

**DISTRICT OF COLUMBIA  
WATER AND SEWER AUTHORITY**



**"SERVING THE PUBLIC - PROTECTING THE ENVIRONMENT"**

**SUPPLEMENTAL  
STANDARD SPECIFICATIONS**

**JUNE 2024**

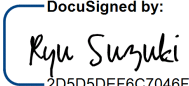
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## AUTHORIZATION FORM

<b>Supplemental Standard Specifications LOG OF REVISIONS</b>	
<b>Issue Date</b>	<b>Brief Description of Revision</b>
April 2021	<p>Added Section 01 33 10 Sup – Document Management Supplement which revises Section 01 33 10 Document Management as follows:</p> <ul style="list-style-type: none"> <li>• Revised Paragraph 1.1 A.</li> <li>• Deleted Paragraph 1.7 C.</li> <li>• Revised Paragraph 2.1 A.</li> <li>• Deleted Article 3.1</li> <li>• Revised Paragraph 3.2 C.</li> </ul> <p>Added Section 33 01 25 SUP – Sewer Lining CIPP Supplement which revises Section 33 01 25 – Sewer Lining CIPP as follows:</p> <ul style="list-style-type: none"> <li>• Added Subparagraph 1.11 A.8. to 1.11 A.10.</li> <li>• Added Paragraphs 3.5 B. and 3.5 C.</li> </ul>
July 2021	<p>Added Section 02 41 00 SUP – Demolition Supplement which revises Section 02 41 00 – Demolition as follows.</p> <ul style="list-style-type: none"> <li>• Revised Subparagraphs 1.3 A.1. and 1.3 A.2.</li> <li>• Revised Paragraph 1.4 A. and 1.4 B.</li> <li>• Revised Paragraph 3.1 A. and 3.1 F.</li> </ul> <p>Added Section 31 11 00 SUP – Clearing, Grubbing, and Stripping Supplement which revises Section 31 11 00 – Clearing, Grubbing, and Stripping as follows.</p> <ul style="list-style-type: none"> <li>• Revised Subparagraph 1.3 A.1. and 1.3 A.2.</li> <li>• Revised Paragraph 1.5 D. and 1.5 E.</li> <li>• Revised Paragraph 3.1 D.</li> </ul> <p>Added Section 33 01 28 SUP – Inspection of Sewers for Cleaning, Repairs, Lining, and New Pipe Installations Supplement which revises Section 33 01 28 – Inspection of Sewers for Cleaning, Repairs, Lining, and New Pipe Installations as follows.</p> <ul style="list-style-type: none"> <li>• Revised Article 1.1</li> <li>• Added Subparagraphs 1.3 A.2. through 1.3 A.4.</li> <li>• Revised Subparagraph 1.7 B.1.</li> <li>• Revised Article 1.8</li> <li>• Revised Subparagraph 2.2 A.2.</li> <li>• Revised Subparagraph 2.2 A.3.e.</li> <li>• Revised Subparagraph 2.2 B.2.</li> <li>• Revised Subparagraph 2.3 B.1.</li> <li>• Revised Paragraph 2.3 C.</li> <li>• Added Paragraph 3.2 L.</li> <li>• Added Paragraph 3.3 E.</li> <li>• Add Subparagraph 3.5 A.4.</li> </ul> <p>Added Section 33 01 38 – CCTV Inspection of Sewers Supplement which revises Section 33 01 38 – CCTV Inspection of Sewers as follows.</p> <ul style="list-style-type: none"> <li>• Added Paragraph 1.1 D.</li> <li>• Added Subparagraph 1.3 A.6.</li> <li>• Revised Paragraph 1.10 B.</li> <li>• Revised Subparagraph 1.10 C. 2.a.</li> <li>• Revised Subparagraph 1.10 D.1.</li> <li>• Revised Subparagraph 1.10 D.2.a.</li> <li>• Revised Subparagraph 2.6 A.2.</li> <li>• Revise Subparagraph 2.6 A.3.e.</li> </ul>

	<ul style="list-style-type: none"> <li>• Deleted Article 2.7.</li> </ul> <p>Added Section 33 01 39 SUP – Sonar Inspection of Sewers Supplement which revises Section 33 01 39 – Sonar Inspection of Sewers as follows:</p> <ul style="list-style-type: none"> <li>• Revised Paragraph 1.7 A.</li> <li>• Deleted Subparagraph 1.10 C.1.e. and 1.10 C.1.f.</li> <li>• Revised Subparagraph 1.10 C.2.a.</li> <li>• Revised Subparagraph 1.10 D.1.</li> <li>• Revised Subparagraph 2.6 B.1.</li> <li>• Revised Paragraph 2.6 C.</li> <li>• Deleted Article 2.7.</li> <li>• Revise Subparagraph 3.2 C.4.</li> </ul> <p>Added Section 33 12 13 SUP – Water Service Lines Supplement which revises Section 33 12 13 – Water Service Lines as follows:</p> <ul style="list-style-type: none"> <li>• Revise Subparagraph 1.3 A.1.</li> <li>• Revise Paragraph 1.6 A.</li> </ul>
September 2023	<p>Added Section 21 11 10 SUP – Fire Hydrants</p> <ul style="list-style-type: none"> <li>• Add to Subparagraph 2.1.A.2</li> <li>• Add to Subparagraph 2.1.A.3.k</li> <li>• Add to Subparagraph 2.1.A.3.l</li> </ul>
October 2023	<p>Replace Section 33 14 00 SUP – Gate Valves</p> <ul style="list-style-type: none"> <li>• Replace paragraph 2.2.A</li> <li>• Delete subparagraph 2.2.A.1</li> </ul>
June 2024	<p>Replace Section 33 12 13 Water Service Lines in its entirety with revised June 2024 revision</p>

These Supplemental Standard Specifications are Authorized by:

DocuSigned by:  
  
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 Ryu Suzuki, P.E., Director  
 Department of Capital Delivery  
 DC Water

## SECTION 01 33 10 SUP

### DOCUMENT MANAGEMENT SUPPLEMENT

The following modifications are made to Standard Specification Section 01 33 10 – Document Management.

**1.1 A. – Revise Paragraph 1.1 A to read as follows:**

- A. Provide all labor, material, and equipment necessary to import data and upload documents into DC Water’s Contract Management System (CMS). Documents and data include, but are not limited to, letters, submittals, meeting minutes, daily reports, drawings, specifications, memorandums, payment requisitions, change order requests, testing reports, warranties, guarantees, requests for information, and correspondence.

**1.7 C. – Delete Paragraph 1.7 C.**

**2.1 A. – Revise Paragraph 2.1 A to read as follows:**

- A. DC Water will provide licenses and access to the CMS.

**3.1 – Delete Article 3.1 Licensing.**

**3.2 C. – Revise Paragraph 3.2 C. to read as follows:**

- C. Notify DC Water immediately of any users who no longer require access to the CMS so DC Water can de-activate their account.

~ END OF SECTION 01 33 10 SUP ~

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**SECTION 33 01 25 SUP**  
**SEWER LINING CIPP SUPPLEMENT**

The following modifications are made to Standard Specification Section 33 01 25 – Sewer Lining CIPP.

