



**SPECIAL PROVISIONS  
FOR  
COMBINATION COATING – GALVANIZED-POWDER TOP COAT**

**Buchanan County  
BRS-C010(100)--60-10**

**Effective Date  
May 15, 2018**

**THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**156106.01 DESCRIPTION.**

This Special Provision includes requirements for coating systems for certain items on the project for the bridge barrier rail, including the rail post assembly, HSS 6 inch by 2 inch by 1/4 inch rail, rail sleeve, and the 5/16 inch by 2 inch by 5 1/2 inch plate washers.

**156106.02 MATERIALS.**

**A. Surface Preparations.**

Prior to being incorporated into an assembled product, steel plates 3/4 inch or more in thickness shall be blast cleaned to remove rolled-in mill scale, impurities, and non-metallic foreign materials. After assembly, all weld flux shall be mechanically removed. The iron or steel product shall be prepared for zinc coating in accordance with ASTM 232.

**B. Zinc Coating.**

The product shall be totally immersed, with no part of it protruding out of the zinc (no double dipping). This is to limit a risk of trapped contaminants containing chlorides and reduce the risk of bare spots. Maximum aluminum content of the bath shall be 0.01%. Flux ash shall be skimmed from the bath surface prior to immersion and extraction of the product to assure a debris-free zinc coating.

**C. Exterior Coating.**

All galvanized exterior surfaces shall be coated with a Urethane or Triglycidyl Esocyanurate (TGCI) Polyester Powder to a minimum film thickness of 2.0 mils. Prior to application, the surfaces to be powder coated shall be mechanically etched by brush blasting (Ref. Society for Protective Coatings [SSPC] SP-7) and the zinc-coated substrate preheated to 450°F for a minimum of 1 hour in a gas-fired convection oven by heating the zinc-coated substrate to a minimum of 350°F and a maximum of 400°F. The thermosetting powder resin shall provide both

intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D3359. Color shall be a gloss or semigloss blue selected from the manufacturer's standard color table. Colors shall be readily matchable for future repair. Color samples shall be submitted to the project engineer before coating for final approval.

**156106.03 CONSTRUCTION.**

**A. Packaging.**

Prior to shipment, all items shall be protected to prevent damage during shipment and handling at project site.

**B. Field Repair Procedures.**

Where factory applied coatings have become damaged or abraded due to handling, transport, installation, welding or other circumstances, they shall be repaired in accordance with manufacturer's recommendations. All damaged areas shall be thoroughly wire brushed. All dirt, oil, grease, or other contaminants shall be removed in accordance with SSPC-SP1 and SP5. Touch-up paint shall be supplied by the galvanizer or steel fabricator, and shall be identical in color and composition to that used in the plant. Touch-up paint shall be applied to all prepared surfaces to a dry film thickness of at least 4.0 mils.

**156106.04 METHOD OF MEASUREMENT.**

All work covered by this specification shall be incidental to the Steel Beam Barrier Rail bid Item

**156106.05 BASIS OF PAYMENT.**

Compensation for all work covered by this specification shall be incidental to the Steel Beam Barrier Rail bid item.