

**CITY OF LONGMONT
APPENDIX I-4**

Water Distribution Approved Materials List

The following list of approved materials applies to all additions or modifications to the City of Longmont water distribution system. All materials shall be designed, manufactured and installed in accordance with Section 500 of the City of Longmont *Design Standards and Construction Specifications*.

Proposed additions or changes to this list of approved materials shall be submitted to the City of Longmont in writing in accordance with Section 108 of these Standards and Specifications.

1. WATER MAINS

- A. Ductile Iron Pipe (AWWA C151)
 - (1) Acceptable manufacturers of unrestrained joint ductile iron pipe are:
 - a. American Ductile Iron Pipe
 - b. McWane Ductile/Pacific States
 - c. United States Pipe and Foundry/Griffin Pipe
 - (2) Restrained joint ductile iron pipe will be considered on a case-by-case basis.
- B. Polyvinyl Chloride (PVC) Pipe (AWWA C900)
 - (1) Acceptable manufacturers of unrestrained joint PVC pipe (AWWA C900) are:
 - a. Diamond Plastic
 - b. North American Pipe
 - c. Vinyltech
 - (2) Per letter dated December 17, 2003, JM Eagle Pipe is not acceptable.
 - (3) Restrained joint PVC pipe will be considered on a case by case basis.
 - (4) Fusible PVC pipe will be considered on a case by case basis.
- C. Asbestos Cement Pipe (No AWWA Standards)
 - (1) No asbestos cement pipe materials are approved.

2. FITTINGS, COUPLINGS, SLEEVES AND ACCESSORIES

- D. Ductile Iron Fittings (AWWA C110) and Ductile Iron Compact Fittings (AWWA C153)
 - (1) Acceptable manufacturers of ductile iron fittings, ductile iron compact fittings and swivel tees are:
 - a. Sigma
 - b. SIP Industries
 - c. Star Pipe
 - d. Tyler Union
 - e. U.S. Pipe and Foundry Company
 - (2) Swivel tees are not included in AWWA Standards. Applicable AWWA Standards for materials shall apply.
- E. Mechanical Joint Adaptors
 - (1) Acceptable manufacturers of bolt-through mechanical joint adaptors (MJ x MJ adapters) are:
 - a. InFact Corp. Foster Adaptor
 - b. Star Pipe Series 100 adapter
 - c. Sigma MJ Connector
- F. Applicable AWWA Standards for materials shall apply Bolted Sleeve Type Couplings (AWWA C219)
 - (1) Acceptable manufacturers and models of ductile iron wide range / extended range couplings are:
 - a. Ford Style "FC2W-L12" Ultra-Flex Wide Range Couplings
 - b. JCM Number "242" Long Length Optimum Range Coupling
 - c. Romac Macro HP Extended Range Coupling (only allowed when connecting water mains that are different materials)
 - d. Romac Style "XR501" Extended Range Coupling (long center ring)
 - e. Smith-Blair Type 461 Quantum Coupling (long sleeve)

- G. Fabricated Carbon Steel Tapping Sleeves (AWWA C223)
 - (1) Approved manufacturers and models of fabricated carbon steel tapping sleeve are:
 - a. Ford Style FTSC
 - b. JCM Number 412
 - c. Mueller Model H-619 (AC pipe only)
 - d. Romac Style FTS 420
 - e. Smith-Blair Type 622

3. HYDRANTS

- H. Dry Barrel Fire Hydrant (AWWA C502)
 - (1) Acceptable manufacturers and models of dry barrel fire hydrants are:
 - a. Clow Medallion F2545 (grease lubrication)
 - b. Mueller Super Centurion 250 Model A423 (oil lubrication)
 - c. Waterous Pacer Traffic Model WB67-250 with cast iron break away flange with “c” on flange (oil lubrication)
- I. Flush Type Hydrant (AWWA C502)
 - (1) Acceptable manufacturer and model of flush-type hydrant with one 2-1/2" hose nozzle is:
 - a. Mueller Model A-412

