

ROAD COMMISSION FOR OAKLAND COUNTY

SPECIAL PROVISION
FOR
CULVERT WATERPROOFING MEMBRANE

RCOC/DESIGN:JOB

PAGE 1 OF 2

RCOC20SP710B
ORG:11-25-22

a. Description

This work consists of providing all labor, equipment and materials necessary to prepare the substrate concrete surfaces and for the application of waterproofing membrane as specified on the plans. Perform this work in accordance with the contract.

b. Materials

Use materials from one of the following suppliers or approved equal:

1. Spray Applied Waterproofing Membrane
 - A. Bridge Preservation, Bridge Deck Membrane, 913-912-3305
 - B. D.S.Brown, Deckguard Spray Membrane, 419-257-3561
 - C. Wasser Coatings, Polyflex Bridge Deck System, 216-536-6777
2. Roll-type Preformed Waterproofing Membrane
 - A. These materials shall be per Section 710 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction.

c. Construction

1. Spray Applied Waterproofing Membrane

Provide a copy of the manufacturer's recommendations and contact information for the manufacturer's technical representative to the Engineer at least 14 calendar days prior to starting the work. Follow the selected manufacturer's recommendations for surface preparation and application, except as modified by this special provision.

A. Surface Preparation. Ensure all concrete to be sealed is at least 28 days old. Ensure all surfaces to receive the concrete sealer are dry and free from contamination such as oil, grease, laitance, and curing compounds. Light abrasive blasting followed by oil-free compressed air cleaning is required. Water blasting or wire brushing is prohibited. Conduct moisture testing in accordance with *ASTM D 4263*. Tape a transparent polyethylene sheet (4 mil) to the concrete surface. Seal all edges with tape that will stick to the concrete substrate. Leave the plastic sheet in place for a minimum of 16 hours. There must be no moisture visible on the polyethylene sheet. Alternate methods to detect moisture must be approved by the Engineer.

B. Application. Follow the selected manufacturer's recommendations for application procedures and rates. When the spray applied membrane is to be overlaid with a wearing course provide the necessary manufacturer's recommended tack coats and/or aggregate course. Protect from overspray in accordance with subsection 715.03.D.4 of the Standard Specifications for Construction.

C. Joints and Cracks. Provide and install manufacturer’s recommended joint systems at all joints according to the manufacturer’s recommendations. Provide and install manufacturer’s recommended joint systems at cracks according to the manufacturer’s recommendations.

D. Bond Testing. Conduct bond testing in accordance with the manufacturer’s recommendations. Perform bond testing a minimum of three times per 5,000 square feet of surface area and as directed by the Engineer. The minimum required tensile bond strength between the primer and the substrate is 150 pounds per square inch.

2. Roll-type Preformed Waterproofing Membrane

A. Per Section 710.03C of the MDOT 2020 Standard Specifications for Construction.

B. Roll type membrane shall be installed such that side lap joints are placed in a parallel orientation to the box culvert joints.

b. Measurement and Payment

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item(s):

| Pay Item | Pay Unit |
|-------------------------------------|-----------------|
| Culvert Waterproofing Membrane..... | Square Yard |

Culvert Waterproofing Membrane will be measured based on plan quantity. No compensation will be made to the Contractor for surplus materials or joint overlap material. Payment includes all costs associated with testing for moisture, bond adhesion and protection for overspray.