SECTION 492—PROFILE MILLING OF BITUMINOUS PAVEMENT SURFACES

492.1 DESCRIPTION— This work is profile milling of existing bituminous pavement surface with parameters to control surface tolerances in both longitudinal and transverse directions.

492.3 CONSTRUCTION—

(a) Equipment. Provide a self-propelled milling machine capable of milling a full-lane width up to 3.6 m (12-feet) wide in one pass.

Equip the milling machine with a built in automatic grade control system to control the longitudinal profile and the transverse cross-slope. Provide longitudinal controls capable of operating from a longitudinal grade reference, including string line, ski 9 m (30 feet) minimum, mobile string line 9 m (30 feet) minimum, or matching shoe. Provide the transverse controls with an automatic system for controlling cross-slope at a given rate.

Mount profiler cutters to the carrier in order to adjust and control them according to depth of cut and cross-slope. Longitudinal milling action may be produced either by a suitable carrier wheelbase or use of an automatic control system having an external reference. Produce either a variable or a constant cross-slope with cross-slop adjustments or automatic controls.

Design, maintain, and operate milling cutters to produce a surface free from grooves, ridges, gouges, or other irregularities detrimental to the safe operation of vehicles in traffic routed onto the profiled surface.

Suitable supplemental equipment or methods, approved by the Representative, may be used in small or confined areas and around utility facilities. Complete adjustment of utility facilities before the milling operation, when pavement is not to be resurfaced. Repair or replace utility facilities that are damaged by the profiling operation to the satisfaction of the utility owner at no additional cost to the Department.

(b) Profiling Operation. Remove irregularities such as bumps, corrugations, and wheel ruts, and establish the specified pavement surface elevation or cross-slope with one or more passes over the designated area, operating the milling machine in automated mode.

Remove milled material from the surface following each pass of the equipment. Before opening the completed area to traffic, thoroughly clean the surface of all loose material that would create a hazard, a nuisance, or would be redeposited into the surface texture.

Maintain the milled surface free of all loose material and contaminants during milling and cleaning operations.

Repair areas where sound pavement has been damaged by milling operations at no additional cost to the Department, in a manner satisfactory to the Representative. The repaired area must conform to the adjacent pavement in smoothness and durability.

Place binder or surface material no more than 7 days after the start of the milling operation. Maintain milled surface and repair or replace areas damaged by methods accepted by the Representative at no additional cost to the Department.

(c) Surface Patching. Areas of the milled surface to be patched due to spalling or dislodgement of unsound pavement during profile milling operation will be designated by the Representative. Excavate to match depth of existing surface. Clean the areas of loose material, coat with Emulsified Asphalt Tack Coat (AE-T), and fill with HMA material of the same type. Level and compact the HMA material to conform to the adjacent pavement.

(d) Surface Tolerances. Profile the surface to a smoothness of 3 mm in 3.0 m (1/8 inch in 10 feet), and match the surface at the edge of adjacent passes within 3 mm (1/8 inches). Conform the cross-slope of the profiled surface to the specified cross-slope within 3 mm in 3.0 m (1/8 inch in 10 feet). Provide a positive cross slope, as shown in the plans, such that the pavement drains.

(e) Disposition of Milled Material. Satisfactorily dispose of the milled material.

(f) Defective Work. Profile milling that fails to meet the surface tolerances in Section 492.3(d) will be considered defective. Payment for defective work will be made at 50% of the Contract Unit Price (CUP) for the full-lane width of the defective area.

492.4 MEASUREMENT AND PAYMENT—

(a) Profile Milling. Square Meter (Square Yard)

(b) Surface Patching. The Department will separately measure and pay for the following item(s), when indicated or required:

1. **Class 1 Excavation.** Cubic Meter (Cubic Yard)

2. **Patching.** Square Meter (Square Yard)