

## SECTION SP-02550

### TEMPORARY BYPASS FOR WATER SERVICES

#### 1.0 GENERAL

##### A. Description

At the Contractor's option, provide all labor, materials, and equipment to furnish, install, and test temporary bypass system for water services during construction of the new water main.

##### B. SUBMITTALS

1. Catalog data for pipe material
2. Working drawings with description of sizes and locations

##### C. JOB CONDITIONS

Provide temporary bypass water service piping of adequate size to maintain water services and fire protection to abutting properties at all times.

#### 2.0 MATERIALS

- A. The Contractor shall provide temporary bypass and fire hydrant piping, hose, fittings, valves and hydrants to maintain water service and fire protection. Such piping shall be of a material that will withstand the working pressure at the location without leakage. All bypass piping shall not impart objectionable color, taste or odor to the water being supplied and shall meet National Sanitary Foundation (NSF) requirements for potable water. Piping and hose shall be approved for potable water by NSF and bear the approval stamp "NSF-PW".
- B. Backflow prevention shall be provided as required. Backflow preventers shall be in accordance with AWWA C 510 latest edition.
- C. Bypass piping for temporary fire protection shall be a minimum of four inch (4") diameter. Temporary bypass piping for service connections only shall be three inch (3").

#### 3.0 EXECUTION

##### A. Property Owner Notification

1. The Contractor shall notify owners adjacent to the Work in advance of the work.
2. Two notifications shall be provided.
  - a. One for property owners whose water service will be temporarily interrupted while their service connections are being connected and disconnected from temporary bypass piping.
  - b. Two, the Contractor shall through the METCOM Engineer, notify in writing all consumers placed on bypass piping and provide them with an emergency phone number and contact person in case of bypass emergencies. Additionally, the information shall advise the consumer to flush in house plumbing by running water and temporarily removing aerators after they are returned to regular service. The information shall be distributed at least three (3), but not more than seven (7) working days, in advance of placing the consumers on bypass piping.

## B. TEMPORARY BYPASS WATER SERVICE SYSTEM

1. The general Work shall consist of, but not be limited to the following: furnishing and installing temporary bypass piping, temporary fire hydrant connections and disconnections, temporary house service connections, temporary connection to existing service main, bypass valves and temporary pressure reducing valves.
2. The Contractor shall maintain the temporary bypass water service system in safe and operative condition at all times and shall be responsible for the protection of property and the prevention of injury to persons and structures. Safeguards shall be provided by the Contractor to the satisfaction of METCOM, but such provisions shall not relieve the Contractor of full responsibility for the adequacy of protection.
3. The Contractor shall have a maintenance crew on standby ready to respond to emergencies. The crew shall be available on a twenty-four (24) hour basis and the Contractor must furnish the Engineer with the address and telephone number of the contact person for this purpose. A telephone answering machine is not acceptable.
4. It is the total responsibility of the Contractor to remove and store all consumers' water meters in a safe and secure place. METCOM will not assume any liability for damage or theft to water meters that have been removed by the Contractor and left at the job site. All meters must be capped at both ends and tagged for proper identification. Removal and handling of all meters is to be done under METCOM's supervision.
5. Before the existing water main to be replaced is shut down, provide temporary bypass piping system of adequate size to provide water service and fire protection to affected properties as required herein and as directed by the METCOM Engineer. Notify the METCOM Engineer:
  - a. At least 48 hours in advance for installation of temporary connections.
  - b. When additional bypass service are made.
  - c. When problems develop with any meters or services.
6. Water for the temporary bypass service shall be taken from the nearest available fire hydrant. Where a fire hydrant cannot be used, excavate and tap existing water main at METCOM's direction. Backflow preventers are to be provided as required.
7. The Contractor shall furnish, install, maintain and remove temporary fire hydrants with individual control valves. Unless otherwise indicated on the plans, temporary fire hydrants shall be placed adjacent to existing hydrants.
8. Temporary service connections shall be provided to each property affected by the water main shutdown. Connections are to be made by removing the outside meter and making the temporary connection to the existing house connection, or as directed by METCOM. Notched meter covers are to be used with the temporary services.
9. Placement and protection of temporary bypass piping system.
  - a. Temporary bypass piping is to be placed so as not to interfere with vehicular and pedestrian traffic and the general public. The temporary piping should not be placed during freezing weather. If already installed, protect from freezing. In general, bypass piping should not be installed and charged prior to March 15 and be removed by November 15.

- b. A cap and sampling connection is to be provided at the downstream end of each separate bypass piping segment. Do not loop downstream end of segment back to or near inlet of segment.
  - c. Sections of temporary bypass lines that cross driveways or sidewalks are to be covered with a bituminous cold patch. Protection of concrete driveways or sidewalks shall be provided to prevent discoloration from the bituminous material.
  - d. Where connection of the domestic service to the bypass piping must cross a roadway, the service lead must be sized at least equal to the existing service and must be secured in place to allow passage of vehicular traffic. In no case will rubber hoses be allowed for this type of installation. All lines, including bypass lines, at road crossing shall be below the existing road surface.
  - e. House to house connections for service connections are prohibited.
  - f. The layout of the temporary bypass piping must be approved by METCOM prior to allowing the Contractor charge the piping for testing purposes. METCOM maintains the rights to have the Contractor relocate any unacceptable layout at the Contractor's expense.
10. The pipe, hoses and other materials which are to be used shall be clean, sanitary, watertight, and adequate to withstand the existing pressures. All bypass piping, hoses and other materials shall be disinfected prior to being placed into service in accordance with the Standard Specifications Section 02551, Water Main Installation and Chlorination.
11. Upon completion and placing into service of the new water main, the Contractor shall remove all aspects of the temporary bypass water service system and reinstall all consumers' water meters. Installation of all meters is to be done under METCOM's supervision. The Contractor shall leave the area in a neat and orderly condition equal to or better than its original condition.

#### 4.0 METHOD OF MEASUREMENT

Measurement for furnishing and installing a temporary bypass piping system will not be made as it will be incidental to the new water main construction.

#### 5.0 BASIS OF PAYMENT

Payment for furnishing and installing a temporary bypass piping system will not be made as it will be incidental to the new water main construction.

**\*\* END OF SECTION SP-02550 \*\***