

ITEM 599.1105 10 M TEMPORARY RESTRAINTS – SB BRIDGE
ITEM 599.1106 10 M TEMPORARY RESTRAINTS – NB BRIDGE

DESCRIPTION

This work shall consist of designing, furnishing and installing, removing and patching all components required for Temporary Restraints of the Southbound and Northbound bridges as shown in the Plans, or as required to complete the work, as directed by the Engineer.

MATERIALS

A. Specifications. Design and construct temporary members in accordance with the provisions of the *AASHTO Guide Specification for Bridge Temporary Works, Copyright 1995*, unless otherwise noted. Temporary Restraints shall be designed for all AASHTO wind and ice load conditions for the position of the Bascule Leaf to be maintained. Tie-backs shall be designed with redundancy.

B. General. The materials for fabrication, installation, use and removal of the Temporary Restraints be as determined in the calculations, as detailed in the Shop Drawings and in accordance with the requirements specified herein and as approved by the Engineer.

C. Material Certifications. The Contractor shall submit material certifications for all materials specified to require material testing within the Plans and Specifications or within a referenced material specification (e.g. ASTM, ANSI, or others).

D. Restraint Responsibility. Develop and implement procedures necessary to obtain satisfactory reconditioning of the Drive Machinery and installation or reconditioning of the Spanlocks. Develop and implement all necessary temporary supports, tie-backs, falsework, shoring, jacking, etc. and procedures to safely restrain the Bascule Leaves while any part of the machinery, primarily the brakes, is not in place. Review and approval, by the Engineer, of temporary supports, tie-backs, falsework, shoring, and/or jacking systems is for compliance with the minimum requirements of the Contract Documents and does not relieve the Contractor of responsibility for the satisfactory and safe rehabilitation of the Bascule Span drive machinery.

E. Submittals. Prepare and submit a detailed “Bascule Leaf Drive Machinery Rehabilitation Procedure.” The Procedure shall specifically address the proposed methods for establishing and maintaining control of the Bascule Leaf during Drive Machinery rehabilitation. The Procedure shall describe and/or detail temporary supports, tie-backs, shoring, falsework and/or jacks for support of the Bascule Leaf during Drive Machinery rehabilitation. The Procedure shall be complete with sketches, calculations, pictures, etc. to supplement the written text. The Procedure shall clearly define any holes to be drilled in structural steel and shall be approved prior to any drilling.

CONSTRUCTION DETAILS

A. General. The Contractor shall install and maintain all Temporary Restraints as required to safely maintain the position of the Bascule Leaf through all required stages of construction. Restraints shall be installed in accordance with the approved Procedure and Shop Drawings. Calculations and plans shall be prepared by and stamped by an engineer licensed in the state of New York.

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B. *Basis of Acceptance.* All fabrication of Structural Steel shall follow all of the requirements of the New York State Steel Construction Manual (SCM). In addition, all shop drawings submitted shall follow all guidelines given in the SCM. No installation or rehabilitation work may take place until the shop drawings and procedures are approved by the Engineer.

C. *Demolition.* All materials installed for Temporary Restraints shall be removed and disposed of. Any holes formed in the concrete of the Bascule Pier shall be patched with epoxy material. Anchors shall be hammered into overdrilled holes and patched over with epoxy. Any holes in structural steel to be abandoned shall be filled with a high-strength bolt and painted as structural steel.

METHOD OF MEASUREMENT

This work will be measured for payment on a lump sum basis per bridge for the Temporary Restraints per bridge satisfactorily furnished, installed and removed, including all associated patching and demolition.

BASIS OF PAYMENT

The lump sum price bid shall include the cost of designing and furnishing all labor, materials, and equipment necessary to satisfactorily complete the work. Progress payments will be made as 50% of the quantity for the functional restraint system designed and installed and 50% after the restraint system is removed and all patch work or replacement of dislocated materials is complete.