**March 21, 2025**

**Revision of Section 627**

**Pavement Marking**

**Notice**

The Standard Special Provision (SSP) on the following page revises or modifies CDOT’sStandard Specifications for Road and Bridge Construction*.* The Construction Engineering Services Branch has reviewed, approved, and issued it. Use as written without change. Do not use modified versions of it on CDOT construction projects. Do not use the following special provision on CDOT projects in a manner other than specified in the instructions without approval by CDOT’s Standards and Specifications Unit. The instructions for use appear below.

Other agencies using the Standard Specifications for Road and Bridge Constructionto administer construction projects may use this special provision appropriately and at their own risk.

**Instructions for use on CDOT construction projects:**

Use the following standard special provision on all projects with pavement marking paint.

# Section 627 Pavement Marking

**Revise Section 627 by removing and replacing the existing Section 627 of the Standard Specifications with the following:**

**Description**

* 1. This work consists of furnishing and applying pavement marking, and furnishing,

installing, and removing temporary pavement marking per these specifications, the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), the Colorado supplement thereto, and in conformity to the lines, dimensions, patterns, locations and details shown on the plans or established.

# Materials

* 1. Materials shall conform to the requirements of the following subsections:

| **Material Requirements** | **Subsection** |
| --- | --- |
| Paint | 708.05 |
| Glass Beads | 713.08 |
| Modified Epoxy Pavement Marking Material | 713.17 |
| Thermoplastic Marking Material | 713.12 |
| Pavement Primer | 708.07 |
| Preformed Plastic Pavement Marking Material | 713.13 |
| Pavement Marking Tape | 713.15 |
| Pavement Marking Tape (Removable) | 713.16 |
| Raised Pavement Marker | 713.18 |
| Preformed Thermoplastic Pavement Marking Material | 713.14 |
| Methyl Methacrylate Pavement Marking Material | 713.19 |

## Construction Requirements

* 1. **General.** All pavement markings shall be placed per the following requirements. When the term “full compliance” is used, it means the pavement markings shall meet the requirements of Standard Plan S-627-1.
1. *Pavement Marking Plan.* When pavement-marking location details are not provided in the Contract, the Contractor shall submit a layout of existing conditions to the Project Engineer for approval. The approved layout is to be used as the final pavement-marking plan.
2. *Roadways Closed to Traffic During Construction.* Full-compliance final markings shall be in place before opening the roadway to traffic.

Pavement markings on detour routes shall be full-compliance markings.

1. *Roadways Constructed Under Traffic.* Full compliance final pavement markings shall be placed within two weeks after final surfacing is completed. Full compliance pavement markings shall also be placed on any roadways opened to traffic when the project pavement work is discontinued for more than two weeks.
2. *Temporary Pavement Markings.* Temporary pavement markings and control points for the installation of those pavement markings for roadways that are being constructed under traffic shall be installed as follows:
	* 1. When one roadway of a normally physically divided highway is closed, and a crossover is constructed, full-compliance pavement markings shall be placed along the tapers and through the median crossovers to the two-way traffic section. Pavement markings through the two-way traffic section shall be as shown on the plans.

All temporary paved roadways shall have full-compliance centerline, lane line, and edge line markings before they are open for traffic.

Upon removal, markings applied to a final surface shall not leave a scar that conflicts with permanent markings.

* + 1. The following criteria apply to all construction on roadways open to traffic other than (d)1. above:

Full-compliance centerline, lane line, and edge line temporary markings shall be in place at the end of each workday.

No-passing zone restrictions shall be identified by full compliance no-passing zone markings. No-passing zone markings shall be in place daily.

Temporary pavement stencils (SCHOOL, RR Xing, etc.) are not required unless specified in the plans.

Temporary pavement markings shall be installed according to the manufacturer’s recommendations in such a way that the markings adequately follow the desired alignment.

