MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**MAINTAIN FLOW, TEMPORARY**

MET:RDM 1 of 2 APPR:DMG:RWS:06-08-21

**a. Description.** This work consists of designing, installing, inspecting, maintaining, and removing temporary stream flow maintenance measures used during staged construction. The intent of this item is to install a means of stream flow maintenance during the staged construction that does not require pumping. Ensure this work is performed in accordance with sections 208, 401 and 704 of the Standard Specifications for Construction, the EGLE permit, the special provision for Construction Dam and Bypass Pumping, as directed by the Engineer, and this special provision.

**b. Materials.** Furnish materials in accordance with the standard specifications, the plans, and the special provisions in the contract.

Drainage Products 909

Geosynthetics 910

Riprap 916

Sand and Stone Bags 916

**c. Construction.** Install temporary stream flow maintenance measures at the locations shown on the plans. Ensure during the staged construction period positive flow is maintained through the site without the need for bypass pumping. Flow maintenance measures may include any combination of the following: existing culvert, proposed culvert, temporary culvert, riprap, steel sheet piling, stone filled bags, sand filled bags, or an Engineer approved proprietary product.

Design, installation, maintenance, and removal of the temporary flow maintenance measures are the responsibility of the Contractor. In accordance with subsection 104.02, the Contractor must submit electronically a proposed design to the Engineer for review at least 10 work days before starting work. Work may begin after the Engineer’s approval of the design.

At the beginning of the staged construction the Contractor must remove the upstream construction dam to allow for unimpeded flow into the existing culvert and remove downstream construction dam to allow for unimpeded flow out of the proposed culvert. Ensure bypass pumping facilities used during construction season that interfere with stream flow are removed.

Ensure the temporary culverts used to connect existing culverts to proposed culverts provide at least 80 percent of the cross-sectional area of the smaller of the two pipes being connected. Sections of existing pipe previously removed as part of this project may be utilized as temporary pipe if approved by the Engineer. Ensure graded channel widths match the span length of the culvert and are lined with riprap placed over geotextile liner.

Maintain the stream flow maintenance measures to ensure they are functioning as intended. Inspect stream flow maintenance measures at least once per week. Ensure inspection frequency is increased to daily during/after rainfall or snow melting events. Ensure the daily inspections continue until flow returns to normal levels. Electronically submit a log of inspections to the Engineer with each pay estimate request involving this item of work.

At the end of the staged construction remove all temporary stream flow maintenance measures and reinstall the construction dams and bypass pumping facilities prior to beginning any work on the culvert.

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

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

Maintain Flow, Temp (Culvert Identification) Lump Sum

**Maintain Flow, Temp (Culvert Identification)** includes designing, furnishing, installing, inspecting, maintaining, and removing the temporary stream flow maintenance measures used for the staged construction period. All work associated with installing riprap and geotextile liner to line temporary channels required for maintaining flow during the staged construction is also included in this pay item.