**1.11 A. – Add Subparagraphs 1.11A.8 to 1.11 A.10 as follows:**

8. A drawing showing a styrene management area with:
  - a. Styrene exhaust and emission points.
  - b. The perimeter boundary and distance from the exhaust and emission points.
  - c. Location of the emissions stack.
  - d. Description of the physical barriers used to designate the styrene management area.
9. A list of fire suppression equipment and materials that are kept on site during operations.
10. Spill response media and response actions when a spill occurs.

**3.1 – Add Paragraph 3.5 B and 3.5 C as follows:**

- B. Styrene Management Area:
  1. Establish a styrene management area as follows:
    - a. Set up a physical barrier demarking a perimeter with a 15-foot radius around all exhaust/emission points.
      - 1) If this perimeter includes an adjacent traffic lane that will remain open to traffic, that lane can be excluded from the perimeter and the traffic control barrier can be used as part of the physical barrier.
      - 2) If this perimeter includes a building wall, the building wall may be used as part of the barrier.
      - 3) Where a building wall is part of the barrier, provide protection at openings and building air intakes to prevent styrene migration into the building.
    - b. The physical barrier can be anything that marks a 15-foot barrier as described in the Contractor's Styrene Management Plan and may include traffic cones with twine and safety flagging, temporary fencing, safety barricades, or other barrier material that will designate the restricted area.
    - c. Anyone entering this 15-foot perimeter shall wear PPE suitable for work with styrene.
    - d. Attach signs to the perimeter stating that entrance inside the perimeter requires styrene-specific PPE.
    - e. As opposed to a 15-foot radius, contractor may use a scrubber to treat styrene exhaust.
  2. Styrene management shall include an emission stack that is a minimum of eight (8) feet high to enhance the dispersion of styrene emissions.
  3. While on site, the Contractor shall observe the impact of prevailing winds on emissions plumes and adjust styrene management areas to allow individuals access inside perimeter while avoiding plumes.
  4. Ensure sufficient fire suppression equipment and materials are located on site.

C. Styrene Spill and Emission Response:

1. Respond to styrene spills immediately and stop any additional spillage from occurring.
2. Suspend operations until the cause of the spill is addressed such that no additional spillage will occur.
3. Address public complaints about emissions by determining cause and eliminating odors.

**~ END OF SECTION 33 01 25 SUP ~**



**SECTION 02 41 00 SUP**  
**DEMOLITION SUPPLEMENT**

The following modifications are made to Standard Specification Section 02 41 00 - Demolition.

**1.3 Revise Subparagraph 1.3 A.1. and 1.3 A.2. to read as follows:**

1. Schedule of Prices.
2. Section 01 41 26: Project Permits and Approvals.

**1.4 Revise Paragraph 1.4 A and 1.4 B. to read as follows:**

- A. Incidental Demolition: Demolition activities that are necessary to complete the Work required by the Contract Documents, whether shown on the Contractor Drawings or not, and does not have a price specified in the Schedule of Prices.
- B. Itemized Demolition: Demolition activities that are specifically called out on the Contract Drawings and have a price specified in the Schedule of Prices.

**3.1 Revise Paragraph 3.1 A and 3.1 F. to read as follows:**

- A. Perform all demolition as Incidental Demolition unless a price is stated for itemized demolition in the Schedule of Prices.
- F. If applicable, obtain Raze permit from DCRA as required by Section 01 41 26 – Project Permits and Approvals.

~ END OF SECTION 02 41 00 SUP ~

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**SECTION 31 11 00 SUP**  
**CLEARING, GRUBBING, AND STRIPPING SUPPLEMENT**

The following modifications are made to Standard Specification Section 31 11 00 – Clearing, Grubbing, and Stripping.

**1.3 Revise Subparagraph 1.3 A.1. and 1.3 A.2. to read as follows:**

1. Schedule of Prices.
2. Section 01 41 26: Project Permits and Approvals.

**1.5 Revise Paragraph 1.5 D. and 1.5 E. to read as follows:**

- D. Incidental Clearing, Grubbing, and Stripping: Clearing, grubbing, and stripping activities necessary to perform the Work required by the Contract Documents, whether shown on the Contract Drawings or not, and does not have a price specified in the Schedule of Prices.
- E. Non-Incidental Clearing, Grubbing, and Stripping: Clearing, grubbing, and stripping activities necessary to perform the Work, are specifically designated on the Contract Drawings with the clearing, grubbing, and stripping areas defined, and has a price specified in the Schedule of Prices.

**3.1 Revise Paragraph 3.1 D. to read as follows:**

- D. Provide an Erosion and Sediment Control Plan as required by Section 31 25 00 – Erosion and Sediment Control and acquire the permits applicable to clearing, grubbing, and stripping as required by Section 01 41 26 – Project Permits and Approvals. All efforts and costs associated with the acquisition of permits necessary for clearing, grubbing, and stripping are incidental to the Contract.

~ END OF SECTION 31 11 00 SUP ~

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**SECTION 33 01 38 SUP**  
**CCTV INSPECTION OF SEWERS SUPPLEMENT**

The following modifications are made to Standard Specification Section 33 01 38 – CCTV Inspection of Sewers.

**1.1 Add Paragraph 1.1 D as follows:**

- D. Use this Section to inspect pipe except when documenting the specific work activities listed in the Section 33 01 28 – Inspection of Sewers for Cleaning, Repairs, Lining, and New Pipe Installation.

**1.3 Add Subparagraph 1.3 A.6 as follows:**

6. Section 33 01 28 – Inspection of Sewers for Cleaning, Repairs, Lining, and New Pipe Installation.

**1.10 Revise Paragraph 1.10 B. to read as follows:**

- B. Prior to commencing inspections, meet with DC Water to confirm the optional data, in addition to the mandatory PACP data, that is to be documented and obtain DC Water approval of the content and format of the inspection reports, log sheets, and/or graphs.

**1.10 Revise Subparagraph 1.10 C.2.a. to read as follows (Subparagraphs 1.10 C.2.a.1. through 1.10 C.2.a.7. remain unchanged):**

- a. Document the inspection of each pipe segment using the PACP codes per the NASSCO PACP standard and as modified by DC Water including but not be limited to:

**1.10 Revise Subparagraph 1.10 D.1. to read as follows:**

1. Submit a NASSCO PACP certified digital database that includes all PACP mandatory and optional data fields as required by the Contract Documents.

**1.10 Revise Subparagraph 1.10 D.2.a. to read as follows:**

- a. Include the digital video file of the inspection on a USB 3.0 compatible hard drive or other DC Water approved media as directed by DC Water.

**2.6 Revise Subparagraph 2.6 A.2. to read as follows (Subparagraphs 2.6 A.2.a. and 2.6 A.2.b. remain unchanged):**

2. CD, DVD, or other DC Water approved recorder as directed by DC Water with the following properties:

**2.6 Revise Subparagraph 2.6 A.3.e. to read as follows:**

- e. Speaker to allow for audio playback from the recording.

**2.7 Delete Article 2.7 and its Paragraph.**

~ END OF SECTION 33 01 38 SUP ~

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**SECTION 33 01 39 SUP**  
**SONAR INSPECTION OF SEWERS SUPPLEMENT**

The following modifications are made to Standard Specification Section 33 01 39 – Sonar Inspection of Sewers.