* + 1. Control Points consisting of 4-inch by 1-foot marks at 40-foot intervals may be placed as guide markers for the installation of temporary or final pavement markings. Raised flexible pavement markers may be substituted for these marks. Control points shall not be used as a substitute for any required marking.
1. *Pavement Marking for Seal Coats (Section 409).*
	1. Raised flexible pavement markers, suitable for use on seal coats, shall be installed as follows:

No-passing zones shall be marked with two markers placed side-by-side at 40-foot intervals throughout the zone.

Passing zones shall be marked with one marker at 40-foot centers. Closer spacing shall be used on curves, as deemed appropriate.

Raised flexible pavement markers, installed on 40-foot centers, may also be used to mark lane lines through multi-lane roadway sections. Auxiliary lanes and shoulder lines may be marked with flexible markers on 80-foot centers or as appropriate.

* 1. Full-compliance final pavement markings shall be placed within one week of completion of the seal coat project.
1. **Procedures for Items Paid by the Gallon**

Either of the following methods are acceptable unless otherwise specified by the Project Engineer.

* 1. **Method #1 - Use of Data Logging System (DLS)**

Equipment: The Contractor shall use a “Skip-line by SPEC-RITE” Data Logger System (DLS) or equivalent DLS equipment as approved by the Project Engineer.

Calibration: Pavement marking vehicles using a Data Logging System (DLS) shall be calibrated at intervals no longer than 12 months. Calibration requirements and allowable tolerances will be determined by the equipment manufacturer. Prior to the installation of materials paid by the gallon, a copy of the most recent certification report for each DLS equipment system used shall be submitted to the Project Engineer.

Verification: A verification test section may be conducted at any time during production at the discretion of the Project Engineer. The verification test shall be performed according to Method #2 and the pavement marking shall be at least 1 mile (5,280 feet) in length, and shall be a width of four, six or eight inches. If the test section cannot be performed as a result of limitations, then method #2 shall be used to verify quantities for payment. If the calibration application rate cannot be verified, then method #2 shall be used to verify quantities for payment.

* 1. **Method #2 - Performing Tank Stabs and Field Measurement**

Tank stab measurements shall be used to verify the application rate by calculating the volume of material used over the corresponding application (square foot) area. Tank stab measurements shall be performed by the Contractor at the beginning and end of the pavement marking installation with the pavement marking vehicle parked at the same location and direction of travel for each measurement. Tank stab measurements shall be taken to the top of the fluid level from a fixed point. These measurements will be visually observed and recorded before the pavement marking operations begin, at the end of the pavement marking operations, and before and after each tank is replenished. The difference in the height of the fluid level corresponds to the volume of material used per the manufacturer’s tank conversion chart. Measurements will be recorded to the nearest 1⁄4 inch.

Plural component materials, such as modified epoxy pavement markings, are applied as a combination of resins and catalysts from separate tanks. Tank stabs shall be recorded for each tank and the volumes combined to determine the total volume, in gallons, applied. Pavement markings shall be field measured to determine the total area of material installed. The tank stab and field measurements will be used to verify the application rate is within the rate specified by the contract.

**627.04 Pavement Marking with Low Temperature Acrylic Paint and High Build Acrylic Paint.** Striping shall be applied on asphalt or portland cement concrete pavements when the air and pavement temperatures are as follows: for high-build waterborne paint, at least 45 °F and expected to remain 45 °F or above for at least 24 hours; for low temperature waterborne paint, at least 35 °F and expected to remain 35 °F or above for at least 24 hours. The pavement surface shall be dry and clean, and free of all latent materials, per the manufacturer’s recommendations. Weather conditions shall be conducive to satisfactory results. Glass beads shall be applied into the paint by means of a low pressure, gravity drop bead applicator.

The Contractor shall use equipment that meets the following requirements, as approved:

1. Equipment shall permit traffic to pass safely within the limits of the roadway surface and shoulder while operating.
2. Equipment shall be designed for placement of both solid and broken line pavement markings with a reasonably clean-edged pavement marking of the width and location as shown on the contract and no overspray on the road surface.
3. Equipment shall have a glass bead dispenser directly behind and synchronized with the paint applicator. Each applicator shall have individual control and automatic skip control that will paint a strip with a gap as shown in the Contract.
4. The equipment may be equipped with a heat exchanger to heat the paint to reduce drying time.
5. The operation shall include a trailing vehicle equipped with a flashing arrow board.

