

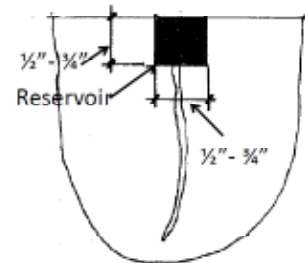
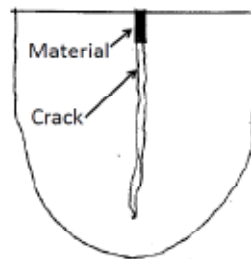
## CRACK FILLING / SEALING / REPAIRING

### Definitions

1. Crack Filling - cracks up to 1/4" in width
2. Crack Sealing - cracks from 1/4" up to 3/4" in width.
3. Techniques to Prepare Cracks: The use of a backer rod at a depth of approximately 1" is a contractor option to reduce material waste. These cracks are to be routed when you have meandering cracks. Routing is used to create a sealant reservoir by enlarging meandering cracks to the desired depth and width to accept the sealant and maximize performance of the sealant. Use of a hot compressed heat lance is used to warm, dry and clean the crack when the sealing operation must be conducted in less than desirable conditions, such as following rain or when the pavement temperature is below 50 degrees Fahrenheit. Heat lance can also be used to remove small amounts of vegetation in cracks. Wire brushes are helpful in removing debris and vegetation from shallow cracks.

### Equipment

1. Routers,
2. Vertical-Spindle
3. Rotary-Impact
1. Hot Compressed Air Heat Lance
  - a. NOTE: Should only be used when the pavement is wet or cold (Pavement Temperatures below 50 Degrees)
4. Wire-brush such as a Billy Goat
5. Compressed air



### Crack Preparation Procedures

1. Hairline cracks (less than 1/4") require no preparation
2. Small Cracks (1/4" to 3/4")
3. Should be widened to a nominal width 1/8" greater than the existing nominal or average width. Widening the cracks 1/8" will eliminate the potential for raveling of the pavement along the edges of crack and will provide a sealant reservoir that has vertical faces. The depth of the routed crack should be approximately 3/4". A backer rod material should be placed in crack that have a depth greater than 3/4".
4. Medium Cracks (3/4" to 2")
5. Shall be prepared by simply cleaning the crack using a sandblaster, HCA Heat Lance, or wire-brushes and then cleaning with compressed air. Crack must be inspected to ensure that is clean and dry.
6. Large Cracks (Greater than 2"). Cracks wider than 2" should be prepared in the same manner as potholes. A saw should be used to cut away damaged pavement to provide a vertical faces. The area should then be cleaned and filled with hot mix asphalt instead of sealed.



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7. Crack Widening. Meandering cracks should be widened using a router. After the crack has been widened or the existing sealant removed, the crack should be cleaned to prevent any debris from contaminating the crack.
8. Final Crack Filling. Once the old sealant and debris have been removed from the crack, the crack is cleaned with compressed air. The compressed air is blown into the crack to remove sand or any debris that was loosened during the initial cleaning. The compressed air also aids in the removal of moisture.

**SCOPE:**

**Crack Filling is performed on non-working cracks that are 1/4" or less than 1/4" in width:**

1. Cleaning of the crack is required with a Hot Air Lance and the material installation shall be such that the crack is filled flush with the pavement surface.
2. No over-banding is required

**SCOPE:**

**Crack Sealing is performed on working cracks that are greater than 1/4" in width.**

1. Preparation of the crack by the use of a router for meandering cracks that will provide vertical sides is required.
2. The material reservoir shall be no greater than 3/4" by 3/4"
3. Clean after routing.
4. Manufacturers recommended backer rods can be used for deeper cracks which means that if a crack is several inches deep the Contractor can minimize material loss and still provide an acceptable seal.
5. Install hot pour rubberized crack filler in areas of repair to finish grade of existing surface one time only. Filler to be applied to dry surfaces. Filler may not be flush with asphalt surface to allow for expansion and contraction.

***Note: Areas of severe separation and depression should be addressed as Enhanced Crack Filling.***