

ASPHALT MILLING

1.0 MILLING OF ASPHALTIC CONCRETE PAVEMENT

1.1 DESCRIPTION

- 1.1.1 This work shall consist of removal of asphaltic concrete pavement by cold planing in accordance with these specifications and in reasonably close conformity with the lines, grades and cross sections shown on the plans or as designated by the Engineer.
- 1.1.2 The sequence of the locations to be milled will be determined by the Engineer.
- 1.1.3 Stockpile sites are located at the following location:

**City Yards, 5 Street and 4 Avenue North
Lethbridge, AB**

1.2 EQUIPMENT

- 1.2.1 The equipment for removing the pavement surface shall be a cold planing machine specifically designed for automatically controlled profiling.
- 1.2.2 The automatic controls shall provide for accurately establishing profile grades at each edge of the machine by referencing from the existing pavement or an independent grade reference, where required, or be capable of automatically maintaining a designated cross slope from a single reference.
- 1.2.3 The machine shall be self-propelled and shall have sufficient power, traction and stability to maintain an accurate depth of cut.
- 1.2.4 The machine will be equipped with means to effectively control dust generated by the cutting operation.
- 1.2.5 Hauling equipment shall be available to receive milled material directly from the milling machine or loaded from a windrow of milled material when approved by the Engineer, and haul it directly to the stockpile.
- 1.2.6 Equipment for removing any loose material during the sweeping operation shall have the capability to pick the material up off the milled and/or adjacent roadway and be able to be unload onto the hauling equipment.

1.3 CONSTRUCTION

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- 1.3.1 The pavement surface shall be removed by milling to the specified depth, width, grade, and cross section shown on the plans or as directed by the Engineer.
- 1.3.2 The number of passes required to achieve the specified width and depth shall be determined by the Contractor.
- 1.3.3 If the milled surface is to be used as the final wearing surface, the texture produced by the planing operation should be characterized by uniform, discontinuous longitudinal striations or other patterns which will, in the opinion of the Engineer, provide a satisfactory riding surface and skid resistance.
- 1.3.4 The surface deviation should not exceed 16 mm in 10 m for a final wearing surface, or 21 mm in preparation for overlay.
- 1.3.5 The milling is to expose frames of all manholes, water valves, survey monuments, power and telephone poles and water valves to the required depth of milling.
- 1.3.6 Dust produced shall be controlled to a level acceptable to the Engineer.
- 1.3.7 When pavement removal is to be completed across the entire roadway width, it shall be completed to a uniform termination point in any given working day. For divided roadways, the interpretation of "entire roadway width" shall be that portion of the roadway facility associated with the movement of traffic in one direction. At the point of daily termination of removal operations, abrupt changes in the roadway surface profile shall be avoided. The longitudinal transition shall be a maximum of 25 mm vertically per metre.
- 1.3.8 In the event the entire roadway of pavement along a section has not been milled by the end of the working period, resulting in a vertical longitudinal face, the maximum deviation between the two surfaces should not exceed 40 mm.
- 1.3.9 Vertical cuts along a gutter line will be allowed at the end of the working period. Should the depth of cut be 75 mm or greater, proving hazardous to traffic, suitable signing and/or warning devices shall be provided by the Contractor.
- 1.3.10 Asphaltic concrete that cannot be removed by the milling equipment because of physical or geometrical restraints should be removed by other methods suitable to the Engineer.
- 1.3.11 All milled material shall be loaded directly to trucks from the milling machine

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or from the windrow if approved by the Engineer, and hauled to the designated stockpile site.

- 1.3.12 The milling equipment shall be operated and maintained in such a manner that tearing and breaking out of the underlying and adjacent material is minimized.
- 1.3.13 The resultant milled roadway surface shall be swept clean immediately after the removal of the milled material, and in no case should the sweeping operation be more than 100 metres behind the milling operation.
- 1.3.14 Any distress of the newly milled surface caused by the milling which may constitute a driving hazard, shall be promptly repaired to the satisfaction of the Engineer.
- 1.3.15 The Contractor shall at all times minimize contamination of the milled material with granular or deleterious material.

1.4 STOCKPILING SITE

- 1.4.1 The location of the stockpile within the site shall be selected to assure that positive surface drainage exists away from the stockpile.
- 1.4.2 The area upon which the stockpile is to be constructed shall be stripped of all clay loam, organic material and other soil as directed by the Engineer.
- 1.4.3 All milled material shall be stockpiled in such a manner that no equipment is allowed to operate on the stockpile itself. The milled material shall not be compacted after placement into the stockpile. The contractor shall be responsible for providing machinery that will maintain an efficient stockpile.
- 1.4.4 The maximum permissible height to which the milled material may be stockpiled is 3 metres, and stockpiling equipment shall operate so as to create as small a total area as possible. When mechanical equipment is used to facilitate the construction of an efficient stockpile such as a front end loader, the free fall distance shall not exceed two (2) metres.

1.5 MEASUREMENT FOR PAYMENT

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- 1.5.1 Work shall be measured by the square metre of surface area milled to a specified depth.
- 1.5.2 Asphalt milling shall be paid for at the tendered unit price which shall be full compensation for all labour, tools, materials and equipment necessary to complete the work, including all other work necessary or incidental thereto for which separate payment is not provided elsewhere.
- 1.5.3 Payment by the square metre will be for an average cut of 25 mm, 53 mm, or 90 mm, and shall be full compensation as listed in 1.5.1.