The Contractor shall prevent traffic from crossing a wet pavement marking. Pavement markings that have been marred or picked up by traffic before they have dried shall be repaired at the Contractor’s expense. Removal of paint material from vehicles that encountered wet paint shall be at the Contractor’s expense.

The water-based paint pavement markings shall fall within the following minimum and maximum ranges:

**Table 627-1**

**Application Rates and Tolerances for Pavement Markings**

| **Description** | **Units** | **Pavement Marking Paint Low Temp** | **Pavement Marking Paint****High Build** | **Pavement Marking Paint High Build****(Temporary)** |
| --- | --- | --- | --- | --- |
| Alignment(Lateral Deviation) | Inches | < 2.0  | < 2.0  | < 2.0  |
| Application Rate | Sq Ft/Gallon | 89-94 | 67-70 | 100-105 |
| Thickness | Mil |  17.5 ± 0.5 |  23.5 ± 0.5 | 15.5 ± 0.5 |
| Width | Inches | Per Plans ± 0.25 | Per Plans ± 0.25 | Per Plans ± 0.25 |
| No Tack Dry Time @ 77º F | Minutes |  5-10 |  7-12 |  5-10 |
| Glass Bead Application Rate | Lbs, Gallon |  7+ |  9+ | 5+ |

1. High Build (Temporary) shall only be used for temporary pavement marking applications.

Equipment shall have a bead dispenser directly behind, synchronized with the paint applicator and shall be capable of painting a clean-edged pavement marking of the designated width plus or minus 1/4 inch with no overspray on the road surface. For centerlines and lane lines, an automatic skip control shall be used. Machines having multiple applicators shall be used for centerlines with “no passing zones.” In areas where machines are not practical, suitable hand-operated equipment shall be used as directed by the Project Engineer. Pavement markings shall be protected until dry.

1. **Modified Epoxy Pavement Marking**. The modified epoxy pavement-marking compound shall be applied with equipment that will precisely meter the two components in the ratio given in subsection 713.17(a). The equipment shall automatically shut off or warn the operator if one component is not being mixed. The equipment shall produce the required amount of heat at the mixing head and gun tip to provide and maintain the temperatures specified.

Before mixing, the individual components A and B shall each be heated to a temperature of 80 to 140 °F. After mixing, the application temperature for the combined material at the gun tip shall be 80 to 140 °F. The 140 °F upper limit is the maximum temperature under any circumstances.

Both pavement and air temperatures shall be at least 35 °F at the time of modified epoxy pavement marking application.

The surface areas of new portland cement concrete pavement and decks that are to receive markings shall be waterblasted before placement of the modified epoxy pavement marking. The amount of waterblasting shall be sufficient to remove all dirt, laitance, and curing compound residue.

The surface areas of new asphalt pavement, existing asphalt pavement, and existing concrete pavement that are to receive markings shall be cleaned with a high-pressure air blast to remove loose material before placement of the modified epoxy pavement marking. Should any pavement become dirty, from tracked mud etc. as determined by the Project Engineer, it shall be cleaned before the placement of the modified epoxy pavement marking.

When recommended by the modified epoxy manufacturer, a high-pressure water blast integrated into the gun carriage shall be used to clean the pavement surface before modified epoxy pavement marking application. The water blast shall be followed by a high- pressure air blast to remove all residual water, leaving only a damp surface.

Modified epoxy pavement marking shall be applied to the road surface according to the modified epoxy manufacturer’s recommended methods at the application rate or coverage shown below. Glass beads shall be applied into the modified epoxy pavement marking by means of a low pressure, gravity drop bead applicator.

