

Hot-Applied Crack Sealing & Filling

Of

Bituminous Concrete Pavement

DRAFT MAINTENANCE SPECIFICATIONS

March 9, 2007

Description: This work consists of furnishing and applying hot-applied rubberized asphalt to bituminous concrete pavement surface cracks. It shall be constructed in accordance with these specifications and in close conformity with the lines, grades, thickness, and typical cross section shown on the plans or established by the Engineer.

Material: The hot-applied crack sealing and filling shall be composed of a hot-applied, rubberized asphalt meeting ASTM Specification D 6690 Type II. The contractor must submit to the Engineer all Material Safety Data Sheet documents from the material manufacturer prior to the commencement of work. During work progress, the contractor must submit to the Engineer the manufacturer's certificate of testing for compliance to ASTM D 6690 Type II for each batch or lot of material utilized on the contract.

Equipment: The equipment used by the contractor shall include, but not limited to the following:

- (1) **Kettle:** The unit shall be a combination melter and pressurized applicator of a double-boiler type with space between the inner and outer shells filled with heat transfer oil having a flash point of not less than 600°F. The kettle shall include a temperature control indicator and a mechanical agitator. The kettle shall be capable of maintaining the treatment material at the manufacturer's specified application temperature range. The kettle shall include an insulated applicator hose and application wand.
- (2) **Hot Air Lance:** The unit shall be designed for cleaning and heating the pavement surface cracks. Minimum compressed air capacity shall be 100 psi. Minimum heated air temperature shall be 1500°F. The unit shall be flame-free while producing high velocity compressed hot air.
- (3) **Squeegee Applicator:** Hand tool shall be of commercial/industrial quality and designed with a "U" shaped configuration.

Construction Methods: The crack sealing and filling operation shall proceed in accordance with the requirements of the “Maintenance and Protection of Traffic” and “Prosecution and Progress” specifications.

(1) Weather Requirements: Work will not be performed unless the pavement is dry; no frost, snow, ice or standing water may be present. No work shall be done if the ambient temperature is below 40° F during the field application operations.

(2) Crack Preparation: Pavement surface cracks to be sealed and filled shall be treated with a hot-air lance prior to application of the treatment material. Two passes shall be made with the hot-air lance. There shall be no more than 10 minutes time lapse between the second hot-air lance treatment and the material application. All pavement surface cracks from ¼” width up to ½” width shall be prepared in this manner.

(3) Crack Sealing and Filling: Treated pavement surface cracks are to be filled to refusal. The treatment material shall be maintained at the manufacturer’s specified application temperature range at all times. Sealed and filled cracks are to be squeegeed immediately following application striking excess sealer flat to the pavement surface.

There shall be no build-up of treatment material above or adjacent to the crack at any time.

(4) Protection of Sealed and Filled Cracks: No traffic shall be permitted on the pavement until the treatment material is set; treatment material does not track and is not subject to deformation in the crack satisfactory to the Engineer.

(5) Surplus Treatment Material: Treatment material remaining in the contractor’s kettle at the close of the daily work session shall be discarded. At no time shall treatment material be re-heated for use in subsequent crack sealing and filling applications unless permitted by the Engineer following a review of field operation circumstances.

Method of Measurement: This work shall be measured by the linear lane-mile.

Basis of Payment: The accepted quantity of pavement surface cracks sealed and filled shall be paid for at the contract unit price per linear lane-mile. The price shall include all materials, equipment, tools, and labor incidental thereto. No payment will be issued to the contractor prior to document submissions required.