

## SECTION 407: TACK COAT

### 407.1 DESCRIPTION

This Work consists of providing and applying asphalt Material to an existing HMA, WMA, or portland cement concrete pavement surface.

### 407.2 MATERIALS

The Contractor shall use one (1) of the following asphalt Materials types for the tack coat:

1. CSS-1, CSS-1H, or SS-1, or SS-1H emulsified asphalt;
2. Performance-graded asphalt binder; or
3. Project Manager approved selection from the Department's *Approved Products List*.

The Contractor shall provide the asphalt Materials in accordance with Section 402, "Asphalt Materials and Mineral Admixtures."

### 407.3 CONSTRUCTION REQUIREMENTS

The Project Manager will determine the tack coat application rate and as indicated in Section 407.3.4, "Application of Asphalt Materials."

#### 407.3.1 Temperature and Weather Limitations

The Contractor shall:

1. Not apply tack coat on a wet surface.
2. Not apply emulsified asphalt when the air temperature is below the manufacturers recommended application temperature.

#### 407.3.2 Equipment

The Equipment shall include an asphalt distributor and Equipment for heating asphalt Material. The Contractor shall provide Equipment that is in accordance with Section 408, "Prime Coat."

#### 407.3.3 Preparation of Surface

The surfaces and edges to be tack coated shall be dry, patched, cleaned, and free of dirt, surface moisture, vegetation and other Deleterious Materials or irregularities.

#### 407.3.4 Application of Asphalt Material

The Contractor shall:

1. Uniformly apply asphalt Material with a pressure distributor at a rate determined by the Project Manager (to provide a "residual" asphalt cement content of from 0.04 gal per square yard to 0.08 gal per square yard);
2. Ensure that the nozzles on the pressure distributor are fully open and at the same angle from the spray bar, approximately 30°;
3. Keep the spray bar at a height above the pavement surface to provide for a double or triple lap of the applied asphalt Material;
4. Keep traffic off of the tack coat, unless otherwise approved by the Project Manager. If the Roadway being paved is closed to traffic, the Contractor may place tack coat a

maximum of 24 h ahead of the laydown operation. If the Roadway being paved is open to traffic, place the tack coat only over the area that can be paved during that Day's laydown operation. If the Contractor uses an emulsified asphalt tack coat, the Contractor may begin paving operations after the emulsified asphalt is cured.

5. Reapplication of tack coat damaged by traffic or construction Equipment will be at no cost to the Department.

#### **407.4 METHOD OF MEASUREMENT**

The Department will consider any water added to further dilute emulsified asphalts incidental to *Asphalt Material for Tack Coat* and no separate payment will be made.

#### **407.5 BASIS OF PAYMENT**

<b>Pay Item</b>	<b>Pay Unit</b>
<i>Asphalt Material for Tack Coat</i>	Ton

##### **407.5.1 Work Included in Payment**

The Department will consider as included in the payment for the pay item(s) listed in this section and will not measure or pay separately for the following Work:

1. Providing, mixing, heating, and applying asphalt Materials to the roadbed with an asphalt distributor;
2. Shipping/Delivery to Project site;
3. Sampling and Testing; and
4. Water.

**SECTION 408: PRIME COAT**

**408.1 DESCRIPTION**

This Work consists of providing and applying asphalt Material and blotter Material (if required) to an existing surface.

**408.2 MATERIALS**

The Contractor shall provide one (1) of the following types of prime coat asphalt Material:

1. Asphalt emulsified prime (AE-P);
2. Penetrating emulsified prime (PE-P);
3. Emulsified Petroleum Resin Prime (EPR-1)
4. MC-70; or
5. Other Material approved by the Project Manager.

The Contractor shall provide prime coat asphalt Material in accordance with Section 402, "Asphalt Materials and Mineral Admixtures."

**408.2.1 Certification**

The Contractor shall provide a manufacturer's written certification that the prime Material is chemically identical to those identified on the Department's *Approved Products List*.

