

SECTION 370

PULVERIZE EXISTING ASPHALT

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370.01 DEFINITION

Full depth asphalt reclamation, often referred to as pulverizing, is a recycling technique in which existing asphalt pavement is crushed in place and mixed with a portion of the underlying granular base to form a homogeneous, blended mixture. The recycled mixture is then shaped and compacted for use as granular base in the new road structure.

370.02 PROCEDURE

The Contractor shall pulverize the existing asphalt pavement and underlying granulars to a total depth equivalent to twice the existing asphalt thickness. If underlying granular layers have insufficient thickness the Owner's Representative must be notified immediately. The depth of pulverizing for determining payment at the contract unit price shall be 220 millimetres, unless otherwise noted in the contract documents. Areas requiring a pulverizing depth greater than 220 millimetres (or as specified in the supplementary general condition) shall be compensated for at the prorated rate as described in Section 370.04.

The pulverized material shall have 100% passing a 40 millimetre sieve and shall be blended uniformly. Any material larger than 40 millimetre in dimension shall be removed from the surface of the Work. Pulverized material shall contain no more than 50% asphalt coated particles when tested in accordance with the latest version of MTO LS-621.

The pulverizing process shall be performed using a self-propelled machine specifically manufactured for full depth recycling work and capable of reducing the material to the specified size. It shall pulverize to a specified depth with standard depth control (as shown on a working gauge) and must maintain a consistent cutting depth and width.

After the pulverizing operation has been completed, the Contractor shall prepare the roadway for Hot or Warm Mix Asphalt Paving. This shall include saw cutting the asphalt, rough grading and addition of new granular "A" as directed by the Owner's Representative, fine grading and compaction. The grading and compaction shall be in accordance with Section 315 and 316, as appropriate.

Should the Owner's Representative require the gradation of the pulverized material to be adjusted, thorough mixing of new granular "A" with the pulverized material will be required. The new road profile and cross section shall be restored to the satisfaction of the Owner's Representative. Work under this item shall also include the excavation and removal of pulverized materials from the transitions areas to permit a suitable transition to match into the existing asphalt as directed by the Owner's Representative.

The Contractor shall be responsible for maintaining the gravel surface in a condition acceptable to the Owner's Representative throughout the entirety of the project. The Contractor is reminded that Section 840 applies to this item.

Prior to termination of daily operations, all open pulverized sections shall be graded, shaped and compacted leaving it suitable for a driving surface.

The Contractor shall be responsible for scarifying and reshaping any areas where Granular A material, placed in preparation for paving operations, has deteriorated due to prolonged exposure and wear. The Contractor shall ensure that the affected areas are properly prepared to meet the specified requirements for paving. The cost associated with the scarifying and reshaping operation shall be considered incidental to the overall work, and no additional compensation will be provided.

The roadway shall not be left unpaved more than 10 days after pulverization of the old asphalt and the pulverized or unpaved work area shall not be greater than 4 kilometres in road length.

Any pulverized roadway that remains unpaved for a period exceeding 10 days shall be subject to the full application of the Liquidated Damages Daily Rate for each day the affected section of the roadway remains in an unpaved condition.

370.03 MEASUREMENT FOR PAYMENT

Measurement for payment shall be in square metres of actual area of roadway pulverized, rounded to one decimal place.

The measurement calculations shall be based on actual existing asphalt width determined from field measurements and the length of the actual horizontal distance pulverized as determined by the Owner's Representative. Unless indicated otherwise in the contract documents, any area pulverized at a depth greater than 220 millimetres, and verified by the Owner's Representative at the request of the Contractor prior to completing the work, will be measured separately for payment at a prorated amount as defined below.

370.04 BASIS OF PAYMENT

Payment at the contract price for full depth asphalt reclamation will be considered compensation in full for all labour, material and equipment use to saw cut asphalt at the limits of pulverizing, pulverize the existing asphalt and granulars to a total depth of 220 millimetres or as specified in the contract documents, rough and fine grading including blending of new granular "A", compaction, and dust control as deemed necessary by the Owner's Representative. Payment for the new granular "A" will be made according to Section 315.

In the event the Contractor encounters areas of significant length (greater than 100 metres) where the actual depth of pulverizing may exceed 220 millimetres or the stipulated depth in the contract documents, the Contractor shall notify the Owner's Representative of such locations prior to proceeding with the work. The Contractor shall allow the Owner's Representative time to investigate such areas as necessary to determine the need to exceed the prescribed depth. In the event the Owner's Representative determines the need to increase the pulverizing depth beyond the contract requirements, the unit price bid per square metre shall be adjusted in accordance with the requirements below. Only areas authorized by the Owner's Representative after receiving notification from the Contractor will be eligible for the unit price adjustment.

Unit Price Prorated Factor

$$\text{Prorating Factor (PRF)} = 1 + 0.75(A-B)/B$$

$$A = \text{Actual Depth} \quad B = \text{Stipulated Contract Depth} \quad \text{PRF} > 1.0$$

Example of Prorated Unit Price for area with depth greater than 220mm:

A – 250mm (this would indicate existing asphalt at 125mm and underlying granulars at 125mm)

B – 220mm (stipulated contract depth)

$$\text{PRF} = 1 + 0.75[(250-220)/220]$$

$$\text{PRF} = 1.102$$