

SECTION 025418
SURFACE TREATMENT

1. DESCRIPTION

One-course surface treatment shall consist of a wearing surface or underseal composed of a single application of asphalt material covered with aggregate, constructed on the prepared base course or surface in accordance with this specification.

Two-course surface treatment shall consist of a wearing surface or underseal composed of two applications of asphalt material, each covered with aggregate, constructed on the prepared base course or surface in accordance with this specification.

Three-course surface treatment shall consist of a wearing surface or underseal composed of three applications of asphalt material, each covered with aggregate, constructed on the prepared base course or surface in accordance with this specification.

2. MATERIALS

1) Asphalt Materials.

The asphalt material used shall be AC-5 (AC-3 in winter) or other approved material as prescribed in Standard Specification Section 025404 "Asphalts, Oils and Emulsions".

2) Aggregate.

The aggregate used shall be Type PE pre-coated natural limestone rock asphalt as prescribed in City Standard Specification Section 025414 "Aggregate for Surface Treatment", graded as shown below.

One-Course:	Grade 4
Two-Course:	Grade 4 – 2 nd course (top) Grade 3 – 1 st course (bottom)
Three-Course:	Grade 4 – 3 rd course (top) Grade 3 – 2 nd course (middle) Grade 3 – 1 st course (bottom)

3. CONSTRUCTION METHODS

Allow sufficient time for the prime coat to cure properly before applying the surface treatment binder. The area to be treated shall be cleaned of dirt, dust, or other deleterious matter by sweeping or other approved methods. If it is found necessary by the Engineer, the surface shall be lightly sprinkled with water just prior to the application of the asphalt material.

Asphalt material shall be applied on the clean surface by an approved type of self-propelled pressure distributor, so operated as to distribute the material in the quantity specified, evenly and smoothly, under a pressure necessary for proper distribution. The Contractor shall provide all necessary facilities for determining the temperature of asphalt material in all of the heating equipment and in the distributor, for determining the rate at which it is applied, and for securing uniformity at the junction of two distributor loads. The distributor shall have been recently calibrated and the Engineer shall be furnished an accurate and satisfactory record of such calibration. After beginning the work, should the yield on the asphalt material appear to be in error, the distributor shall be calibrated in a manner satisfactory to the Engineer before proceeding with the work.

Asphalt material may be applied for the full width of the surface treatment in one application, unless the width exceeds 26 feet. No traffic or hauling will be permitted over the freshly applied asphalt material. Asphalt material shall not be applied until immediate covering is assured.

Aggregate shall be immediately and uniformly applied and spread by an approved self-propelled continuous feed aggregate spreader, unless otherwise shown on the plans or authorized by the Engineer in writing.

Surface treatment shall not be applied when the air temperature is below 60° F and is falling, but it may be applied when the air temperature is above 50° F and is rising; the air temperature being taken in the shade and away from artificial heat. Asphalt material shall not be placed when general weather conditions, in the opinion of the Engineer, are not suitable.

The rates of application of the aggregate and asphalt shall be as follows or as otherwise specified:

	<u>1st Course</u>	<u>2nd Course</u>	<u>3rd Course</u>
Asphalt Cement	0.20 gal/sq.yd.	0.16 gal/sq.yd.	0.16 gal/sq.yd.
Aggregate	80 sq.yd./cu.yd.	100 sq.yd./cu.yd.	100 sq.yd./cu.yd.

The entire surface shall be broomed, bladed or raked and thoroughly rolled as required by the Engineer.

Where multiple courses are specified, each course shall be applied in the manner specified for one course surface treatment.

The Contractor shall be responsible for the maintenance of the surfaces until the Engineer accepts the work.

All storage tanks, piping, retorts, booster tanks and distributors used in storing or handling asphalt materials shall be kept clean and in good operating condition at all times, and they shall be operated in such manner that there will be no contamination of the asphalt materials with foreign material. It

shall be the responsibility of the Contractor to provide and maintain in good working order a recording thermometer at the storage heating unit at all times. The Engineer will select the temperature of application based on the temperature-viscosity relationship that will permit application of the asphalt within the limits recommended in Standard Specification Section 025404 "Asphalts, Oils and Emulsions", with that being 220 to 300 degrees F for AC-3, and 275 to 350 degrees F for AC-5.

4. MEASUREMENT AND PAYMENT

Unless otherwise specified on the Bid Form, surface treatment as an integral part of the final structural pavement section shall be measured in place by the square yard of surface area to the limits shown on the plans and as directed by the Engineer.

Payment shall be full compensation for all labor, materials, tools, equipment and incidentals necessary to furnish and place the type of surface treatment called for.

Surface treatment for temporary pavements shall not be measured and paid separately, but shall be subsidiary to the construction in which the surface treatment is used.