ITEM 11662.2510 M – INSTALL CON EDISON GAS MAIN AND APPURTENANT WORK FOR BRIDGE CROSSING AND APPROACHES

1. DESCRIPTION

This work shall consist of removing the existing gas main and installing the new gas main and all related appurtenances on the bridge and in the approaches as shown in the contract documents and in accordance with Con Edison Specifications.

2. MATERIALS

A. The Contractor shall furnish the following as shown on the contract documents.

- Gas Mains: Con Edison specification G-8005
- Pipe supports.
- Steel traffic plates
- Barricades
- Barriers for traffic and pedestrian protection
- 10mm (3/8”) sand: Con Edison spec EO-8085 for backfill material.
- Coating: Con Edison specification G-8209

B. Materials furnished by Con Edison at the site will consist of the following.

1. Steel pipes for the gas mains and pipe sleeves
2. Ball valves
3. Magnesium anodes, and lead wires
4. Valve boxes and covers
5. Insulating couplings
6. Steel weld end pipe fittings (elbows, tees and caps)
7. Link seals and duct seals
8. Pipe support skids
9. Hot tapping tees
10. Warning tapes

3. CONSTRUCTION DETAILS

The following Con Edison specifications are included:

- EO-1181: General specifications for backfilling of trench and small openings.
- EO-8085: General backfill and bedding material for excavations.
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G-1065 Qualification of Welders for Welding Procedures.
G-8005 General specification for the installation of gas distribution mains.
G-8201 Electrical Spark Inspection of Coating on Steel Pipe
G-8204 Pressure testing gas mains and services.

A. General

The Contractor shall notify Con Edison of the gas main installation schedule at least thirty (30) days before the materials are required at the site. Should Con Edison fail to deliver the necessary material according to the required schedule, the State shall not be held responsible for any delays attributable, thereto, nor for the failure to the delivery of such material.

The Contractor shall inspect all material immediately upon delivery and advise Con Edison promptly of all damaged or missing material. All material damaged or lost after the Contractor’s inspection shall be the responsibility of the Contractor and shall be replaced in kind by the Contractor at no expense to the State or Con Edison. Replacement material shall be equal in all respect to the Con Edison supplied material and shall be approved by the Engineer and Con Edison in writing.

The Contractor shall be responsible for the protections required to properly safeguard the integrity of the existing live and active gas mains. The Contractor shall advise Con Edison in advance of all work at these locations and shall exercise all the necessary safety precautions in the performance of the Contractor’s work to protect the gas and other facilities, Contractor’s equipment and the safety of the Contractor’s personnel and the public.

B. Specific Details

Con Edison shall isolate, purge and inert the existing gas mains to be removed. The Contractor shall begin the removal of existing gas mains only after the completion of all Con Edison preparation work and on approval by the Con Edison Company.

All gas mains shall be installed in accordance with the details, dimensions and locations as shown on the contract documents and in accordance with the Con Edison Specification G-8005. Piping shall be installed 914mm (three feet) minimum below grade from pavement. Protective and load re-distribution bridging steel plates (approved by the Engineer and Con Edison) shall be installed where above clearances cannot be attained.
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The Contractor shall make the necessary arrangement for Con Edison to examine the new main and for the Contractor to install the contractor’s pre-tested tie-in pieces after the conclusion of the pressure test. Con Edison shall implement a Contingency Procedure prior to any welding on the transmission main. The Contractor shall advise Con Edison five (5) days (min.) in advance prior to welding on the transmission main.

The Contractor shall inspect and internally clean each length of pipe for foreign matter prior to and after installation by pulling a wired cleaning pig through the pipe. Open ends shall be capped each time pipe work is stopped to prevent foreign matter, animals or birds from getting into the pipe. The Contractor shall provide gas mains with 305mm (12 inches), 152 mm (6 inches) minimum clearance from any adjacent subsurface structures.

The Contractor shall excavate and backfill all trenches and other construction openings required for the installation of the gas piping and appurtenances, its cutouts and tie-ins.

