OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
FOR
BONDED HOT MIX ASPHALT

These Special Provisions revise, amend, and where in conflict, supersede applicable sections of the 2009 Standard Specifications for Highway Construction, English and Metric.

(Add the following:)

407.01 DESCRIPTION

This work consists of applying a warm Polymer Modified Cationic Rapid Set-1s (PMCRS-1s) followed immediately with the placement of the hot mix asphalt (HMA) so as to produce a homogeneous surface.

407.02 MATERIALS

Provide the PMCRS-1s in accordance with the following table:

Test	PMCRS-1s
Viscosity, Saybolt Furol, 122 °F [50 °C], s	25 – 125
Storage stability test, 24 hr, %	≤1
Sieve test, %	≤0.05
Demulsibility, %	≥60
Oil distillate, by volume of emulsion, %	≤2
Residue, %	≥63
Penetration, 77 °F, [25 °C], 100 g, 5 s	90 – 150
Elastic recovery, 50 °F [10 °C], %	≥60
Solubility in trichloroethylene [a], %	≥97.5

[a] an organic solvent may be used.

407.03 EQUIPMENT

Provide a self-contained, self-propelled paver approved by the Engineer. Ensure the paver has the following:

- a receiving hopper for hot mix asphalt;
- a distribution system to uniformly place and spread the HMA in front of the screed without causing HMA segregation;
- an asphalt emulsion storage tank;
- a system for measuring the PMCRS-1s volume;
- a spray bar; and
- a heated, variable width, vibratory or combination vibratory-tamping bar screed.

Ensure the paver is capable of the following:

- spraying the PMCRS-1s evenly across the surface at the rate prescribed by the Engineer;
- operating at forward speeds to consistently place the mixture;
- applying the hot mix asphalt overlay;
- leveling the surface of the mat in one pass;
- placing the hot mix asphalt within 5 seconds of the application of the PMCRS-1s;
- spraying and paving at a controlled speed from 30 ft/min to 90 ft/min [9 m/min to 27 m/min];
- spreading and finishing HMA courses on lanes, shoulders, and similar construction to the widths and thicknesses shown on the Plans; and
- producing a finished surface that meets the specified evenness and uniform texture without tearing, shoving, or gouging the mixture or causing HMA segregation.

Prevent wheels and other parts of the paving machine from contacting the PMCRS-1s before applying the hot mix asphalt. Provide a machine with a screed that is capable of crowning the pavement at the center and adjusting the extensions vertically to accommodate the pavement profile.

407.04 CONSTRUCTION METHODS

Using a metered mechanical pressure spray bar, uniformly spray the PMCRS-1s at a temperature from 120 °F to 180 °F [49 °C to 82 °C], or as recommended by the material supplier. Ensure the sprayer accurately and continuously monitors the spray rate and applies the membrane uniformly across the width of the overlay. The Engineer may adjust the spray rate based on the pavement surface conditions and the recommendations of the material supplier.

Apply the bonded HMA in accordance with Section 411.04 over the full width of PMCRS-1s immediately after applying the PMCRS-1s. Place the bonded HMA with a heated vibratory, or combination vibratory-tamping bar screed. Pave continuously to reduce surface imperfections.

407.05 METHOD OF MEASUREMENT

The Engineer will measure the PMCRS-1s by the gallon of product delivered by the supplier.

407.06 BASIS OF PAYMENT

The Department will pay for the PMCRS-1s needed to construct the bonded hot mix asphalt at the contract unit price bid per:

Pay Item:	**Pay Unit:**
POLYMER MODIFIED CATIONIC RAPID SET-1S	Gallon [Liter]

Payment will be considered full compensation for furnishing all material, equipment labor and incidentals to complete the work as specified.