4. RESILIENT SEATED GATE VALVES

- J. Resilient Seated Gate Valves (AWWA C509) & Reduced Wall Resilient Seated Gate Valves (AWWA C515)
 - (1) Acceptable manufacturers and models of resilient seated gate valves are:
 - a. American AVK Series 45
 - b. Clow 2639
 - c. M&H Style 4067
 - d. Mueller A-2362
 - e. U.S. Pipe A-USP2
 - (2) Acceptable manufacturers and models of reduced wall resilient seated gate valves are:
 - a. American AVK Series 65
 - b. American Flow Control Series 2500
 - c. Clow 2638
 - d. M&H Style 7000
 - e. Mueller A-2361
 - f. U.S. Pipe A-USP1

5. VALVE BOXES

- K. Acceptable manufacturers and models of cast iron two-piece valve boxes with screw-in risers are:
 - (1) Castings, Inc. Model 6850 with 17" Rite Hite cast iron screw type valve box riser
 - (2) East Jordan Iron Works 8550 Series valve box with #69 screw type adjustable riser
 - (3) Tyler Union 6850 Series valve box with #69 screw type adjustable riser
 - (4) Star Pipe Products Cast Iron Heavy Duty valve box CL35, two piece, screw type adjustable riser
 - (5) Sigma 2600 Series Cast Iron valve box CL35, with screw type adjustable riser

6. RESTRAINT, SUPPORT AND INSULATION

- L. Joint Restraints
 - (1) Acceptable manufacturers and models of mechanical joint restraint for ductile iron pipe are:
 - a. EBAA Iron Series 1100
 - b. Ford Series UFR1400
 - c. Sigma ONE-LOK Series SLDE
 - d. Star Pipe Products Stargrip Series 3000

- (2) Acceptable manufacturers and models of restraint harness for push on joints for ductile iron pipe are:
 - a. EBAA Iron Series 1700
 - b. Ford Series UFR1450-D
 - c. Sigma PV-LOK Series PWP
 - d. Star Pipe Products Series 3100P
- (3) Acceptable manufacturers and models of mechanical joint restraint for PVC pipe are:
 - a. EBAA Iron Series 2000PV
 - b. Ford Series UFR1500-C
 - c. Sigma One-LOK Series SLCE
 - d. Star Pipe Products Stargrip Series 4000
- (4) Acceptable manufacturers and models of restraint harness for push on joints for PVC pipe are:
 - a. EBAA Iron Series 1500
 - b. Ford Series UFR1390-D
 - c. Sigma PV-LOK Series PWP
 - d. Star Pipe Products Series 1100G2
- (5) Applicable AWWA Standards for materials shall apply.

M. Pipe Insulation

- (1) Acceptable manufacturer and materials for 2-inch thick pipe jacket insulation are:
 - a. Pittsburgh Corning FOAMGLAS® ONE™ insulation with PC 88® adhesive and PITTWRAP® SS jacketing.
- (2) Acceptable manufacturers of 2-inch thick closed-cell extruded polystyrene (XPS) foam rigid insulation board:
 - a. Dow Styrofoam HIGHLOAD 100
 - b. Owens Corning Formular 1000

7. CORROSION PROTECTION

- N. Polyethylene Encasement (AWWA C105)
 - (1) No manufacturers are listed.

8. LOCATING SYSTEMS

- O. Tracing Wire and Accessories
 - (1) Acceptable manufacturers and materials for tracing wire are:
 - a. Open Trench or Open Cut Installations: Copperhead Industries High Strength – 1230 CCS Tracer Wire
 - b. Direction Drilling or Boring Installations: Copperhead Industries Extra-High Strength – 1245 CCS Tracer Wire
 - (2) Acceptable manufacturer and model of tracing wire splice kits are:
 - a. 3M Direct Bury Splice Kit Model DBR-6.
 - (3) Acceptable manufacturer and model of test station boxes are:
 - a. Copperhead RB14*TP single-terminal
- P. Warning Tape: No manufacturers are listed.
- Q. Electronic Marker System
 - (1) Acceptable manufacturer and model of an electronic marker is:
 - a. 3M EMS Ball Marker 1403-XR

9. DISINFECTION AND FLUSHING

- R. Hypochlorite Tablets (AWWA B300)
 - (1) No tablet manufacturers or products are listed. Tablets shall comply with applicable AWWA B300 Standards.
 - (2) Acceptable manufacturers of chlorine tablet adhesive are:

- a. Dow Corning 748 noncorrosive sealant
 - b. Approved equals manufactured for food processing applications with FDA 21, NSF 51 and NSF 61 listings.
- S. Dechlorination Tablets (AWWA C655)
 - (1) No tablet manufacturers or products are listed. Tablets shall comply with applicable AWWA C655 Standards.