Modified epoxy pavement markings and beads shall be applied within the following limits:

**Table 627-2**

**Application Rates and Tolerances for Modified Epoxy Pavement Marking**

| **Description** | **Units** | **Modified Epoxy Pavement Marking** |
| --- | --- | --- |
| Alignment (Lateral Deviation) | Inches | < 2.0 |
| Application Rate | Sq Ft/Gallon | 85 - 90 |
| Thickness | Mil | 18.5 ± 0.5 |
| Width | Inches | Per Plans ± 0.25 |
| No Tack Dry Time @ 77º F | Minutes |  5 - 7 |
| Glass Bead Application Rate |  Lbs per Gallon | 23+ |

**627.06 Thermoplastic Pavement Marking.**

1. *Equipment-General.* The material shall be applied to the pavement by an extrusion method where one side of the shaping die is the pavement and the other three sides are contained by or are part of suitable equipment for heating, mixing, and controlling the flow of the material.

The equipment shall be constructed to provide continuous mixing and agitation of the

material. Conveying parts of the equipment between the main material reservoir and the shaping die shall be so constructed as to prevent accumulation and clogging. All parts of the equipment that come in contact with the material shall be easily accessible and exposable for cleaning and maintenance.

All mixing and conveying parts up to and including the shaping die, shall maintain the material at the plastic temperature.

The equipment shall be so constructed as to assure continuous uniformity in the dimensions of the pavement marking. The applicator shall provide a means for cleanly cutting off squarepavement marking ends and shall provide a method of applying "skip" lines. The use of pans, aprons or similar appliances that the die overruns will not be permitted under this specification.

Glass beads for the surface of the completed pavement marking shall be applied by an automatic bead dispenser attached to the applicator in such manner that the beads are dispensed almost instantly upon the completed line. The bead dispenser shall be equipped with an automatic cutoff control synchronized with the cutoff of the thermoplastic material.

The equipment shall be so constructed as to provide for varying die widths to produce varying widths of traffic markings.

The equipment shall be designed to permit agitation of the material to prevent scorching, discoloration or excessive high temperatures of any part of the material.

A special kettle shall be provided for melting and heating the composition. The kettle shall be equipped with an automatic thermostatic control device so that heating can be done by controlled heat transfer liquid rather than direct flame.

The applicator and kettle shall be so equipped and arranged as to satisfy the requirements of the National Fire Underwriters.

The equipment shall be so equipped as to permit preheating of the pavement immediately before application of the material.

The applicator shall be mobile and maneuverable to the extent that straight lines can be followed, and normal curves can be made in a true arc.

1. *Types of Equipment.*
	1. Portable Applicator. The portable applicator shall be a device typically used for painting crosswalk lines, stop bars, short lane lines and short centerlines. The applicator shall be easily maneuverable and capable of being propelled by the operator.
	2. Mobile Applicator. The mobile applicator shall contain equipment to provide for automatic installation of skip lines in any combination of line and skip up to 40 feet. The mobile applicator shall be moved in conjunction with the melting and heating kettles in such a manner as to provide continuous highway operation of the kettles and the mobile applicator as an integral unit.
	3. Epoxy Primer Equipment. The epoxy primer application shall be accomplished using equipment having the following features:
		1. The main storage tank shall be equipped with a visible gauge that will allow the Project Engineer to readily ascertain the rate of application.
		2. The main storage tank shall be equipped with a heating device that will maintain the epoxy at a constant efficient temperature.
		3. The spray nozzle and epoxy spray shall be protected from the action of wind to ensure placement where needed.
	4. Cleaning Equipment. Equipment must be provided to ensure removal of laitance, dust, debris, paint and other foreign matter from the road surface immediately before the installation of the composition, or immediately before the application of primer.
2. *Application.* The pavement marking shall be applied to the pavement to either the right or left of the application unit, dependent upon roadway lane being used. The unit shall not occupy more than one lane of roadway while operating.

The finished lines shall have well defined edges and be free of waviness. All of the equipment necessary to the preheating and application of the material shall be so designed that the temperature of the material can be controlled within the limits necessary to its pourability for good application.

At the time of installation of thermoplastic materials, the pavement shall be clean, dry, and free of laitance, oil, dirt, grease, paint or other foreign contaminants. Pavement and ambient temperatures shall be at least 50 °F.

