Verify/revise oil specifications and unit of payment before using.

1. Sealing Asphaltic Pavement Cracks, Item SPV.0125.##

A Description

This special provision describes routing, cleaning, drying, and sealing of longitudinal and transverse cracks in existing asphaltic pavement, and shoulders as the plan details show.

B Materials

The sealant shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of effectively sealing joints and cracks in concrete and asphaltic pavements against the infiltration of moisture and foreign materials throughout repeated cycles of expansion and contraction with temperature changes, and that will not at ambient temperatures flow from the crack, or be picked up by vehicle tires.

Furnish material that conforms to the requirements of the Specifications for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements, ASTM Designation: D 6690, Type II, modified to require that the bond strength test be run at - 20 degrees F.

Deliver each lot or batch of sealing compound to the jobsite in the manufacturer's original sealed container. Each container shall be legibly marked with the manufacturer's name, the trade name of the sealant, batch or lot number, specification number, type, and the safe heating temperature. Present the manufacturer's certification stating that the compound meets the requirements of this specification. Before applying the sealant, furnish to the engineer a certificate of compliance and a copy of the manufacturer’s recommendations on heating and applying the sealant.

C Construction

Heat the sealing compound to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. If and when using the heating kettle on concrete or asphaltic pavement, properly insulate the heating kettle to ensure heat is not radiated to the pavement surface.

Make route cuts in a single pass. Two-pass cutting will not be allowed. Use a self-propelled mechanical router capable of routing the bituminous pavement to provide a 1.0:1.0 depth to width ratio of all routed cracks. The router blade or blades shall be of such size and configuration to cut the desired crack reservoir in one pass of the route. No spacers between blades shall be allowed unless the contractor can demonstrate to the engineer that the desired reservoir and route cut can be obtained with them. Either wet or dry routing will be permitted provided the above conditions are met. Use a pressure distributor for applying sealing material through a hand–operated wand or nozzle conforming to sealant manufacturer's instructions.

Conduct the operation so that the routing, cleaning, and sealing are continuous operations. Traffic shall not be allowed to knead together or damage the routed cracks. Reroute, if necessary, routed cracks not sealed before traffic is allowed on the pavement when routing and sealing operations resume at no additional cost to the department.

Route the crack to a minimum width of 3/4-inches and a minimum depth of 3/4-inches. Use a power vacuum or equivalent to immediately remove any routing slurry, dirt, or deleterious matter adhering to the crack walls or remaining in the crack cavity, or both. Before sealing, dry the cleaned routed cracks using methods approved by the engineer. Immediately before sealing, blow out the dried crack with a blast of compressed air, 80-psi minimum. Continue cleaning until the crack is dry, and until all dirt, dust, or deleterious matter is removed from the routed crack and adjacent pavement to the satisfaction of the engineer. If the air compressor produces dirt or other residue in the cavity, the contractor shall be required to clean the crack again.

If cleaning operations could cause damage to, or interfere with, traffic in adjacent lanes, or both, provide protective screening that is subject to the approval of the engineer to the cleaning operation.

Provide positive temperature control and mechanical agitation. Do not heat the sealant to more than 20 degrees F below the safe heating temperature. The safe heating temperature can be obtained from the manufacturer's shipping container. Provide a direct connecting pressure type-extruding device with nozzles shaped for insertion into the routed crack. Immediately remove sealant spilled on the surface of the pavement.

Seal the cracks when the sealant material is at the pouring temperature recommended by the manufacturer. Fill the crack such that after cooling, the sealant is flush with the adjacent pavement surface. Do not overfill the routed crack; the engineer may allow a very slight overband. Sand shall not be spread on the sealed cracks to allow for opening to traffic. Before opening to traffic, the sealant shall be tack free.

D Measurement

The department will measure Sealing Asphaltic Pavement Cracks by the mile acceptably completed, measured in length by the centerline mile.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER DESCRIPTION UNIT

SPV.0125.## Sealing Asphaltic Pavement Cracks MILE

Payment is full compensation for route cutting; cleaning the crack; furnishing and installing all materials, including sealant.

ner-460-010 (20171213)