MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**MODULAR EXPANSION JOINT GLAND REPLACEMENT**

BRG:MGB 1 of 2 APPR:TEB:JAB:09-17-24

**a. Description.** This work consists of accessing and replacing modular expansion joint glands, control springs and dowels, and associated appurtenances as shown on the plans in accordance with the repair procedure described herein. Perform this work in accordance with sections 706 and 712 of the Standard Specifications for Construction and this special provision.

Ensure the modular joints manufacturer’s representative is present during all work on the modular joints.

**b. Materials.** Field measure the existing bridge deck joint and the existing bridge before ordering materials. For the modular joints furnish a continuous neoprene gland in each cell to replace each of the existing glands. Determine the correct seal manufacturer from field inspection. Fabricate the gland to conform to the contour of the bridge deck, all upturns, and the field-measured dimensions of the joints. Use lubricant and adhesive to install and seal the joint as recommended by the manufacturer. Furnish new expanded metal screening connection hardware galvanized to *ASTM A123/A123M*.

**c. Equipment.** Furnish equipment in accordance with subsection 712.03.A of the Standard Specifications for Construction and all equipment required to access the glands and control springs.

**d. Construction.** For the modular joints, clear debris on the joints and remove the galvanized steel sliding plates that cover the barriers or brush blocks prior to removing and replacing the gland if required to access the glands. Clean the exposed structural steel expansion joint device in accordance with *SSPC-SP 2, Hand Tool Cleaning*. Repair damaged coating in accordance with subsection 716.03.E of the Standard Specifications for Construction. Protect the work and environment in accordance with section 715 of the Standard Specifications for Construction. Replace control springs and dowels as noted on the plans. Reset support beam bearings. Remove, salvage, and reinstall existing expanded metal screening using new connection hardware. Realign or respace rails as needed. Install components in accordance with the manufacturer’s recommendations. After installing the gland replace any galvanized steel sliding plates that were removed. Replace any broken fastening hardware in kind.

**e. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

**Pay Item** **Pay Unit**

Modular Joint Gland Replacement Foot

Control Springs (Structure Identification) Lump Sum

1. **Modular Joint** **Gland Replacement** will be measured to the limits shown on the plans. The Engineer will measure Modular Joint Gland Replacement by joint length independent of the number of glands that will be replaced. The unit price for **Modular Joint** **Gland Replacement** includes the cost of removing the existing glands any associated appurtenances including galvanized steel sliding plates, cleaning the expansion joint device and repairing damaged coating, protecting the work and environment during cleaning, and furnishing and installing the replacement glands, lubricants, adhesives, and any associated appurtenances including galvanized steel sliding plates. Payment also includes all costs associated with providing the manufacturer’s technical representative on site and costs for replacing any broken fastening hardware.

2. **Control Springs (Structure Identification)** includes the cost of furnishing and installing control springs and dowels as noted on the plans. Payment also includes all costs associated with equipment access, resetting support beam bearings, realigning rails, replacing rails as needed, and removing, salvaging, and reinstalling existing expanded metal screening with new connection hardware.