

## **ITEM 10599.2018 M - REMOVE, RELOCATE AND REINSTALL TRAFFIC SIGNALS**

### **DESCRIPTION**

Under this item, the Contractor shall disconnect, remove from original locations, install and maintain on a temporary pole, remove from temporary locations all traffic signals. He shall reinstall on new traffic signal poles the existing northeast and southwest traffic signals and store the removed northwest and southeast traffic signals as specified herein. The Contractor shall also furnish and install two new northwest traffic signal heads and two new southeast traffic signal heads as shown on the contract plans. Existing northwest and southeast gongs shall also be removed, relocated and reinstalled on the same poles as the relocated traffic signals.

The following related work is included and paid under separate item numbers:

1. The removal of existing conduits and junction boxes, Item No.10670.9412 M - **Remove Wiring, Conduits and Junction Boxes.**
2. Temporary wiring for the traffic signals, Item No.10670.9521 M - **Install and Remove Temporary Wiring.**
3. The erection of the new traffic signal poles, Item No. 680.6704 M - **Traffic signal Pole- Post Top Mount** and Item No.680.620206 M - **Traffic Signal Pole-Mast Arm.**
4. The installation of new conduits, Item Nos. 670.2303 M and 670.2305 M - **P.V.C. Coated Rigid Galvanized Steel Conduit** of the Standard Specifications, Section 723-23.
5. The installation of new wiring, Item No. 670.7006 M - **Single Conductor Cable** of the Standard Specifications, Section 723-70.
6. The installation of new junction boxes, Item No.670.40 M - **Cast Iron Junction Boxes** of the Standard Specifications, Section 723-40.

### **MATERIALS**

Unless otherwise indicated on the plans, the relocated traffic signal assembly and gongs shall include the traffic signal heads, existing gongs, new temporary pole, mounting hardware and temporary wiring. All mounting hardware shall be stainless steel and in conformance with the requirements under subsection 715-16 of the NYSDOT Standard Specifications. They shall be securely tightened to prevent loosening by the wind. The traffic signals temporary wiring shall be in accordance with the specifications under item

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number 10670.9521 M.

The new traffic signal heads shall be in conformance with section 724-04 of the Standard Specifications, and paid for under Item No. 680.8101 M, **Traffic Signal Section-300 mm.**

The new traffic signal poles shall be in compliance with section 724-03 of the Standard Specifications, and paid for under Item No. 680.6704 M, **Traffic Signal Pole-Post top Mount** and Item No.680.620206 M, **Traffic Signal Pole-Mast Arm.**

### **CONSTRUCTION DETAILS**

#### **A. Submittals**

Catalog cuts shall be submitted for all components that are standard manufactured catalog items. Each catalog cut shall clearly identify the component and its use and include all electrical ratings, dimensions, industry standards and codes complied with, and any other applicable information or data which will determine its compliance with the plans.

#### **B. Shop Drawings**

The Contractor shall prepare and submit complete shop drawings executed in accordance with the NYSDOT Steel Construction Manual. Shop drawings shall include the following:

1. Assembly and erection drawings of the traffic signal assemblies and gongs mounted on the temporary and permanent poles.
2. Dimensions and locations of temporary and permanent poles.
3. Temporary and permanent wiring details of the traffic signals and gong electrical equipment. Wires shall be suitably numbered for proper identification.
4. Installation methods showing mounting details, fasteners, and required anchor bolts at temporary and permanent locations.

#### **C. Removal**

The Contractor shall carefully remove the existing traffic signals and gongs at north and south approaches of the bridge, including mounting hardware, etc., from their existing

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locations and install them on temporary poles mounted on the concrete barriers.

### **D. Temporary Location**

Before the beginning of stage IA construction, the Contractor shall furnish and install temporary poles on the west concrete barrier. Then, the existing northwest and southwest traffic signals and gong shall be mounted on the temporary poles as shown on the contract plans. (Also see dwg. No. 1A on page 8 under item 10599.2011 M for details). The contractor shall furnish temporary cable to feed the traffic signals and gong and keep them operational until completion of stage IA construction. The northeast and southeast traffic signals shall remain in place until the beginning of stage IIIB construction.

At stage IB construction, all traffic signals shall be kept at the same locations as in stage IA and properly functional (see dwg. No. 1B on page 9 under item 10599.2011 M for details).

At the beginning of stage II construction, the northwest and southwest traffic shall be disconnected, removed from their temporary locations and permanently reinstalled and wired where and/or as shown on the contract plans.

At stage IIIA construction, all traffic signals and gongs shall remain at the same location as in stage II (see dwg. No.2 on page 11 under item 10599.2011 M for details).

At stage IIIB construction, the Contractor shall remove the temporary poles from the west concrete barrier and install them across on the east concrete barrier. Then, he shall mount the existing northeast and southeast traffic signals and corresponding gong on the poles where shown on the contract plans. (Also see dwg. No. 3B on page 12 under item 10599.2011 M for details). Temporary cable shall be furnished and installed to feed and keep the traffic signals and gong operational until completion of stage IIIB construction.

The dimensions of the temporary pole to be erected shall be determined in the field by the Contractor. When field conditions require a change in pole position from that shown in the contract plans, the pole length requirements may vary. It shall be the Contractor's responsibility to verify pole length before ordering poles. The mounting height of the traffic warning light shall not be less than 4.9 m.

### **E. Reinstallation**

Before the beginning of stage II construction, the existing northwest traffic signals shall be disconnected, removed and disposed of as directed by the Engineer. The existing southwest traffic signals shall be permanently relocated on a newly erected post top

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mount pole and rewired. The corresponding temporary wiring shall also be removed. The contractor shall furnish, install and wire new northwest traffic signals and existing gong on a newly erected mast-arm pole as shown on the contract plans (see dwg. No. 2 on page 10 under item 10599.2011 M for details).

After satisfactory completion of stage IIIB construction, the Contractor shall, as shown on the contract plans, permanently install on a newly erected post top mount pole and rewire the existing northeast traffic signals. New southeast traffic signals shall be furnished, installed on a newly erected mast-arm pole and wired as shown on the contract plans. The corresponding temporary wiring shall be removed and disposed of as well as the existing southeast traffic signals. The existing southeast gong shall be installed on the new pole and rewired as well.

The new traffic signal assemblies shall be equipped with a terminal blocks providing separate screws for signals and incoming wires. The new wires shall be extended from the junction boxes to underneath the poles, and from there to the traffic light fixtures via the terminal blocks. Existing traffic signal assemblies shall be wired in a similar manner.

### **F. Precaution**

Care shall be exercised in removing and reinstalling the traffic signals and gongs so that they will remain in their original form and existing condition whenever possible. The Contractor will be required to replace at his own expense any traffic signal head which is determined by the Engineer to have been damaged or destroyed by as a result of the Contractor's operations.

## **METHOD OF MEASUREMENT**

Payment will be made at the lump sum price bid for this work.

## **BASIS OF PAYMENT**

The price bid shall include the cost of all labor, materials and equipment necessary to complete the work.

Partial payments will be made under this item in proportion to the amount of work done as determined by the Engineer.