

SECTION 514—DIAMOND GRINDING OF CONCRETE PAVEMENT

514.1 DESCRIPTION—This work is the diamond grinding of existing cement concrete surfaces as indicated or directed.

514.3 CONSTRUCTION—

(a) Equipment. Use a power driven, self-propelled machine having diamond blades and capable of grinding the surface of the pavement to the specified smoothness tolerances and texture. Do not use equipment that causes spalls at joints or cracks, or fractures the aggregate at the surface.

(b) Grinding. Grind the pavement in the longitudinal direction beginning and ending at lines normal to the pavement centerline. Grind in either direction unless it is otherwise determined by the Representative that traffic safety considerations mandate grinding with traffic flow. Provide a uniform finished surface, eliminate joint or crack faults, and provide positive lateral surface drainage. Operate grinding machine parallel to centerline. Texture the entire pavement surface; however, do not perform extra depth grinding to eliminate minor depressions. Do not exceed 50 mm (2 inches) of overlap.

Remove slurry or residue resulting from the grinding in a continuous operation. Do not allow grinding slurry to flow across lanes occupied by traffic or to flow into gutters or other drainage facilities. Satisfactorily clean the pavement surface.

(c) Texture. Provide a surface texture consisting of parallel grooves between 2.3 mm and 3.3 mm (0.09 inch and 0.13 inch) wide with a “land area” between grooves of 1.52 mm to 2.79 mm (0.060 inch to 0.110 inch) and a difference between the peaks of the ridges and the bottom of the grooves of approximately 1.6 mm (1/16 inch).

(d) Tolerance.

1. Transverse Tolerance. Restore original pavement cross slope. Maintain a uniform cross slope. Check the uniformity of cross slope at 30 m (100-foot) intervals longitudinally.

Correct any areas with deviations greater than 6 mm (1/4 inch) in 3.6 m (12 feet). Provide a positive cross slope such that the pavement drains.

Provide the Representative with documentation recording the test location and the maximum depth of depression or slope misalignment at that location.

2. Longitudinal Tolerance. Supply and operate equipment as specified in [Section 507.3\(a\)](#), for all longitudinal roughness tests. Test the pavement surface roughness in the longitudinal direction and submit the record of the information to the Inspector-in-Charge before beginning any pavement rehabilitation work. Following grinding of the pavement surface, test the longitudinal roughness as specified in [Section 507.3\(c\)1](#).

Regrind pavement segments as specified in [Section 507.3\(d\)](#).

514.4 MEASUREMENT AND PAYMENT—

- Square Meter (Square Yard) if minimum IRI specified in [Section 507.4](#) is attained.
- Incentive payment specified in Table A, Schedule C in [Section 507.4](#), if IRI meets incentive levels specified in [Section 507](#).