



# Iowa Department of Transportation

## SPECIAL PROVISIONS FOR ANTI-GRAFFITI COATING

Scott County  
BRFIM-074-1(153)0--05-82

Effective Date  
December 17, 2013

**THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

### **12XXX.01 DESCRIPTION.**

This section specifies the requirements for applying a non-sacrificial, matte gloss, anti-graffiti protective coating over concrete and/or structural steel surfaces as noted in the contract documents. The Contractor shall protect surrounding areas, prepare surfaces to be coated and apply the anti-graffiti coatings in accordance with this specification. Anti-graffiti coating shall be applied to the limits shown in the plans.

### **12XXX.02 MATERIALS.**

#### **A. Approved Manufacturers.**

The manufacturer shall have at least 5 years experience producing anti-graffiti coating capable of being used on vertical surfaces. The Contractor performing the work of this section shall have at least 3 years experience applying anti-graffiti coating over vertical surfaces.

Approved brands of anti-graffiti coatings are listed in Materials I.M. 491.23, Appendix A.

#### **B. Product.**

Anti-graffiti coating shall be a coating system, including primer, sealer or densifier coats as recommended by the manufacturer. The final coat of the system shall be a urethane based sealant, in accordance with the requirements of Materials I.M. 491.23, which provides an invisible, non-sacrificial penetrating barrier. Coating shall dry as a matte or satin finish. A high gloss finish is unacceptable. The application of the coating product shall not result in yellowing or color change to the surface.

The anti-graffiti coating shall be a low volatile organic content (VOC) material, with a VOC less than 600 grams/liter. The coating shall be resistant to weather, humidity, abrasion, acid, alkali, salt spray, ultra-violet rays, and petroleum products and shall allow vapor transmission when tested in accordance with ASTM E 96.

The coating shall have the capability of having all types of paints and graffiti materials completely removed without damaging the surfaces to which the coating is applied. Removal of graffiti shall not result in "shadowing" of the base surface upon removal of graffiti. Manufacturer recommended cleaning products for removal of graffiti shall be non-toxic and biodegradable.

Provide all coating materials in sealed, original, containers that are properly marked and labeled to allow verification with applicable material safety data sheets, application precautions, and instructions. Labeling shall include the manufacturer's name, type of material, brand name, gloss designation, date of manufacture, shelf life, contract or order number under which the material has been ordered, lot and batch numbers, quantity, handling, thinning, and application instructions.

**C. Submittals.**

A minimum of 3 weeks prior to commencing production coating of the wall surfaces, provide Product Data Sheets, along with Material Safety Data Sheets (MSDS) for the coating products including thinners and cleaning agents. The information submitted shall also include information verifying compliance to VOC limitations as outlined above.

Provide written application instructions from the manufacturer, which shall include recommended application equipment, application methods and rates, surface preparation requirements and other applicable manufacturer's recommendations.

**12XXX.03 CONSTRUCTION.**

**A. Project Conditions.**

Coordinate schedule for anti-graffiti coating application with earthwork, back filling operations, and flatwork construction. Delay adjacent plantings until anti-graffiti application is completed. Coordinate work to permit applications without interference from other trades.

**B. Protection of Surfaces and Surrounding Property.**

Use protective coverings, shields, or masking as necessary to protect surfaces that are not designated to receive anti-graffiti coating. When tarps are used, secure them firmly to avoid being dislodged during heavy winds. If tarps become dislodged, stop work immediately and secure the loose tarps. When sustained winds are 40 miles per hour or above, drop and secure the tarps. Maintain all protective coverings during the entire period the work is being performed, and remove all coverings upon completion of the work.

Use diligence to assure vehicles, structures, buildings, vegetation, equipment, hardware, fixtures, and other materials not designated to receive anti-graffiti coating are protected from over spray, spillage, and other damage. Remove over spray to non-porous surfaces in accordance with the manufacturer's recommendations. Clean up any spills at no additional cost and to the satisfaction of the Engineer.

When applying coating adjacent to occupied buildings, cover air intakes and air conditioning vents, which could carry fumes into buildings. Coordinate shutdown of air handling equipment with building owners throughout application process. Vents shall remain covered and air handling equipment shall remain inactive until surfaces are visibly dry or until odor has dissipated. Maintain adequate ventilation when working in confined areas.

**C. Surface Preparation.**

Take precautions to protect new construction from graffiti "tagging" prior to application of anti-graffiti coating. Any graffiti that does occur prior to application of anti-graffiti coating shall be completely removed at the Contractor's expense and to the satisfaction of the Engineer prior to applying coating.

Surfaces to be coated shall be clean, dry, and free of oil, dirt, grease, form release agent, efflorescence or any other coating, which may inhibit penetration and adhesion of anti-graffiti coating. If surface requires cleaning prior to applying anti-graffiti coating, clean surface in accordance with manufacturer's recommendations. Abrasive blasting and chemical cleaning shall not be allowed. Pressure washed surfaces, if allowed by the manufacturer, shall be allowed to dry 48 hours prior to coating. Complete any required caulking prior to application of coating.

**D. Application.**

Apply by means of brush, roller or sprayer in accordance with the manufacturer's recommendations. The number of coats applied shall be in accordance with the manufacturer's recommendations.

Do not dilute coating material in any way. If surface is still glistening 5 to 0 minutes after application and complete absorption has not occurred, wipe off excess amount and decrease the amount of product being applied.

**1. Spray Application**

Use a low-pressure setting of approximately 40 pounds per square inch to avoid atomization of coating material. Spray equipment shall be fitted with fan tip, stainless steel or brass fittings and gaskets suitable for solvent solutions.

Apply first coat in a saturating spray application from the top down. Apply sufficient coating to create 4 to 6 inches of rundown below the contact point. If required, apply additional coats as soon as the previous coat is dry to the touch. Follow each spray application with clean bristle broom brushing to avoid excessive build-up.

**2. Brush and Roller Application**

Utilize nylon or other synthetic material resistant to solvent solutions. Apply sufficient product to thoroughly saturate the surface. Avoid excessive overlapping and take care to brush out runs and drips to avoid build-up.

**E. Inspection.**

The Engineer will inspect all phases of the work to verify that it is in accordance with the requirements of this section. Facilitate this inspection as required, including providing the Engineer with advance notice of scheduled work, allowing ample time for the inspections and access to the work. Inspections may include, but are not limited to, surface preparation, pre-coating cleanliness, coating application, and final appearance. Do not proceed with subsequent phases of the work until the Engineer has approved the preceding phase.

The inspection by the Engineer in no way relieves the Contractor of the responsibility to comply with all requirements of this section. Furnish, until final acceptance of the anti-graffiti coating, all equipment and instrumentation needed for self-inspection of all phases of the work.

**12XXX.04 METHOD OF MEASUREMENT.**

The work of furnishing and applying Anti-graffiti Coating will be based on plan quantities and will not be measured.

**12XXX.05 BASIS OF PAYMENT.**

For the number of square yards of Anti-graffiti Coating shown on the plans, the Contractor will be paid the contract unit price per square yard. This payment shall be full compensation for all labor, materials, equipment, services, and incidentals necessary to perform the work of this section.