

635.10010011 – RECESS GROOVING FOR INLAID ASPHALT PAVEMENT MARKING STRIPES
635.11010011 – RECESS GROOVING FOR INLAID ASPHALT PAVEMENT MARKING LETTERS
635.12010011 – RECESS GROOVING FOR INLAID ASPHALT PAVEMENT MARKING SYMBOLS
635.13010011 – RECESS GROOVING FOR INLAID CONCRETE PAVEMENT MARKING STRIPES
635.14010011 – RECESS GROOVING FOR INLAID CONCRETE PAVEMENT MARKING LETTERS
635.15010011 – RECESS GROOVING FOR INLAID CONCRETE PAVEMENT MARKING SYMBOLS

DESCRIPTION. This work shall consist of grooving of portland cement and bituminous pavement surfaces in preparation for the application of recessed pavement markings.

CONSTRUCTION DETAILS.

General. Grooving requirements for Pavement Safety Marking materials shall be in accordance with details shown on Work Orders and/or Plans and as directed by the Engineer.

Before any grooving work begins, a schedule of operations shall be submitted for the approval of the Engineer. When the work is conducted under traffic, the Contractor shall supply all necessary flags, markers, signs, and other devices to maintain and protect traffic. Recess grooving shall be done in the general direction of traffic. Recess grooving against the direction of traffic flow shall not be allowed.

Whenever recess grooving is installed, the work shall be conducted in such a manner that the finished pavement surface is not damaged or left in a pattern that will mislead or misdirect the motorist.

Limits of Work. Engineer may instruct pavement surface grooving for recessed lines, letters and symbols. Lines will be meant to include: broken line; dotted line; channelizing line; barrier lines; stop lines; crosswalk line and crossbars. For lines, grooving width shall be confined to the surface area specified for the application of pavement marking line plus one (1) inch on each side of the proposed line. Grooving width of the surface area for letters and symbols shall be sufficiently large enough to accommodate the new marking. Grooving depth shall be 30-40 mils + pavement safety marking material thickness, or as directed by the Engineer.

Cleaning of Surface and Disposal of Waste. After grooving, but before placement of any pavement safety marking material, the recessed surface area shall be cleaned to the satisfaction of the Engineer. Any debris not picked up by vacuum recovery that remains on the roadway shall be removed and disposed of in a manner satisfactory to the Engineer. Any wastewater and collected solid waste shall be disposed of in accordance with all federal, state, and local requirements.

Grooving Equipment. Equipment for grooving shall be approved by the Engineer prior to the start of work. Grooving equipment shall be equipped with a free-floating, cutting or grooving head to provide a consistent groove depth over irregular pavement surfaces. The grooving or cutting head shall be equipped with diamond saw blades, steel star cutters and/or carbide tipped star cutters. The grooving equipment must be capable of producing a final pavement surface that is free of ridges.

Wet Saw Blade Operation: When water is required or used to cool the saw blades, such as during a continuous edge line grinding operation, 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 dry prior to the application of the pavement markings.

Dry Saw Blade Operation: If the grooving is done with dry saw blades, debris and dust shall be cleaned and removed by means of vacuum recovery during grinding.

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METHOD OF MEASUREMENT. Grooving of pavement surfaces for lines will be measured in feet along the centerline of the prepared surface and will be based on a nominal 4 inches wide line. Measurement for grooving surfaces for line widths greater than the nominal 4 inches will be made by the following method:

$$\frac{\text{Nominal Existing Width of Line (inches)} \times \text{Length (feet)}}{4 \text{ (inches)}}$$

No payment will be made for the additional one (1) inch of grooving on each side of the line beyond “Limits of Work” section defined above.

Grooving for letters and symbols on pavement surfaces will be measured by each unit grooved. A unit will consist of one letter or one symbol. Example: “STOP” would be measured as four (4) units.

The Engineer will adjust the quantities of these items as required to meet field conditions. This may result in substantial increases or decreases of the proposal quantities.

BASIS OF PAYMENT. The accepted quantities of grooved pavement surface will be paid for at the contract unit price, which shall include the cost of furnishing all labor, materials and equipment to satisfactorily complete the work. The cost of maintaining and protecting traffic during the grooving work will be included in the price bid.

Payment will be made under:

Item No.	Item	Pay Unit
635.10010011	Recess Grooving for Inlaid Asphalt Pavement Marking Stripes	Feet
635.11010011	Recess Grooving for Inlaid Asphalt Pavement Marking Letters	Each
635.12010011	Recess Grooving for Inlaid Asphalt Pavement Marking Symbols	Each
635.13010011	Recess Grooving for Inlaid Concrete Pavement Marking Stripes	Feet
635.14010011	Recess Grooving for Inlaid Concrete Pavement Marking Letters	Each
635.15010011	Recess Grooving for Inlaid Concrete Pavement Marking Symbols	Each