

**Approved Materials List
Water/Wastewater Utilities
December 2005**

All materials shall meet the requirements of the City's Design Standards and Construction Specifications.

WATER

Fire Hydrants

The approved Fire Hydrants are:

1. Waterous: Pacer 250 with cast iron break away flange and with "c" on flange
2. Clow: Medallion F-2545
3. Mueller: Super Centurion 250 3-way fire hydrant

In addition, all fire hydrants used in the City of Longmont Water System shall meet the following Specifications:

- a. All hydrants shall be new.
- b. All extension sections must be class 52 ductile iron or cast iron pipe and installed per the manufacturer's recommendations.
- c. All fire hydrants shall have an oil reservoir and be oil lubricated from the factory.
- d. All oil screws for hydrants will be removable with a HEX key or wrench. Slotted, phillips, etc. screws will not be accepted.
- e. All hydrants will come with a weather shield.
- f. Buried bolts will be Type 304 stainless steel.
- g. Color:
Waterous - red hydrant, white caps and weather shield.
Others - red with white caps, bonnet and weather shield.

Reference AWWA Spec. #C-502 and section 518-00 of the City' s--Design Standards and Construction Specifications.

Valves

The approved gate valves are:

1. AVK: Resilient Seated Gate Valve
2. M&H: Resilient Wedge Valve
3. American Flow Control: DI Resilient Wedge Valve Waterous Model AFC 2500
American Flow Control: Resilient Wedge Valve Waterous Series 500
4. Clow: Resilient Seated Gate Valve
5. U.S. Pipe: Metroseal 250 Resilient Seat Gate Valve
6. Mueller: A-2360

Butterfly valves must be in accordance with A.W.W.A. C-504, pressure rating 150B and designed for direct burial. Valves must be tight closing rubber seat type with seats bonded to the body. The valves must open counterclockwise and have a 2" standard operating nut.

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All valves greater than 12" are subject to review and approval by the engineer.

Features:

- High strength bronze or stainless steel stem.
- Type 304 stainless steel bolts.
- 2" square operating nuts - open left.
- Fully encapsulated disk.

Reference AWWA Spec. #C-509 and Section 515.00 of the City's Design Standards and Construction Specifications.

Standard Blow-off

The approved blow-off is:

1. Eclipse #85

Valve Boxes

The approved valve box is:

1. Tyler: 6850 series
1. East Jordan Iron Works: 8550 series

Top, middle, and bottom sections shall be screw type adjustable cast iron with lid. The boxes must have a circular base. Top section must be a model 69, 16-½" in length.

Reference the City's Design Standards and Construction Specifications.

Tapping Valves and Saddles

Tapping valves and saddles must conform to the above gate valve requirements specified by the Engineer. Tapping saddles shall be fabricated steel with epoxy coating and stainless steel nuts, bolts and washers.

The approved tapping saddles are:

1. Ford: Style FAST FTSC
2. Romac: FTS420
3. Apac: Tapping Sleeve 512
4. Mueller: Tapping sleeve H-619 (AC pipe only)
5. Smith Blair 622

Reference section 515.04 of the City's Design Standards and Construction Specifications.

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Service Line Tapping Saddles

The approved service line tapping saddles are:

1. Jones: J996 - ¾" to 2"
2. Romac: 202B Brass Straps – ¾" to 2"
202BS Stainless Steel Straps ¾" to 2"
3. A.Y. McDonald: 3845SS – ¾" to 2"
4. Ford: S70 or S90 – ¾" to 2"
202BS wide strap or double wide strap – ¾" to 2"
5. Mueller: H-13000 Series - ¾" to 2"
BR 2 S Series - wide strap or double wide strap – ¾" to 2"

All straps must be wide flat and either brass or stainless steel.

Hex nut only instead of screwhead. For service connection only. Service line tapping saddles shall be CC thread.

Asbestos cement pipe: must be full circumference seal, tapped, repair clamp, 12" minimum length. All parts must be stainless steel. Approved by engineer on a case by case basis.

Reference section 512.04 of the City's Design Standards and Construction Specifications.

