**Special Note for High Velocity Surface Texturing**

1. **DESCRIPTION**

The work covered by this project shall include texturing existing concrete and/or asphalt pavement at locations and widths stated in the Proposal, cleaning the textured surfaces, and collecting and disposing of all surface materials generated during the texturing process at locations approved by the Department.

1. **EQUIPMENT**

The equipment used shall be specifically designed and built for high production pavement texturing. Use equipment employing the HVIM (High Velocity Impact Method) by hurling steel abrasive media at a high velocity to abrade and texture the surface.

The equipment shall be capable of varying the velocity of the steel abrasive as well as the speed of the machine to produce the desired surface texture such that a 12 foot wide lane is completed with a maximum of two parallel passes. The equipment shall be equipped with a vacuuming method to recover the abrasive and surface materials without emitting objectionable dust into a minimum 6 cubic yard container in such manner that meets or exceeds all local, State, and Federal air pollution control laws and regulations. Each equipment unit shall have a minimum average production rate of 1200 square yards per hour for concrete pavement and 1800 square yards per hour for asphalt pavement.

The equipment shall direct the velocity of abrasion in a bi-directional fashion, giving uniform abrasion to the surface. When transverse grooves are present, use equipment that directs abrasion at an angle transverse to the grooves to give equal texture to the groove edges.

The equipment shall have on-board controls capable of providing and monitoring uniform velocity and direction, and with self-contained lighting for night operations.

Provide additional equipment to electro-magnetically remove any remaining steel abrasive at the same width and production rate of the texturing equipment if deemed necessary by the Engineer.

Upon request by the Engineer, the Contractor may be required to provide documentation from previous pavement texturing projects demonstrating the ability to meet the requirements of this specification or conduct test sections at no cost to the Department to demonstrate that ability, prior to the approval of the use of the equipment within the limits of the project.

1. **CONSTRUCTION**

Texture the pavement surfaces in a continuous operation of consecutive passes up to 6 feet in width, parallel to the centerline such that a 12 foot wide lane is completed with a maximum of 2 passes.

Operate the equipment in such a manner that the textured surface has a uniform surface appearance, with a non-directional texture, and is devoid of machine produced streaks, ruts, or over-lap grooves which will inhibit the free flow of water.

When required by contract, conduct operations such that the texturing process does not obliterate or remove pavement striping or markings and without causing damage to the raised/inlaid pavement markers. The distance from the edge of traffic markings to the texture surfaced shall be a maximum of three inches.

Thoroughly clean the textured surface of all loose abrasives, surface materials, dust and other objectionable material using vacuum, electromagnetic, or other approved methods and remove from the right of way. Do not store or transfer surface materials on-site. Remove all loose material from the pavement surface without the use of equipment that would result in debris being swept off adjacent to the roadway. Conduct texturing operations in a manner that effectively minimizes the amount of dust being emitted.

Plan and conduct the operation so it is safe for persons and property adjacent to the work including the traveling public.

Conduct a half mile test section to determine the velocity of the steel abrasive media to require a surface texture to yield the highest skid values without damaging the surface. Stop texturing the surface until the Department evaluates the skid values obtained from the test section.

1. **TESTING**

Test the textured surface using ASTM E2380 – 09, Standard Test Method for Measuring Pavement Texture Drainage Using an Outflow Meter. Perform the testing in the presence of the Engineer with a qualified technician. A minimum of three tests are required per lane mile and during startup operations at random locations determined by the Engineer. The Engineer reserves the right to reduce testing for the subsequent lanes. Each one lane mile section shall have a minimum average test result of 10 seconds or less.

The Department will provide equipment and personnel to perform skid testing on the textured surface immediately after the surface has been textured at a maximum of half mile intervals as deemed by the Engineer. If the skid values are significantly lower than the test section reapply the surface treatment over the area until the values are within four points of the test section.

When surface texturing is required for the placement of a high friction surface treatment or an epoxy treatment overlay on a concrete surface, the texturing shall meet a minimum standard surface roughness of CSP 5 developed by the International Concrete Repair Institute.

Any additional surface texturing required to meet friction and surface roughness is at no additional cost to the Department.

1. **DISPOSAL**

Waste shall be properly disposed of off state right of way and in accordance with local and state regulation. Any cost associated with disposing the waste shall be incidental to the surface texturing.

1. **MEASUREMENT & PAYMENT**

The Department will measure the actual number of square yards of surface area that has been textured in accordance with the requirements of this specification. The Department will consider the unit bid price per square yard to include all labor, materials, and equipment necessary to complete the work. The Department will make payment for the completed and accepted quantities according to the following:

Code Pay Item Pay Unit

25089EC High Velocity Surface Texturing SQYD