
Special Specification 3027

Pavement Texturing



1. DESCRIPTION

This Item governs for the texturing of existing asphaltic concrete pavement and Portland cement concrete pavement and the texturing of bridge deck surfaces at the locations shown on the plans or as directed by the Engineer and in accordance with this Item.

2. EQUIPMENT

The texturing must be done by a machine designed and built for high production pavement texturing. Each machine must have a minimum average production rate of 1200 sq. yd. per hr. for concrete surfaces and 1800 sq. yd. per hr. for asphalt surfaces. The machine must employ the High Velocity Impact Method (HVIM) by hurling steel abrasive media at high velocity to abrade and texture the surface. The machine must be capable of varying the velocity of the steel abrasive as well as the speed of the machine to produce the desired surface texture. Utilization of radial blades in multiple centrifugal wheels must produce a continuous, minimum 6 ft. wide swath. This is synchronous to the recycling of abrasive and vacuuming of surface materials into a self-contained vacuum unit of 6 cu. yd. or more, meeting or exceeding all environmental air quality standards. No objectionable dust must be emitted during the work. The machinery must direct the velocity of abrasion in a bi-directional fashion, giving uniform abrasion to the surface. When transverse grooves are present, the abrasion will be at an angle transverse to the grooves to give equal texture to the groove edges.

On-board controls capable of providing and monitoring uniform velocity and direction will be required. Self-contained lighting for night operations will be required.

A generator driven electromagnet equal in width and production to the texturing machine will be available on the project. It will be used to pick up any steel abrasive left behind the machine if deemed necessary by the Engineer.

Verifiable proof of prior major pavement texturing, in accordance with this specification, or satisfactory test sections performed at the Contractor's expense will be necessary before the equipment will be approved.

3. CONSTRUCTION

Texturing must be done on the areas indicated on the plans. Texturing must be performed in a continuous operation of consecutive passes up to 6 ft. in width (if necessary), parallel to the centerline, so that 1-12 ft. lane can be completed in a maximum of 2 passes. The textured surface must have a uniform surface appearance and be devoid of machine produced streaks, ruts, or over-lap grooves which will inhibit the free flow of water. It must have a non-directional texture. Following the texturing operation, the electromagnet must pass over the entire surface if deemed necessary by the Engineer.

The texturing must not encroach on the existing centerline stripes, lane stripes, traffic arrows, cross bar stripes, traffic buttons, or other traffic markings unless approved by the Engineer. The distance from the edge of traffic markings to the texture must be a maximum of 3 in. The longitudinal area between dashed lane markings need not be textured.

All surface materials removed during the texturing process must be collected and stored in the vacuum unit until it can be removed from the project and disposed of by the Contractor. No on-site transfer of, or storage of, the materials will be permitted. No loose material will be left on the roadway or swept off to the side of the roadway.

4. TESTING

One of the following two testing procedures will be required by the Engineer.

- 4.1. **Test Method Tex 436-A Sand Patch.** When texturing first starts, a minimum of 3 sand patch tests must be taken per lane mile at randomly selected wheelpath locations. Subsequent to the first lane mile, the minimum number of tests per lane mile will be determined by the Engineer. The minimum average macrotexture depth required for each lane mile using this test will be shown on the plans. Surfaces not meeting this texture depth will be retextured at the Contractor's expense.
- 4.1.1. **FHWA Type Outflow Meter.** When texturing first starts, a minimum of 5 outflow meter tests must be taken per lane mile at randomly selected wheelpath locations approved by the Engineer. Subsequent to the first lane mile, the minimum number of tests per lane mile will be determined by the Engineer. Testing must be performed by the Contractor's technician under the supervision of the Engineer. An average of 10 sec or less must be obtained for any 1 lane mile section. Sections not meeting this criterion will be retextured at the Contractor's expense.

5. MEASUREMENT

Texturing will be measured by the square yard of surface area for each pavement type. Pavement types are asphaltic concrete pavement, Portland cement concrete pavement, and bridge decks. Square yard calculations will be based on the neat dimensions shown on the plans or as adjusted by the Engineer.

6. PAYMENT

The work performed in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Texturing Asphaltic Concrete Pavement", "Texturing Portland Cement Concrete Pavement", or "Texturing Bridge Decks." This price will be full compensation for texturing the pavement surface as well as vacuuming, hauling, unloading, and satisfactory storing or disposing of the material, for all labor, equipment, supplies, and incidentals.