



MATERIAL AND INSTALLATION SPECIFICATIONS FOR CONSTRUCTING WATER SERVICES

INSPECTIONS

- A. It is YOUR responsibility to schedule ALL inspections and the installation of water meters with LWD (978) 540-2222, a minimum of 24 hours prior to the time YOU need the service.
- B. LWD is available Monday thru Thursday to inspect, between 7 am & 4 pm.
- C. **No Contractor shall operate water main valves, curb stops, or corporations, unless authorized to do so, and while under the supervision of LWD Personnel.**

SCHEDULING INSPECTIONS & FINAL SIGN OFF

- 1. File for service with Littleton Water Department. If necessary, pay connection fee and/or meter fee.
- 2. Schedule with LWD for inspection of water line installation, including tap, prior to any work being performed on water service line.
- 3. Once Water Line has been installed, inspected, and backfilled, provide to LWD an AS-BUILT Drawing (ON THE CARD ATTACHED). Refer to the AS BUILT DRAWING section of this document. A poorly drawn or inaccurate AS-BUILT will be rejected.
- 4. Contact LWD to schedule the installation of the water meter. The Unit must have both power and heat prior to requesting a water meter, and AS-BUILT Drawing must be accepted.
- 5. Contact LWD to schedule FINAL INSPECTION. All plumbing should be complete, and MUST include a PRESSURE REDUCER installed past the meter. The meter and pressure reducer MUST be securely supported to either the floor or wall of the foundation. LWD will sign off on the building permit for the service line installation once all work is completed and approved by LWD.

MATERIALS & INSTALLATION

1 – DESCRIPTION

1.1 General:

This part of the specifications shall govern for all materials used in the construction of water distribution facilities under the jurisdiction of the Littleton Water Department. Projects that would necessarily involve materials other than those included in this specification shall be subject to the approval of the Water Department Superintendent. Complete specifications covering all materials not included herein shall be submitted for approval. Any material used other than materials herein specified shall be of the kind and type normally used in the construction of water distribution facilities.

2 – SERVICE LINES (See Attachment A)

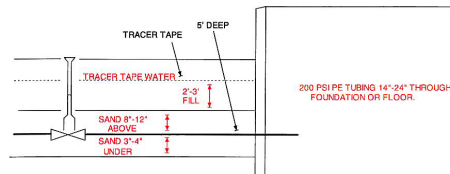
2.1 Description:

The service line is the line from the main to the outlet valve at the customer's meter. It shall consist of the corporation stop at the main, the tubing or pipe, the curb stop and curb box, and a meter with valves on both the inlet and outlet. LWD also requires a Pressure Reducer be installed past the meter, as well as for all Sill Cocks to be equipped with a Hose Bib Vacuum Breaker equal to Watts # 8.

2.1.1 Polyethylene Service line: Tubing for services shall be polyethylene designed for 200 psi service. Pipe shall be in accordance with AWWA C901 standard for Polyethylene Pressure Pipe, tubing and fittings.

2.1.2 For service lines larger than two inches in diameter, refer to LWD Specifications and Guidelines for the Installation of Water Mains.

ATTACHMENT A



LITTLETON WATER DEPT.

SERVICE INSTALLATION:

ERIE SERVICE BOX W/PLUG
PE TUBING 200 PSI
STEEL INSERTS

2.1.3 Rejection: PE tubing may be rejected for failure to meet any of the requirements of this specification.

2.1.4 Trace Wire - Trace wire shall be laid with all non-metallic pipe as per standard details. Trace Wire shall be fourteen (14) gauge single strand plastic coated copper trace wire. The trace wire should be wrapped around Erie Box and extend through the foundation.

3 – FITTINGS

3.1 Description:

All fittings used in the construction of water service lines shall be “Underwriters Laboratory” (UL) approved. All materials listed in this section shall be **manufactured in the U.S.A.**, unless specifically authorized in writing by the Superintendent.

3.2 Brass Water Service Fittings / Service Boxes:

3.2.1 General - Stops and Fittings furnished under these specifications shall be of the size and type specified, with all parts of brass, conforming to Alloy Number 4 A (ASTM Designation B 62) which has a nominal composition of 85% copper and 5% each of tin, lead, and zinc, plus or minus 1%. All stops, cocks, and fittings shall be full size openings, throughout, of the size specified. **(Beginning January 1, 2014, all Brass shall be LEAD FREE).**

All castings shall be smooth, free from burrs, scales, blisters, sand holes, and defects of every nature that would make them unfit for the use for which they are intended.

Nuts shall be smooth cast, with symmetrical, hexagonal wrench flats.

3.2.2 Corporations shall be AWWA corporation valve inlet thread by compression fitting, meeting the requirements of ANSI/AWWA C800-89, **Mueller 25008** or equivalent. They shall be designed to rotate about the axis of the flow passageway within a circle of rotation small enough to properly clear the inside of any standard tapping machine of appropriate size.

3.2.3 Curb Stops shall be compression fitting meeting the requirements on ANSI/AWWA C800-89. Mueller 25209 or equivalent. Curb Stops shall be FULL BORE inside.

3.2.4 Service Boxes shall be Erie Box Plug Style with 36” Stainless Steel Rod with standard 4.5 – 5.5 feet boxes with a standard plug cover with brass pentagon plug. Each box will be fitted with a 36’ service road and the box shall be manufactured in U.S.A.

4 – METERS

4.1 Description:

LWD will supply either a 5/8” or a ¾” meter. A special detail will be submitted for approval for meters larger than one inch, and shall be the responsibility of the applicant to supply.

