

SECTION 2200 – SUBGRADE PREPARATION AND PAVEMENT MILLING**PART 1 - GENERAL**

- 1.01 SCOPE:** This Section covers the removal of pavement by excavation and preparation of pavement subgrade. Topics included are disposal, equipment requirements, cold milling, subgrade compaction and grading tolerances, and placement of granular base.
- 1.02 SALVAGE AND DISPOSAL:** The Unified Government retains the ownership of milled asphalt chips. Contractor shall transport millings to the Unified Government-owned yard(s) identified in the Special Conditions. Millings shall be tail dumped where directed. Unified Government will stockpile material. Other material shall be disposed of off site. Contractor shall make all arrangements necessary for disposal of materials.

PART 2 - PRODUCTS

- 2.01 EXCAVATING EQUIPMENT:** Excavating equipment operating on pavement surfaces to remain shall be mounted on rubber tires.
- 2.02 ROTOMILL MACHINES:** Pavement milling machines shall be track propelled type rotomill capable of maintaining precise grade and cross-slope control. Milling machines used for cold recycling shall be capable of distributing and mixing asphalt emulsion inside the drum cage, or a separate mixer shall be used. Approved models are CMI Roto-Mill, Roadtec Roto-Mill, or Caterpillar Roto-Mill.
- 2.03 SUBGRADE STABILIZATION MATERIALS:** Stabilization materials shall meet the following requirements, and application shall be as specified in Part 3:
- A. Fly ash shall meet the requirements of ASTM C260, Class C or Class F.
 - B. AB-3 shall be Aggregate for Aggregate Base Construction, gradation AB-3, KDOT Standard Specifications Subsection 1105.
 - C. Surge rock shall be Stone for Aggregate Ditch Lining, $D_{50} = 5$ inches, KDOT Standard Specifications Subsection 1116.
- 2.04 PLATE FOR TEMPORARY TRAFFIC SUPPORT:** Plate shall be ASTM A36 structural steel, minimum 3/4-inch thick, and of sufficient length to provide adequate bearing surface on solid pavement.

PART 3 - EXECUTION

- 3.01 MILLING:** Normal depth of milling shall be 2 inches or less, but Engineer shall determine the exact limits and depth of milling. Pavement shall be removed to the edge of the concrete gutter or curb. When pavement is an asphalt overlay over brick or concrete, the asphalt shall be removed to the

underlying pavement, as directed by Engineer. Headers shall be cut at limits of milled area. Headers shall be straight across the pavement and shall have a vertical face. Headers across alleys and driveways shall be in line with the edge of pavement. A temporary wedge of milled chips shall be provided at headers, and shall be removed immediately prior to paving. Work shall be scheduled so that no longitudinal ridges are left overnight. Pavement shall be swept clean of loose chips immediately following the milling operation. From the time that an area is milled, to the time that it is overlaid, Contractor shall patch pot holes in the exposed base, on a daily basis if needed. Milled chips may be used for this patching.

When edge milling is called for on a street milling shall include the entire surface of the intersection to maintain surface water flow paths in the finished work.

If no traffic control plan is included in the drawings, the minimum traffic control requirements shall be augmented with the addition of uneven pavement signs posted on the streets under construction.

3.02 SUBGRADE PREPARATION: Pavement subgrade shall include street subgrades between lines 1 foot outside of the curbs and other areas shown on the drawings.

- A. Subgrade Stabilization: If material encountered at the subgrade cannot be compacted to the required limits, call Engineer for identification and directions. Engineer's directions to remedy unsuitable foundations shall be followed. Remediation directed by Engineer may be:
1. Excavating, spreading to dry, replacing, and recompacting the soft material;
 2. Overexcavation and disposal of the soft material and replacement by AB-3, surge rock, or asphalt pavement material; or
 3. Blending soft material with fly ash and recompacting.
- B. Requirements for new construction: Pavement subgrade shall be scarified 6 inches and compacted to at least 95 percent standard density as determined by ASTM D698; moisture content shall be within 3 percent of optimum. Pavement subgrade shall be graded continuously during final compaction effort to produce uniform grade and density. Subgrade elevation shall be true to plan elevation to within 1/2-inch.
- C. Requirements for rehabilitation: Subgrade, whether undisturbed soil or top of stabilization material, shall be free from loose material and sudden changes in alignment. Subgrade elevation shall permit pavement section to equal adjacent pavement thickness, minimum patch thickness, or at the elevation directed by Engineer; whichever is the lowest elevation. Sudden changes in subgrade elevations are not permitted.

3.03 GRANULAR BASE COURSE: Granular base shall be AB-3 aggregate compacted to 95 percent of standard density as determined by ASTM D698. Moisture content shall be within 3 percent of optimum at time of compaction.

END OF SECTION 2200