10. SERVICE LINE, VALVES, AND FITTINGS

- T. Service Line (AWWA C800)
 - (1) No manufacturers are listed.
- U. Service Saddles (AWWA C800)
 - (1) Acceptable manufacturers and models of two-piece, all brass or bronze body, **HINGED** service saddles for cast iron sized AWWA C900 PVC pipe with AWWA taper (C.C.) taps are:
 - a. A.Y. McDonald Model 3895 (4" to 8" pipe with ¾" to 2" taps)
 - b. Ford Style S90 Hinged Design (4" to 8" pipe with ½" to 2" taps)
 - c. Mueller S-13000 Series (4" to 8" pipe with ¾" to 1" taps)
 - (2) Acceptable manufacturers and models of two-piece, all brass or bronze body, **BOLTED** service saddles with AWWA taper (C.C.) taps for cast iron sized AWWA C900 PVC pipe are:
 - a. A.Y. McDonald Model 3805 (4" to 12" pipe with ¾" to 2" taps)
 - b. Ford Style S902 (4" to 12" pipe with ¾" to 2" taps)
 - c. Jones J-996 Series (4" to 12" pipe with ¾" to 2" taps)
 - d. Mueller H-13000 Series (4" to 12" pipe with ¾" to 2" taps)
 - (3) Acceptable manufacturers and models of two-piece, brass or bronze top body with **SINGLE WIDE** stainless steel band/strap, bolted service saddles for cast iron sized AWWA C900 PVC pipe with AWWA taper (C.C.) taps:
 - a. A.Y. McDonald Model 3845 (4" to 12" pipe with ¾" to 2" taps)
 - b. Ford Style 202BS (4" to 12" pipe with ¾" to 2" taps)
 - c. Jones J-969W Series (4" to 12" pipe with ¾" to 2" taps)
- V. Corporation Stop (AWWA C800)
 - (1) Acceptable manufacturers and models of AWWA Standard Thread / Corporation Cock (AWWA/CC) taper thread inlet by compression outlet for Copper Tube Size (CTS) ball style corporation stops are:
 - a. A.Y. McDonald Model 74701BQ
 - b. Ford Model FB1000
 - c. Mueller Model B25008N
- W. Curb Stop Valve and Box (AWWA C800)
 - (1) Acceptable manufacturers and models of curb stop valves are:
 - a. A. Y. McDonald: 6100 Series
 - b. Ford: B44
 - c. Mueller: H15000 Series
 - (2) Acceptable manufacturers and models of curb stop valve boxes are:
 - a. McDonald (Arch Pattern): 5601 – ¾" to 1" and 5603 – 1 ½" to 2"
 - b. Mueller (Arch Pattern): H10314 – ¾" to 1" and H10310 – 1 ½" to 2"
- X. Meter Setters (AWWA C800)
 - (1) Acceptable manufacturers and models of copper meter setters are:
 - a. A.Y. McDonald: Model 731-2--WWQQ33
 - b. Ford: #V82-W-44-33 with two angle valves.
 - c. Ford 70 Series for 1- ½" & 2" with second angle valve and lockable bypass

11. WATER METERS

- Y. Meter Pits (no AWWA Standard)

- (1) Acceptable manufacturers of meter pits are:
 - a. Mid-States MS2036B
 - b. Armorcast - Fiberglass Reinforced Plastic (FRP)
 - c. Sigma Raven RMP2036-W
- Z. Meter lid (no AWWA Standard)
 - (1) Acceptable manufacturers and models of frost proof meter covers are:
 - a. Castings, Inc.: Cast lid with pre-drilled 2" antenna hole
- AA. Meter frost lid (no AWWA Standard)
 - (1) Acceptable manufacturers and models of frost proof meter covers are:
 - a. Castings, Inc.: INLP3 HDPE meter inner lid frost proof