ORIGINATION FORM

Specification: Section 338
Subject: VALUE ADDED ASPHALT PAVEMENT
Origination date: July 15, 2008
Originator: David Wang
Phone: State Construction Office/850-414-4152

Problem statement:

There is a discrepancy between 330-12 and 338 for the specified design speed requiring a Laser Profiler test. Section 330 was changed for the 1/09 Workbook and this discrepancy may create some confusion to the users. Section 330 was changed from 50 mph to 55 mph because the laser profile acceptance criteria was developed around high speed, multi-lane, divided highways and the current design speed of 50 mph may require laser profile testing on other type roadways.

Proposed solution:

Modify Sections 338-5.2 and 338-5.3 to be consistent with Section 330 of the 1/09 Workbook. With the agreement of Materials, Design and Construction to change 330-12 to raise the Laser Acceptance for projects from 50mph and greater, to 55mph and greater, the change needs to be made in 338 -5.2 Category 1 Pavement, and 338 -5.3 Category 2 Pavement changing the design speed from 50mph and greater to 55mph and greater for compatibility between the Specifications.

Information source: David Wang, Greg Sholar, Bruce Dietrich
Recommended Usage Note: No change
Estimated fiscal impact, if implemented: Possible slight reduction due to not laser profile testing roadways with design speeds of 50 mph.

Florida Department of Transportation

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M E M O R A N D U M

DATE: October 24, 2008

TO: Specification Review Distribution List

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

SUBJECT: Proposed Specification: **3380502 Value Added Asphalt Pavement – Pavement Evaluation and Remedial Work**

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

This change was proposed by David Wang of the State Construction Office to change the Design Speed on Category 1 and Category 2 Pavement from 50 to 55 mph to agree with Section 330.

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 November 21, 2008 may not be considered. Your input is encouraged.

RP/dr
Attachment

VALUE ADDED ASPHALT PAVEMENT – PAVEMENT EVALUATION AND REMEDIAL WORK.

(REV 10-07-08)

SUBARTICLE 338-5.2 (of the Supplemental Specifications) is deleted and the following substituted:

338-5.2 Category 1 Pavement: For purposes of this Specification, "Category 1 Pavement" is defined as mainline roadways, access roads and frontage roads with a design speed ~~50~~*55* mph and greater.

Threshold values and associated remedial work for Category 1 Value Added Asphalt Pavement are specified in Table 338 1.

TABLE 338-1 Category 1 Pavements			
Type of Distress	Type of Survey	Threshold Values for Each LOT (0.1 Mile) per Lane.	Remedial Work
Rutting [1]	Any Survey	Depth ≤ 0.25 inch	None required
		Depth > 0.25 inch	Remove and replace the distressed LOT(s) to the full depth of all layers, and to the full lane width [2]
Ride [3]	Any Survey	RN < 3.5	Remove and replace the friction course for the full length and the full lane width of the distressed LOT(s)
Settlement/Depression[3A]	Any Survey	Depth ≥ 1/2 inch	Propose the method of correction to the Engineer for approval prior to beginning remedial work
Cracking [4]	Any Survey	Cumulative length of cracking > 30 feet for Cracks > 1/8 inch	Remove and replace the distressed LOT(s) to the full depth of all layers, and to the full lane width [5]
Raveling and/or Delamination affecting the Friction Course [6]	Any Survey	Individual length ≥ 10 feet.	Remove and replace the distressed area(s) to the full distressed depth and the full lane width, for the full distressed length plus 50’ on each end
		Individual length < 10 feet.	Patch the distressed area(s) to the full distressed depth and to a minimum surface area of 150% of each distressed area, subject to performance at final survey [7]
Pot holes and Slippage Area(s) [6]	Any Survey	Observation by Engineer	Remove and replace the distressed area(s) to the full distressed depth, and to a minimum surface area of 150% of each distressed area OR temporarily patch the distressed area(s) AND, prior to the final survey, remove and replace the distressed area(s) to the full distressed depth, and to a minimum surface area of 150% of each distressed area

TABLE 338-1 Category 1 Pavements			
Type of Distress	Type of Survey	Threshold Values for Each LOT (0.1 Mile) per Lane.	Remedial Work
Bleeding [8]	Any Survey	Loss of surface texture due to excess asphalt, individual length ≥10 feet and ≥1 foot. in width.	Remove and replace the distressed area(s) to the full distressed depth, and to a minimum surface area of 150% of each distressed area

