



*Florida Department of Transportation*

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GOVERNOR

605 Suwannee Street  
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KEVIN J. THIBAUT, P.E.  
SECRETARY

February 12, 2020

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **711**  
Proposed Specification: **REVISED 7110402 Thermoplastic Pavement Markings.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Revised Supplemental Specification.

The changes are proposed by Alan El-Urfali from the Traffic Engineering and Operations Office to implement railroad dynamic envelopes on state roads.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [daniel.strickland@dot.state.fl.us](mailto:daniel.strickland@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Daniel Strickland, P.E.  
State Specifications Engineer

DS/rf

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

**THERMOPLASTIC PAVEMENT MARKINGS****(REV ~~12-3119-2019~~)**

SUBARTICLE 711-4.1.1 is deleted and the following substituted:

**711-4.1.1 Preformed Thermoplastic:** Apply markings to dry surfaces only and when ambient air temperature is at least 32°F. Prior to installation, follow the manufacturer's recommendations for pre-heating. For railroad dynamic envelopes, keep all equipment and personnel out of the foul area.

SUBARTICLE 711-4.2.3 is deleted and the following substituted:

**711-4.2.3 Preformed Thermoplastic:** Apply 0.125 inch or 125 mils of preformed thermoplastic material. Use preformed thermoplastic for bicycle markings, shared use path markings, 24 inch markings ~~of the on~~ special emphasis crosswalks, route shields, ramp exit numbers, roundabout informational markings, railroad dynamic envelopes, white dotted lines (2'-4') with trailing black contrast, and black contrast arrows, messages, and symbols.

Measure, record and certify on Department approved form and submit to the Engineer, the thickness of the pavement markings in accordance with FM 5-541.

SUBARTICLE 711-4.3 is deleted and the following substituted:

**711-4.3 Retroreflectivity:** Apply white and yellow pavement markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m<sup>2</sup> and not less than 350 mcd/lx·m<sup>2</sup>, respectively for all longitudinal lines. All chevrons, diagonal lines, stop lines, messages, symbols, and arrows will attain an initial retroreflectivity of not less than 300 mcd/lx·m<sup>2</sup> and 250 mcd/lx·m<sup>2</sup> for white and yellow respectively. All crosswalks, railroad dynamic envelopes and bicycle markings shall attain an initial retroreflectivity of not less than 275 mcd/lx·m<sup>2</sup>. Black pavement markings must have a retroreflectance of less than 5 mcd/lx m<sup>2</sup>.

Measure, record and certify on Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with FM 5-541.

SUBARTICLE 711-9.2 is deleted and the following substituted:

**711-9.2 Contractor's Certification of Quantities:** For all items except railroad dynamic envelope, Rrequest payment by submitting a certification of quantities no later than Twelve O clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:

1. Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.

2. The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

ARTICLE 711-10 is deleted and the following substituted:

### **711-10 Method of Measurement.**

**711-10.1 Certified Quantities:** The certified quantities, authorized and acceptably applied, under this Section will be paid as follows:

1. The length, in gross miles, of solid, 10'-30' skip, 3'-9' dotted, 6'-10' dotted, 2'-2' dotted, and 2'-4' dotted lines.
2. The length, in linear feet, of transverse lines, diagonal lines, chevrons, and parking spaces.
3. The number of pavement messages, symbols, and arrows. Each arrow is paid as a complete marking, regardless of the number of "points" or directions.
4. The area, in square feet, for removal of existing thermoplastic pavement markings acceptably removed. Payment for removal of thermoplastic pavement markings will only be made for locations where the existing pavement surface is to remain.

The gross mile measurement will be taken as the distance from the beginning of the thermoplastic line to the end of the thermoplastic line and will include the unmarked gaps for skip and dotted lines. The gross mile measurement will not include designated unmarked lengths at intersections, turn lanes, etc. Final measurement will be determined by plan dimensions or stations, subject to 9-1.3.1.

**711-10.2 Plan Quantities:** The plan quantity length, in linear feet of railroad dynamic envelope markings.

ARTICLE 711-11 is deleted and the following substituted:

### **711-11 Basis of Payment.**

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 711	Thermoplastic Pavement Markings
	Solid - per gross mile.
	Solid - per linear foot.
	Skip - per gross mile.
	Dotted - per gross mile.
	Message or Symbol - each.
	Arrows - each.
	Yield Line - per linear foot.
	<u>Railroad Dynamic Envelope - per linear foot.</u>
	Remove - per square foot.

**THERMOPLASTIC PAVEMENT MARKINGS****(REV 1-31-20)**

SUBARTICLE 711-4.1.1 is deleted and the following substituted:

**711-4.1.1 Preformed Thermoplastic:** Apply markings to dry surfaces only and when ambient air temperature is at least 32°F. Prior to installation, follow the manufacturer's recommendations for pre-heating. For railroad dynamic envelopes, keep all equipment and personnel out of the foul area.

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	Arrows - each.
	Yield Line - per linear foot.
	Railroad Dynamic Envelope - per linear foot.
	Remove - per square foot.