**1.7 Revise Paragraph 1.7 A. to read as follows:**

- A. Code the inspection for defects such as debris accumulation, pits, cracks, and corrosion hidden under the waterline following NASSCO guidelines and industry standards.

**1.10 Delete Subparagraphs 1.10 C.1.e. and 1.10 C.1.f.**

**1.10 Revise Subparagraph 1.10 C. 2.a. and its Subparagraphs to read as follows:**

- a. Document the Sonar Inspection of each pipe segment using the inspection log sheets agreed to previously by DC Water including but not be limited to:
- 1) The same data provided on the Inspection Summary Report.
  - 2) Date of inspection.
  - 3) Length of pipeline section inspected.
  - 4) The direction of the inspection, i.e., upstream or downstream.

**1.10 Revise Subparagraph 1.10 D.1. to read as follows:**

1. Submit a digital database that includes all header section fields as appropriate for Sonar inspections and in accordance with the Contract Documents.

**2.6 Revise Subparagraph 2.6 B.1. to read as follows:**

1. Able to capture still frame screen images and save the images as JPEG files or other DC Water approved format as directed by DC Water.

**2.6 Revise Paragraph 2.6 C. to read as follows:**

- C. Provide a continuous NTSC composite video output to surface equipment so that the entire survey can be recorded on DVD or other DC Water approved media, as directed by DC Water, and viewed on video monitors.

**2.7 Delete Article 2.7 and its Paragraph.**

**3.2 Revise Subparagraph 3.2 C.4. to read as follows:**

4. Referenced in the database with audio comments.

~ END OF SECTION 33 01 39 SUP ~

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**SECTION 21 11 10 SUP**  
**FIRE HYDRANTS SUPPLEMENT**

The following modifications are made to Standard Specification Section 21 11 10 – Fire Hydrants.

**2.1.A.2      ADD to Subparagraph 2.1.A.2 the following:**

- c.    AMERICAN Flow Control – Model No. American-Darling 5 ¼-inch B-84-B-5, made by American Valve and Hydrant, Beaumont, Texas
- d.    AMERICAN Flow Control – Model No. American-Darling 6-inch B-84-B-BB-5, made by American Valve and Hydrant, Beaumont, Texas
- e.    No other hydrant models or ‘or-equals’ shall be used.

**2.1.A.3.k    ADD to Subparagraph 2.1.A.3.k the following:**

- 3)    System 3:
  - a)    Primer – One (1) coat Dupont E-Coat (Epoxy Electrodeposition), ½ mil to 1 mil dry film thickness to be applied inside and out.
  - b)    Top Coat – One (1) coat Dupont Imron 3.5 HG Polyurethane, minimum 4 mil dry film thickness.)

**2.1.A.3.l    ADD to Subparagraph 2.1.A.3.l the following:**

- 3)    System 3:
  - a)    Primer for Barrel – Two (2) coats exterior, one (1) coat interior, Asphalt Emulsion for Ductile Iron Pipe and Fittings, or equal, 1 mil nominal dry film thickness per coat.
  - b)    Top Coat for shoe – One (1) coat Akzo Nobel Resicoat R4-ES HGF17R Rust Red, fusion bonded, 8 mil nominal dry film.

~ END OF SECTION 21 11 10 SUP ~

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**SECTION 33 14 00 SUP**  
**GATE VALVES SUPPLEMENT**

The following modifications are made to Standard Specification Section 33 14 00 – Gate Valves.

**2.2.A REPLACE Paragraph 2.2.A with the following:**

- A. Resilient -seated gate valves shall be ductile iron per AWWA C509 or C515 except as modified or supplemented within this Section:

**2.2.A.1 DELETE Subparagraph 2.2.A.1**

1. (Delete) AWWA C515 may be used when shown on the Contract Drawings and approved by DC Water.

~ END OF SECTION 33 14 00 SUP ~

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## SECTION 33 12 13

### WATER SERVICE LINES

#### PART 1. GENERAL

##### 1.1 SUMMARY:

- A. Provide all labor, materials, and equipment necessary to install water service lines, two (2) inches and smaller, and remove and replace lead water service lines to properties including but not limited to excavating test pits, water service trench excavation and backfill, installation of meter box, curb stop, curb stop box, service saddles, corporation stops, and temporary surface restoration. Work includes replacing galvanized iron and brass water service if directed by DC Water.

##### 1.2 RELATED DOCUMENTS:

- A. Drawings, Technical Specification Sections, General and Supplementary Conditions of the Contract and other Division 00 and Division 01 Specification Sections, apply to this Section.
- B. Specifications throughout all Divisions of the Project Manual are directly pertinent to this Section, and this Section is directly pertinent to them.

##### 1.3 REFERENCED SECTIONS:

- A. Sections specified elsewhere may include but are not limited to:
  - 1. Section 01 41 26: Project Permits and Approvals.
  - 2. Section 01 06 50: Public Notification – Water.
  - 3. Section 01 32 22: Preconstruction Site Inspection.
  - 4. Section 01 33 00: Submittals.
  - 5. Section 31 23 37 Test Pits.
  - 6. Section 33 01 20: Abandonment of Underground Utilities.
  - 7. Section 33 12 17: Service Saddles.

##### 1.4 REFERENCED CODES AND STANDARDS:

- A. ASTM International (ASTM):
  - 1. ASTM B88: “Standard Specification for Seamless Copper Water Tube”.
  - 2. ASTM C33: “Standard Specification for Concrete Aggregate”.
  - 3. ASTM C534: “Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form”.
  - 4. ASTM C552: “Standard Specification for Cellular Glass Thermal Insulation”.
  - 5. ASTM C564: “Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings”.
  - 6. ASTM C920: “Standard Specification for Elastomeric Joint Sealants”.
  - 7. ASTM D746: “Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact”.
  - 8. ASTM D1248: “Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable”.
  - 9. ASTM D1505: “Standard Test Method for Density of Plastics by the Density-Gradient Technique”.

10. ASTM D1785: “Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Schedules 40, 80, and 120”.
  11. ASTM D2665: “Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings”.
  12. ASTM E84: “Standard Test Method for Surface Burning Characteristics of Building Materials”.
  13. ASTM A48: “Standard Specification for Gray Iron Castings”.
  14. ASTM D5857: “Standard Specification for Polypropylene Injection and Extrusion Materials Using ISO Protocol and Methodology”.
- B. American Water Works Association (AWWA)
1. AWWA C810: “Replacement and Flushing of Lead Service Lines”.
- C. Code of Federal Regulations:
1. 40 CFR 261: “Identification and Listing of Hazardous Waste”.
  2. 40 CFR 262: “Standards Applicable to Generators of Hazardous Waste”.
  3. 40 CFR 263: “Standards Applicable to Transporters of Hazardous Waste”.
  4. 40 CFR 264: “Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities”.
  5. 40 CFR 265: “Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities”.
  6. 40 CFR 268: “Land Disposal Restrictions”.
- D. District of Columbia Department of Consumer and Regulatory Affairs (DCRA):
1. District of Columbia Plumbing Code.
- E. Safe Drinking Water Act (SDWA):
1. Reduction of Lead in Drinking Water Act.
- F. American Association of State Highway and Transportation Officials (AASHTO):
1. AASHTO M306: “Drainage, Sewer, Utility, and Related Castings”.

