MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**UNDERBRIDGE WIRING SYSTEM**

UTL:BMB 1 of 2 APPR:RPB:DBP:06-27-23

**a. Description**. This work consists of furnishing all conduit, conduit connections and accessories, all wiring from the lighting control panel, all junction boxes, hardware and accessories required to make the underbridge lighting operational. Install conduit and wiring for lighting as shown on the plans.

**b. Materials.** Ensure all materials meet the requirements of section 918 of the Standard Specification for Construction.

1. Conduit. Furnish PVC rigid conduit. Furnish liquid tight PVC flexible conduit.

2. Junction Boxes, Fittings and Connectors. Furnish PVC junction boxes, fittings, wall hangers, covers and connectors for PVC conduits of the sizes shown on the plans. Ensure junction boxes and fittings are gasketed. Furnish stainless steel screws.

3. Expansion Joints and Couplings. Furnish expansion joints and couplings between junction boxes. Ensure couplings are rigid non-metallic suitable for the conduit used and of the same manufacturer.

4. Wires. Furnish thermoplastic, heat and water-resistant, type THW wires meeting the requirements of section 918 of the Standard Specification for Construction for cable in conduit.

**c. Construction.** Perform work in accordance with sections 818 and 918 of the Standard Specifications for Construction and this special provision.

Rigidly and securely fasten the conduit system to the precast concrete wall structure.

Ensure conduits and couplings provide smooth passage for the installation of conductors.

Ensure conduit runs do not contain pockets or traps where water might accumulate.

Locate junction boxes as close as practical to the wiring end of lighting fixtures to minimize the length of flexible conduits. Secure all connections as specified by the manufacturer or other approved type locking fitting.

Pull sufficient length of wire into junction boxes to permit making connections without strain.

Make joints or splices in conductors in the junction boxes using solderless compression type connectors.

Ground all metallic cases of electrical equipment.

Install fixtures to prevent obstruction with opening the cover completely.

Test the underbridge wiring system in operation with lighting fixtures as a completed system.

Testing includes operation, continuity, megger, voltage, and ground resistance readings.

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

**Pay Item Pay Item**

Underbridge Wiring System Each

**Underbridge Wiring System** includes all cable, conduits, junction boxes, supports, and ancillary equipment associated with the underbridge lighting system from the power source to each of the underbridge luminaires.