

SECTION 2410 - SERVICE PIPE, FITTINGS, AND METER SETTING COMPONENTS

PART 1 - GENERAL

1.1 SCOPE OF WORK:

Provide all labor, materials, equipment and services required for furnishing and installing all service piping and appurtenances specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE:

- A. Trench Excavation: Section 2550
- B. Bedding and Backfill: Section 2560
- C. Corporation Stops: Section 2420
- D. Meter Box and Cover: Section 2440
- E. Curb Stops and Boxes: Section 2450
- F. Tapping Saddles: Section 2460
- G. Pressure Reducing Valves: Section 2470

PART 2 - PRODUCTS

2.1 HOUSE SERVICE CONNECTIONS:

- A. Service connection shall consist of a 3/4" or larger corporation stop, service line, and meter pit or curb stop. A 2"x4" board shall be placed in a vertical position extending approximately 3' above the existing grade at the end of each service connection. The 2x4 shall be painted blue. The CONTRACTOR shall adjust meter pits to finished grade. A "pigtail" of service line shall extend five feet (5') beyond the meter pit or curb stop. Services shall not be installed in driveways. Couplings on service lines are only permissible with the approval of the ENGINEER.
- B. Service Lines Crossing Pavement - All pipe may be pushed beneath the pavement, unless solid rock prevents using this method, in which case, the open trench method will be used, if permitted by the Butler County Engineer's Office. The open trench method is generally described in Section 1165 of these specifications. If the open trench method is not permitted by the Engineer's Office, the procedures described in paragraph 2.1 C shall be followed.
- C. Service Lines Crossing a State Highway - Service lines shall be pushed under state highways. If solid rock is encountered, the service may be relocated to permit pushing. If relocation of the push is not possible, a casing pipe must first be installed by boring and jacking. Open trench for service lines crossing state highway pavement will not be permitted. Schedule 40 steel pipe shall be used as casing pipe unless otherwise indicated by the Plans.
- D. "Pulling" of service pipe is not permissible unless approved by the ENGINEER. Contractor shall pull the meter out prior to any disturbance of the existing service lines. This is to prevent debris from the existing service that may have broken loose from entering the service downstream of the meter or the building plumbing.

- E. All fixtures and fittings to be connected as part of BCWS' potable water system shall comply with ANSI-NSF 372 Drinking Water System Components, Lead Content, published in 2010.

2.2 SERVICE PIPE AND FITTINGS

Minimum service piping size shall be 3/4" as shown on drawings.

- A. Service piping three inches (3") and larger shall be AWWA C151 Thickness Class 53 ductile iron pipe meeting the requirements of Sections 2110 & 2130 of these specifications.
- B. Service piping smaller than three inch (3") shall be seamless copper flexible water tubing, ASTM B 88, Type K, Pressure Class 250. Fittings shall be compression-style for CTS tubing, Ford "Pack Joint", A.Y. McDonald "Mac-Pak" fitting or approved equal. Couplings with set screws or grip rings will not be acceptable. Water service tubing shall be bedded six inches (6") below and six inches (6") above with sand or other non-compactable material approved by the ENGINEER.

2.3 METER SETTING COMPONENTS

- A. Meter settings shall be installed as shown on the standard details.
- B. Meter Settings - 5/8"x3/4" or 1" Meters:

The following fittings shall be furnished and installed for each service connection that includes a meter pit for 5/8"x3/4" or 1" meters. All shall be manufactured by Ford Meter Box Co., or approved equal.

- 1. Meter Yoke Bar:

Ford Y502 (5/8"x3/4") or Y504 (1")

- 2. Inlet Angle Yoke Valve:

Ford AV94-323W Key Valve or BA94-323W Ball Valve (5/8"x3/4")
Ford AV94-444W Key Valve or BA94-444W Ball Valve (1")

- 3. Outlet Angle Dual Check Valve with Test Valve:

Ford HHCA94-323TV (5/8"x3/4")
Ford HHCA94-444TV (1")

- 7. Expansion Connection (to be purchased and installed with meter by OWNER):

Ford #EC-23 (5/8"x3/4")
Ford #EC-4 (1")

- C. Meter Setters – 1-1/2" or Larger:

- 1. Coppersetter units shall be furnished and installed for each service connection that includes a meter pit for 1-1/2" or 2" meters. Coppersetter units shall be complete coppersetter units assembled at the factory, manufactured by Ford Meter Box Company, A.Y. McDonald, Mueller Company or approved equal. Coppersetter units shall be furnished as follows, without a by-pass: Ford #V76-27-44-66 with Key Valve Inlet and Ell Outlet or #VB76-27-44-66 with Ball Valve Inlet and Ell Outlet (1-1/2"); Ford #V77-27-44-77 with Key Valve Inlet and Ell Outlet or #VB77-27-44-77 with Ball Valve Inlet and Ell Outlet (2"); McDonald #22-627WN2266-0 (1-1/2") or #22-727WN2277-0 (2"); Mueller #H-1422 (27") (1-1/2" or 2").

2" coppersetters may require an adapter flange plate similar, but not limited, to the A.Y. Macdonald Meter Adapter 10J67DH, depending on the meter type and laying length. See BCWS detail 5170 for additional info.

2. Meter settings for 3" and larger meters shall have standard flanged resilient wedge gate valves, flanged fittings, flange adapters, and flanged spool couplings meeting the requirements of the relevant sections of these specifications.

D. Meter pits, curb stops and/or fire vaults shall be located in accordance with the Butler County standard street section on private property within two feet (2') of the utility easement line, where a platted utility easement exists adjacent to the right-of-way. Where no utility easement exists adjacent to the right-of-way, the meter pit, curb stop and/or fire vault shall be located on private property within two feet (2') of the property/right-of-way line. The maximum distance from the water tap to the meter pit, curb stop and/or fire vault shall be the shortest distance from the water tap location on the water main to the edge of the right of way or easement line plus two feet (2'), unless approved otherwise by BCWS.

PART 3 - BASIS OF PAYMENT

Payment for customer service connections will be made at the Contract unit price each, complete in place, which shall include compensation for tapping the water main and furnishing and installing the corporation stop, service piping necessary to make the connection from the main line to the meter box, and the 5 foot pigtail, meter box and cover, and meter setting fittings. Where these items are required for installation of purity testing stations, no separate payment will be made and all service piping, corporation stops, etc. shall be paid for under the bid item for the purity test stations.

When a separate bid item is included on the proposal forms for services under pavement, additional compensation shall be made at the bid price per service for each service installed under the roadway. This item shall include either pushing the service under the pavement or open-cutting the pavement to install the service according to the above specifications, as required for each service.

END OF SECTION