#### 1.5 SUBMITTALS:

- A. Requirements for “Submittals” shall be in accordance with Section 01 33 00 – Submittals.
- B. Submit the “Product Data Sheets” for each product used.
- C. Submit “Field Data” for work performed including but not limited to permits, invoices, tap cards, and daily and weekly reporting sheets, Resident outreach logs, completed and cancelled services orders.
- D. Submit written evidence that the receiving lead waste treatment, storage, or disposal facility is approved to accept lead waste by the federal and district or local regulatory agencies.
- E. Submit Private Property Side Agreement Documentation.
- F. Submit proposed method of installation for service lines.

#### 1.6 PERMITS:

- A. Contractor shall obtain permits required by Section 01 41 26 – Project Permits and Approvals.

#### 1.7 NOTIFICATIONS:

- A. Notifications shall be made in accordance to Section 01 06 50 – Public Notification - Water.

- B. Contractor shall notify DC Water a minimum of two (2) weeks prior to performing water service work, meter relocation, and/or new meter installation.

## **PART 2. PRODUCTS**

### **2.1 GENERAL:**

- A. All service brass shall comply with the 2011 Reduction of Lead in Drinking Water Act which went into effect January 1, 2014. Products shall be marked “lead-free” or “Low Lead” to signify compliance.
- B. The following materials shall comply with the District of Columbia Plumbing Code.
  - 1. Shut-off valves.
  - 2. Pressure reducing valves.
  - 3. Copper-to-Copper Couplings.
  - 4. Copper-to-Non-Copper Couplings.
  - 5. Meter Yokes.
  - 6. Reducers.
  - 7. Meter Stops.
  - 8. Meter Valves.
  - 9. Seamless Copper Water Tube shall be ASTM B88, Type K.
  - 10. Hard Copper Pipe shall be ASTM B88, Type L.

### **2.2 CORPORATION STOPS:**

- A. Corporation Stops shall be per the District of Columbia Plumbing Code.
- B. Acceptable manufacturers and models for one (1) inch corporation stop include Mueller Corporation Valve Model B25000N, A.Y. McDonald Model 74701B, or approved equal.
- C. Acceptable manufacturers and models for one half (1-1/2) inch corporation stop include Mueller Corporation Valve Models B20003N and H10096N, A.Y. McDonald Models 73121 and 74000, or approved equal.
- D. Acceptable manufacturers and models for two (2) inch corporation stop include Mueller Corporation Valve Models B20003N and H10096N, A.Y. McDonald Models 73121 and 74000, or approved equal.

### **2.3 CURB STOPS AND EXTENSION RODS:**

- A. Curb stops shall be an optimized design by combining a strong and reliable ball/stem connection with other designed features, including a blow-out-proof stem, double O-rings and a 300 psig working pressure rating. The design shall offer true bi-directional (two way) flow.
- B. Extension rods shall be stainless steel. Rods shall be half (1/2) inch diameter for two (2) feet long and shorter 5/8-inch diameter for greater than two (2) feet. Rods shall be supplied with optional rod rings and stainless steel cotter pins. Acceptable models are A.Y. McDonald Model 5660SS, Bingham & Taylor Model Type ROD SS, or approved equal for the appropriate size required.
- C. Acceptable manufacturers and models for one (1) inch curb stops include Mueller 300 Ball Corporation Valve Model B25204N, A.Y. McDonald Model 76100, or approved equal.
- D. Acceptable manufacturers and models for one half (1-1/2) inch curb stops include Mueller 300 Ball Corporation Valve Model B25204N, A.Y. McDonald Model 76100, or approved equal.

- E. Acceptable manufacturers and models for two (2) inch curb stops include Mueller 300 Ball Corporation Valve Model B25204N, A.Y. McDonald Model 76100, or approved equal.

#### 2.4 CURB STOP BOXES:

- A. Curb stop boxes shall be telescoping, two (2) piece, screw style. Lower section shall consist of full externally threaded shaft over a Buffalo style bell that is arched and flanged. Upper section shall consist of full internally threaded shaft that fits over lower section with cast iron rim on top of shaft to accommodate a cast iron cover (lid) with "WATER" imprinted on it.
- B. Both the lower section and the upper section of the curb stop box shall be rigid acrylonitrile-butadiene-styrene (ABS.) plastic, either injection molded or extruded.
- C. The cast iron lid and rim shall be of standard Buffalo new style design with standard pentagon head bolt and shall be interchangeable with the cast iron Buffalo old style boxes already in use.
- D. Acceptable manufacturer and model include Bingham & Taylor Model Series 250 for use outside the roadway or series 4901, Sliding Type P-94-E, for use within the roadway – Screw curb stop box, or approved equal.

#### 2.5 METERS:

- A. Existing meters shall be disconnected, protected, and reinstalled.
- B. If a meter is damaged, outdated, or unknown condition, a new meter will be provided by DC Water.
- C. Meters and MTUs will be furnished by DC Water.

#### 2.6 METER BOXES, FRAMES AND COVERS:

- A. On new installations, provide meter box, frame, and cover, sized to fit the meter installation, as a complete set as listed under approved manufacturers.
- B. Non-Traffic Areas:
  - 1. Load Rating and Deflection of Box, Frame and Cover: 20,000 lbs. – less than 1/2 inch.
  - 2. Meter Box:
    - a. Properties:
      - 1) High-density polyethylene (HDPE) Type III or Type IV per ASTM D1248 or Polypropylene (PP) high impact copolymer per ASTM D5857.
      - 2) HDPE densities of 0.95 g/c.c. and above and PP densities of 0.9 c.c and above, as determined by ASTM D1505.
    - b. Box Dimensions:
      - 1) Diameter:
        - i. 5/8, 3/4, and 1-Inch Meter: 20-inch.
        - ii. 1-1/2 to 2-Inch Meter: 30-inch.
      - 2) Height: 30-inch.
    - c. Color:
      - 1) Internal Surface – White.
      - 2) External Surface – White or Black.
    - d. Pipe Entry Size: Allows 2-inch pipe.

