



## A-1

### **SPECIFICATIONS FOR HOT ASPHALT CONCRETE SURFACE PATCH**

#### **GENERAL**

This work shall consist of placing a layer of asphaltic concrete on distressed pavement as directed by the Engineer.

The exact limits of asphaltic concrete surface patch during a work period shall be placed before the time the lane is to be opened to public traffic.

#### **WEATHER**

Asphalt concrete shall not be placed on any wet surface, when the temperature is below 50 degrees F, or when weather conditions otherwise prevent the proper handling or finishing of the patch.

#### **EQUIPMENT**

Equipment tools and machines used in the performance of the work shall be maintained in satisfactory working condition at all times, and shall be subject to the approval of the Engineer. All equipment proposed to be used under this section shall be of sufficient size and in such mechanical condition to be capable of completing the work and producing a good patch.

#### **SURFACE PREPARATION**

Immediately prior to applying the tack coat, the surface shall be cleaned by sweeping, flushing or other means necessary to remove all loose particles of paving, all dirt and all other extraneous material. Pavements impregnated with grease, oil or fuel shall be thoroughly cleaned.

#### **APPLICATION OF TACK COAT**

The entire surface of the area to be patched shall receive a tack coat of SS-1H asphalt emulsion at a rate of .12-gal/square yard prior to the placement of the asphaltic concrete. The emulsion will be applied in a neat and orderly manner. The outside edges of the area to be tacked will be "string lined" and the tack will meet the string line exactly. The tack may be applied via spray equipment or manually with brushes or rollers. Broadcasting or "dripping" the tack will not be allowed. In no event will the asphalt emulsion be diluted.

#### **PATCHING MATERIAL**

The patching material shall consist of hot asphalt concrete conforming to MAG Spec, Section 710. The selection of the particular gradation of the asphalt concrete to be used will be determined by the Engineer and should be based on the particular use of the asphalt surface.

### **PLACEMENT OF PATCHING MATERIALS**

The materials shall be placed around the perimeter of the patch area and raked toward the center of the patch to reduce segregation and concentration of aggregates at the joints. The materials shall also be dumped or placed and not thrown or broadcast to reduce segregation.

The thickness of the compacted patch shall match the depth of the adjacent pavement surfaces and the asphalt concrete will be feathered into those surfaces.

### **COMPACTION OF MIXTURE**

Compaction shall be effected by tandem rollers (steel wheel) with a minimum weight of 7 tons. Rolling of the mixture shall begin as soon after placing, as the mixture will bear the roller without undue displacement. Delays in rolling freshly spread mixture will not be tolerated. Alternate trips of the roller shall be of slightly different lengths.

Rollers shall move at a slow, not to exceed 3 MPH (264 Ft/min.), uniform speed, with the drive roll or wheels nearest the paver. The number and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable condition. No leakage from any roller shall be allowed to come in contact with the pavement being constructed nor shall a roller be permitted to stand motionless on any portion of the work before it has been properly compacted. Steel roller wheels shall be treated with water and detergent to prevent the adherence of the asphalt concrete.

Final rolling of the top or finish course shall be accomplished with a steel wheel roller, removing all surface imperfections. Rolling of the surface shall be continued until all roller marks are eliminated.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with hand operated mechanical tampers. Any mixture that becomes mixed with foreign material or in any way is defective shall be removed, replaced with fresh mixture and compacted to the density of the surrounding pavement.

### **JOINTS**

All joints shall present the same texture, density and smoothness as other sections of the course. Care shall be exercised in connection with the construction of joints to ensure that the surface of the pavement is true to grade and cross section. All joints shall be completely bonded. The joints between old and new pavements or between successive days' work shall be carefully made in such a manner as to ensure a continuous bond between old and new sections of the course. All contact surfaces of previously constructed pavements shall be painted with a thin uniform coat of hot bituminous material just before the fresh mixture is placed. All joints shall be properly "set up" with the back of the rake at a proper height and level to receive the maximum compression under the rolling. Competent workers who are capable of making a correct, clean and neat joint shall do the work of setting up the joints. All joints shall be constructed within the smoothness requirements stated herein. To avoid segregation, any excess aggregate remaining on or near the joint area after it is set up shall be removed from the pavement surface and must not be broadcast across the new pavement mat.

On transverse joints, the roller shall pass over the unprotected end of the freshly laid mixture only when the laying of the course is to be discontinued or when delivery of mixture is interrupted to the extent that the unrolled material may become cold. In these cases, the edge-of the previously laid course shall be cut back to expose an even vertical surface for the full thickness of the course.

On longitudinal joints when the edges of the joints are irregular, honeycombed or poorly compacted, all unsatisfactory sections of joint shall be cut back to expose an even, vertical surface for the full thickness of the course prior to constructing the adjacent pavement.

### **SMOOTHNESS**

Except in intersections or any changes in grade, when a 10 foot straight edge is laid on the finished surface parallel to the centerline of the patch, the surface shall not vary from the edge of the straight edge more than 1/4 of an inch between any two contacts with the surface. Joints shall also be checked for smoothness. Joints shall not vary from the edge of a straight edge placed perpendicular to the joint by more than 3/16 of an inch.

All humps or depressions exceeding the specified tolerances shall be corrected immediately as directed by the Engineer.

### **PROTECTION OF PAVEMENT**

After final rolling, no vehicular traffic of any kind shall be permitted on the pavement until it has cooled and hardened.