Curb Stops

The approved curb stops are:

1. Ford: B44
2. Mueller: H15000 series
3. A.Y. McDonald: 6100 series

Curb stops with compression connections only. Stop and waste valves are prohibited.

Reference section 517.00 of the City's Design Standards and Construction Specifications.

Curb Stop Boxes

The approved curb stop boxes are:

1. A.Y. McDonald: Arch Pattern
 - a. 5601 – ¾" & 1"
Lid 5601L
 - b. 5603 – 1 ½" & 2"
2. Mueller: Arch Pattern
 - a. H10314 – ¾" & 1"
 - b. H10310 – 1 ½" & 2"

Reference section 517.00 of the City's Design Standards and Construction Specifications.

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Corporations

Male threads on corporations: - ¾" through 2" shall be CC thread. (City of Longmont supplies)

Joint Restraints

The approved joint restraints are:

1. Uni-Flange:
 - Series 1300C - Mechanical Joint Fittings PVC/DIP 4" to 12"
 - Series 1390C - Joint (Bell) Restraint PVC/DIP 4" to 12"

2. Ebaa iron:
 - Series 2000 PV PVC 4" to 12"
 - Series 1100 DIP 3" to 12"
 - Series 1500 Joint (Bell) Restraint PVC 4" to 12"
 - Series 6500 Joint (Bell) Restraint DIP 4" to 12"

3. Romac:
 - Grip Ring

Reference section 523.00 of the City's Design Standards and Construction Specifications.

Transition Couplings

The approved transition couplings are:

1. Romac
2. Dresser
3. Viking

Meter Pits

The approved meter pits are:

1. Mid-States
2. Armorcast - Fiberglass Reinforced Plastic (FRP)

Meter Covers

The approved meter cover is:

1. Castings Inc.: Frost Proof M-70-AL

Meter covers must have a cast iron top lid. Dome and frost lid may be either cast iron or aluminum.

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Meter Coppersettters

The approved copper settlers are:

1. A.Y. McDonald: #37-2-WWCC33 with two angle valves.
2. Ford: #VV82W2233 with two angle valves.
3. Mueller: #HI41002 with second angle valve.
4. Ford 70 Series for 1- ½" & 2"

Pipe

1. P.V.C. - Must be in accordance with A.W.W.A. C-900 for pipes up to and including 12" and A.W.W.A. C-905 for pipes larger than 12" diameter.
2. Ductile Iron - Must be in accordance with A.W.W.A. C-151; Lined and coated in accordance with A.W.W.A. C-104.
3. Asbestos Cement - All use is strictly prohibited.
4. All service lines larger than 2" must be approved by the engineer.

Reference section 511.00 and 512.00 of the City's Design Standards and Construction Specifications.

Fittings

1. Ductile & Cast Iron - Must be in accordance with A.W.W.A. C-110 (cast iron) or C-111 (ductile iron).

Reference section 514.00 of the City's Design Standards and Construction Specifications.

Tracing Wire

Reference the City's Design Standards and Construction Specifications.

The approved Tracing Wire is:

1. UF type meeting Fed Spec J-C-30A.

The approved Splice Kit is:

1. 3M Direct Bury Splice Kit model DBR-6.

The approved test station box is:

1. Handley T2PS3E

Chlorine Tablet Adhesives

1. Permatex Form-A-Gasket No. 2
2. Permatex Clear RTV Silicone Adhesive Sealant

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WASTEWATER

Pipe

1. P.V.C. must be in accordance with A.S.T.M. D-3034 and be S.D.R.-35.
2. Ductile Iron must be in accordance with A.W.W.A. C-150, minimum class 50.
3. Vitrified clay pipe is strictly prohibited.
4. Asbestos Cement pipe is strictly prohibited.

Reference section 411.00 and 412.00 of the City's Design Standards and Construction Specifications.

Fittings

1. Fittings must meet all the requirements of the pipe described above. (Gasket fittings only).
2. Approved flexible couplings include the following: Can-Tex, C-T Adapters; Fernco; Jointers, Calder coupling; Mission coupling; Nashua Pre-Cast Corp, Flex-o-joint.

