

Chapter 26

Bridge Project Development

The following are changes, additions or deletions to the January 2014, Topic #625-000-007, Plans Preparation Manual (PPM), for use on Turnpike projects only.

26.9.4 Aesthetics

Add the following items

3. FTE offers the following guidance as to the implementation of Structures Design Guidelines 1.4.5 and 7.3.1.c “Concrete Surface Finishes”. Smooth uncoated surfaces are preferred for all concrete structures; however project specific conditions may dictate that enhanced aesthetics are required. For projects that involve coatings, textures, colors or graphics on any concrete structures, please see the guidance below, request the appropriate approvals as necessary and coordinate with the FTE Project Manager. “Coating” refers to coatings, colors, tints, or stains. “Structures” include bridges, retaining walls, noise barriers and traffic railings/parapets on bridges and roadway.

Projects with	Treatment
New Structures	No coating.
New Structures Adjacent to Existing Structures / Bridge Widening	No coating. If project specific conditions warrant (ex: existing coating on an adjacent structure), then coat new structure to match the existing scheme and clean the existing structure. If cleaning alone is insufficient, then clean and recoat the existing structure. In all cases, avoid where possible (re)coating areas that require Chief Engineer approval (ex: traffic face of traffic railing). If the Class 5 coating on an existing bridge has degraded to resemble unfinished concrete, the bridge should be considered to "not have a Class 5 coating" for the purposes of SDG 7.3.1.c.
Painted Steel Girders	No (re)coating of concrete. Cleaning of the existing concrete may be considered where warranted.
Aesthetic Commitments	Meet aesthetic commitments.
Other Agencies	No (re)coating. If a Local Maintaining Agency requests (re)coatings then follow SDG 1.4.5.D (as revised by SDB 13-03).
Anti-Graffiti Coating	Do not use.
Textures/Graphics	Use of textures and graphics is acceptable. Get approval if texture/graphic is not from the Standard Index drawings.

The Approval Letter for Concrete Surface Finishes can be found at:

http://design.floridasturnpike.com/prod_design/struct/structures.html

4. For projects with steel girders that require painting, coordinate the girder color with the FTE Project Manager. Typically steel girders are painted FTE Green (FC34090).
5. For historical documentation, the following are the colors that were previously used on FTE structures:
 - a) Light Tan: FC23717 for retaining walls
 - b) Dark Tan: FC20475 for traffic railings, copings and slab overhangs
 - c) FTE Green: FC34090 for beams

26.10 Bridge Development Report (BDR) Submittal Checklist

Add the following to item 4

Bridge deck spread shall be evaluated for all bridges. The Bridge Development Report (BDR) shall include preliminary spread calculations for the bridge deck in order to determine whether additional drainage conveyance is required. Typical drainage conveyance costs may include, but are not limited to, additional shoulder width during construction, cross slope adjustment, bridge deck drains and conveyance systems. Costs for the bridge deck drainage may be significant when comparing alternative bridge designs.

Add the following section

26.19 Deviations from Structures Manual

26.19.1 Deck Thickness Determination

Structures Manual – Volume 1: Structures Design Guidelines - Section 4.2.2.D shall be modified as follows:

The thickness of CIP bridge decks on beams or girders for minor widening will be 8” minimum unless otherwise approved by the Turnpike Structures Design Engineer.

26.19.2 Miscellaneous Structures Splice

Full penetration welded shop splices are not allowed for uprights or chord members.

26.19.3 Bridge Deck Grooving

Structures Manual – Volume 1: Structures Design Guidelines – Section 7.7.A shall be modified as follows:

For widened superstructures where at least one traffic lane is to be added, add a note to the plans specifying that the new bridge floor finish match that of the existing bridge deck surface. If the

existing deck is not grooved, and there is a history of crashes at that location, grooving shall be investigated during the design process.

26.19.4 Barrier Retrofit

Substandard TL-3 barriers with round aluminum railing may be candidates for upgrades using a steel elliptical railing retrofit. Contact the Turnpike Structures Design Engineer for details.