Low-Tracking or Non-Tracking Tack Coat NJSP-15-15G

1.0 Description. This work shall consist of preparing and treating an existing bituminous or concrete surface with a low-tracking or non-tracking tack coat material prior to an asphalt overlay in accordance with Section 407, except as revised by this specification.

2.0 Low-Tracking or Non-Tracking Requirements. Products accepted for use as low-tracking or non-tracking tack shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the surface to be overlaid becomes visible or void of tack prior to the placement of the asphaltic concrete pavement mixture. The tack material shall exhibit a low-tracking or non-tracking characteristic within 30 minutes of being applied to the roadway. Products accepted for use shall exhibit a laboratory “no-pick-up" time of 60 minutes or less per TM-87. The product shall bond the two pavements. Products accepted for use shall exhibit a laboratory bond strength greater than or equivalent to a standard SS-1h tack material. The test method used may be any AASHTO TM method or other approved research test methods.

2.1 Optional Application. In lieu of applying a Low-Tracking or Non-Tracking Tack, a Polymer Modified Emulsion Tack may be placed immediately ahead of the asphalt pavement as defined below in section 4.0 Optional Polymer Modified Emulsion Tack.

3.0 Equipment and Construction Requirements. All equipment and construction requirements shall be in accordance with Section 407; except as revised as follows:

3.1 Storage and Handling. All guidelines and instructions about storage and handling of the non-tracking tack product shall be followed in accordance with the product manufacturer. A copy of this in formation shall be provided to the engineer. The information shall include the application and maximum allowable temperatures for the product and the particle charge.

3.2 Distributor. The distributor shall have the full circulating and heating capabilities in the tank. If the particle charge of the low-tracking or non-tracking tack is different from the particle charge of the emulsion that was previously used then the tank shall be thoroughly cleaned prior to use, since some products are not compatible.

3.3 Curing. The low-tracking or non-tracking tack shall be allowed to cure prior to any construction traffic driving on the surface. A minimum of 15 minutes of cure time shall be allowed prior to driving on the tacked surface, unless less cure time is successfully demonstrated and approved by the engineer.

3.4 Supplier Information. The low-tracking or non-tracking tack materials are a different type of product compared to the conventional tack used in Missouri. *There may be multiple products that can meet the low-tracking or non-tracking tack requirements. All products that achieve equivalent field performance will be allowed.*

3.5 Material Requirements. All material shall be in accordance with Section 1015 of the Standard Specifications and specifically as follows:

Emulsion Properties for Low-Tracking or Non-Tracking Tack Coat			
Tests	Method	Min	Max
Viscosity, Saybolt Furol @ 25°C (77°F), s	AASHTO T 59	10	100

Storage Stability Test, 24 hr, percent	AASHTO T 59	--	1.0
Sieve Test, percent	AASHTO T 59	--	0.30
Residue by Distillation, percent	AASHTO T 59	50	
Oil Distillate by Distillation, percent	AASHTO T 59	--	1
Test on Residue from Distillation			
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
Solubility in Trichloroethylene, %	AASHTO T 44	97.5	--

OR

The following requirements are not intended to govern emulsified products.

PG Graded Products for Low-Tracking or Non-Tracking Tack Coat			
Tests	Method	Min	Max
Rotational Viscosity (Pa-sec) @ 302° F	AASHTO T 316 302°F	100	300
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
In addition to the table above, when using PG Graded Binders as tack, a certification shall be supplied to the engineer which includes test results demonstrating that the PG binder component meets the minimum requirements of a PG 58 or greater on the high end and a -22 or lower on the low end in accordance with AASHTO M320. The PG binder component shall account for at least 97% of the total product composition by volume. If using 100% PG binders, then the products shall be in accordance with Section 1015.10.			

All products that meet a laboratory "no-pick-up" time of 60 min or less and a field "no-pick-up" time of 30 min or less shall be accepted per TM-87.

4.0 Optional Polymer Modified Emulsion Tack.

4.1 Description. In lieu of using a low-tracking or non-tracking tack coat material, a Polymer Modified Emulsion Tack may be placed prior to a bituminous overlay of hot asphaltic concrete pavement. The Polymer Modified Emulsion Tack shall be spray applied immediately prior to the application of the hot asphaltic concrete pavement so as to produce a homogeneous surface in accordance with Secs 401, 402, or 403. This option will not be required solely if low tracking tack products fail to perform in the field.

4.2 Materials. The Polymer Modified Emulsion Tack shall be in accordance with Sec 1015.20.5.1.1 or Sec 1015.20.6.2.

4.3 Construction Requirements. The asphaltic concrete pavement shall be placed in accordance with Secs 401, 402, or 403, except as modified herein.

4.4 Equipment. No wheel, track or other part of the paving machine or any hauling equipment shall come in contact with the Polymer Modified Emulsion Tack before the asphaltic concrete pavement mixture is applied.

4.5 Application of Polymer Modified Emulsion Tack.

4.5.1 The Polymer Modified Emulsion tack shall be sprayed at a temperature of 120 - 180° F. The sprayer shall accurately and continuously monitor the application rate and provide a uniform coverage across the entire width to be overlaid. The application rate of the asphalt emulsion tack shall be applied at the same rate as the low-tracking or non- tracking tack coat material in accordance with Sec 407. The Engineer may make adjustments to the application rate based upon the existing pavement surface conditions and the recommendations of the Polymer Modified Emulsion Tack supplier.

4.5.2 Water may be added to SS-1hp and CSS-1hp by the emulsion manufacturer and shipped to the jobsite. No dilution shall be allowed in the field. When water is added to SS-1HP or CSS-1HP, the resulting mixture shall contain no more than 20 percent of added water. The contractor shall notify the engineer of the use of a diluted emulsion. The exact quantity of added water shall be indicated on the manufacturer's bill of lading, manifest or truck ticket. The application rate of the resulting mixture shall be adjusted such that the original emulsion will be spread at the specified rate. No water shall be added to the CPEM-1 or PEM-1.

5.0 Method of Measurement. Measurement of asphalt emulsion to the nearest gallon shall be made as specified in Sec 1015. The measurement of asphalt emulsion shall be based upon undiluted material.

6.0 Basis of Payment. The accepted quantity of low-tracking or non-tracking tack coat or polymer modified emulsion tack will be paid for at the contract unit price 407-99.12, Misc. Tack Coat – Low-tracking or Non-tracking.