SECTION 350 ASPHALT CONCRETE CRACK SEALING (New Section)

350.1 DESCRIPTION

This work shall consist of routing and sealing transverse and longitudinal cracks in an asphalt concrete roadway surface with the specified sealant.

350.2 MATERIALS

The sealant shall conform to the requirements of ASTM D-3405 with the following modifications:

Penetration at 77EF (25EC) 90-150
Bond at -20EF (-29EC), Std. Specimen,
3 cycles, 200% Extension ..... Passes
The sealant material shall have a unit weight between
8.99 and 9.36 lbs./gal. (1080 and 1124 kilograms per cubic meter).

Only products that meet the above requirements and have performed satisfactorily based on Department analysis, may be used. A listing of acceptable products may be obtained by contacting the Area Engineer.

The blocking medium shall be an inert, compressible material which is compatible with the sealant.

350.3 CONSTRUCTION REQUIREMENTS

A. ROUTING

1. Routing equipment shall be mechanical, power driven, and capable of cutting a reservoir to the required dimensions. Equipment designed to plow the cracks to dimension will not be permitted.

2. Cracks which are less than 3/4 inch (20 mm) in width or depth will require routing to a width and depth of 3/4 to 7/8 inch (20 to 22 mm).

3. Cracks which are 3/4 inch (20 mm) or greater in width and depth will not require routing, but shall be thoroughly cleaned of foreign material to a depth equal to the width of the crack.

4. The walls of the finished reservoir shall be vertical and the reservoir bottom shall be flat.

5. Routing will not be allowed when the roadway is wet.

B. CLEANING

1. Cleaning shall be accomplished with an air compressor producing a minimum of 125

CFM (0.06 cubic meters per second) output and equipped with a maximum 3/4 inch (20 mm) nozzle.

2. Reservoirs and cracks shall be thoroughly cleaned of dust, dirt, and loose materials so that it is clean and dry at the time the blocking medium or sealant is applied.

3. If a routed reservoir or crack is left overnight, it shall be recleaned immediately before the blocking medium or sealant is applied.

4. The routed asphalt concrete and foreign material resulting from the reservoir preparation shall be removed from the roadway surface before an area is opened to traffic.

C. SEALING

1. Cracks 3/8 inch (10 mm) or greater in width which exist below the routed and cleaned reservoir shall be filled with a blocking medium to insure a nominal sealant depth equal to the width of the reservoir.

2. Sealant material shall be placed within 72 hours of routing.

3. There shall be no visible signs of moisture on the roadway surface or in the reservoir at the time the sealant is applied.

4. The sealant handling, mixing, and application temperature restrictions shall strictly adhere to manufacturer recommendations.

5. Sealant shall be applied with a pressure type applicator.

6. When applying the sealant, the reservoir shall be overfilled and squeegeed to provide a film of sealant on the roadway surface one to three inches (25 to 75 mm) on both sides of the reservoir.

7. The squeegee shall be a "U" shaped device which will produce a full, uniform, and neat appearing reservoir and adjoining surface area. Other type devices will require prior approval by the Engineer.

8. A blotting material, such as toilet tissue, shall be placed over the sealant material immediately after placement at intersections, superelevated curves, grades steeper than four percent, or as specified on the plans. Blotting material will be required when traffic is allowed to cross a sealed area before track free status has been achieved.

9. The Contractor shall repair or refill, at his own expense, any part of a sealed reservoir damaged by traffic.

D. SEASONAL AND TEMPERATURE LIMITATIONS

1. Routing and sealing of asphalt concrete surfaces will be permitted only during daylight hours between May 1 and October 15.

2. Routing with a star bit type router will not be allowed when the ambient air temperature is below 55EF (13EC).

3. Application of the sealant material will not be allowed when the ambient air temperature is below 45EF (7EC).

E. GENERAL

1. Only one-half of the roadway shall be worked on at a time unless a traffic control plan to work full width is submitted by the Contractor and approved by the Engineer.

2. Routing and crack sealing shall be considered as one work zone. A work zone shall not exceed two miles (three kilometers) in length at any one time.

350.4 METHOD OF MEASUREMENT

Asphalt concrete crack sealing will be measured by the pound (kilogram) of sealant used. The manufacturer's weights of the sealant will be accepted as the basis for measurement.

350.5 BASIS OF PAYMENT

Asphalt concrete crack sealing will be paid at the contract unit price per pound (kilogram) and shall be full compensation for routing, furnishing, heating, placing, and blotting the sealant. Traffic control will be paid at the contract unit price.