3. Frame:
  - a. Frame sized to fit meter box and AASHTO M306 H20 rated.
  - b. Cast Iron per ASTM A48, Class 35B min.
  - c. Finish:
    - 1) Sandblast clean.
    - 2) One (1) coat of asphalt coating.
4. Cover:
  - a. Composite cover.
  - b. Locking mechanism to frame.
  - c. Polyolefin resin or similar material that is UV stabilized, RF transparent, and AMI device mounting compatible.
  - d. Standard size bronze pentagon nut swaged to a locking worm gear.
  - e. Labeled with "Water" in 1-inch high letters.
  - f. Dimensions: 12 1/4-inch O.D.
5. Expander Ring, Monitoring Mid-Ring, and Outer Lid:
  - a. Frame sized to fit meter box and AASHTO M306 H20 rated.
  - b. Cast Iron per ASTM A48, Class 35B min.
  - c. Finish:
    - 1) Sandblast clean.
    - 2) One (1) coat of asphalt coating.
6. Approved manufacturers:
  - a. For five-eighths (5/8) inch, three-quarter (3/4) inch, and one (1) inch and smaller meters:
    - 1) Box:
      - i. Bingham and Taylor: MMP2030
      - ii. Bingham and Taylor: MMP202430
      - iii. Oldcastle Infrastructure: NexGen 0020-30
    - 2) Frame: Bingham and Taylor: CULF18020AWEH-TR.
    - 3) Cover: Bingham and Taylor: PLDA12.25A7S.
  - b. For one and one half (1-1/2) inch and two (2) inch meters: Bingham and Taylor:
    - 1) Box: PMP3030
    - 2) Expander Ring: EJORDR30
    - 3) Monitoring Mid-Ring: VESMR20
    - 4) Outer Lid: IFRR2112A
    - 5) Cover: PLDA12.25A7S
  - c. Other, approved equal.

2.7 DELETED.

2.8 METER SETTINGS:

- A. Meter settings for five-eighths (5/8) inch and three-quarters (3/4) inch meters:
1. A one (1) inch meter single meter setter shall be one (1)-piece factory assembled, including, ball valves, dual check valves, elbows, and all connections as shown on standard details. All joints within the meter pit must be flared, brazed, or threaded fittings. Meter setting adapters shall be installed to adapt the five-eighths (5/8) inch or three-quarters (3/4) inch meter.
  2. Acceptable manufacturers and models for five-eighths (5/8) inch meter setting adapters (5/8-inch to 1-inch) include A.Y. McDonald Model 710J14KIT, Mueller H10879, or approved equal.
  3. Acceptable manufacturers and models for three-quarters (3/4) inch meter setting adapters (3/4-inch to 1-inch) include A.Y. McDonald Model 710J34, Mueller H10879 or approved equal.
- B. Meter settings for one (1) inch meters:
1. Single meter setter shall be one (1)-piece factory assembled, including, ball valves, dual check valves, elbows and all connections as shown on standard details. All joints within the meter pit must be flared, brazed, or threaded fittings.
  2. Acceptable manufacturers and models for one (1) inch meter settings include Mueller Model 330B2489-6A-N, A.Y. McDonald Model 737412WDCC44, or approved equal.
- C. Meter settings for one half (1-1/2) and two (2) inch meters:
1. Single meter setter shall be one (1) piece factory assembled, including high bypass, ball valves, dual check valves, elbows and all connections as shown on standard details. All joints within the meter pit must be flared, brazed, or threaded fittings.
  2. Acceptable manufacturers and models for one half (1-1/2) inch meter setter includes Ford Meter Box Company Model VBHC76-27HBHC-11-66-NL, A.Y. McDonald Manufacturing Company Model 720R627WD-FF-66X427, Mueller Co. Model 096B2423-2-39N dated 1/5/16, or approved equal.
  3. Acceptable manufacturers and models for two (2) inch meter setter includes Ford Meter Box Company Meter Model VBHC77-27HBHC-11-77-NL A.Y. McDonald Manufacturing Company Model 720-R727WD-FF-775.04X427, Mueller Co. Model 1096B2423-2-39N dated 1/5/16, or approved equal.

## 2.9 SERVICE SADDLES:

- A. Service Saddles shall be in accordance with Section 33 12 17 – Service Saddles.

## 2.10 PIPE PENETRATION MATERIALS:

- A. Sealant:
1. Pipe penetration sealant used with grout filler shall be one (1) component polyurethane, elastomeric non-sag sealant meeting ASTM C920, Type S, Grade NS, Class 35. Sikaflex 1a as manufactured by Sika Corporation, Lyndhurst, NJ or approved equal.
  2. Pipe penetration sealant for full depth penetration (no grout filler) shall be two (2) component, polyurethane-based, elastomeric non-sag sealant with chemical cure meeting ASTM C920, Type M, Grade NS, Class 25. Sikaflex 2c NS as manufactured by Sika Corporation, Lyndhurst, NJ or approved equal.
- B. Grout: Non-Shrink.
1. Manufacturer:
    - a. Kaufman – Suregrout
    - b. W.R. Meadows – CG-86

c. Other, approved equal.

C. Sleeve: Schedule 40 PVC pipe sleeve shall conform to ASTM D1785 and ASTM D2665.

D. Transition Coupling: Transition couplings shall be rubber and conform to ASTM C564.

E. Stainless Steel Clamps: Stainless steel clamps with screw.

## 2.11 INSULATION:

A. Cellular-Glass Insulation:

1. Cellular-Glass Insulation shall be Foamglas One as manufactured by Pittsburgh Corning Corp. or approved equal.
2. Preformed pipe insulation shall comply with ASTM C552, Type II, Grade 6.
3. Insulation thickness shall be a minimum of 0.75-inches.
4. Insulation jacket shall be 50 mil thick self-sealing modified bituminous membrane, glass fabric with aluminum top film for direct bury conditions. Jacket shall be as recommend by the manufacturer of the insulation and may be field or factory applied.

B. Flexible Closed-Cell Elastomeric Insulation:

1. Flexible closed-cell elastomeric insulation shall be AP/Armaflex as manufactured by Armacell, or approved equal.
2. Preformed pipe insulation shall comply with ASTM C534, Type 1 – Grade 1.
3. Insulation materials shall have a flame spread index of less than 25 and a smoke-developed index of less than 50 when tested in accordance with ASTM E84.
4. Insulation wall thickness shall be minimum of 0.75-inches.
5. Insulation jacket shall be PVC in tubular or sheet form that is formaldehyde free, low VOC's, fiber free, dust free and resists mold and mildew. Jacket shall be as recommend by the manufacturer of the insulation and may be field or factory applied.

## 2.12 GRAVEL:

A. Gravel shall be size No. 57 or 67 Gravel per ASTM C33.

## 2.13 COPPER SERVICE LINE:

- A. All exterior service pipe shall be soft, annealed seamless rolled copper tubing conforming to ASTM B88, Type K. The name and trademark of the manufacturer shall be stamped along the pipe.
- B. Install seamless hard copper pipe conforming to ASTM B88, Type L from the first fitting into the building.
- C. Copper line shall be a minimum of 1-inch or shall match the existing service connection size in kind. Existing service lines to be replaced that are less than 1-inch shall be replaced with minimum 1-inch copper service line.
- D. Size: 1-inch, 1.5-inch, 2-inch.

## 2.14 BALL VALVES:

A. Description:

1. Standard: MSS SP-110

2. SWP Rating: 150 psi.
3. CWP Rating: 600 psi.
4. Body Material: Forged Brass.
5. Ends: Threaded or soldered joint.
6. Seats: RPTFE or PTFE.
7. Stem Material: 316 Stainless steel.
8. Stem Extension Sleeve Material: Aluminum to extend operating handle past pipe insulation.
9. Ball Material: 316 Stainless steel.
10. Port: Full.
11. Packing Material: PTFE.
12. Operator: Steel lever with zinc plating and vinyl grip.
13. Size: 1-inch, 1.5-inch, 2-inch.

