

## **ITEM 567.94 18 ASPHALTIC PLUG JOINTS FOR BRIDGES**

### **DESCRIPTION**

Furnish and install Asphaltic Plug Joints for Bridges (APJ) into prepared joint recesses in accordance with the contract documents.

### **MATERIALS**

Use an asphaltic plug bridge joint system appearing on the Department's Approved List of Materials and Equipment. All Materials shall meet the requirements of section 705-18 of the Standard Specifications.

The joint system will be comprised of the following components: a mixture of thermoplastic polymeric- modified asphalt, select aggregates, steel plate, locating pins (optional) and a backer rod. The joint systems shall be capable of providing up to  $\pm 25$  mm of movement while maintaining a continuous load bearing surface.

The aggregate shall be double-washed, dried, and delivered to site in pre-weighed, labeled packages. The aggregates type and size will be identified in the Materials Details of the manufacturer.

The backer rod, used to control the depth of the binder material in the expansion gap shall be a closed cell foam expansion joint filler, compatible with the polymer modified bituminous binder and the elevated application temperature of the binder. The size of the backer rod shall be in accordance with the manufacturer's recommendation for the existing expansion gap width and the anticipated expansion and contraction at each joint.

The bridging plates shall be composed of A36/A36M mild steel and will have the following minimum dimensions: 1 meter long in the direction of the joint, 200 mm in width, and 6 mm thick. When locating pins are required by the Materials Details, the bridging plate shall have pre-drilled holes at 300 mm on center.

A NYS DOT approved sealing material shall be used for sealing the expansion gap at curbs, parapets, and sidewalks.

### **CONSTRUCTION PROCEDURES**

Install the asphaltic plug bridge joint system in accordance with the approved Materials Details for that system.

The joint opening shall be prepared for the installation of the asphaltic plug bridge joint system to the satisfaction of the Engineer. All surfaces to come in contact with the joint system shall be abrasive blast cleaned.

Arrange for the asphaltic plug bridge joint system manufacturer to have a competent technical representative at the job site during all phases of preparation and installation of the system. The representative shall advise both the Engineer and the Contractor regarding proper installation procedures of their system. The representative may be released at the EIC's discretion after the initial installation.

This system should not be installed if the ambient temperature is expected to be below 5° C at any time during the installation. All receiving surfaces must be completely dry, air blasted and free from any foreign objects prior to any material application. The expansion gap at curbs, parapets, and sidewalks shall be sealed where shown on the plans.

After the joint system has been installed and exposed to normal daily vehicular traffic for a minimum of five (5) days, a Watertight Integrity Test as per 567.3.01H of the Standard Specifications shall be performed. Repairs made to the joint system for the successful completion of the Watertight Integrity Test shall be done at no cost to the State.

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Repairs to the joint recess necessitated by the Contractor's operation shall be completed at no additional cost to the State. Repairs to the joint recess necessitated by deterioration of the concrete not attributable to the Contractor's operation will be eligible for payment. Note: Maximum joint width is 600 mm, concrete repairs needed to meet the opening size with other materials may warrant additional payment.

The manufacturer's representative shall provide written certification to the Engineer that the asphaltic plug bridge joint system was installed in accordance with the manufacturer's requirements.

For situations outside the system limits, contact the Materials Bureau for approval.

### **METHOD OF MEASUREMENT**

Measurement for payment purposes shall be taken as the number of cubic meters of sealed joint system measured horizontally and vertically along the centerline of the completed joint system between the outer limits indicated on the Contract documents.

### **BASIS OF PAYMENT**

The unit price bid per 0.01 cubic meters shall include all labor, materials, and equipment necessary to complete the work. This includes any required overlay, sidewalk and curbs work removal.