

SECTION 02620

BITUMINOUS PRIME AND TACK COAT

PART 1 - GENERAL

1.1 Summary

A. Description of Work

The work to be performed in accordance with this Section includes furnishing and applying emulsified asphalt prime and tack coats prior to asphalt concrete paving.

This work shall include the furnishing of all labor, tools, equipment, materials and performing all required operations to provide a complete item in accordance with the project plans and specifications.

B. Related Work Specified Elsewhere

Aggregate Base CourseSection 02610
Asphalt Concrete PavementSection 02630

1.2 Quality Assurance

A. Reference Standards and Specifications

1. American Society for Testing and Materials (ASTM)

ASTM C117 - Materials Finer than No. 200 Sieve in Mineral Aggregates by Washing.

ASTM C136 - Sieve or Screen Analysis of Fine and Coarse Aggregates.

ASTM D420 - Guide to Site Characterization for Engineering Design, and Construction Purposes.

ASTM D977 - Emulsified Asphalt.

ASTM D2397 - Cationic Emulsified Asphalt.

1.3 Submittals

A. Certificates of Compliance

1. Bituminous Prime Coat.
2. Bituminous Tack Coat.

B. Suppliers Recommendation

1. Type and Grade of Bituminous Prime Coat.
2. Type and Grade of Bituminous Tack Coat.
3. Application Temperature, Dilution Recommendations.

1.4 Product Delivery Storage and Handling

Take all precautions in handling, storing and applying emulsified asphalts so as not to damage the product or damage the environment.

PART 2 - MATERIALS

2.1 Bituminous Prime and Tack Coats

A. Alternatives

Select one of the emulsions listed below as recommended by the emulsion supplier.

B. Bituminous Prime Coat

ASTM D977, SS-1, SS-1h, or ASTM D2397, CSS-1 or CSS-1h.

C. Bituminous Tack Coat

ASTM D997, SS-1, SS-1h, or ASTM D2397, CSS-1 or CSS-1h. Diluted 1 to 1 with water.

D. Application Temperatures

Apply bituminous prime and tack coat at suppliers recommended temperature but in no case less than 75 degrees Fahrenheit.

PART 3 - EXECUTION

3.1 Preliminary Investigation of the Work

Verify all preliminary work has been performed in accordance with the plans and specifications prior to application of bituminous prime and tack coats.

3.2 Weather Limitations

Apply bituminous tack and prime coat only when the application surface is dry, when the atmospheric temperature is above 60 degrees Fahrenheit and when the weather is not foggy, rainy, or extremely windy.

3.3 Bituminous Prime Coat

A. Preparation of Surface

Construct base course according to Section 2610, Aggregate Base Course, to the grade and cross section indicated.

B. Application of Bituminous Material

1. Dilution

Not used.

2. Area Application

Immediately before applying the prime coat, sweep the base course surface with a power broom to remove all loose dirt and other objectionable material.

Apply bituminous prime coat only to surfaces that are slightly damp or dry with a self-powered, pressure operated distributor. The distribution truck shall be capable of applying the prime coat at the specified rate, with an allowable deviation of 5 percent.

3. Application Rate

Uniformly apply prime coat at a rate of 0.20 to 0.40 gals/square yard. The exact rate of application shall be as recommended by the supplier and approved by the Owner.

Apply the prime coat at the approved application rate in one application.

4. Drying Time

Maintain the integrity of the primed surface until the bituminous material has sufficiently dried (breaks) so it will not be picked up or otherwise damaged by the paving operation. If the bituminous material has not cured within 36 hours, a sand blotter material shall be spread over the required areas.

The sand blotter material shall conform to the following requirements:

| Sieve Sizes | Percentage by Weight Passing Sieve |
|--------------------|---|
| 1/2-inch | 100 |
| No. 4 | 90-100 |
| No. 16 | 30-75 |
| No.200 | 0-12 |

| Test | Method | Requirements |
|--------------------|------------------|---------------------|
| Sieve Analysis | ASTM C136 & C117 | Above |
| Sampling Aggregate | ASTM D420 | ----- |
| Organic Impurities | ASTM C403 | Maximum * |

* Organic Plate Number

3.4 Bituminous Tack Coat

A. Preparation of Surface

Thoroughly clean surfaces to receive tack coat of all loose material including dirt and other objectionable material. Use equipment specifically suited for the work.

B. Application of Bituminous Material

1. Dilution

Dilute asphalt as recommended by the supplier and as approved by the Owner. Unless otherwise approved dilute 1 to 1 with water. Always add water to emulsion.

2. Area Application

Apply bituminous tack coat with a pressure operated distributor truck designed, equipped, maintained and operated for such use. The distributor truck shall meet the requirements of that used for the application of the prime coat.

3. Vertical Edges and Miscellaneous Work

Apply bituminous tack coat to all edges except driveways with mechanical or hand held spray equipment. Brushed or poured application will not be accepted.

4. Application Rate

Apply bituminous tack coat at a rate of 0.05 to 0.10 gallons per square yard. The exact rate of application shall be as recommended by the supplier and approved by the Owner. Apply the tack coat at the approved application rate in one application.

5. Drying Time

Maintain the tacked surface until the bituminous material has sufficiently dried (breaks) so it will no longer be picked up or otherwise damaged by the paving operation.

PART 4 - MEASUREMENT AND PAYMENT – Not Applicable

**** END OF SECTION 02620 ****