

ITEM 490.1701--25 - PRODUCTION COLD MICRO-MILLING

1. DESCRIPTION:

- 1.01 This work shall consist of the milling, shaping and removal of portions of existing surfaces by a cold micro-milling process, and subsequent cleaning, utilizing equipment and procedures meeting the requirements in this specification.
- 1.02 The work shall consist of production cold micro-milling of Hot Mix Asphalt (HMA) or concrete pavement as indicated in the contract documents and as shown on the plans.

2. MATERIALS:

- 2.01 Provisions of §490-2, Materials, shall apply except as modified below.
- 2.02 **Equipment.** The micro-milling machine shall be equipped with a cutting mandrel with carbide or equivalent tipped cutting teeth designed for micro-milling asphalt or concrete pavement surfaces to close tolerances. The micro-milling machine shall be capable of producing a finished surface texture that consists of a matted surface with a transverse pattern with 0.3125 inch maximum center to center of each strike area. The difference between the high and low points of the matted surface shall not exceed 1/16 inch. The contractor shall be knowledgeable of equipment capabilities and is advised that the texture specified may not be obtainable at high speeds. The carbide cutting teeth shall be uniform in diameter with a uniform length, with a ± 0.02 inch tolerance. The tooth holder blocks shall be uniform and not cause variations in the cut radius greater than ± 0.02 inches. The contractor shall submit copies of the manufacturer's equipment specifications 7 days prior to milling the test section that show the equipment meets the specification requirements. Small areas, tapered lanes, etc. may be milled by a smaller machine acceptable to the Engineer.
- 2.03 The advancing ground speed of the milling operation shall be a function of the RPMs of the milling drum such that the full uniform texture pattern is achieved. The speed of milling operation, in feet per minute, shall be limited to 2/3 times the drum RPMs. Any proposal to advance faster than this speed shall be discussed with the Engineer and proven on the test strip, and result in no repeated inconsistencies in texture during production milling. If these inconsistencies are present, the machine speed will be reduced to the recommended speed as stated above.

3. CONSTRUCTION DETAILS:

- 3.01 Provisions of §490-3, Construction Details, General shall apply.
- 3.02 **Production of Cold Micro-Milling.** Production cold micro-milling of bituminous and concrete surfaces shall be performed in accordance with the details and the locations indicated in the plans.
- 3.03 The milled area shall be as shown on the plans. The cut shall be no deeper than 1 inch per pass. The total milled depth shall be as shown on the plans.
- 3.04 The entire milled surface shall be textured, shall be substantially free from waves or irregularities, and shall not vary from a 10-foot straight edge by more than 1/8 inch. There can be occasional exceptions as determined by the engineer where low point defects may not be textured in order to maintain acceptable profile. The texture produced for the finished pavement shall be a uniform surface with longitudinal striations. The difference between the high and low points of the surface texture shall be approximately 1/16 inch.

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3. CONSTRUCTION DETAILS: (cont'd)

3.05 On the first day of milling, after acceptance of the proposed equipment submittal, the contractor will mill a test strip at a specified ground speed. The texture and consistency of profile and cross slope of this test section will be evaluated by the Engineer. If the contractor proposes to mill at higher speeds than this specification allows, a test strip must be milled to demonstrate the texture achieved will meet the specification limits.

3.06 Continuously remove the slurry from the pavement using a vacuum system, and transfer the slurry into equipment capable of transporting it from the job site without spills. In any case, do not allow slurry discharge into:

- Occupied travel lanes.
- Drainage structures.
- Wetlands, streams, estuaries, or sensitive environmental resources identified in the contract documents.
- Areas where it will become a public nuisance.

Dispose of slurry in conformance with all Federal, State, and local regulations.

4. METHOD OF MEASUREMENT:

4.01 Provisions of §490-4, Method of Measurement, shall apply.

5. BASIS OF PAYMENT:

5.01 Provisions of §490-5, Basis of Payment, shall apply.

Payment will be made under:

Item No	Item	Pay Unit
490.1701--25	Production Cold Micro-Milling	Square Yard