An epoxy resin primer conforming to subsection 708.07 shall be applied to all pavement surfaces before the application of the thermoplastic pavement marking.

The marking material shall not be applied until the epoxy resin primer reaches the tacky stage, approximately 15 minutes under normal conditions. An infrared heating device may be employed to shorten the curing time of the epoxy.

To ensure the best possible adhesion, the marking material as specified, shall be installed at the manufacturer's recommended temperature.

The minimum thickness of thermoplastic lines as viewed from a lateral cross section shall not be less than 3/32 inch at the edges, or less than 1/8 inch at the center.

Measurements shall be taken as an average throughout any 36-inch section of the line. The material, when formed into traffic pavement markings, must be readily renewable by placing an overlay of new material directly over an old line of compatible material. Such new material shall bond itself to the old line in such a manner that no splitting or separation takes place.

Glass beads shall be applied to the thermoplastic pavement marking by means of a low pressure, gravity drop bead applicator at a rate of 10 pounds per 100 square feet, minimum.

* 1. **Methyl Methacrylate Pavement Marking.** Methyl methacrylate pavement marking shall be installed per manufacturer’s recommendations. The Contractor shall use installation equipment, materials, equipment technicians and operators recommended by the manufacturer.​

Methyl methacrylate pavement markings shall be applied to the road surface according to the manufacturer’s recommended methods at 60-mil minimum thickness. Glass beads shall be applied using a double drop bead application system. The first bead applicator shall apply glass beads at the rate of 3.2 pounds per square yard (10 pounds per gallon) minimum, and 1.9 pounds per square yard (6 pounds per gallon) minimum for the second bead applicator.

Methyl methacrylate pavement marking, and beads shall be applied within the following limits:

**Table 627-3**

**Application Rates and Tolerances for**

**Methyl Methacrylate Pavement Marking**

| **Description** | **Units** | **Methyl Methacrylate Pavement Marking** |
| --- | --- | --- |
| Alignment(Lateral Deviation) | Inches | < 2.0 |
| Application Rate | Sq Ft per Gallon | 26 - 28 |
| Thickness | Mil | 60 ± 2.0 |
| Width | Inches | Per Plans ± 0.25 |
| No Tack Dry Time @ 77 ºF | Minutes | < 15 |
| Glass Bead Application Rate |  Lbs per Gallon | 1st Application = 10+2nd Application = 6+ |

* 1. **Preformed Plastic Pavement Marking.** This retroreflective preformed plastic strip shall be suitable for application on asphaltic or portland cement concrete pavement. The strip shall be applied at the locations called for on the plans or as directed.

If recommended by the manufacturer, an epoxy resin primer conforming to subsection 708.07 shall be applied to all pavement surfaces before the application of the preformed plastic pavement marking.

The surface of the pavement shall be clean, free of loose foreign material, dry and have no moisture for a minimum of 48 hours before application of the markings.

The air and surface temperature shall be a minimum 40 °F or as recommended by the manufacturer.

The marking strip as applied shall be in good appearance, free of cracks and the edges shall be true and straight.

The preformed plastic pavement marking shall be Type I, Type II, or Type III as shown on the plans.

Before beginning installation operations, the Contractor shall submit to the Project Engineer instructions from the performed plastic pavement manufacturer detailing surface preparation, grooving requirements and material application. The instructions shall include the following:

1. Equipment Requirements.
2. Approved Work Methods and Procedures.
3. Material Application Temperature Requirements.
4. Ambient Air and Surface temperature Requirements.
5. Weather Limitations.
6. Special Precautions.
7. Any other requirements necessary for successful installation and satisfactory performance of the material.

The Contractor shall secure from the manufacturer all warranties and guarantees with respect to materials, workmanship, performance, or combination thereof, and shall include these warranties and guarantees with the Certification of Compliance.

Materials supplied without installation instructions or with incomplete instructions will not be accepted for use.

Unless otherwise shown on the plans, typical pavement markings shall conform to the shapes and sizes as shown on Standard Plan S-627-1.

