MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**CONCRETE REPAIRS FOR BOX CULVERT**

GLD:MRR 1 of 2 APPR:JAB:TES:07-10-24

**a. Description.** This work consists of completing the culvert repairs as described herein and as shown on the plans.

**b. Materials.** Furnish materials in accordance with section 712 of the Standard Specifications for Construction.

Use Patching Conc, C-L in accordance with section 1006 of the Standard Specifications for Construction.

**c. Construction.** Perform construction in accordance with sections 706 and 712 of the Standard Specifications for Construction except as described herein or as modified by details on the plans.

Prior to concrete culvert repairs, clean the culvert and perform visual examination and mechanical sounding of all exposed concrete surfaces to identify and mark the concrete surface areas to be repaired, which will include delaminated, spalled, disintegrated and otherwise unsound concrete surface areas. All previous repairs must also be marked for replacement if unsound. In the sounding and marking survey, mark cracks in the concrete surfaces that warrant crack repair in accordance with the Special Provision for Culvert Joint and Crack Sealing 20RD401(B435).

The Engineer will coordinate in the marking process so that the repair criteria (the definition of which surface conditions warrant a repair, and which do not) is clearly communicated and followed in the marking process. Perimeter limits of repairs will be aligned with limits of distress identified in sounding survey, adjusted only to achieve specified removal geometries. Video survey the concrete box culvert after sounding and marking is complete, provide a copy of the video to the Engineer. The video must show each repair limit clearly. The Engineer will review and approve the final marked repair areas. Submit calculations of repair quantities to the Engineer for review and approval. No removal will be permitted until the calculated quantities are approved by the Engineer.

Perform hand chipping, patch forming, and placing patching concrete to the limits determined and as approved by the Engineer. Replace deteriorated steel reinforcement as directed by MDOT. Place galvanic anodes around the perimeter of the patch in accordance with section 712 of the Standard Specifications for Construction.

Contain all debris.

Concrete patch areas will be 1 foot-0 inches by 1 foot-0 inches minimum.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for in accordance with subsection 712.04 of the Standard Specifications for Construction except as described herein:

**Pay Item Pay Unit**

Hand Chipping, Shallow, Modified Square Yard

Hand Chipping, Deep, Modified Square Yard

1. **Hand Chipping, Shallow, Modified** applies to removing box culvert concrete. The unit price includes all items noted in subsection 712.04.C.1 of the Standard Specifications for Construction and the cost of culvert cleaning, inspection, coordination, patch forming, and quantities approved by the Engineer.

2. **Hand Chipping, Deep, Modified** applies to removing box culvert concrete. The unit price includes all items noted in subsection 712.04.C.2 of the Standard Specifications for Construction and the cost of culvert cleaning, inspection, coordination, patch forming, and quantities approved by the Engineer.

Cost associated with the patching material will be covered by other items of work.