Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

January 14, 2013

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section **975**
Proposed Specification: **9750204 Structural Coating Materials.**

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Paul Vinik, State Materials Office, to accommodate newer anti-graffiti technologies by removing cyclic weather testing from non-sacrificial testing. These coatings are not meant to prevent corrosion.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965TT or trey.tillander@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

V. Y. "Trey" Tillander, III, P.E.
State Specifications Engineer

TT/cah
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

STRUCTURAL COATING MATERIALS.
(REV 1~~1~~-*14*~~8~~-1*3*~~2~~)

SUBARTICLE 975-2.4.1 (Page 1112) is deleted and the following substituted:

975-2.4.1 Prime Coat: Zinc dust pigment shall be a minimum of Type II in accordance with ASTM D520. Organic zinc rich primers shall meet the requirements SSPC Paint 20, Type II, Level 2.

Zinc primers shall be used as ~~G~~galvanizing ~~R~~repair ~~C~~compounds for areas greater than 100 square inches.

ARTICLE 975-7 (Pages 1114 – 1115) is deleted and the following substituted:

975-7 Anti-Graffiti Coating Materials.

975-7.1 General Requirements: Anti-graffiti coatings intended for use under this specification shall be of a composition capable of preventing the adhesion of and facilitating the removal of acrylic, polyurethane, and alkyd spray paint. All anti-graffiti coatings shall possess the physical and handling characteristics that are compatible with the requirements of Section 563. *The manufacturer shall designate the ~~N~~non-~~S~~sacrificial product as ~~W~~water ~~C~~cleanable or ~~S~~solvent ~~C~~cleanable in accordance with this section.*

Anti-graffiti coatings shall contain less than 5.0 lb per gallon volatile organic compounds (VOC) as defined by 40 CFR Part 59, Subpart D, ~~and~~ evaluated as per ASTM D3960.

The manufacturer shall supply the following additional information:

a. *Technical data sheet that includes installation instructions and ~~G~~g*raffiti removal instructions, including any solvents or other materials, as necessary. Graffiti removal must be accomplished with nonproprietary cleaners as defined in ASTM D6578.

b. Sacrificial Coating Removal instructions, as applicable.

c. *Certification that ~~N~~non-~~S~~sacrificial ~~A~~anti-~~G~~graffiti coating shall not blister, crack, check, chalk, delaminate, or exhibit a color change of more than 8 ~~Delta~~dE94 (or dE76) ~~E~~ CIE LAB~~Lab~~ units for a period of one year after installation* ~~Identification of coating components~~.

975-7.2 Performance Requirements: For laboratory testing, use flat test panels prepared in accordance with AASHTO R31. Outdoor exposure testing will be performed by the Department. Submit four, 4 inch~~es~~ by 8 inch~~es~~ fiber cement test panels to the State Materials Office. Panels will be exposed at the Department's outdoor test site in accordance with ASTM G .

Laboratory Testing - Non-Sacrificial		
Property	Test Method	Requirement
~~Cyclic Weather Testing (solvent cleanable and water cleanable)~~	~~AASHTO R31~~	~~No blistering, cracking, checking, chalking, or delamination; color change less than 3 Delta E CIE LAB units; Retention of 60° Gloss ratio >= 0.80~~

Laboratory Testing - Non-Sacrificial		
Property	Test Method	Requirement
Graffiti Resistance (solvent cleanable)	ASTM D6578. Complete removal of solvent-based acrylic, polyurethane, and alkyd spray paint; after exposure; and recleanability	Cleanability Level 8, 9, or 10~~.~~*,* *Accelerated or outdoor exposure is not required. Cure per the spray paint manufacturer's requirements and assess cleanability per Section 10 of ASTM D 6578.*
Fluid Resistance (solvent cleanable)	ASTM D1308 – Spot Test; Paint Thinner, Gasoline	No blistering, discoloration, softening or adhesion loss.
Outdoor Exposure Testing – Non-Sacrificial		
Property	Test Method	Requirement
Graffiti Resistance (water cleanable)	ASTM G7: 6 months exposure at FDOT test site 2500 psi using pressure washer	Complete removal of solvent based acrylic, polyurethane, and alkyd based spray paint. No delamination or visual defects.

Laboratory Testing - Sacrificial		
Property	Test Method	Requirement
Cyclic Weather Testing	AASHTO R31, no salt fog, 95°F, 0%- 90% Relative Humidity, 500 hours, alternating RH every 100 hours	No melting or disbondment
Outdoor Exposure Testing - Sacrificial		
Property	Test Method	Requirement
Sacrificial Coating removability	ASTM G7: 6 months exposure at FDOT test site	Complete removal of solvent based acrylic, polyurethane, and alkyd based spray paint from substrate

STRUCTURAL COATING MATERIALS.
(REV 1-14-13)

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Zinc primers shall be used as galvanizing repair compounds for areas greater than 100 square inches.

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975-7.1 General Requirements: Anti-graffiti coatings intended for use under this specification shall be of a composition capable of preventing the adhesion of and facilitating the removal of acrylic, polyurethane, and alkyd spray paint. All anti-graffiti coatings shall possess the physical and handling characteristics that are compatible with the requirements of Section 563. The manufacturer shall designate the non-sacrificial product as water cleanable or solvent cleanable in accordance with this section.

Anti-graffiti coatings shall contain less than 5.0 lb per gallon volatile organic compounds (VOC) as defined by 40 CFR Part 59, Subpart D, evaluated as per ASTM D3960.

The manufacturer shall supply the following additional information:

a. Technical data sheet that includes installation instructions and graffiti removal instructions, including any solvents or other materials, as necessary. Graffiti removal must be accomplished with nonproprietary cleaners as defined in ASTM D6578.

b. Sacrificial Coating Removal instructions, as applicable.

c. Certification that non-sacrificial anti-graffiti coating shall not blister, crack, check, chalk, delaminate, or exhibit a color change of more than 8 dE94 (or dE76) CIE LAB units for a period of one year after installation.

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Laboratory Testing - Non-Sacrificial		
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Property	Test Method	Requirement
Graffiti Resistance (solvent cleanable)	ASTM D6578. Complete removal of solvent-based acrylic, polyurethane, and alkyd spray paint; after exposure; and recleanability	Cleanability Level 8, 9, or 10, Accelerated or outdoor exposure is not required. Cure per the spray paint manufacturer's requirements and assess cleanability per Section 10 of ASTM D 6578.
Fluid Resistance (solvent cleanable)	ASTM D1308 – Spot Test; Paint Thinner, Gasoline	No blistering, discoloration, softening or adhesion loss.
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Graffiti Resistance (water cleanable)	ASTM G7: 6 months exposure at FDOT test site 2500 psi using pressure washer	Complete removal of solvent based acrylic, polyurethane, and alkyd based spray paint. No delamination or visual defects.

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