



Florida Department of Transportation

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STRUCTURES DESIGN BULLETIN 20-04

ROADWAY DESIGN BULLETIN 20-07

(FHWA Approved: June 3, 2020)

DATE: June 8, 2020

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Consultant Project Management Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Program Management Engineers, District Materials Engineers, Structures Manual Holders

FROM: Robert V. Robertson, P. E., State Structures Design Engineer
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SUBJECT: Class 5 Coating Approval Process

This Bulletin implements a modification to the approval process for the use of Class 5 coatings. This change affects the *Structures Design Guidelines (SDG)* and the *FDOT Design Manual (FDM)*.

REQUIREMENTS

1. Replace *SDG* 1.4.5 with the following:

1.4.5 Concrete Surface Finishes

- A. The use of a Class 2 Surface Finish is preferred for all concrete elements except for bridge decks and concrete approach slabs. Textures, striations and/or graphics that are compliant with Department requirements may be used where appropriate at the discretion of the EOR for all structures other than noise, perimeter and retaining walls. Approval by the District Design Engineer (DDE) is required for the use of textures or graphics other than those shown in *Standard Plans* Index 534-200 for retaining walls and noise walls. Allowable textures for the front face of perimeter walls are limited to those used for commercially and readily available masonry blocks. The back face of masonry blocks and precast wall panels used for perimeter walls shall be smooth. Class 5 coatings, tints or stains may be considered for concrete elements as described in Paragraphs B and C below.

- B. Approval by the DDE is required for the use of Class 5 coatings, tints or stains on bridges and noise, perimeter and retaining walls. The use of Class 5 coatings, tints or stains on the outside of concrete traffic railings and parapets mounted on bridges and retaining walls (i.e. traffic railing surfaces that are visible from a vantage point off of the bridge) are typically considered when enhanced aesthetic treatments are required because of their close proximity to and/or high visibility from important or popular locations with the following land uses: historical, tourism, commercial, recreational or residential. The use of Class 5 coatings, tints and stains on median traffic railings and the inside and top surfaces of outside shoulder traffic railings and parapets mounted on bridge and retaining walls require additional justification when seeking approval by the DDE (Class 5 coatings have shown to collect debris and mildew faster on these surfaces due to traffic proximity). All noise walls in non-urban locations and all structures not specifically listed above are typically not considered candidates for the use of Class 5 coatings, tints or stains. See **FDM** 215 for the companion policy on the use of Class 5 coatings, tints and stains on roadway concrete barrier walls.

Commentary: The use of a Class 5 coating should be thoughtfully considered. Class 5 coatings have shown to collect debris and mildew faster due to the coarse texture resulting in a diminished appearance of the structure, especially for surfaces that are more directly exposed to traffic (median traffic railings and the inside and top surfaces of outside shoulder traffic railings). The Class 2 Surface Finish is preferred by the Department as it results in a more aesthetic appearance of the structure during its entire service life, typically requiring no maintenance.

- C. The Department will cover the cost for coatings, tints or stains on bridges and noise, perimeter and retaining walls only as described above. If a Local Maintaining Agency desires a bridge or noise, perimeter or retaining wall with coatings, tints or stains and the structure does not qualify for such treatment as determined by the Department, the structure may be treated with approval by the District Secretary. The Local Maintaining Agency shall provide the additional construction funding for the coatings, tints or stains and shall commit to cover the associated maintenance costs for the service life of the structure.
- D. Determine the need for sacrificial or non-sacrificial anti-graffiti coatings based on project specific requirements. Use anti-graffiti coatings on the back face of noise or perimeter walls only if the back face of the wall is immediately adjacent to a public or common area. Coordinate the use of anti-graffiti coatings on other structures and/or in other locations with the District Maintenance Office.
- E. See also **SDM** 4.4 for examples of how to depict surface finish requirements in the plans.

Modification for Non-Conventional Projects:

Delete **SDG** 1.4.5 and see the RFP for requirements.

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2. Replace the first paragraph, including items (1) and (2), of **FDM 215.6** (Surface Finishes) with the following:

Class 5 coatings, tints or stains may be applied to roadway concrete barrier walls in order to be compatible with the treatment of bridge or retaining wall mounted traffic railings or for corridor uniformity. Approval by the District Design Engineer is required for the use of Class 5 coatings, tints or stains.

BACKGROUND

Previously, the use of Class 5 coatings, tints and stains required the approval of the Chief Engineer for certain locations. In this new policy, the use of Class 5 coatings, tints and stains requires the approval of the District Design Engineer for all locations. The overall intent of the policy remains the same: coatings or other aesthetic surface treatments will be used only when formally justified in order to reduce construction and maintenance costs.

IMPLEMENTATION

These requirements are effective immediately for all projects regardless of production or letting dates. No action is required if approval has been completed under the previous process.

CONTACT

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