The Contractor shall make all arrangements to have a manufacturer-trained installer of the manufacturer’s products on-site during the placement of preformed plastic pavement marking to ensure proper installation. A minimum of two weeks before the placement of the preformed plastic pavement marking, the Contractor shall submit written documentation of the installer’s qualifications and training in the installation of preformed plastic pavement marking. Upon completion of the work, the Contractor shall obtain and submit to the Project Engineer written documentation from the manufacturer-trained installer certifying that the product was installed in full compliance with this specification and manufacturer’s recommendations.

The preformed plastic pavement marking shall be inlaid on new and existing pavements as shown in the Contract. The material shall be usable for patching worn areas of the same type according to the manufacturer’s recommendations.

The Contractor shall not perform wet cutting of pavement unless otherwise directed. Application and removal of temporary pavement marking associated with wet cutting of pavement shall be at the Contractor’s expense.

The preformed plastic pavement marking shall conform to pavement contours by the action of traffic, and shall be applicable on new, dense, and open graded asphalt wearing courses during the paving operations according to the manufacturer’s recommendations. After application, the markings shall be immediately ready for traffic.

* 1. *Inlaid Preformed Plastic Pavement Marking.* The grooved width for inlaid preformed plastic pavement marking is called for in the Contract. The grooved width shall be the pavement marking width plus 1 inch, with a tolerance of plus or minus 1/4 inch. The depth of the grooves shall be 130 mils plus or minus 5 mils. Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint.

Grooving shall not be performed on bridge decks with Polyester Polymer Concrete Overlays.

The bottom of the groove shall have a smooth, flat finished surface. The spacers between blade cuts shall be such that there will be less than a 10-mil rise in the finished groove between the blades.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. The Contractor shall prevent traffic from traversing the grooves, and re- clean grooves, as necessary, before application of the preformed plastic pavement markings.

* 1. *Reserved.*
	2. **Preformed Thermoplastic Pavement Marking.** The markings shall consist of a resilient white or yellow thermoplastic product with glass beads uniformly distributed throughout the entire cross-sectional area. Legends and symbols shall be capable of being affixed to bituminous pavements by heating.

The markings shall conform to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. The material shall have resealing characteristics with the capability of fusing with itself and previously applied thermoplastic markings under normal use.

The preformed thermoplastic markings shall be packaged in a protective plastic film with cardboard stiffeners where necessary to prevent damage in transit. The carton in that the material is packed shall be clearly labeled for ease of identification.

1. *Application*. Application temperature shall be as recommended by the manufacturer. The pavement and air temperature shall be as recommended by the manufacturer at the time of application. The materials shall be applied using a heating method recommended by the manufacturer. The Contractor shall provide the Project Engineer a copy of the manufacturer's installation recommendations before beginning the work. The pavement shall be clean, dry and free from debris. The preformed thermoplastic markings may be installed on top of existing thermoplastic markings after all loose material has been removed. The preformed thermoplastic markings shall not be installed on top of existing preformed plastic pavement markings without first removing the existing markings to a depth that ensures removal of the adhesive backing of the preformed plastic. It shall not be installed on top of pavement marking paint without first removing the paint.
2. *Equipment*. The Contractor shall use a heating method specifically recommended by the manufacturer for the installation of preformed thermoplastic markings.
	1. **Pavement Marking Tape.** Retroreflective tape shall be suitable for temporary use on asphaltic or portland cement concrete pavements. The tape shall be applied at the locations shown on the plans or as directed. The tape shall conform to subsection 713.15.

The surface that the tape is applied shall be clean, dry and free of dirt, oils and grease. The tape shall be pressed down immediately after application, until it adheres properly and conforms to the surface. Temporary marking tape sections longer than 1 foot shall be removed before placement of the final pavement course. All tape shall be removed on sections where tape conflicts with revised traffic lanes before opening of new lanes to traffic.

Pavement marking tape (removable) shall be installed per the manufacturer's recommendations and maintained throughout the required construction phase at no additional cost to the Department.

