

ITEM 502.14 05 - PARTIAL DEPTH PAVEMENT REPAIR USING NON-CEMENTITIOUS PATCHING MATERIALS

DESCRIPTION. Perform partial depth concrete pavement repairs using non-cementitious materials.

MATERIALS. CrafcotechCrete or approved equal as determined by the Director, Materials Bureau.

CONSTRUCTION DETAILS.

Technical Assistance. Processes with this specification are performed in accordance with the manufacturer's instructions. The manufacturer must supply on-site technical assistance at the beginning of the work until the Engineer determines the assistance is no longer required. Provide the manufacturer's application instructions to the Engineer at least 7 calendar days before starting work associated with patching.

Determine Repair Boundary. Sound the area surrounding the repair with a 1 - 1.5 kg hammer to identify delaminated areas and include them within the repair boundary. Extend repair areas 75 - 150 mm beyond the visible deterioration or delaminations, whichever is larger. Combine repair areas within 150 mm of each other into one repair. Mark the repair boundary outlines.

Saw Cut Repair Boundary. Do not saw cut until the Engineer approves the repair boundary. Diamond blade saw cut the repair boundaries 50 - 100 mm deep. Cut at right angles to the pavement surface. Over cut intersecting saw cuts such that the entire repair area is cut to the same depth.

Use diamond blade saws capable of making straight, 100 mm deep, saw cuts. Use saws equipped with cutting guides, blade guards, water cooling systems, dust control, and cut depth control. Maintain equipment and supplies to ensure uninterrupted operation.

Concrete Removal. Use chipping hammers to remove concrete within the saw cuts. Remove concrete such that the repair bottom is at a uniform depth, ± 25 mm, and sound concrete is exposed along all faces. Discontinue removal if:

- Pavement joint hardware is encountered.
- The required repair depth exceeds 100 mm.
- The PCC surrounding or below the removal area is unsound.

In this instance the Engineer will determine the required repair, typically full-depth removal and replacement.

Use chipping hammers weighing no more than 13.5 kg (including bit and muffler) equipped with sharp spade bits. Provide the Engineer hammer specifications from the Manufacturer before sawing or coring. Use a maximum air pressure of 700 kPa (measured at the compressor) to power the hammer. Supply an air pressure gauge at the compressor that allows the Engineer to easily monitor air pressure. Maintain equipment and supplies to ensure uninterrupted operation. The Engineer may halt operations if concrete to remain in place is damaged by the hammers.

Clean the Repair Bottom and Vertical Faces. As close to repair material placement as possible, thoroughly abrasive blast all concrete surfaces that will be in contact with the repair material such that they are uniformly abraded and free of any dirt, laitance, oil, or other material that may prevent bond. Consult the Manufacturer's instructions and completely dry the substrate, if required, before placing the repair material.

Application. Apply bonding agent and handle, mix, heat, place, and texture the material in accordance with the manufacturer's instructions.

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METHOD OF MEASUREMENT. The work will be measured for payment as the number of square meters of non-cementitious repair material placed measured to the nearest 0.01 m².

BASIS OF PAYMENT. Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work, including technical assistance from the Manufacturer, in the unit price bid for Partial Depth Pavement Repair Using Non-cementitious Patching Material.