

SPECIAL SPECIFICATION
3014
Diamond Grinding Concrete Pavement

1. **Description.** Diamond grind existing concrete pavement surfaces and remove resulting residue at locations shown on the plans or as directed.
2. **Equipment.** Provide machinery, tools, and equipment necessary for proper execution of the work. Use grinding machines that:
 - have a self-propelled machine built for grinding pavements;
 - provide enough power, traction and stability to maintain specified depth of cut and cross slope. (Do not use flailing devices);
 - have 50 to 60 diamond blades per foot, mounted on a multi-blade arbor;
 - have approved dual longitudinal controls capable of operating on both sides automatically from any longitudinal grade reference, which includes string line, ski, mobile string line or matching shoe;
 - have approved transverse controls with an automatic system to control cross slope at a given rate;
 - able to achieve a uniform depth of cut, flush to all inlets, manholes, bridge joints and other appurtenances within the paved area.
3. **Construction.** Demonstrate grinding work to receive approval of the operation procedure and the use of grinding and residue removing equipment.
 - A. **Grinding.** Perform grinding in a longitudinal direction beginning and ending at lines perpendicular to the pavement lane lines. Start grinding at the outside edge of the concrete pavement, and continue across the lane surface to the opposite outer edge of the traffic lane or pavement. Grind surfaces on both sides of transverse joints or cracks and finish the surfaces in essentially the same plane. Eliminate minor depressions by extra depth grinding when directed. Transition auxiliary and ramp lane grinding from the mainlane edge as directed. Terminate grinding at bridge joints.

Produce a uniform surface with a longitudinal corduroy type texture that eliminates joint and crack faults. Provide positive lateral surface drainage by maintaining a constant cross-slope across each lane.

- B. Grooves.** Groove 0.10 to 0.16 in. wide with a land area 0.70 to 0.80 in. between the grooves. Groove to the specified depth as shown on the plans. Meet the groove tolerances ± 0.02 in. for width and ± 0.06 in. for depth under normal pavement conditions unless otherwise directed.
 - C. Repairs.** Repair damages to concrete pavement caused by Contractor's operation without any additional compensation. As directed, perform repairs in accordance with Item 361, "Full-Depth Repair of Concrete Pavement" or Item 720, "Repair of Spalling in Concrete Pavement" if spalls are 0.25 to 3 in. depth.
 - D. Ride Quality.** Unless otherwise shown on the plans, measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces."
 - E. Removal of Residue.** Immediately and continuously remove the slurry or residue resulting from the grinding operation. Keep pavement in a washed clean condition, and free of slipperiness from the slurry, etc. Do not permit the residue to flow across shoulders or lanes occupied by traffic or into gutters or other drainage facilities.
- 4. Measurement.** This Item will be measured by the square yard of surface area grinded and accepted. Measurement will be based on the depth shown, within the limits shown on the plans.
- 5. Payment.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Diamond Grinding Concrete Pavement", of the depth specified. This price is full compensation for grinding the pavement surface, repairing of damaged concrete pavement including spalls or partial depth failures, loading, hauling, and disposing of the residue material, labor, tools, equipment, and incidentals. Demonstration work to receive approval for use of equipment will not be paid for unless work is performed in accordance with the Contract and is accepted.