* 1. **Raised Pavement Markers.** Raised pavement markers (temporary) shall be installed on centerlines, edge lines, and lane lines where specified in the Contract. Single markers shall be installed at 5-foot intervals for solid lines. A group of four markers at 3-foot spacings and at 40- foot intervals shall be installed for skip lines.

Markers supplementing lines shall be installed at the spacing shown on the plans. Raised pavement markers (temporary) shall be installed per the manufacturer's recommendations and shall be maintained throughout the required construction phase at the Contractor’s expense.

**Method of Measurement**

**627.12** The types of pavement marking described will be measured by the following units, complete-in-place and accepted.

Pavement marking paint will be measured by the number of gallons used. Procedures Method #1 or Method #2 will be used to determine the quantities for pavement markings paid by the gallon. The material used in excess of the application rate specified, will not be paid.

Modified epoxy pavement marking, polyurea, and methyl methacrylate pavement marking will be measured by the total number of gallons of components A (pigment/resin) and B (hardener/catalyst) combined to achieve the application requirements as specified.  Procedures Method #1 or Method #2 will be used to determine the quantities for pavement markings paid by the gallon. The material used in excess of the application rate specified, will not be paid.

Thermoplastic pavement marking, preformed thermoplastic pavement marking, and preformed plastic pavement marking will be measured by the square foot. The unmarked spaces between markings will not be included in the overall measurement.

The amount of pavement marking tape to be measured will be the linear feet of the specified width tape applied. Gaps in marking will not be measured for payment.

Raised pavement marker (temporary) will be measured as a unit in place and shall include all adhesive necessary for installation. Removal of the raised pavement marker shall be included in the work.

Pavement word and symbol markings, transverse and longitudinal crosswalk lines, and stop lines will not be measured, but shall be the quantities, in square feet, designated in the Contract; except measurements will be made for revisions requested by the Project Engineer. The unmarked spaces within these markings will not be included in the measurement.

# Basis of Payment

**627.13** The accepted quantities will be paid for at the contract price per unit of measurement for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

|  |  |
| --- | --- |
| Pay Item | Pay Unit |
| Pavement Marking Paint | Gallon |
| Pavement Marking Paint (High Build) | Gallon  |
| Pavement Marking Paint (High Build)(Temporary) | Gallon |
| Pavement Marking Paint (Low Temperature)  | Gallon |
| Modified Epoxy Pavement Marking | Gallon |
| Methyl Methacrylate Pavement Marking | Gallon |
| Thermoplastic Pavement Marking | Square Foot |
| Preformed Plastic Pavement Marking (Type ) (Inlaid) | Square Foot |
| Preformed Plastic Pavement Marking (Word-Symbol) (Type I) (Inlaid) | Square Foot |
| Preformed Plastic Pavement Marking (Xwalk-Stop Line) (Type I) (Inlaid) | Square Foot |
| \_\_\_Inch Pavement Marking Tape | Linear Foot |
| Pavement Marking Tape (Removable) Linear | Foot |
| Raised Pavement Marker (Temporary) | Each​ |
| Pavement Marking Paint (Word-Symbol) | Square Foot |
| Pavement Marking Paint (Xwalk-Stop Line) | Square Foot |
| Thermoplastic Pavement Marking (Word-Symbol) | Square Foot |
| Thermoplastic Pavement Marking (Xwalk-Stop Line) | Square Foot |
| Preformed Thermoplastic Pavement Marking  | Square Foot |
| Preformed Thermoplastic Pavement Marking (Word-Symbol) | Square Foot |
| Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line) | Square Foot |

Waterblasting will not be measured and paid for separately but shall be included in the work.

Glass beads and cleaning with high-pressure water blast or air blast shall be included in the cost of the work.

Calibration and the verification of DLS equipment will not be measured and paid for separately but shall be included in the work.

Each authorized application of temporary pavement marking will be measured and paid for at the contract unit price for the type of material used.

Control points and Contractor pavement marking plans will not be measured and paid for separately but shall be included in the work.

All costs associated with having the Preformed Plastic Pavement Marking manufacturer- trained installer on-site and providing the documentation will not be measured and paid for separately but shall be included in the work.

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