B. Manufacturers:

1. Apollo Valve.
2. Milwaukee Valve.
3. NIBCO Inc.
4. Other, approved equal.

## 2.15 PRESSURE REDUCING VALVES:

A. Description:

1. Control Pressure Range: 15-75 psi.
2. Body Material: Bronze, ASTM B62.
3. Strainer Material: Stainless steel.
4. Ends: Threaded or soldered joint.
5. Disc and Diaphragm: EPDM.
6. Stem, Nut, and Spring: Stainless steel.
7. Tailpiece: Brass.
8. Port: Full.
9. Packing Material: PTFE.
10. Size: 1-inch, 1.5-inch, 2-inch.

B. Manufacturers:

1. Apollo Valve 36ELF Series.
2. Other, approved equal.

## 2.16 FITTINGS AND COUPLINGS:

- A. Fittings and couplings 3/4-inch, 5/8-inch, 1-inch, 1.5-inch, and 2-inch shall meet AWWA C-800 for the same thickness class of tubing and rigid pipe.



## 2.17 BACKER ROD:

- A. Material: Low density polyethylene foam.
- B. Fitting Size: 3/4-inch.
- C. Acceptable manufacturer and model for backer rods include Sika Pro Closed Cell Backer Rod or approved equal.

## 2.18 RESILIENT PACKING MATERIAL:

- A. Material: Polyurethane.
- B. Shore A Hardness: 30-50, unswollen.
- C. Acceptable manufacturer and model for backer rods include Sika Leakmaster LV-Z or approved equal.

## PART 3. EXECUTION

### 3.1 GENERAL:

- A. Installation of water services shall be performed by Master Plumbers licensed in the District of Columbia or the Jurisdiction where the Work is performed if Work is performed outside of the District of Columbia. Journeyman and Apprentices working directly for and under the direct supervision of a licensed plumber may perform work provided the Master Plumber obtains the permit, inspects all work, and provides a certification for each service to DC Water that the work was performed in accordance with all codes.
- B. New meters to replace damaged existing meters will be supplied by DC Water and shall be installed by the Contractor. The Contractor shall furnish and install pipe, yoke, couplings, shunt, meter valves, meter housing, meter housing gravel foundation, meter box frame and cover.
- C. Water service components and/or lead water service line replacement to properties shall be removed, replaced, adjusted and/or maintained for water service line piping two (2) inch diameter and smaller as follows:
  - 1. Public Space: Replace the entire service line between the corporation stop, the meter and the curb stop with new copper piping if there is any instance of Lead piping either between the corporation stop and the Meter or between the Meter and curb stop. If a material other than Lead or Copper is found between the corporation stop, the meter and the curb stop, the Contractor shall immediately inform DC Water. Replace all non-copper service lines. Non-copper service lines that are less than one (1) inch diameter shall be replaced with one (1) inch copper.
  - 2. Private Property: Replace the entire service line between the curb stop and the first fitting inside the home if there is any instance of Lead piping between the curb stop and the first fitting inside the home. If a material other than Lead or Copper is found between the curb stop and the first fitting inside the home, the Contractor shall immediately inform DC Water. Replace service lines as directed by DC Water. Service lines, directed by DC Water for replacement, that are less than one (1) inch diameter shall be replaced with one (1) inch copper.
  - 3. Lead service replacement shall be completed in one shutoff. No partial replacements will be permitted.

### 3.2 DOCUMENTING THE WATER SERVICE LINE:

- A. Perform a site inspection before beginning work in accordance with Section 01 32 22 – Preconstruction Site Inspection.
- B. When inspecting or replacing water service line material on private property document the service line material at all test pits and at the point of entry to the building as required by Section 31 23 37 – Test Pits.
- C. When the water service line is replaced in public space but not on private property:
  - 1. Photograph the water service line at the point of transition from public space to private property.
  - 2. Prior to connecting to the curb stop or connecting the new material in public space to existing material on private property, take at least one (1) photo of the cross-section of the pipe material in private property.
  - 3. Record pipe material, location, etc., on a whiteboard, which will be included in the photo, in a similar manner to that required for test pits.

### 3.3 DELETED.

### 3.4 WORK ON PRIVATE PROPERTY:

- A. DC Water Responsibility:
  - 1. DC Water will contact all affected Property Owners to obtain a signed agreement that authorizes replacing lead services on Private Property.
  - 2. After the Agreement is signed, DC Water will provide the Contractor with a list of addresses where the Property Owners have authorized lead service line replacement on Private Property and the corresponding Service Orders issued by DC Water.
  - 3. If work scheduled on Private Property is subsequently cancelled by the Property Owner or DC Water, DC Water will notify the Contractor of the cancellation and that no work on the Private Property is authorized.
- B. Contractor Responsibility:
  - 1. Where no service order has been issued for work on Private Property, dependent on the following project categories, the Contractor shall:
    - a. Small Diameter Water Main Rehabilitation Project
      - 1) Provide a curb stop in Public Space as per DC Water’s Standard Details.
    - b. By-Block Lead Service Line Replacement Project
      - 1) Not perform work on the service line in Public or Private Property.
    - c. Voluntary Lead Service Line Replacement Project
      - 1) Not perform work on the service line in Public or Private Property.
  - 2. The Contractor shall not begin work on Private Property until after receipt of a valid service order from DC Water. The Contractor shall make no claim for any time delay associated with obtaining permission to work on Private Property.
  - 3. If a service order is cancelled directly with the Contractor by the Property Owner, the Contractor shall note the cancellation of service order in the outreach log and return the service order to DC Water with a status of “Cancelled by Homeowner.”
  - 4. Contractor shall honor all Private Property service orders generated by DC Water until final surface restoration has been completed.
  - 5. Contractor shall honor all Private Property service orders generated until final surface restoration has been completed.

6. Where the material on the Private Property segment of the water service line is determined to not be lead, the Contractor shall notify the Resident that the scheduled appointment for water service line replacement on Private Property is not necessary unless directed otherwise by DC Water. Return the service order to DC Water with a status of “Closed – No Replacement Done.”
7. Work performed by Contractor under Private Property side agreements made directly between the Contractor and the Property Owner shall be reported daily to DC Water. All pertinent information that is similar to that which is included on the Tap Card shall be documented.
8. For each address for which the Contractor has entered into a side agreement with the Property Owner, the Contractor shall provide to DC Water a copy of each permit procured to execute the work, a copy of the invoice, and a copy of a completed Tap Card for recording the relevant information on the work performed.
9. Contractor shall perform all work using appropriate methods to minimize the disturbance of Private Property including the existing interior wall finish and exterior foundation wall. The existing pipe penetration shall be removed, and the opening sealed watertight. The Contractor shall restore the existing interior wall finish and/or exterior foundation wall when damaged by the Contractor at no additional cost to DC Water.
10. Upon completion of water service line work, the Contractor shall verify water service has been restored to each property by meeting with the owner or occupant of the property, visibly inspecting each water service line, verifying flow to the fixtures. If required, the Contractor shall verify restoration of water service after normal working hours when the property is occupied.

