ITEM 566.13141501 – ELASTOMERIC EXPANSION JOINT SYSTEM

DESCRIPTION

This work shall consist of furnishing and installing a Elastomeric Expansion Joint System at the locations indicated in the contract plans in accordance with this specification and the joint system Manufacturer’s instructions. The Contractor shall notify the Deputy Chief Engineer, Structures (DCES) of the name and address of the fabricator of all bridge joint systems in accordance with §106-01 Sources of Supply.

Elastomeric Expansion Joint System consists of a steel support system cast integral with the supporting concrete to which segmental plates are bolted. The plates are supported only by the steel support to which they are bolted and do not rest on the steel support of the opposing plates. The plates are symmetrical and not unique to one side of the joint or the other. A flexible elastomeric drainage trough is attached to both sides of the joint and sloped transversely to drain.

Sliding Joints consist of a steel support system cast integral with the supporting concrete to which segmental plates are bolted to on one side of the joint. These plates span the joint opening and rest on the steel support on the opposing side of the joint which has grooves for the s. A flexible elastomeric drainage trough is attached to both sides of the joint and sloped transversely to drain.

MATERIALS

The joint system and all its component parts shall be supplied by the Manufacturer. The Manufacturer shall certify that the following components meet the listed requirements:

All steel components of the joint system shall be fabricated from stainless steel. Stainless steel shall meet the requirements of ASTM A240, Type 304.

All fasteners shall be stainless steel and meet the requirements of §715-16.

Flexible material for drainage troughs shall be neoprene or natural rubber meeting the requirements of ASTM D2000-12 M2BC517A14B34.

Shop Drawings shall be required for any joint system supplied as part of this work. Shop Drawings shall be prepared and reviewed in accordance with the applicable provisions of the SCM and this Specification and submitted to the Engineer for approval. All Shop Drawings shall note the name and address of the Joint System Fabricator, including the actual location (address) where the fabrication will take place.

The joint system Manufacturer's instructions for the proper installation of the joint system shall be entered on the Shop Drawings. Manufacturer's instructions shall include the proper width settings for various ambient temperatures. Shop Drawings which lack Manufacturer's installation instructions shall be returned without examination.

Filler metal shall be qualified in accordance with Section 7 of the SCM. Welding Procedure
Specifications (WPS) shall be submitted for approval to the Engineer with the Shop Drawings for each combination of joint type and welding process shown on the Shop Drawings. Shop Drawing Approval shall be withheld until this requirement has been met.

Fabrication shall not commence until the Engineer has approved the shop drawings and authorized fabrication.

The fabricated joint system will be accepted at the work site by the Engineer after a visual inspection and upon receipt of the Manufacturer's Certification Report (MCR) that the materials and the fabricating procedures were in accordance with the Approved Shop Drawings and this Specification. The Manufacturer shall submit, with the MCR, a Certified Copy of the Mill Test Report (MTR) for all steel used to fabricate the joint system.

**CONSTRUCTION DETAILS**

The concreting surface leveling accuracy, installation of anchoring system, installation of drainage system under the joint, and installation of elements shall be as per the joint Manufacturer’s instructions. The concrete block out and deck opening shall be based on the specific joint system used.

A minimum gap of ¼ inch (+ 1/8 inch) shall be provided between the concrete edge and joint system and it shall be filled with silicone joint sealant per §705-05.

The drainage channel shall be bonded and bolted to the connecting parts.

The joint system shall include provisions to allow for routine maintenance including cleanout of the drainage trough.

After the joint system is permanently installed, including plates and all concrete placements, a watertight integrity test of the joint system shall be performed. The test shall be done in accordance with the requirements of §567-3.01H.

**METHOD OF MEASUREMENT**

This work will be measured as the number of linear feet of expansion joint system satisfactorily furnished and installed.

**BASIS OF PAYMENT**

The unit price bid per linear foot shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.