

Asphalt Surface Crack Assessment & Repair Recommendation

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1. Purpose

This technical note evaluates the pavement distress documented in the attached site photographs and provides a recommended repair methodology together with the corresponding PAVECOR product range for asphalt surface protection and crack maintenance.

2. Site Observation

The submitted photographs show a single, narrow, meandering crack line running along the pavement, in one location crossing a transverse construction/joint line (Figure 4). No adjacent alligator (fatigue) cracking, rutting, or edge raveling is visible in the surrounding surface, and the crack width is estimated below 5 mm.



Figure 1 — General view of the longitudinal crack along the pavement lane.



Figure 2 — Close-up of the crack line showing narrow, single-line propagation.



Figure 3 — Crack extending toward the shoulder edge; no adjacent alligator cracking observed.



Figure 4 — Crack intersecting a construction/transverse joint line.

3. Crack Classification

Based on the visual evidence, the distress is consistent with one of the following mechanisms, which should be confirmed on site:

- Reflective cracking — an underlying pavement layer or joint reflecting through the new surface course
- Thermal / shrinkage cracking — caused by binder contraction under temperature cycling
- Longitudinal construction joint cracking — separation along the seam between two paving passes

The crack has not yet progressed to raveling or interconnected fatigue cracking, which indicates early-stage distress. This is the optimal condition for low-cost crack sealing, before water infiltration reaches the base layer and accelerates deterioration into potholing.

4. Recommended Repair Procedure

1. Clean the crack of dust, debris, and vegetation using compressed air or a wire brush; dry with a hot-air lance if moisture is present.
2. Rout the crack (if narrower than 2–3 mm) to a 10–15 mm width and 20–25 mm depth reservoir to provide adequate sealant volume and movement capacity.
3. Apply a bituminous tack coat / primer to promote adhesion, particularly on oxidized or aged surfaces.
4. Pour the PAVECOR hot-applied, SBS-modified rubberized crack sealant at 180–200 °C; its elastic behaviour allows it to expand and contract with the pavement, delaying re-cracking.
5. Level the sealant flush with the surrounding surface while still hot and dust with fine silica sand or mineral filler to prevent tire pick-up and allow early traffic opening.
6. Apply a full-width surface protection / fog seal treatment to address general UV and oxidative aging across the pavement, recommended where binder loss is visible.
7. Re-inspect the treated section at 6–12 month intervals; if the crack is reflective in origin it may reopen and require sealant renewal. If settlement is suspected, evaluate base/subgrade stabilization.

5. Recommended PAVECOR Products

Product	Application
Hot-Applied Rubberized Crack & Joint Sealant (SBS-Modified Bitumen)	Primary crack-filling compound; elastic, high-adhesion, resists thermal cycling
Cold-Applied Crack Filling Compound	Localized, low-equipment repairs; quick application
Bituminous Tack Coat / Primer	Surface preparation prior to sealant application, improves bond strength
Asphalt Surface Protection Solution (Fog Seal / Rejuvenator)	Restores surface binder, slows UV and oxidative aging across the full pavement
Cold-Mix Asphalt Patch Repair Mortar	Point repairs where cracking has progressed to potholing
Soil / Base Stabilization Chemicals	Addresses recurring cracking caused by subgrade or base-layer settlement
EPDM Joint Gaskets	Structural movement joints (bridge decks, culvert transitions) where applicable

6. Notes

This assessment is based on visual review of the supplied photographs only. On-site inspection, crack width/depth measurement, and pavement age/traffic loading data are recommended prior to final material selection and quantity estimation. Product technical data sheets and application guidance are available on request through PAVECOR's BoQ-based quotation process.

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