

**AMERICAN IRON & STEEL WAIVER REQUEST REVIEW APPLICATION**

Cape May County MUA  
(Project Owner)

Wastewater – Various Regions  
Pump Station Restoration  
Phase 1 – Flow By-Passing  
Contract No. - WW-19-15  
(Name of Project)

NJDEP Project No. S340661-22  
(NJSRF Clean Water Funded Project Number)

**GENERAL**

**Description of the Construction Material:** Stainless steel line stop sleeves with the following various size configurations (20x14, 12x12, 14x10, 18x14, & 30x24). Stainless steel wet tap sleeve (24x20).

**Quantity and Unit of Measure:** 14 Units

**Price:** Average price for 14 units (includes subcontract labor/equipment to install): \$ 20,094.29 / unit

**Time of delivery or availability:** Not available

**Location of the construction project:** Various County MUA pump stations, Cape May County, NJ

**Name and address of proposed supplier and/or Manufacturer:** JCM Industries, Inc.

P.O. Box 1220 75569-1220 Nash, TX. Phone: (903) 832-2581. Fax: (903) 838-6260

**Detailed justification for the use of foreign construction materials:** AIS compliant line stop and wet tap sleeves in the appropriate sizes are not available.

**AVAILABILITY WAIVER REQUEST**

**Domestic Supplier Information:** JCM Industries, Inc.

**Project Schedule:** December 1, 2016 (NTP) – October 9, 2016 (Completion)  
(Provide NTP date and completion date along with project schedule)

**List Supporting Documentation:** Email correspondence detailing JCM Industries attempt to locate appropriate AIS compliant stainless steel material for fabrication.

**Efforts to Locate Available Domestic Source:** See attached email correspondence.

NJDEP Project Engineer: Robert M. Hopkins, P.E.

NJDEP Section Chief: William P. Machotka, P.E.

\*NOTE: The referenced attachments with project diagrams, schedules, and supplier correspondence are in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing SRF\_AIS@epa.gov

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Contract No. - WW-19-15  
(Name of Project)

NJDEP Project No. S340661-22  
(NJSRF Clean Water Funded Project Number)

## GENERAL

**Description of the Construction Material:** 14x10 stainless steel line stop sleeves

**Quantity and Unit of Measure:** 2 Units

**Price:** \$ 12,655 per unit (includes subcontract labor/equipment to install)

**Time of delivery or availability:** Not available

**Location of the construction project:** 39th Street Pump Station, Avalon, Cape May County, NJ

**Name and address of proposed supplier and/or Manufacturer:** JCM Industries, Inc.

P.O. Box 1220 75569-1220 Nash, TX. Phone: (903) 832-2581. Fax: (903) 838-6260

**Detailed justification for the use of foreign construction materials:** 14x10 AIS compliant line stop sleeves are not available.

## AVAILABILITY WAIVER REQUEST

**Domestic Supplier Information:** JCM Industries, Inc.

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## **SECTION 02630 WET TAPS, LINE STOPS, AND TEMPORARY BYPASSES**

### **PART 1 – GENERAL**

#### **1.01 DESCRIPTION**

**A. Work included:**

1. The Contractor shall provide all labor, materials and equipment necessary to furnish, install and test line stops, line stop saddles, wet taps, wet tap saddles, and other appurtenances as shown on the Contract Drawings and specified herein.

**B. Related Work:**

1. Other sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. Section 02220: Excavation, Backfilling and Compaction

#### **1.02 SUBMITTALS**

**A. Comply with provisions of Section 01300, Submittals**

**B. Manufacturer's product data:**

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data require to demonstrate compliance with the specified requirements.
3. All fittings shall be inspected and tested at a place of manufacture as required by the AWWA standards referenced in this Specification. Provide ENGINEER with two (2) copies of certifications from each manufacturer stating the product was inspected as required, and that the test results comply with the AWWA standards.

**C. Shop drawings showing precise dimensions of the work of this section, and all other data needed to ensure proper and adequate provisions in construction to accommodate the work of this section.**

**D. Calculations for all thrust forces and thrust blocks associated with the line stop bypass and all hydraulic headloss calculations for each temporary bypass system.**

Calculations shall be signed and sealed by a New Jersey licensed professional engineer.

E. Manufacturer's recommended installation procedures

1.03 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the ENGINEER.

B. Qualifications of workmen:

1. Provide at least one (1) person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the ENGINEER will make no allowance for lack of skill on the part of the workmen.

1.04 DELIVERY, STORAGE AND HANDLING

A. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the ENGINEER and at no additional cost to the OWNER.