**408.2.2 Blotter Material**

The Contractor shall provide fine aggregate (sand) blotter Material in accordance with Table 408.2.2:1, "Blotter Material," unless otherwise approved by the Project Manager.

**Table 408.2.2:1  
Blotter Material**

<b>Sieve size</b>	<b>% passing</b>
3/8 inch	100
No. 4	80 – 100
No. 16	45 – 80
No. 50	10 – 30
No. 100	2 – 10

**408.3 CONSTRUCTION REQUIREMENTS**

The Project Manager will determine the prime coat application rate and as indicated in Section 408.3.4, "Application of Prime Material."

**408.3.1 Temperature and Weather Limitations**

The Contractor shall not apply the prime Material in the following conditions:

1. If the surface has standing water;
2. If the air temperature is less than manufacturer's recommendation; or
3. If weather conditions prevent the proper placement of the prime coat.

The Project Manager may waive these temperature and weather limitations due to wet weather conditions or to protect Work in progress during Department approved suspensions.

#### **408.3.2 Equipment**

The Contractor shall:

1. Provide a distributor and Equipment for heating bituminous Material. Ensure the distributor is capable of maintaining the prime Material at an even temperature and can uniformly distribute the Material on variable widths with uniform pressure;
2. Ensure that the distributor can apply the Material as required;
3. Ensure that the distributor circulates the prime Material within the tank, the spray bar, and other accessories when not spraying; and
4. Ensure that the distributor has a hand spray gun with a precise-control single or double nozzle and a positive shut-off valve.

The Contractor shall ensure that the distributor has the following Equipment:

1. A tachometer;
2. Pressure gauges;
3. Accurate volume-measuring devices or a calibrated tank;
4. A thermometer that measures the temperature of tank contents;
5. A power unit for the pump; and
6. Laterally and vertically adjustable spray bars.

#### **408.3.3 Preparation of Surface**

The Contractor shall:

1. Shape the surface to be primed in accordance with the Plans, and ensure that it is free of ruts, corrugations, segregated Materials, or other irregularities.
2. Uniformly compact the surface in accordance with Section 303, "Base Course."
3. Ensure that the surface is slightly moist but not saturated when applying the prime.

#### **408.3.4 Application of Prime Material**

The Contractor shall:

1. Not apply the prime coat until the Project Manager has approved the quantities, application rates, Material temperature, and locations;
2. The Contractor shall apply the prime Material in a uniform and continuous layer using a pressure distributor;
3. Ensure the nozzles on the pressure distributor are fully open and at the same angle from the spray bar, approximately 30°;
4. Keep the spray bar at a height above the pavement surface to provide a double or triple lap of the prime Material;
5. If using a hand-held want, ensure the application is uniform; and
6. If distribution irregularities occur, cease operations and take corrective action.

If the Department allows traffic on the surface, the Contractor shall maintain one (1)-way traffic on the untreated section of the Roadbed until the treated surface has absorbed the prime Material, then transfer traffic to the treated portion and prime the untreated section.

The Contractor shall perform Work and procedures in accordance with manufacturer's recommendations.

#### **408.3.5 Application of Blotter Material**

If the prime Material fails to penetrate the surface within 24 h after its application, the Contractor shall spread blotter Material to absorb the excess Material. The Project Manager may approve the use of blotter Material on Roadway sections that must be opened to traffic before the 24 h waiting period.

#### **408.4 METHOD OF MEASUREMENT**

The Department will consider any water added to further dilute emulsified asphalts incidental to *Asphalt Material for Prime Coat* and no separate payment will be made.

#### **408.5 BASIS OF PAYMENT**

<b>Pay Item</b>	<b>Pay Unit</b>
<i>Prime Coat Material</i>	Ton

##### **408.5.1 Work Included in Payment**

The Department will consider as included in the payment for the pay item(s) listed in this section and will not measure or pay separately for the following Work:

1. Providing, mixing, heating, and applying asphalt Materials to the roadbed with an asphalt distributor;
2. Provide blotter Material as required;
3. Shipping/Delivery to Project site;
4. Sampling and Testing; and
5. Water.