Florida Department of Transportation

JEB BUSH
GOVERNOR

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DENVER J. STUTLER, JR.
SECRETARY

July 27, 2006

**** EXPIRED ****

MATERIALS BULLETIN NO. 06-06
DCE MEMORANDUM NO. 18-06
(FHWA Approved: 7/20/06)

TO: **DISTRICT MATERIALS ENGINEERS**
DISTRICT CONSTRUCTION ENGINEERS

FROM: Thomas O. Malerk, P.E., Director, Office of Materials
Brian A. Blanchard, Director, Office of Construction

COPIES: Bob Burleson, Jim Warren, Gale Page

SUBJECT: **USE OF ALTERNATIVE EMULSIFIED ASPHALT TACK COAT MATERIALSs**

Suppliers as well as Contractors have approached the Department with alternative emulsified asphalt tack coat materials for HMA construction. Two such products are NTSS-1hm and CRS-1h. Testing to date has indicated that the performance of these products is equivalent to that of current materials allowed by Specifications. The suppliers of these tack coat materials have indicated additional benefits of reduced "tracking" and improved break times. Based on the response from the Districts and Contractors, the Department has forwarded specifications for these alternative emulsified asphalt materials to the Specifications Office to start the review process to include these materials in the Specifications.

In the interim until these materials are in the Specifications, if a contractor proposes use of either of the above products, a no cost change order may be initiated by the Department. It should be understood that it is the contractor's choice to use or not use these alternate materials. No additional contract time will be allowed. Specifications for the materials are attached. It should be noted that all emulsified asphalt materials to be used shall be pretested by the Department and have a valid pretest number, and all other relevant Specifications related to tack apply.

This memorandum serves as a blanket approval to process a $0.00 specification change for on-going projects and should be attached to the Field Supplement Agreement/Work or the Supplemental Agreement.

If you have further questions, please contact Gale Page at 352-955-2903

TOM/BB:gp

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MEMORANDUM

DATE: June 30, 2006

TO: Mayur Patel, Bouzid Choubane, Dave Horhota, Rick Kessler, and John Cooper

FROM: Thomas O. Malerk, Director, Office of Materials

SUBJECT: Delegation of Signature Authority

In my absence for the month of July 2006, I delegate signature authority to David Horhota and, in his absence, Richard Kessler. The delegate will sign his own name for Thomas O. Malerk, Director, Office of Materials and attach a copy of this signature authority to all outgoing correspondence.

TOM:dd

Change **300-2.3 Tack Coat:** as shown below:

300-2.3 Tack Coat: Unless the Contract Documents call for a specific type or grade of tack coat, use RA-500 meeting the requirements of 916-2, heated to a temperature of 250 to 300°F or undiluted Emulsified Asphalt Grades RS-1, RS-2, CRS-1h, or NTSS-1hm meeting the requirements of 916-4. Heat RS-1, RS-2, CRS-1h, and NTSS-1hm to a temperature of 150 to 180°F. The Contractor may use RS-1 modified to include up to 3% naphtha to improve handling of the material during the winter months.

For night paving, use RA-500 tack coat. The Engineer may approve RS-1, RS-2, CRS-1h, or NTSS-1hm for night paving if the Contractor demonstrates, at the time of use, that the emulsion will break to allow paving in a timely manner.

916-4.1 Requirements: is amended to add the following additional emulsions.

EMULSIFIED ASPHALT GRADE CRS-1h		
Test	Conditions	Minimum/Maximum
Tests on Emulsion:		
Saybolt Furol Visc	77°F[25°C]	20 – 100 seconds
Storage Stability	24 hour	maximum 1%
Demulsibility	35 ml 0.8% Sodium Dioctyl Sulfosuccinate (a)	minimum 60%
Sieve Test		0.10% max
Residue by Distillation	500°F. Distillation [260°C]	minimum 55%
Naphtha Portion	500°F. Distillation [260°C. Distillate] (b)	maximum 3% by volume
Particle charge		positive
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F[25°C], 100g, 5 seconds	minimum 60
Viscosity	140°F [60°C]	minimum 1600 poise [160 Pa S]
Ductility	77°F [25°C]	minimum 400 mm
Solubility	in Trichloroethylene	minimum 97.5%
(a) The demulsibility test shall be made within 30 days from the date of shipment. (b) When CRS-1h has been modified to include naphtha, the 24 hour storage stability testwill be waived.		

EMULSIFIED ASPHALT GRADE NTSS-1hm		
Test	Conditions	Minimum/Maximum
Tests on Emulsion:		
Saybolt Furol Visc.	77°F[25°C]	25 – 500 seconds
Storage Stability	24 hour	maximum 1%
Settlement	5 days	maximum 5%
Residue by Distillation		mimimum 35%
Naphtha Content	500°F. Distillation [260°C]	maximum 1% by volume
Sieve Test		0.30% max (a)
Tests on Residue From Distillation Test:		
Penetration (0.1mm)	77°F[25°C], 100g, 5 seconds	5 / 20
Softening Point ASTM D36		minimum 149°F[65°C]
Dynamic Shear Rheometer AASHTO T315	G* sin&, 186.8°F[86°C] @ 10rad/sec	minimum 1.00 kPa
Solubility	in Trichloroethylene	minimum 97.5%
(a) Sieve test may be waived if no application problems are present in the field.		