C. Delivery and storage:

1. During loading, transporting, and unloading, exercise care to prevent damage to materials.
2. Do not drop pipe or fittings

3. Assure that materials are kept clean.

## **PART 2 – PRODUCTS**

### **2.01 ACCEPTABLE MANUFACTURES**

A. Process and equipment shall be furnished by the following Acceptable manufactures:

1. Pro Tapping
2. Team Industrial Technologies
3. Furmanite
4. Approved Equivalent

### **2.02 WET TAPPING AND LINE STOPPING INFORMATION**

- A. Prior to the placement of material orders for this portion of the project, the Contractor shall be required to obtain certain jobsite data to facilitate the proper manufacture of components needed to complete the work. All relevant data shall be submitted to the Engineer a minimum of 60 days prior to the required mobilization of the specialty fittings, equipment, and technicians to the work site.
- B. Prior to fabrication of materials required for the line stop process, the Contractor shall determine, in the field, the actual site conditions of the pipe at the location where the work is to take place.
- C. The Contractor shall excavate, expose, and clean the outside of the existing force main, to permit the Contractor to accurately circumferentially tape measure and caliper the pipe for the purpose of determining the outside diameter and ovality of the pipe to which the line stop fitting must be installed. Pipes shall be circumferentially tape measured and calipered at a minimum of four (4) points.
- D. Should the existing pipe be encased in concrete, the encasement shall be removed down to the factory supplied pipe outside diameter or the location for the work changed to an area where the factory supplied pipe is accessible.
- E. The Contractor shall be required to obtain existing conditions for proper design of the concrete support and thrust blocks for the line stops.
- F. The Contractor shall be responsible for all design calculations and placement of support required for the line stop installations and operations. This shall include all pipe support based upon the size and weight of the equipment to be utilized. Calculations for concrete support and thrust restraint shall be based upon on-site soil conditions and the applicable hydrostatic test pressures. The Test Pressures for each force main at each

pump station are specified in "Table 01050-1 Design and Testing Conditions" of Paragraph 1.03 of Technical Specification Section 01050, Field Engineering.

### 2.03 Tapping Sleeves and Line Stop Sleeves:

- A. The tapping Contractor shall provide pressure retention design calculations for the type of fitting specified and based upon the operating conditions as provided by the Engineer.
- B. Tapping sleeves and line stop sleeves shall be designed for the type and size of pipe being tapped and shall provide a watertight seal on the pipe by means of mechanical joints, caulked joints or an O-ring. Sleeves shall incorporate a test plug so that the integrity of the sleeve seals can be verified prior to the actual tapping of the pipe. Sleeves shall be rated to 150-psi minimum.
- C. The tapping sleeve body, neck, and flange shall be made of heavy 18-8 Type 304 stainless steel or ductile iron conforming to ASTM A536 or gray iron conforming to ASTM A48.
- D. The line stop sleeve body, neck, flange and blind flange shall be made of heavy 18-8 Type 304 stainless steel. The flange shall conform to AWWA C207 Class D, and recessed to accommodate tapping valves. The completion plug shall be made of heavy 18-8 Type 304 stainless steel or ductile iron conforming to ASTM A536. Completion Plug locking mechanisms shall consist of ring segments or steel leaves that lock from or into the flange bore. The use of point loaded set screw type locks shall not be permitted. Minimum blind flange thickness shall comply with AWWA C-207.
- E. All welded stainless steel surface areas shall be fully passivated for maximum corrosion protection.
- F. The bolts shall be 18-8 Type 304 stainless steel with NC threads and epoxy coated. The nuts shall be 304 stainless steel, fluoropolymer coated to prevent galling. One (1) Type 304 stainless steel washer is to be provided with each bolt.
- G. Blind flange gaskets shall be of SBR or NBR rubber and shall be designed to mate to the inner bore and inner bolt circle of the line plugging flange. All gaskets shall be at least 0.125-inches minimum thickness.

### 2.04 Tapping Valves

- A. Tapping valves shall have sufficient internal diameter to accept the tapping machine cutting tool and shall have ends to match the sleeve on one side and the machine/lateral pipe on the other. Tapping valves shall, in all other respects, meet the requirements for resilient wedge gate valves of Section 02641 Valves and Piping Appurtenances.

