

Section 2540. Longitudinal Joint Repair

2540.01 DESCRIPTION.

- A. For longitudinal joint repair:
- Mill the existing unstable asphalt material down to the PCC base over longitudinal widening joints and the center line joint, as shown in the contract documents or as directed by the Engineer. The width to be milled will be designated in the contract documents.
 - Clean and seal or fill the existing longitudinal opening in the concrete base.
 - Fill the milled trench with the specified mixture.
- B. The Engineer may also designate other joints and cracks for this repair.

2540.02 MATERIALS.

- A. Use the following materials for filling the longitudinal joint in the PCC base:
1. For a 0 to 3/4 inch (0 mm to 20 mm) opening, fill the existing joint with either PG 58-xx or CRS-2 emulsion.
 2. For an opening greater than 3/4 inch (20 mm), fill the existing joint with a 3/8 inch to 1/2 inch (9.5 mm to 12.5 mm) commercial HMA mixture with PG 58-xx or other suitable hot or cold bituminous mixture approved by the Engineer.
- B. For completing the joint repair (filling the milled trench above the PCC base), use a 300,000 ESAL HMA or similar mixture approved by the Engineer.

2540.03 CONSTRUCTION.

A. Equipment.

1. Use milling equipment capable of removing deteriorated material 6 inches (150 mm) in width and up to 7 inches (175 mm) in depth in a single pass operation. Use equipment capable of delivering high pressure compressed air to the joint from a nozzle on a flexible hose to:
 - Remove other deteriorated material, and
 - Clean the existing joint in the PCC base.
2. The intent is to use maintenance type equipment for filling joints with bituminous material and for producing and placing asphalt mixtures for joint and trench filling. The Engineer may waive those requirements that make it impractical to use this type of equipment.
3. To compact the lower lifts, use any one of the following:
 - Mechanical tampers meeting the requirements of [Article 2001.04](#),
 - Trench rollers,
 - Vibratory compactors, or
 - Weighted vehicles operated in the trench.

B. Joint Repair.

1. Use milling equipment to remove the deteriorated material above the longitudinal joint. Remove all deteriorated material to the PCC base surface, including any mesh. Spread this material on the adjacent shoulder, or remove according to [Article 1104.08](#).
2. Remove all loose and adjacent deteriorated material from the existing joint in the PCC base to a depth of at least 4 inches (100 mm) using high pressure compressed air. Air blast the joint twice. Should the air blast remove deteriorated material in a manner that undermines any of the asphalt surfacing, use hand tools to produce a nearly vertical face of sound material.
3. It is anticipated that the blasting operation will, on occasion, remove or indicate the need for removal of material outside of the trenched area. When these additional areas are in excess of 2 square feet in 10 linear feet (0.2 m² in 3 m), they will be considered as part of the surface

patching operation. The material used to repair these areas will be measured and paid for as surface patching.

4. Fill joints in the PCC Base with the material specified in [Article 2540.02](#). Spade and rod into place the material used to fill joints over 3/4 inches (20 mm) in width. Compact the material with suitable hand tools to the satisfaction of the Engineer. Take care not to overfill the joint.
5. Lightly tack the vertical faces and the base of trench prior to filling the trench with HMA. Ensure these surfaces are clean and dry enough to make this tacking operation effective.
6. Place the material for filling the trench in uniform lifts of no more than 3 inches (80 mm) in depth. Compact the material with a minimum of three passes with compaction equipment. Cores may be required to ensure that compaction is adequate. Ensure the finish elevation of the trench material is level with, or no more than 1/4 inch (6 mm) above, the surrounding pavement surface.

C. Limitations.

Apply [Article 2212.03, C](#).

2540.04 METHOD OF MEASUREMENT.

Measurement for Longitudinal Joint Repair will be to the nearest 0.1 foot (0.1 m) on the basis of 6 inch (150 mm) width of repair.

2540.05 BASIS OF PAYMENT.

- A. Payment will be paid the contract unit price per linear foot (meter) of Longitudinal Joint Repair completed.
- B. Payment is full compensation for:
 - All labor, materials, equipment necessary for milling to the existing PCC base,
 - Removal of all deteriorated material from the joint and trench,
 - Cleaning and filling the joint with the specified material, and
 - Filling the trench with HMA.