ASPHALT PATCHING

Placement of asphalt patch material to repair a severe, localized distress.

Asphalt patching, or pothole patching, is a temporary solution for repairing a localized distress. In most cases, potholes are formed when connected fatigue cracks, or alligator cracks, allow water into the pavement structure. This water, combined with the traffic loadings, force portions of the weakened pavement to become loosened and finally removed, leaving a pothole. Placing additional asphalt material in the hole will extend the serviceability of the roadway, but will not provide a long-term solution. A semi-permanent patch, or a full-depth permanent patch requires a greater amount of effort, but results in a higher quality and longer lasting patch.

PURPOSES:

Maintain safety

Restore surface

Repair localized failure

Prolong pavement serviceability

Selecting the Project: Patching procedures may be used for potholes or deteriorated areas of virtually any size. Potholes having a diameter of 6 inches or more should be patched for safety reasons. Proper patching procedures should also be used to repair edge failures, localized base failures, and utility cuts.

CAUTION: *Though typical procedures range from "throw-and-go" to full-depth and semi-permanent patches, minimal effort will result in minimal success. At a minimum, the area should be cleaned, dried, properly filled, and thoroughly compacted.*

Materials: A number of materials are acceptable for patching, including hot mix asphalt, cold mix asphalt, aggregate/emulsion combinations, and special proprietary patching mixtures. Though hot mix is usually the best performer, other materials may provide significant advantages relating to handling, temperature, and availability.

Construction: Remove entire damaged pavement area using vertical rectangular cuts (pneumatic hammer with spade bit, diamond saw, cold milling machine). Remove all damaged material, then clean and dry the surface (broom, mop, air blower). For full-depth permanent patches, excavate 50% deeper than distress depth. Place patch material in hole using a shovel, exceeding capacity by about 20% so that after compaction, the surface will be slightly crowned (1/4"). Compact the patch in ≤4" lifts until stable (tamper, compactor, roller). For full-depth patches, compaction equipment should be narrow enough to not "bridge" the hole.

The cost of a patch is primarily a function of how long the patch lasts. Taking extra steps to create a higher quality patch results in lower overall patching costs.

* Improve performance by 1) applying tack coat to sides and bottom of the hole before placing patch material, 2) placing crack sealant along edges of the patch, and 3) spraying a fog seal on top of the patch for waterproofing. Use blotter coat if needed for traffic.

Cost:
$40 - $1000 / patch
Dependent upon size

PAVEMENT LIFE EXTENSION GENERATED BY PATCHING	LOWER TRAFFIC	HIGHER TRAFFIC
Asphalt surface – up to 5 yrs old, good condition	1 – 3 yrs	1 – 2 yrs
Asphalt surface – aged, fair condition	0.5 – 2 yrs	0 – 1 yrs
Chip Seal – good to fair condition	1 – 2 yrs	1 – 3 yrs