

SECTION 649 TEMPORARY PAVEMENT MARKINGS

649.1 Description

- (1) This section describes furnishing and applying temporary pavement markings.

649.2 Materials

649.2.1 General

- (1) Unless a contract bid item or contract provision requires a specific material, the contractor may furnish any material specified here in 649.2. Provide sample materials for testing as the engineer requests.

649.2.2 Removable Tape

- (1) Furnish new 4-inch tape with a pre-coated pressure-sensitive adhesive. Use tape that has demonstrated good performance in 6-month NTPEP tests for retroreflectivity, appearance, durability, removability, and residue. Use reflectorized tape where the plans show yellow or white marking. Use non-reflectorized tape where the plans show black marking.

649.2.3 Reflectorized Paint

- (1) Furnish commercially available solvent-borne or waterborne paint conforming to [646.2.2](#) and intended for marking traffic lanes on both concrete and asphalt highways. Reflectorize the paint using glass beads conforming to [646.2.3](#).

649.2.4 Reflectorized Tape

- (1) Use a commercially available 4-inch reflectorized pavement-marking tape that is readily visible when illuminated by headlights at night.

649.2.5 Raised Pavement Markers

- (1) Furnish raised pavement markers for temporary pavement marking from the department's approved products list. Use the colors and configurations the plans show. If installing at a new location, use new markers. If installing replacement markers, the contractor may install used markers in like-new condition.

649.3 Construction

649.3.1 General

- (1) Apply temporary pavement markings at the locations, and to the dimensions and tolerances the plans show, or as the engineer directs. Use the color the plans show. If applying markings over markings of a different color, completely cover the original markings. If at any point a differently colored underlying marking shows through, re-apply the overlying marking.
- (2) Prepare the surface of the pavement receiving marking as specified in [646.3.1.1](#).
- (3) For pavements open to all traffic, apply markings to all intermediate pavement layers, including milled surfaces, on the day the pavement is placed or milled unless the contract requires permanent same-day marking. If weather prevents marking, resume marking as soon as conditions allow.
- (4) If required to apply no passing zone temporary pavement marking, reference the beginning and end of all existing no-passing barrier lines before resurfacing. Accurately re-mark the temporary no-passing barrier lines after resurfacing.
- (5) Protect freshly applied painted markings until dry enough to prevent pickup under traffic. Replace all temporary pavement marking, including raised markers, that deteriorates or fails to adhere to the extent that the roadway is not adequately delineated.

649.3.2 Applying Temporary Markings

- (1) Apply paint at 13 gallons per mile, for a 4-inch line. Reflectorize with 4 pounds of glass beads per gallon of paint applied to the wet line immediately after painting. Apply paint and glass beads at a uniform rate across the full width of the line. Use equipment conforming to [646.3.2](#).
- (2) Apply marking tape as the manufacturer recommends. Apply temporary raised markers using the surface preparation and installation procedures the manufacturer recommends.

649.3.3 Removing Temporary Marking

- (1) Remove Temporary Raised Pavement Markers and marking applied under the Temporary Pavement Marking Removable Tape bid items without damaging the pavement. The contractor need not remove other temporary markings except as follows:

1. Work designated for removal under the Removing Pavement Markings bid items of [section 646](#).

2. Temporary marking placed as a contractor option under the same-day marking requirements of [section 646](#).

- (2) Use equipment with a dust control system. Collect, haul, and dispose of dust or residue from removals.

649.4 Measurement

- (1) The department will measure the linear foot bid items under this section by the linear foot of line acceptably completed. The department will calculate quantities as follows:
1. For solid lines, by adding the linear feet of solid line measured end to end.
 2. For intermittent lines, by multiplying the specified length of the individual markings of the line by the number of markings in the intermittent line end to end.
- (2) The department will measure the each bid items under this section as each individual unit acceptably completed.

649.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
649.0100	Temporary Pavement Marking 4-Inch	LF
649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF
649.0300	Temporary Pavement Marking Reflective Tape 4-Inch	LF
649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF
649.0600	Temporary Pavement Marking Removable Tape 6-Inch	LF
649.0701	Temporary Pavement Marking 8-Inch	LF
649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF
649.0900	Temporary Pavement Marking Stop Line 12-Inch	LF
649.1000	Temporary Pavement Marking Stop Line Removable Tape 12-Inch	LF
649.1100	Temporary Pavement Marking Stop Line 18-Inch	LF
649.1200	Temporary Pavement Marking Stop Line Removable Tape 18-Inch	LF
649.1300	Temporary Pavement Marking Stop Line 24-Inch	LF
649.1400	Temporary Pavement Marking Stop Line Removable Tape 24-Inch	LF
649.1500	Temporary Pavement Marking Diagonal 12-Inch	LF
649.1600	Temporary Pavement Marking Diagonal Removable Tape 12-Inch	LF
649.1700	Temporary Pavement Marking Arrows	EACH
649.1800	Temporary Pavement Marking Arrows Removable Tape	EACH
649.1900	Temporary Pavement Marking Words	EACH
649.2000	Temporary Pavement Marking Words Removable Tape	EACH
649.2100	Temporary Raised Pavement Markers	EACH

- (2) Payment is full compensation for preparing the surface; for providing all markings, including reflectorization; for protecting painted marking until dry; for replacing failed or deteriorated marking. Placing and removing temporary markings applied under the [section 646](#) contractor option for same-day marking is incidental to the applicable permanent pavement marking bid item.
- (3) Payment for the various Temporary Pavement Marking Removable Tape bid items and the Temporary Raised Pavement Markers bid item also includes marking removal, including dust and residue collection and disposal. The department will pay separately for contract required removals of other temporary pavement marking under the Removing Pavement Markings bid items as specified in [646.5](#) or [647.5](#).