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**3.33 CRACK REPAIR - SPRAY PATCH****3.33.1 GENERAL**

The work consists of repairing transverse and longitudinal cracks by cleaning the defect of all rock, dirt, sand or other objectionable material, applying asphalt binder as a tack material, filling with a mixture of asphalt binder and crushed aggregate and compacting the mix.

**3.33.2 MATERIALS**

Aggregate shall be supplied in accordance with Specification 3.2, Aggregate Production and Stockpiling and Specification 5.2, Supply of Aggregate.

The Contractor shall produce crushed aggregate meeting the following gradation specifications.

<u>Metric Sieve Size <math>\mu\text{m}</math></u>	<u>% Passing</u>
12 500	100
10 000	90 - 100
5 000	20 - 100
2 500	5 - 30
1 250	0 - 10

The Contractor shall supply an emulsified asphalt binder appropriate for the aggregate materials used.

**3.33.3 EQUIPMENT**

The Contractor shall supply all equipment necessary to complete the work. The equipment required includes but is not limited to the following:

- A compressor for high pressure air with a minimum rated capacity of 5.2 cubic metres per minute (185 CFM) capable of blowing the crack clean of all dirt, sand, rock, or other objectionable material.
- A proprietary or prototype machine capable of spraying the asphalt into the crack, and then combining crushed aggregate and asphalt and spraying the mixture into the crack.
- Appropriate compaction equipment.

**3.33.4 PROCEDURE**

The Consultant will determine which cracks are to be repaired. Generally, cracks less than 5mm width will not require repair. Potholes or other surface defects that are contiguous with cracks are considered to be 'crack related' and are to be repaired by spray patching.

Work shall not be performed when the atmospheric temperature at the work site is below 5°C.

All objectionable material shall be removed from the open crack and surrounding area by blowing with high pressure air streams or other means acceptable to the Consultant.

Cleaned cracks shall be sprayed with the emulsified asphalt, and then sprayed with the combined asphalt and crushed aggregate mixture.

Some over-spraying of the crack will be required to ensure a smooth transition between the repaired crack and the adjacent undisturbed pavement surface.

The repaired area shall be compacted to ensure adequate embedment of the asphalt aggregate mixture into and over the crack.

All loose aggregate and debris shall be swept or removed from the pavement surface and disposed of to the satisfaction of the Consultant. Generally, the debris may be swept or blown evenly over the sideslopes however, in some cases as determined by the Consultant, the Contractor shall pickup, haul and dispose of it in an approved site.

**3.33.5 SCHEDULE LIMITATIONS**

The Contractor shall schedule his operations to ensure that crack repair is completed a minimum of two weeks prior to any required pavement overlay.

**3.33.6 MEASUREMENT AND PAYMENT**

Measurement will be in metres based on the length of cracks treated.

Payment will be made at the unit price bid per metre for "Crack Repair - Spray Patch". This payment will be full compensation for cleaning the cracks; disposing of the debris; tacking; providing the crushed aggregate and asphalt binder; producing, hauling, placing and compacting the mix; traffic accommodation and signing; and all labour, materials, equipment, tools and incidentals necessary to complete the work.

Payment for the supply of aggregate will be made in accordance with Specification 5.2, Supply of Aggregate.