

MIDLAND COUNTY ROAD COMMISSION

BID FORM

Sealed Proposals will be received at the office of the Board of Road Commissioners, County of Midland, at 2334 N. Meridian Road, Sanford, Michigan 48657 until:

DATE: Friday, March 3, 2017, at 9:00 a.m.

Item No. 20 – CONCRETE SURFACE COATING

Magruder Rd over Pine River, Jasper Twp.	\$ _____/Lump Sum
4 ¾ Mile Rd over Pine River, Homer Twp.	\$ _____/Lump Sum
Curtis Rd over Tittabawassee River, Edenville Twp.	\$ _____/Lump Sum

DESCRIPTION

This work consists of providing all labor, materials, equipment, and traffic control required to prepare, clean, and apply a concrete surface coating to the structure identified. Surfaces to be coated include from inside toe of barrier railing up and across the top, down the outside of the barrier to the deck fascia, underside of the deck to the fascia beam, down to the bottom of the fascia beam and across the bottom of the fascia beam. Also included is any exposed face of the abutments, wing walls, slope walls, and end walls. Magruder Road over the Pine River shall also include coating of the vertical exposed faces of the piers. Perform all work according to the MDOT 2012 Standard Specifications and the special provision below. Bridge inspection reports available via email upon request.

COMPANY BIDDING _____

CONTACT PERSON _____

ADDRESS _____

PHONE/FAX _____

AUTHORIZED SIGNATURE TITLE

INDICATE ON ENVELOPE: Company Name, Item Number, Bid Item, Time and Date

MIDLAND COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
CONCRETE SURFACE COATINGS

MCRC:ALB

1 of 2

02-01-2016

a. Description. This work consists of furnishing and applying an acrylic based concrete surface coating to concrete structures, including but not limited to bridge railings, fascias, abutments, and piers as specified on the plans. All work and materials must be in accordance with the standard specifications, except as modified herein.

b. Materials. Select the acrylic based concrete surface coating from the products listed below. On any single structure, use the same product for all areas to be coated with a specified color. Do not mix colors or products from more than one source.

For this project, furnish and apply a smooth textured, concrete coating of the following color, or another Engineer approved color:

Federal Standard 595C color #37150, Limestone

Submit color samples to the Engineer for review and approval. If required by the Engineer, complete a test section to demonstrate the final color prior to application of the coating to the structure.

<u>Company</u>	<u>Product</u>
Benjamin Moore	Super Spec Masonry 100% Acrylic Elastomeric Coating Flat 056
Carboline Company	Carbocrylic 3350
ChemMasters	Colorcoat
ChemMasters	Colorlastic
Conspec	Permacoat
ICI Dulux Paints	Decra-Flex 300
O'Leary Paint Company	O'Leary 1375 Elastomeric
PPG Industries, Inc.	Perma-Crete Pitt-Flex Elastomeric Coating 4-110
Sherwin-Williams	Concrete Texture Coating Smooth B97-160 Series
Sika Corporation	Elastocolor
Sika Corporation	Sikagard 550W Elastic
Sonneborn	Super Color Coat
Tamms Industries	Tammolastic
Thoro	Thorocoat
Thoro	Thorolastic

c. Construction.

1. Surface Preparation. Cure new concrete a minimum of 28 days before coating. Following the curing period and prior to coating, test for moisture content in the concrete as described herein.

Test all concrete to be coated for the presence of moisture after surface preparation has been completed and prior to application of the coating. Ensure testing is in accordance with *ASTM D 4263*.

Tape an 18 inch by 18 inch sheet (4mil) of transparent polyethylene to the concrete surface to be coated. Seal all edges with tape that will stick to the concrete substrate and not allow the infiltration of air. Leave the plastic sheet in place a minimum of 16 hours to detect the presence of moisture in the concrete. Ensure there is no moisture visible on the polyethylene sheet after the minimum period of time has elapsed. Before application of the coating begins have this verified by the Engineer. This test may not be reliable in cooler conditions. Ensure alternate methods to detect moisture are approved by the Engineer. This test should be performed a minimum of once every 100 feet on barriers, walls etc., and a minimum of once on columns, piers, etc. Prepare the surface, including removing fins and projections and filling surface voids and cracks (if required), according to manufacturer's recommendations, except as modified by this special provision.

Ensure the surface to be coated is dry and free from all contamination including, but not limited to: dirt, form release agents, oil, grease, laitance, loose material, existing coatings and curing compounds. Clean the surfaces to be coated by abrasive blasting (followed by oil-free compressed air cleaning) or high pressure wash to achieve an acceptable cleaned surface. The concrete surface profile (CSP) must be CSP 3 in accordance with the *International Concrete Repair Institute Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays* (Guideline No. 03732). When using light abrasive blasting, be careful not to remove excessive concrete material.

2. Visual Inspection. Check surface cleanliness by lightly rubbing with a dark cloth or by pressing translucent adhesive tape onto the concrete surface in the presence of the Engineer. An acceptable level of residual dust can be agreed upon by the Engineer and the Contractor. Perform a water drop test in the presence of the Engineer prior to coating the concrete surface to detect for the presence of any hydrophobic contaminants. Hydrophobic contaminants include materials such as form release agents, curing compounds, oil, grease, wax, and resins. If contaminants are detected, as evidenced by a lack of rapid absorption of the water drop into the concrete, remove the contaminants and perform the tests again until no contaminants are detected.

3. Application. Apply two coats (do not dilute) of the acrylic based concrete surface coating. Apply each coat to provide the minimum wet film thickness as recommended by the manufacturer. A primer is not required unless recommended by the manufacturer's product data sheet. Temperature limitations for application will follow manufacturer's recommendations without exceeding an ambient temperature of 45-90 degrees F and the temperature must be at least 5 degrees F above the dew point when relative humidity is below 90 percent.

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
Conc Surface Coating (Structure No.)	Lump Sum

Conc Surface Coating (Structure No.) includes all labor, equipment, and materials to prepare the substrate concrete surface, conduct the visual inspection and apply the primer (if required) and two top coats of surface coating. No additional payment will be made for the test section.