C. Pipe Penetrations:

1. Water Service line passing through concrete or cinder block walls and floors, or other corrosive material shall be protected against external corrosion by a protective PVC pipe sleeve meeting the requirements of the DC Plumbing Code. The pipe sleeve shall allow for expansion and contraction of the water service line.
2. Sleeves shall be sealed to wall or floor with non-shrink grout and sealants as required for a watertight seal.
3. Refer to the notes in the “Typical Copper Service Penetration Detail” WD023.

D. Pressure Reducing Valves:

1. Install pressure reducing valves if incoming pressure is greater than or equal to 80 psi.
2. Pressure reducing valves shall be preset to 75 psi and field adjusted by the Contractor if requested by the Resident to reduce the pressure.

### 3.5 MAINTAINING WATER SERVICE:

- A. Existing water service shall be kept in service until transfer connections are made. Where the water service line is replaced to the water main, the Contractor shall use a wet tapping machine to install a new corporation stop prior to disconnecting the old water service line. The new water service line shall be connected to the new corporation stop and installed within the time limits specified herein. The existing corporation stop shall be removed, and a solid threaded brass plug installed in place of the removed corporation stop.
- B. No more than three separate shutoffs will be permitted for any single water service line, and the duration of each shutoff shall not exceed four (4) hours, except in an emergency when DC Water will grant a time extension. The Contractor shall give sufficient, advance written notice to DC Water of the starting time and duration of proposed shutoff in-order to provide for emergency water supply.

- C. If the proposed shutoff time conflicts with essential consumer use, it shall be rescheduled to alleviate interference. DC Water will determine action to be taken for essential consumer use requests. No additional payments will be made to the Contractor for working outside normal hours to accommodate essential service.
- D. Overtime, weekend, and holiday work may be ordered by DC Water to promptly complete temporary and/or permanent water service. The Contractor shall respond to emergency work within two (2) hours of notification.

### 3.6 SERVICE TAPS:

- A. DC Water will install all service taps requested by organizations that are not performing work as part of a construction contract issued by DC Water. Contractors performing work as part of a construction contract issued by DC water shall install service taps in accordance with Section 33 12 17 – Service Saddles.
- B. Install all new water service line taps at the water main and remove and plug all existing corporation stops.
- C. Confirm the water service line tap is made to a pressurized water main.
- D. Install new service taps at least 18 inches away from a pipe joint or existing service tap, regardless of whether the existing tap is active or abandoned.

### 3.7 METER, METER BOX, FRAME AND COVER INSTALLATION:

- A. Contractor shall schedule all meter pickups with DC Water at least five (5) business days in advance of any proposed meter work.
- B. Protection of Meters:
  - 1. The Contractors shall provide safe transport and care of the meters to and from the point of installation. Replacement of any meter damaged, lost, or stolen while in the possession of the Contractor shall be at the Contractor's expense.
- C. Installation:
  - 1. Existing meters shall be reinstalled at their existing location, unless specifically directed by DC Water or as follows:
    - a. Wherever an existing meter is located on Private Property or inside a building, the Contractor shall install a new meter setter with jumper, meter box, frame and cover in Public Space and leave the existing meter in place. Contractor shall also notify DC Water that a meter needs relocation or abandonment.
    - b. Where any unmetered water service is encountered, the piping, yoke, fittings, meter box, shunt, frame and cover will be installed in Public Space.
  - 2. If the existing meter is an AMR type meter greater than or equal to five-eighths (5/8) inch in diameter, the Contractor shall reinstall the existing meter. If the meter is damaged, the Contractor shall:
    - a. Request, coordinate, and pick-up a new water meter from DC Water;
    - b. Remove existing meter, protect existing meter and place in a 42 gallon capacity, three (3) mil plastic bag with twist tie or other device to seal the bag, all provided by the Contractor. Place the bag containing the meter in the bottom of new meter box.
    - c. Connect the new meter to the meter yoke.

3. If a new meter is not available, a temporary meter jumper line shall be furnished and installed by the Contractor until a new meter is available. When the new meter becomes available, Contractor shall remove the jumper line and install the new meter at no additional cost to DC Water.

D. Meter and MTU Startup:

1. Comply with NECA 1.
2. The Contractor shall have at least one trained member per crew for programming and putting water meters and MTUs into operation.
  - a. DC Water shall provide two (2) hour onsite instruction for up to three (3) Contractor staff, who will then train any additional Contractor staff.
  - b. Detailed installation instruction and work activities shall be provided by DC Water during the training.
  - c. Programming water meters and MTUs shall include but not limited to connecting MTU to meter register, selecting meter type, recording meter serial number, and FTP programming records to AMI head end system.
3. Contractors shall furnish feasible number of programming pucks, operating systems and hardware devices required for new meter and MTU programming and operation.
  - a. Acceptable manufacturer and model for programming pucks include Aclara Wireless Field Programming Coil or approved equal.
  - b. Acceptable operating systems and hardware include below specifications:
    - 1) Android:
      - i. OS 8.1 or later; Bluetooth 4.1 or later; MEM minimum 2 GB; GPS required.
    - 2) IOS:
      - i. IOS 13 or later; Bluetooth 4.0 or later; MEM minimum 2 GB; GPS required.
    - 3) Windows:
      - i. Windows 10 version 1809 or later; Bluetooth 4.2 or later; MEM minimum 4 GB; GPS required.
4. The startup must be done onsite at the Private Property during the Work.
5. Examine water meter startup area and prepare written report conditions detrimental to meter programming and putting them into operation.
6. Proceed with installation only after unsatisfactory conditions have been corrected.
7. Transfer all requested data in a flat file or in a method instructed by DC Water on a daily basis.
8. Take photos to document that startup programming has been completed.
  - a. Provide photos of meters at each property clearly showing meter reads and meter numbers.
  - b. Clearly show the water meter and include a note in the photo that startup has been completed.
9. A whiteboard must be used with each water meter photograph.
  - a. On a small whiteboard, write the following information: date, time, property address, and startup status.

### 3.8 ADJUSTING WATER SERVICE LINE:

- A. Work consists of adjusting water service line pipe due to new water main work that affects water service.
  - 1. If the existing water service piping is copper, is not less than five-eighths (5/8) inch diameter and enough slack exists in the piping to make the connection as determined by DC Water, the existing piping shall be connected to the new main without replacing any piping.
  - 2. If insufficient slack is available or pipe cannot be bent by approved means to meet new corporation stop, adjustment under this subsection will not be feasible and a section of pipe shall be replaced as specified herein.
- B. Work consists of trench excavation within the street including excavation, backfill and compaction. The Contractor shall abandon the old tap and install a new tap, adjust the existing copper service pipe to bring pipe to the connection point at the new corporation stop and, making the connection.
- C. Install and maintain temporary asphalt patching until permanent restoration is performed.