## 2.05 Temporary Bypasses

- A. To insure that the Work shall be accomplished without interruption of service or flow, the Contractor shall install one or more line stops on the force mains where shown on the plans, by Contractor personnel skilled and experienced in the procedures specific to line stops of this size. Temporary bypass piping shall be installed from line stop to line stop, or from line stop to the connection point on the Owner's pump station piping, as shown on the plans. The existing pumps in the Owner's pump stations shall be used for pumping during the temporary bypass operation.
- B. With the exception of the Owner's operation of the existing pump station pumps. The Contractor shall be responsible for the design, operation and maintenance of the temporary bypass operation.
- C. Existing pump station and force main valves shall only be operated by the Owner's Operations Staff or by the Contractor when directed and under the immediate supervision of the Owner's Operations Staff.
- D. Temporary hydraulic restrictions due to the line stop and bypass system operations will be allowed. However, the total loss in pressure allowed for a line stop (or combination of line stops) and associated temporary bypass systems (bends, temporary piping, etc.) at one time is a maximum of 15 ft. (6.5 psi) at the applicable design flows. The Design Flows for each force main at each pump station are specified in "Table 01050-1 Design and Testing Conditions" of Paragraph 1.03 of Technical Specification Section 01050, Field Engineering.
- E. Temporary Bypass Piping: Temporary bypasses piping shall be constructed on rigid pipe with positive, restrained joints. Aluminum "irrigation" type piping or glued PVC pipe will not be allowed. Discharge hose will only be allowed in short sections and as accepted by the Engineer. Temporary bypass discharge piping shall be designed, rated and pressure tested for the applicable Test Pressures. The applicable Test Pressures for each force main at each pump station are specified in "Table 01050-1 Design and Testing Conditions" of Paragraph 1.03 of Technical Specification Section 01050, Field Engineering.

The bypass line must be pressure tested at the pressures given above with water before it is placed in operation with sewage. Contractor is responsible for design and installation of temporary thrust bracing as required for the temporary bypass system piping.

Allowable piping materials will be Godwin "QD" Steel Pipe (Godwin Pumps of America, Inc.); fused, high-density polyethylene pipe meeting the requirements of Section 02660 Polyethylene Pipe; ductile iron pipe meeting the requirements of Section 02615 Ductile Iron Pipe and Fittings; or approved equivalent.

- F. The temporary bypass system will be conveying wastewater and must be 100% leak free. The temporary bypass lines do not have to be buried, however their integrity and

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WET TAPS, LINE STOPS,  
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protection is the responsibility of the Contractor. The Contractor shall be solely responsible for the operation during the bypass period. The Contractor shall not back-up or surcharge the influent gravity lines at any time. Any consequences resulting from the failure of the bypass pumping operation shall be the responsibility of the Contractor. The Contractor shall provide the Owner with a list of phone numbers and shall ensure that an authorized representative of the Contractor shall be available within one hour's notice, 24 hours a day during the bypass operation. The bypass pumping system shall be designed as a leak-free operation and if a leak should develop, the Contractor shall be responsible to immediately notify the Resident Engineer and the Owner. The Resident Engineer or the Owner will notify the Department of Environmental Protection. The Contractor shall be responsible for any fines, clean-up costs and other liability due to leaks, sewage back-ups or other problems or failures due to the bypass pumping operation.

### **PART 3 – EXECUTION**

#### **3.01 EXAMINATION**

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the ENGINEER.
- C. Do not proceed until unsatisfactory conditions are corrected.

#### **3.02 INSTALLATION**

- A. Line stop and wet tap fittings shall be installed in accordance with the manufacturer's recommendation.
- B. Proper pipe support and thrust restraint shall be in place prior to the deployment of line stop and wet tap saddle installations. The pipe shall be thoroughly cleaned down to the factory supplied outside diameter. The pipe shall be carefully inspected, especially at the point where the fitting must seal to the pipe surface. Any surface pitting shall be filled in with an engineer approved epoxy or the site moved to an acceptable location.
- C. The line stop flange shall be plumbed using a spirit level.
- D. Upon installation of the saddle a blind flange shall be attached to the fitting flange outlet and the fitting shall be pressurized to 150 psi. No leakage shall be permitted. After successful pressure test, the blind flange shall be removed.
- E. All coupons shall be turned over to the CMCMUA.



- F. Line stop technician shall be required to furnish, to the Owner/Engineer, written calculations for the line stop, pipe plugging and wet tap operations a minimum of 28-days prior to the procedures for review and approval. That written calculation must include pilot drill travel, location of the pilot drill keeper wires in relation to the severed coupon and line stop shell cutter travel. Line tap machine shall be provided with a positive travel measurement device and all calculations shall be verified by the site engineer prior to the start of the tap. Plugging head sealing element sizing data and plugging head travel calculations shall be provided in a written format. Completion plug setting calculations shall also be required.
- G. Line stop technician actually operating the machinery shall have, as a minimum, a (5) year continuous employment history with the line stop contracting company. Line Stop Company shall be required to furnish employment history for this technician along with a safety and other operational training summary. In no case shall a technician without proper supporting documentation and qualifications be permitted to work on the jobsite.

**(END OF SECTION)**