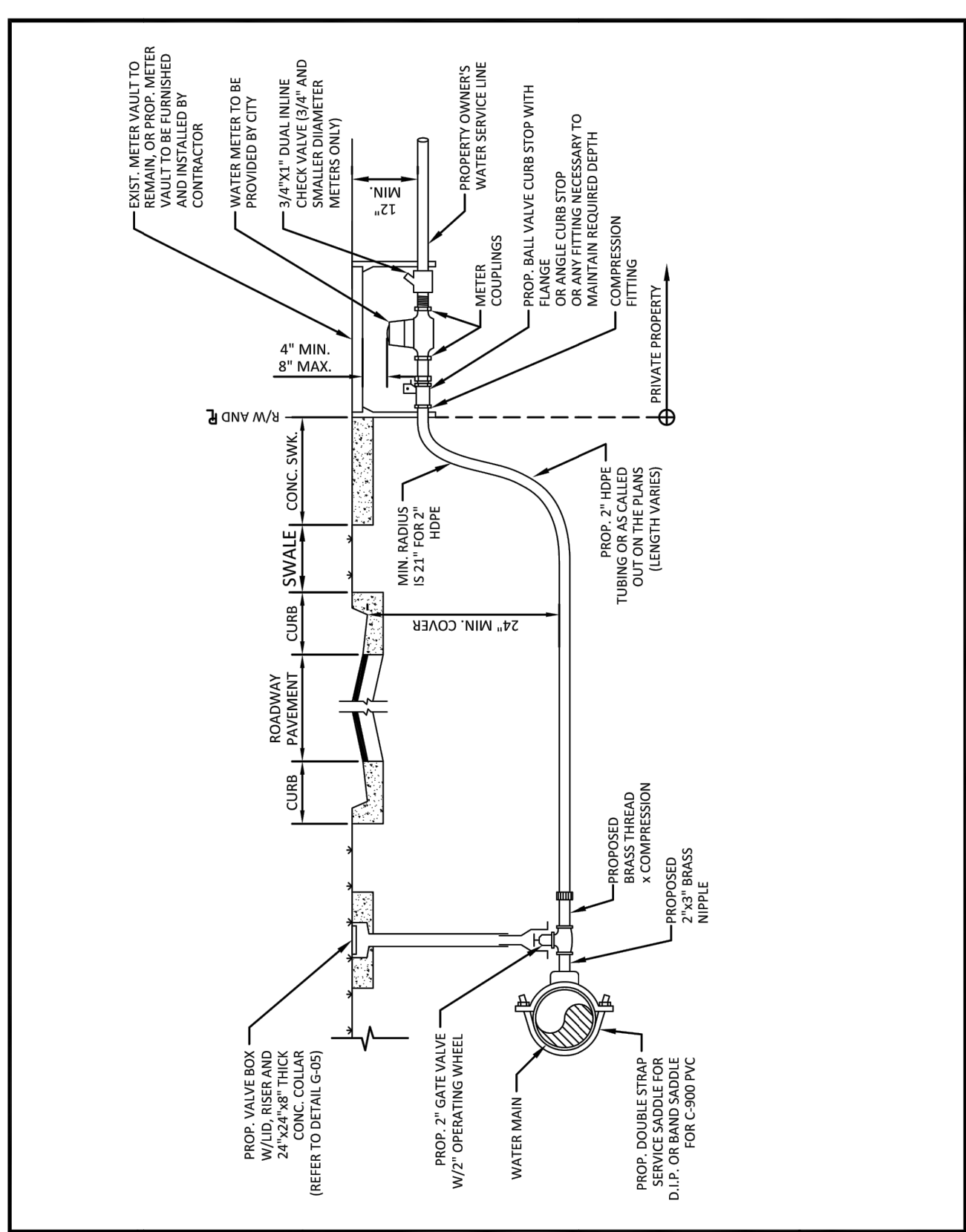


**MATERIALS**

| ITEM | QTY. | DESCRIPTION                              | ITEM | QTY. | DESCRIPTION  |
|------|------|--|------|------|--|
| 1    | 1    | 4", 6", 8" VALVE, DOUBLE CHECK           | 8    | N/A  | PLASTIC LINER/WEED STOP (5 MILS)                                   |
| 2    | 4    | 4", 6", 8" BEND-90°                      | 9    | 4    | RESTRAINED JOINTS  |
| 3    | 2    | 4", 6", 8" D.I.P. SPOOL PIECE            | 10   | 1    | LOW FLOW METER   |
| 3A   | 1    | 4", 6", 8" D.I.P. SPOOL PIECE (24" LONG) | 11   | 1    | VALVE, BYPASS DOUBLE CHECK   |
| 4    | 10   | 4", 6", 8" FLANGE, D.I.P.                | 12   | 1    | 4", 6", 8" TEE   |
| 5    | 2    | 4", 6", 8" GATE VALVE (SEE NOTE 6)       | 13   | 1    | 4", 6", 8" BUTTERFLY VALVE (SUPERVISED CLOSED), CHAINED AND LOCKED |
| 6    | 1    | SCREW JACK/ANCHORED                      | 14   | 1    | 4", 6", 8" CAP   |
| 7    | N/A  | PEA GRAVEL (4" DEEP)                     |      |      |  |

- NOTES:**
- 1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
  - 2. ALL PIPING SHALL BE D.I.P. CL 50/52 AS APPLICABLE TO MINIMUM STANDARDS.
  - 3. ALL LOW FLOW METER PIPING SHALL BE BRASS OR COPPER.
  - 4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
  - 5. MAY USE 45° BENDS (SEE DETAIL W-05) WHEN WORKING AREA IS NOT LIMITED, AS DIRECTED BY CITY.
  - 6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

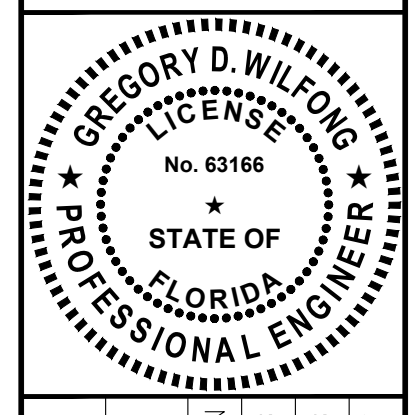
ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 06/08/2014  
DRAWN: EAM TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR FOR FIRE SPRINKLER SERVICE W/B.V. CONNECTION (90° BENDS) DRAWING NO. W-04  
APPROVED: XXX



ISSUED: 03/01/1994 DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL REVISED: 11/06/2017  
DRAWN: EAM TYPICAL 2-INCH HDPE WATER SERVICE FOR SINGLE/DUAL 5/8" TO 1" METERS, AND ANY SINGLE 1-1/2" TO 2" METERS DRAWING NO. W-09  
APPROVED: XXX

Table with columns for No., Revisions, Date, and By.

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KHA PROJECT 147507131  
DATE 07/15/2024  
SCALE AS SHOWN  
DESIGNED BY SHB  
DRAWN BY SHB  
CHECKED BY GDW

**UTILITY DETAILS**

**OAKWOOD SOUTH  
RETAIL SHOPPING  
CENTER**  
CITY OF HOLLYWOOD  
SHEET NUMBER  
**C-410**