### 3.9 REPLACE WATER SERVICE LINE:

- A. Work consists of replacing water service line pipe in accordance with DC Water's Standard Details.
  - 1. If existing water service piping is lead or galvanized iron, or is copper pipe less than 5/8 (five-eighths) inch diameter, the Contractor shall replace the water service piping with a single section of copper pipe not less than 3/4 (three quarter) inch diameter with no joints, couplings or fittings from the new main to the new meter housing and from the meter to:
    - a. The property line, along with a curb stop and curb stop box at the property line when there are no obstructions present in Public Space.
    - b. The face of building projection, along with a curb stop and curb stop box close to the face of projection, when projection occupies Public Space.
  - 2. Replacement piping shall be the same size as piping replaced except that all existing piping in public space smaller than five-eighths (5/8) inch shall be replaced with three-quarter (3/4) inch copper piping and all lead or galvanized iron pipe shall be replaced with copper.
- B. Provide service Saddles as required by Section 33 12 17 – Service Saddles.
- C. Install a curb stop box and set plumb over the curb stop so that the stop is centered within box. Top section of box shall be rotated so that box cover will be flush with finished ground surface. Backfill shall be carefully placed to avoid disturbance of curb stop or curb stop box.
- D. Install extension rod for each curb stop. Extension rods shall extend as close to the curb box cover as possible using a manufacturer's standard length extension rod.
- E. Install water service lines using trenchless or conventional excavation methods, as approved by DC Water. Submit proposed method of installation to DC Water for review and approval. Installation shall include temporary and permanent exterior restoration (except seeding, sodding, permanent PCC base, PCC pavement, asphalt base, concrete driveway pavement, asphalt driveway pavement, concrete sidewalks, brick and block sidewalks, and overlay) including cleaning of work spaces, restoring exterior physical features to their original condition or better, temporary sidewalk, temporary driveway, temporary roadway, granite and concrete curbs, backfill, compaction, and all other costs associated with the installation regardless of whether trenchless or conventional excavation methods are used. Installation shall include temporary and permanent interior restoration including cleaning of workspaces, restoring interior physical features to their original

condition or better, including but not limited to access panel, repair sheet rock, including spackle, prime paint coat, and finish paint coat, resetting or replacing existing tile, cabinetry, and all other costs associated with the installation regardless of interior installation method.

- F. If DC Water determines that a meter requires relocation or a new meter is necessary, the Contractor shall cut service line using a pipe cutter or shearing device (abrasive cutting methods are not permitted) at a location as directed by DC Water and provide and install new pipe, meter yoke and couplings, meter box, and frame and cover. Install the new meter provided by DC Water. If meter and housing adjustment in-place is necessary, the Contractor shall furnish and install new pipe and couplings.
- G. Following installation of the water service line and prior to backfilling the areas of connections and joints, the new connection shall be activated and visually inspected to ensure that all connections are leak free. Any leakage found shall be immediately corrected by the Contractor to the satisfaction of DC Water at no additional cost to DC Water. The water service line trench shall be backfilled only after visual inspection, and photo documentation. Should a trench for replacements be covered prior to visual examination and photo documentation, it shall be uncovered by the Contractor at no additional cost to DC Water.
- H. Immediately following the replacement of the water service line, flush the service in accordance with AWWA C810 except that flushing at the external hose bib of the connected building shall be for at least 30 minutes, or as long as necessary as determined by DC Water. The Contractor shall also flush for at least one (1) minute at the meter and at least one (1) minute at the curb stop. Any damage to Private Property shall be restored to DC Water's satisfaction at the Contractor's expense.
  - 1. If the Contractor is able to perform the flushing from the external hose bib, the Contractor shall provide the Resident with the appropriate notification.
  - 2. If the Contractor is unable to perform the flushing from an external hose bib, the Contractor shall inform DC Water of such and provide the Resident with the appropriate notification. DC Water will provide the appropriate language to include in the notification.
  - 3. Use a garden hose and other means to direct flows away from the building and dissipate flows to a velocity that will not erode property or discharge directly to curb and storm gutters.

### 3.10 PIPING INSULATION WITHIN CRAWL SPACES:

- A. Contractor shall apply insulation materials, accessories, and finishes in accordance with the manufacturer's written instructions. Insulation shall be installed with smooth, straight, and even surfaces; free of voids throughout the length of piping, including fittings, valves and specialties and equipment.
- B. Insulation jacketing may be factory or field installed.
- C. The insulation and jacketing shall extend for a depth of 42 inches into the ground for freeze protection.
- D. Contractor shall apply insulation to straight pipes and tubes as follows:
  - 1. Secure each layer of insulation to pipe with wire, tape, or bands without deforming insulation materials.
  - 2. Seal longitudinal seams and end joints with vapor-retarder mastic.
  - 3. For insulation with factory-applied jackets, secure laps with outward clinched staples at six (6) inches o.c.
  - 4. For insulation with factory-applied jackets with vapor retarders, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by the insulation manufacturer and seal with vapor-retarder mastic.

- E. Contractor shall apply insulation to fittings and elbows as follows:
1. Apply pre-molded insulation sections of the same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
  2. When pre-molded sections of insulation are not available, apply mitered sections of insulation. Secure insulation materials with wire, tape or bands. Cover fittings with standard PVC fittings covers. Overlap PVC covers on pipe insulation jackets at least one (1) inch at each end. Secure fittings cover with manufacturer's attachments and accessories. Seal seams with tape and vapor-retarder mastic.
- F. Contractor shall apply insulation to valves and specialties as follows:
1. Apply pre-molded segments of insulation to valve body.
  2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
  3. Use preformed standard PVC fitting covers for valve sizes where available.
  4. Secure fitting covers with manufacturer's attachments and accessories.
  5. Seal seams with tape and vapor-retarder mastic.

### 3.11 LEAD PIPE DISPOSAL:

- A. Disposal of lead pipes shall be at a site approved by the U.S. Environmental Protection Agency (and the State) to accept lead waste. Handle, label, store, transport, and dispose of lead or lead-contaminated waste in accordance with the following Code of Federal Regulations: 40 CFR 261, 40 CFR 263, 40 CFR 264, and 40 CFR 265. Comply with land disposal restriction notification requirements as required by 40 CFR 268.
- B. Submit written evidence that the receiving lead waste treatment, storage, or disposal facility is approved to accept lead waste by the federal and district or local regulatory agencies. Submit, within ten (10) days, one (1) copy of complete manifests, signed and dated by the transporter in accordance with 40 CFR 262.
- C. Lead pipe (piping, fittings, etc.) removed as part of the work shall be recycled at a certified recycling facility in accordance with the required regulations.
- D. No lead pipe shall be disposed of in excavated material.
- E. Lead pipe abandoned in place shall have the ends sealed before backfilling.

### 3.12 ABANDONMENT OF EXISTING WATER SERVICE LINES:

- A. Abandonment of existing water service lines shall be in accordance with Section 33 01 20 – Abandonment of Underground Utilities.

### 3.13 FIELD DATA:

- A. Contractor shall complete and submit a DC Water Tap Card in DC Water's 3PP system for each new installation within 48 hours of making the installation.
- B. For each premise where service work, test pit, or service line replacement/adjustment is performed, the Contractor shall collect the necessary data to populate the daily and weekly reporting spreadsheets. The daily reporting sheet shall be completed and submitted to the DC Water Construction Project Manager each day no later than 2:00 p.m. that a full or partial lead service replacement (LSR) is performed.



- C. The weekly reporting sheet shall be completed and submitted to DC Water Construction Project Manager every Monday. The weekly reporting sheet shall detail all of the week's prior work including replacements (lead and non-lead), adjustments, and test pits.

**~ END OF SECTION 33 12 13 ~**

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