Reference section 415.00 of the City's Design Standards and Construction Specifications.

Manholes

1. CONCRETE - must be constructed with concrete that meets or exceeds the requirements of A.S.T.M. C-478. Eccentric cone sections must be used on all manholes.
2. LID & FRAMES - shall be Deeter pattern No. 1258 or approved equal.
 - a. When the lid and frame is located in a pedestrian or bike path, it shall have a smooth surface
3. MORTAR.
 - a. One part Portland Cement, C150, Type II.
 - b. Three parts sand, C144.
 - c. ½ part hydrated lime, C207, Type S.
4. GROUT: Non-shrink, non-metallic, pre-mixed
 - a. Master Builders "Set Grout"
 - b. Sika Grout 212
5. PREFORMED PLASTIC GASKETS
Conformance: Fed. Spec. SS-S-00210, Type 1, Rope Form. Primer required on both surfaces of manhole joints.

Diameter: 1½" for 48" manhole.
 2" for 60" manholes and larger.

Manufactures:

"Kent-Seal", Hamilton-Kent Manufacturing Co.
"Rub'r-Nek", K.T. Snyder Co.
G.S. #4, #44, or #79, General Sealants Inc.
CS-202, Concrete Sealants, Inc. (ConSeal)
"Ram-Nek" is not acceptable.

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6. PIPE PENETRATION GASKETS (for precast manholes)
Kor-N-Seal, Dukor Company.
PS-10, Press Seal Gasket Corp.
A-Lok, A-Lok Corp.
Lock Joint Flexible Manhole Sleeve, Interpace Corp.

Reference section 418.02 of the City's Design Standards and Construction Specifications.

Miscellaneous

Filter Fabric (for trench stabilization): DuPont Typar, Style 3301; Mirafi 140n; or approved equal.

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LIFT STATIONS

Pumps

1. Type shall be submersible and explosion proof.
3. Manufacturers:
 - a. ITT Flygt
 - b. ABS

Wet Well Interior Coating System

1. The interior of the wet well shall be coated with one of the follow products:
 - a. DuraGard CR, LifeLast, Inc.
 - b. T-Lok
 - c. TNEMEC Elasto Shield with primer

Segmental Sealing Units

1. Link-Seal

Hatches

1. Hatches shall be type J-AL or JD-AL with stainless steel hardware throughout as manufactured by The Bilco Company

Motor and Control Circuit Breakers

1. Manufacturer: Square D

Motor Starters

1. Manufacturer: Square D

Jib Crane

1. Manufacturer.
 - a. Columbus McKinnon Corporation, CM Electrified Articulated Jib Arm and CM Lodestar Electric Chain Hoist with CM Metal Chain Container
 - b. Or City approved equal

Exterior Coating System

1. Manufacturer:
 - a. Koppers "Bitumastic Super Black Solution"
 - b. Tnemec "449 Tnemecol"
 - c. Porter "Tarmastic 100"

Bituminous Coating for Aluminum Handrail

1. Manufacturer:
 - a. Glidden – Glid Guard 61776
 - b. Kop-Coat – Bitumastic No. 50
 - c. Porter – Tarmastic 100
 - d. Tnemec – Heavy Duty 46-450

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Toeboard (Kick Plate) for Aluminum Handrail

1. Manufacturer:
 - a. Crane Veyor Corp, Toeboard No. C43880
 - b. Or City approved equal

Mechanical Handrail System

1. Manufacturer:
 - a. Thompson Fabricating Company of Birmingham, Alabama

Valve Vault Floor Drain

1. Manufacturer:
 - a. Josam
 - b. Or City approved equal

Swing Check Valves

1. Manufacturer:
 - a. American-Darling 52SC
 - b. M&H 259-02
 - c. Mueller A2600-6-02

Eccentric Plug Valves

1. Manufacturer:
 - a. DeZurik Series 100 with interior epoxy coating

Generator

1. Manufacturer:
 - a. Onan
 - b. Generac