

Designer Note: Use the Grooving for Recessed Pavement Marking special provision when you are using the Preformed Plastic Pavement Marking, Type B – Inlaid District special provision.

GROOVING FOR RECESSED PAVEMENT MARKING

Effective August 2, 2013

Description. This work shall consist of grooving the pavement surface in accordance with the material manufacturer's requirements and as specified herein in preparation for the application of recessed pavement markings.

Equipment. Equipment shall be according to the following.

Pavement Marking Tape Installations: The grooving equipment shall have a free-floating saw blade cutting head equipped with gang-stacked diamond saw blades. The diamond saw blades shall be of uniform wear and shall produce a smooth textured surface. Any ridges in the groove shall have a maximum height of 15 mils (0.38 mm).

CONSTRUCTION REQUIREMENTS

General. Prior to the operation, the Contractor shall supply the Engineer with a copy of the pavement marking material manufacturer's recommendations for constructing a groove.

Pavement Grooving Methods. The grooves for recessed pavement markings shall be constructed using the following methods.

- (a) Wet Cutting Head Operation. When water is required or used to cool the cutting head, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.
- (b) Dry Cutting Head Operation. When used on HMA pavements, the groove shall be vacuumed or cleaned by blasting with high-pressure air to remove loose aggregate, debris, and dust generated during the cutting operation. When used on PCC pavements, the groove shall be flushed with high pressure water or shot blasted to remove any PCC particles that may have become destabilized during the grooving process. If high pressure water is used, the pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

Pavement Grooving. Grooving shall not cause ravels, aggregate fractures, spalling or disturbance of the joints to the underlying surface of the pavement. Grooves shall be cut into the pavement prior to the application of the pavement marking material. Grooves shall be cut such that the width is 1 in. (25 mm) greater than the width of the pavement marking line as

specified on the plans. The length of the groove shall be cut such that the pavement marking material can be applied meeting the installation requirements for the entire length of the marking material. Grooving between skip dashes will not be allowed. Grooves for letters, numbers and symbols shall be cut in a square or rectangular shape so that the entire marking will fit within the limits of the grooved area. The position of the edge of the grooves shall be a minimum of 4 in. (100 mm) from the edge of all longitudinal joints. The cutting head shall be operated at the appropriate speed in order to prevent undulation of the cutting head and grooving at an inconsistent depth. The depth of the groove shall be in accordance with the manufacturer's recommendations for the pavement marking material specified. In the absence of manufacturer recommendations, the entire thickness of the marking material shall be below the finished pavement elevation, but in no case shall the groove depth be greater than 200 mils.

At the start of grooving operations, a test section of 4 properly spaced skip dashes shall be installed and embedment measurements shall be made on each of the skip dashes. The individual depth measurements shall be within the allowable ranges according to this special provision. If it is determined the test section has not been grooved at the appropriate depth or texture or that deformation of the markings has occurred during the installation, adjustments shall be made to the cutting head or the installation procedure, and another test section of 4 skip dashes shall be installed and checked. This process shall continue until the test section meets the requirements of this special provision. Markings not meeting installation requirements shall be removed and then replaced using the pavement grooving procedure. No additional compensation will be allowed for the removal and replacement of markings not meeting installation requirements.

For new HMA pavements, grooves shall not be installed within 14 days of the placement of the final course of pavement.

Final Cleaning. Immediately prior to the application of the pavement marking material or primer sealer, the groove shall be cleaned with high-pressure air blasts.

Method of Measurement. This work will be measured for payment as follows.

(a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a).

(b) Measured Quantities. Grooves will be measured for payment in place in feet (meters) for the length of grooving with pavement marking material applied. Double grooves will be measured as two separate grooves. Grooving in excess of the applied marking material, including any transition lengths, will not be measured for payment.

Grooving for letters, numbers and symbols will be measured for payment in place in Square Feet (Square Meters).

Basis of Payment. This work will be paid for at the contract unit price per Foot (Meter) for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified and per Square Foot (Square Meter) for GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS, NUMBERS AND SYMBOLS.