4.2 Meters must conform to AWWA Standard C-700, latest edition.

4.3 As of September 1, 2003, LWD will charge \$360.00 for a ¾" (5/8" Meter) and \$425.00 (3/4" meter) for a 1" meter set up for new installations. The owner shall provide a shut-off valve adjacent to and on the house side of the meter. Water must be shut off from the meter in cold weather or the meter otherwise protected from frost. Any person allowing their meter to be damaged by frost or otherwise will be held responsible for the cost of making good the same. For meter sizes one and one-half inch (1 ½") or greater, it is the responsibility of the owner/customer to supply said meter and shut-off, in accordance with LWD Specifications. All meters larger than 1" shall be approved by LWD. All meters MUST be equipped with an ITRON cable to work with LWD Radio Read system.

4.4 LWD requires a pressure reducer on the customer side of the meter be installed by a licensed plumber prior to final sign off.

5 – SERVICE LINE BEDDING AND BACKFILL

5.1 Bedding:

5.1.1 Bedding sand shall be used for ductile or plastic pipe. Sand shall be free of stones. A minimum 8" – 12" of bedding sand shall be laid beneath the pipe, and extend 18" over the pipe. Bedding sand shall be extend to the width of the trench.

5.2 Backfill:

5.2.1 Backfilling over the first 18" of the pipe shall be SAND, as described above. Backfill above the sand layer shall be done with good earth, sand or gravel and shall be free from large rocks or hard lumpy material, unless the rocks or lumps are not more than approximately four (4) inches in greatest diameter and are scattered in the soil. No material of a perishable, spongy, or otherwise unsuitable nature shall be used in backfilling.

6 – PAVEMENT REPAIRS

6.1 Description:

This section covers the construction methods to be used in the repair of roads, streets, or other public rights-of-way.

6.2 Permanent Repairs:

6.2.1 Asphalt concrete hot mix surface course construction shall meet with the current requirements of the Littleton Highway Department Specifications or the Mass DOT Specifications for the construction of asphalt concrete hot mix surface course or as otherwise approved.

6.2.2 Concrete pavement repairs shall meet with the current requirements of the Mass DOT Specifications or the Littleton Highway Department Specifications for the construction of concrete rigid pavements.

6.2.3 Gravel surfacing shall meet with the current requirements of the Littleton Highway Department

6.2.4 All permanent repairs of streets, roads, or other public rights-of-way shall meet with the construction requirements of the governing agency or private owner and shall meet with the requirements of all local Ordinances, Regulations, Permits, or Codes governing the repairs to roads, streets, or other rights-of-way.

7 – CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

7.1 City Streets:

Littleton Highway Department and MassDOT (when applicable) shall be notified prior to any street cuts. Proper permitting shall be obtained prior to opening of any city streets

If city streets have to be closed, the Littleton Fire, Police and Highway department shall be notified of closing. Proper barricades, warning signs, lights and watchmen shall be employed. Work shall be prosecuted in such a manner that one-half of the traveled portion of the road is open to traffic unless approved by Littleton Police Dept. in writing.

Right-of-way shall be left in a neat and orderly manner and left in as good or better shape than it was before construction.

7.2 Easements:

Easements shall be left in a neat and orderly manner. Easements shall be left in as good or better shape than that before construction.

8 – EXISTING STRUCTURES

8.1 General:

No trees or existing structures shall be removed unless approved by the Superintendent. All existing structures, improvements, and utilities shall be adequately protected, at the expense of the Contractor, from damage that might otherwise occur due to construction operations. The Contractor shall be liable for damage to any utilities resulting from his operation. During construction, all fire hydrants, valve boxes, fire or police call boxes, and other existing utility controls shall be left intact, unobstructed and accessible.

AS BUILT DRAWINGS

SECTION 1 – GENERAL

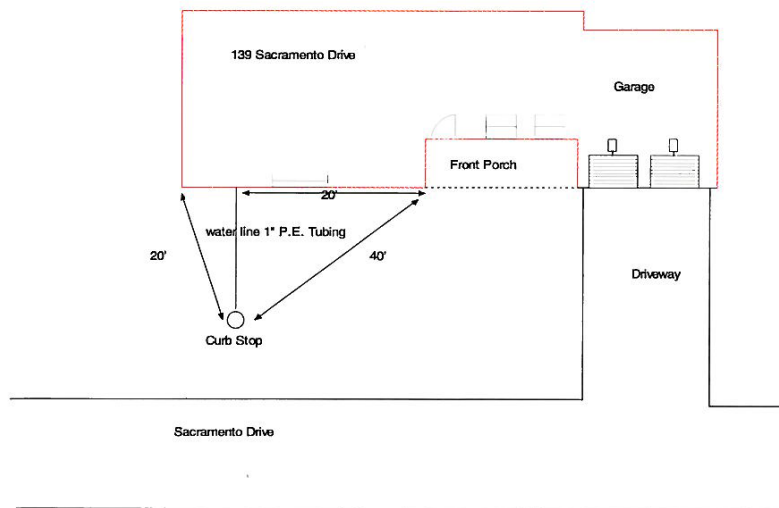
1.1 This part of the specifications stipulates requirements for the provision of AS BUILT drawings of work to be provided to the Littleton Water Dept. All costs associated with providing accurate AS BUILT drawings to LWD shall be the responsibility of the contractor.

SECTION 2 –SERVICE AS BUILT

2.1 At the completion of the installation, and prior to a water meter being installed, the contractor shall provide to Littleton Water Dept an AS BUILT drawing depicting the following:

- Curb Stop
- Water Line with Designation as to the size.
- Location where the service enters the building

All AS BUILT Drawings shall have a minimum of two (2) ties from permanent structures (i.e. building corner, hydrant, gate cover, manhole cover, catch basin, hydrant, property bound).



Example of water service as-built.
Must be submitted before water meter is set.

ATTACHMENT B