MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**TEMPORARY CHANNEL**

MUS:JAS 1 of 2 APPR:DMG:TWK:08-23-21

**a. Description.** This work consists of constructing, maintaining, and removing a temporary channel to facilitate the construction of the proposed culvert in the dry.

**b. Materials.** Furnish materials in accordance with sections 205 and 208 of the Standard Specifications for Construction and as specified herein.

1. Backfill. Furnish Embankment, CIP in accordance with section 205 of the Standard Specifications for Construction.

2. Polyvinyl Chloride (PVC) Liner. Furnish a minimum 10 mil thick PVC liner manufactured from 100 percent first quality virgin polyvinyl chloride that is resistant to UV degradation, construction damage, and to all forms of biological and chemical degradation normally encountered in highway construction applications. Provide general certification that the PVC liner is in accordance with the requirements of Table 1.

**Table 1: Physical Requirements**

|  |  |  |
| --- | --- | --- |
| Property | Test Method | Requirement |
| Thickness Tolerance, % | *ASTM D1593* | ±5 |
| 100% Modulus, psi | *ASTM D882* | 1000 |
| Elongation at Break, % | *ASTM D882* | 300 |
| Dimensional Stability,  % change (maximum) | *ASTM D1204*  (88 °F, 15 minutes) | 5 |

Ensure the PVC liner rolls are delivered to the site with all manufacturer factory packaging and batch labeling in place for observation by the Engineer prior to opening the packaging and placement. Ensure rolls that have been removed from packaging and cannot be identified by the Engineer will not be accepted and require removal from the project limits immediately so the rejected material will not be included in the work. Ensure each unit of material is labeled to provide product identification sufficient for field identification and correlation to required certification. Ensure the specified physical properties are certified as minimum average roll values (MARV).

**c. Construction.** Construct the temporary channel in accordance with sections 205 and 208 of the Standard Specifications for Construction, E&S-35 Series of the Soil Erosion and Sedimentation Control Manual and as shown on the plans.

Submit proposed temporary channel details and sequencing to the Engineer at least 5 work days prior to construction for review and approval. No additional time or compensation will be granted in securing the Engineer’s approval. Place silt fence prior to starting the work in accordance with section 208 of the Standard Specifications for Construction and as shown on the plans.

Construct the temporary channel so that it diverts water away from the proposed culvert work area and maintains flow. The water level is subject to change. Determine water levels that may occur during construction and size temporary channel to account for fluctuations in water level, as necessary.

Line the temporary channel with PVC liner. Place the PVC liner, free of wrinkles, on prepared areas and in accordance with the manufacturer’s recommendations or as directed by the Engineer. Fasten adjacent sections of PVC liner with watertight splices in accordance with the manufacturer’s recommendations. In lieu of watertight splices the PVC liner may be overlapped at least 24 inches. Repair damage to the PVC liner in accordance with the manufacturer’s recommendations. Damage and defects include, but are not limited to tears, punctures, flaws, deterioration, etc. Repair or replace damaged PVC liner to the satisfaction of the Engineer at no additional cost to the contract.

Place sand filled bags as necessary to divert and contain flow and anchor PVC liner as necessary. Place additional sand filled bags as directed by the Engineer at no additional cost to the contract.

Maintain the temporary channel to the satisfaction of the Engineer. This includes but is not limited to repairing damage to the PVC liner, providing corrective action to areas that have eroded and removal of all debris. Perform other maintenance to the temporary channel as needed or as directed by the Engineer at no additional cost to the contract.

Remove the temporary channel when no longer needed and after the flow has been permanently diverted through the constructed culvert. Prior to diversion of the flow into the new culvert, ensure all disturbed areas are stabilized. Remove PVC liner and backfill temporary channel to the original elevation or as directed by the Engineer. Dispose of excess material in accordance with subsection 205.03.P of the Standard Specifications for Construction.

If a temporary channel is not used, maintain flow by pumping in accordance with subsection 406.03.G of the Standard Specifications for Construction. Submit a pumping plan to the Engineer at least 5 work days prior to construction for review and approval. If the Engineer determines the pumping plan is unsatisfactory, the temporary channel work specified herein will be required. No additional compensation will be granted for pumping.

**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**

Channel, Temp, (Structure Identification) Lump Sum