[1] Rutting: Rut depth to be determined by Laser Profiler in accordance with the Flexible Pavement Condition Survey Handbook. For any LOT that cannot be surveyed by Laser Profiler, rut depth to be determined manually in accordance with the Flexible Pavement Condition Survey Handbook, with the exception that the number of readings per LOT will be one every 50 feet. For a partial LOT, a minimum of three measurements not exceeding 50 feet apart will be made. When the average of the measurements by manual straightedge exceeds a 0.30 inch threshold value, the remedial work is needed.
[2] Remedial Work for Rutting: The Contractor may propose removal and replacement of less than the full depth of all layers by preparation and submittal of a signed and sealed engineering analysis report, demonstrating the actual extent of the distressed area(s). Remedial work must be performed in accordance with Table 338-1 unless the Engineer approves the proposal.
[3] Ride: Ride Number (RN) to be established by Laser Profiler in accordance with FM 5-549. As a condition of project final acceptance in accordance with 5-11, correct all deficiencies in accordance with acceptance criteria for pavement smoothness in accordance with 330-12.~~6.~~
[3a]Settlement/Depression: Depth of the settlement/depression to be determined by a 6 foot manual straightedge.
[4] Cracking: Beginning and ending of 1/8 inch cracking will be determined as the average of three measurements taken at one foot intervals. The longitudinal construction joint at the lane line will not be considered as a crack.
[5] Remedial Work for Cracking: The Contractor may propose removal and replacement of less than the full depth of all layers by preparation and submittal of a signed and sealed engineering analysis report, demonstrating the actual extent of the distressed area(s). Remedial work must be performed in accordance with Table 338-1 unless the Engineer approves the proposal.
[6] Raveling, Delamination, Pot holes, Slippage: As defined and determined by the Engineer in accordance with the examples displayed at the following URL: www2.dot.state.fl.us/specificationsestimates/pavement.aspx
[7] Patched Areas: At the time of final survey, patched areas must be performing to the satisfaction of the Engineer. If the Engineer determines patched areas are not performing satisfactorily, remove and replace the distressed area(s) to the full distressed depth, and to a minimum surface area of 150% of each distressed area.
[8] Bleeding: Bleeding to be determined as defined and determined by the Engineer in accordance with the examples displayed at the following URL: www2.dot.state.fl.us/specificationsestimates/pavement.aspx

SUBARTICLE 338-5.3 (of the Supplemental Specifications) is deleted and the following substituted:

338-5.3 Category 2 Pavement: For purposes of this Specification, ”Category 2 Pavement” is defined as mainline roadways, access roads and frontage roads with a design speed less than ~~50~~*55* mph; approach transition and merge areas at toll booths; ramps; acceleration and deceleration lanes (including tapers); and turn lanes, parking areas; rest areas; weigh stations; and agricultural inspection stations.

Threshold values and associated remedial work for Category 2 Value Added Asphalt Pavement are specified in Table 338-2.

TABLE 338-2 Category 2 Pavements			
Type of Distress	Type of Survey	Threshold Values	Remedial Work

TABLE 338-2 Category 2 Pavements			
Type of Distress	Type of Survey	Threshold Values	Remedial Work
Rutting	Automated Measurement	See Table 338-1	See Table 338-1
	Manual Measurement (1)	Depth > 0.4 inch	Remove and replace 1.5 inch the full lane width for the area plus 50 feet with rutting equal to or greater than 0.4 inch.
Cracking	Any Survey	Cumulative length of cracking > 300 feet for Cracks > 1/8 inch	See Table 338-1
Surface Deterioration (2)	Any Survey	See Table 338-1	See Table 338-1
Settlement/Depression(3)	Any Survey	Depth ≥ 1/2 inch	Propose the method of correction to the Engineer for approval prior to beginning remedial work

(1) Rutting: Rut depth to be determined manually in accordance with the Flexible Pavement Condition Survey Handbook. For any LOT that cannot be surveyed by the Laser Profiler, the rut depth will be determined manually in accordance with the Flexible Pavement Condition Survey Handbook, with the exception that the number of readings per LOT will be one every 20 feet. For partial LOT, minimum of three measurements not exceeding 20 feet apart will be checked. When the average of the measurements by manual straightedge exceeds 0.6 inch, the remedial work is needed. When any individual measurement exceeds 0.6 inch, the remedial work is needed.

(2) Surface Deterioration: As used in Table 338-2, Surface Deterioration includes Raveling and/or Delamination affecting the Friction Course, Pot holes, Slippage Area(s), Segregated Area(s) and Bleeding; all as defined and footnoted in Table 338-1.

(3) Settlement/Depression: Depth of the settlement/depression to be determined by a 6 foot manual straightedge.