ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR (The person who receives or originates the issue and needs to forward the issue for action.)

Specification: 330

Subject: Hot Bituminous Mixtures - General Construction Requirements

Origination date: May 21, 2010

Originator: Greg Sholar
Office/Phone: State Materials Office / 352.955.2920

Problem statement: 1. Recent research, conducted by the State Materials Office and District 2, has shown that the specification requirement discussed in subarticle 330-10.1.7, related to the use a pneumatic-tire roller or vibratory roller on the first structural layer placed on a milled surface, is unnecessary.

Proposed solution: 1. Remove subarticle 330-10.1.7 and renumber subsequent subarticles, as necessary.

Information source: SMO Bituminous staff. District personnel.

Recommended Usage Note: All asphalt projects.

Estimated fiscal impact, if implemented: None.

Implementation of these changes, if and when approved, will begin with the January 2011 letting.

For State Specifications Office Use Only

Begin date:
File Number:
Scheduled completion date:
Implementation date:
Implementation team member:
Usage Note:

Notes:

Florida Department of Transportation

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M E M O R A N D U M

DATE: July 2, 2010

TO: Specification Review Distribution List

FROM: Rudy Powell, Jr., P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **3301001 Hot Bituminous Mixtures – General Construction Requirements.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

These changes were proposed by Greg Sholar of the State Materials Office to delete the requirement to use a pneumatic-tired roller or vibratory roller on the first structural layer placed on a milled surface. Current research conducted by the SMO has shown this requirement is unnecessary.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at ST986RP or rudy.powell@dot.state.fl.us. Comments received after **July 30, 2010** may not be considered. Your input is encouraged.

RP/dt
Attachment

HOT BITUMINOUS MIXTURES – GENERAL CONSTRUCTION REQUIREMENTS. (REV 5-24-10)

SUBARTICLE 330-10.1 (of the Supplemental Specifications) is deleted and the following substituted:

330-10.1 Provisions Applicable to All Types:

330-10.1.1 Equipment and Sequence: For each paving operation, furnish a separate set of rollers, with their operators.

When density testing for acceptance is required, select equipment, sequence, and coverage of rolling to meet the specified density requirement. The coverage is the number of times the roller passes over a given area of pavement. Regardless of the rolling procedure used, complete the final rolling before the surface temperature of the pavement drops to the extent that effective compaction may not be achieved or the rollers begin to damage the pavement.

When density testing for acceptance is not required, propose an alternative rolling pattern to be approved by the Engineer or use the following standard rolling procedure:

1. Seal (breakdown) Rolling: Provide two static coverages with a tandem steel-wheeled roller, weighing 5 to 15 tons, following as close behind the paver as possible without pick-up, undue displacement, or blistering of the material.

2. Intermediate rolling: Provide five static coverages with a pneumatic-tired roller, following as close behind the seal (breakdown) rolling operation as the mix will permit.

3. Final rolling: Provide one static coverage with a tandem steel-wheeled roller, weighing 5 to 15 tons, after completing the seal (breakdown) rolling and intermediate rolling, but before the surface pavement temperature drops to the extent that effective compaction may not be achieved or the rollers begin to damage the pavement.

330-10.1.2 Rolling Procedures: Utilize procedures that will uniformly compact the pavement layer to the desired density level.

Roll across the mat, overlapping the adjacent pass by at least 6 inches. Roll slowly enough to avoid displacement of the mixture, and correct any displacement at once by the use of rakes and the addition of fresh mixture if required. Continue final rolling to eliminate all roller marks.

330-10.1.3 Compaction of Areas Inaccessible to Rollers: Use hand tamps or other satisfactory means to compact areas which are inaccessible to a roller, such as areas adjacent to curbs, gutters, bridges, manholes, etc.

330-10.1.4 Rolling Patching and Leveling Courses: Use pneumatic-tired rollers to roll all patching and leveling courses. When placing the initial leveling course over broken concrete pavement, use a pneumatic-tired roller that weighs at least 15 tons.

330-10.1.5 Correcting Defects: Do not allow the rollers to deposit gasoline, oil, or grease onto the pavement. Remove and replace any areas damaged by such deposits as directed by the Engineer. While rolling is in progress, test the surface continuously, and correct all discrepancies to comply with the surface requirements. Remove and replace all drippings, fat or lean areas, and defective construction of any description. Remedy depressions that develop before completing the rolling by loosening the mixture and adding new mixture to bring the depressions to a true surface. Should any depression remain after obtaining the final compaction,

remove the full depth of the mixture, and replace it with sufficient new mixture to form a true and even surface. Correct all high spots, high joints, and honeycombing as directed by the Engineer. Remove and replace any mixture remaining unbonded after rolling. Correct all defects prior to laying the subsequent course.

330-10.1.6 Use of Traffic Roller on First Overbuild Course: Use a pneumatic-tired roller on the first overbuild course. Compact the pavement with a minimum of five coverages.

~~**330-10.1.7 Use of Traffic Roller or Vibratory Roller on First Structural Layer Placed on a Milled Surface:** Use a pneumatic-tired roller or vibratory roller on the first structural layer placed on a milled surface.~~

330-10.1.~~8~~ *7* Use of Traffic Roller or Vibratory Roller on First Structural Layer Placed on an Asphalt Rubber Membrane Interlayer (ARMI): Use a pneumatic-tired roller or a vibratory roller on the first structural layer placed on an ARMI.

330-10.1.~~9~~ *8* Compaction at Bridge Structures: Compact asphalt mixtures placed over bridge decks and approach slabs using static compaction only. Utilize the standard rolling procedure described in 330-10.1.1 or an alternative procedure approved by the Engineer.