The pipe locations and sizes of the trench shall be in accordance with Con Edison Dwg. 309495. Backfilling shall be as per Con Edison Standard Specification EO-1181. Backfill material shall be type 10mm (3/8”) sand.

The transmission pressure and low pressure gas mains shall be leak tested to 3633 kPa (525 psig) (min.) and 650 kpa (90 psig) (min.) for 12 hours and 2 hours (min.) respectively in accordance with Con Edison Specification G-8204. The Contractor may, with the approval of Con Edison, pre-test a section(s) prior to the final test to insure pipe integrity prior to backfilling. The Contractor shall correct any defect(s) found and shall perform the necessary final leak test.

C. Removal of Existing Gas Mains (With Lead Joints)

The Contractor shall remove existing gas mains as shown on the drawing. The C.I. gas Main has lead joints. The Contractor is strictly required not to cut the gas main near the joint. Commercial grade Plastic shall be wrapped around the lead joints 460 mm minimum each side of the joint. The plastic wrap shall be well taped to the gas main to avoid any possible friable lead Material. The Contractor’s removal operation shall be under the direction of Con Edison’s Authorized representative.

The Contractor shall strictly adhere to all environmental requirements and work practices. The Contractor is required to follow Con Edison general Environmental Instruction 1.04. The existing gas mains with lead joints shall be removed in the largest
possible sections to suit the dumpster size. The Contractor has to ensure that any cut of the gas main with lead joints shall be at least one meter away on each side from the joint.

Con Edison will provide the dumpster as required for the lead joint pieces only for the pipe at the site. The Contractor shall place the lead joint pieces of the pipes into the dumpster which will be removed by Con Edison. All other parts of the gas main (non lead) shall be removed and disposed by the Contractor as normal construction debris.

Notify Con Edison at least 30 days before the dumpster and representative will be required at the site. Provide the notification to Con Edison representative. No work shall be performed unless Con Edison’s representative is present.

D. Removal of Existing Steel Gas Main (Coated)

Before removal of existing gas main the coating of the steel gas main shall be tested for the asbestos containing material (ACM). If it is found with asbestos containing material then the steel gas main shall be removed and paid for under item 210.5131, Removal and Disposal of Underground Asbestos Containing Pipe (BV12).

All gas main pipe welding, pipe welder’s qualifications and certifications and radiographic inspection shall be in accordance with Con Edison Specifications G-1064, G-1065, G1066 and G1070. No mitered joint is allowed on the bridge gas piping except that where required a 3 degree maximum miter may be allowed for pipe alignment purposes. Main offsets and bends shall be made using long radius elbows field cut to the required bends.

All transmission pressure gas pipe welding shall be 100% visually inspected and 100% radiographically examined by Con Edison.

All low pressure bridge gas piping welds extending to the insulating joints and 25% of buried low pressure gas piping welds shall be 100% radiographically examined by Con Edison prior to the leak testing. All tie in welds shall be 100% radiographically examined.

All pipe support welds and weld to structural steel shall be in accordance with the current requirements and recommended practices of the American Steel Construction Manual and the NYSDOT.
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All gas mains including the exposed gas main in the bridge shall be Pritec coated. Contractor shall field coat all bare pipes with the tape coating and damaged coating as per Con Edison specification G-8209. All coated pipe shall be jeeped by the Contractor as per Con Edison specification G-8201. Con Edison shall test all pipes for proper cathodic protection and isolation.

METHOD OF MEASUREMENT

The work under Install Con Edison Gas main and appurtenant work for Bridge Crossing and Approaches will be measured for payment on the lump sum basis.

BASIS OF PAYMENT

The lump sum bid for Install Con Edison Gas main and appurtenant work for Bridge Crossing and Approaches shall include the cost of all labor, materials, transportation, and equipment necessary to satisfactorily perform the work. Removal of asbestos material coating, if encountered, will be paid for under 210.5131.