

7110400 THERMOPLASTIC PAVEMENT MARKINGS  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (Internal, 4-1-19)

I have two problems with the spec.

The last sentence says final measurement will be determined by plan dimensions or stations.

Should be

field measurement. Also, as usual the language about repair to engineers satisfaction any damage from

removal. The best removal leaves scarring. Get the wrong engineer and you are toast.

Response: (4-2-19) Email: Per my conversation with Dan, please remove the highlighted sentence in the attached prior to the next stage of review.

Change has been made by the Specifications Office.

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Anh-Thu  
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Comments: (Industry, 4-11-19)

Does this mean that we will now quantify the removal of thermoplastic on surfaces where there is no milling? Will the BOE reflect the change? Do we need approval from the Maintenance Engineer?

Response: (5-20-19) Yes. The Basis of Estimates will reflect the Specification and there will be no approvals necessary. No change made.

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Brian Blair  
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Comments: (Industry, 4-12-19)

Recommend changing "Do not use paint to blackout, hide, or disguise existing markings" to "Do not paint over existing markings" for simplification.

Response: (5-20-19) That was the initial proposed language, but the intent behind the additional detail is to minimize or eliminate the Maintenance Specification. No change made.

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Comments: (Industry, 4-15-19)

the new language place all the risk on the Department for potentially writing various work orders if the plans do not designate the conflicting area to be removed. Also, the revised language does

not address how the contractor will be compensated for the removal. Suggestion is to leave out “When shown in the Plans” from the beginning sentence and to specify the method of payment for the removal.

Response: (5-20-19) Modified first sentence of 711-4.1. The method of measurement is per square foot, as shown in 711-10. Change made.

Marshall Douberley

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Comments: (Industry, 4-23-19)

Attached is District One Construction’s comments on the rewrite of Standard Specification 711. Please review and send to Design to incorporate these comments.

We felt that three categories were needed as general, asphalt and concrete for the different surfaces that thermoplastic is applied on.

Please let me know how the rewrite will be considered.

**711-4-Application.**

**711-4.1-General:** Remove existing pavement markings such that scars or traces of removed markings will not conflict with new pavement markings by a method approved by the Engineer. Cost for removing conflicting pavement markings during maintenance of traffic operations to be included in Maintenance of Traffic, Lump Sum. ~~When shown in the Plans, remove existing thermoplastic pavement markings using a method approved by the Engineer such that pavement surface scars or traces of the removed thermoplastic pavement markings will not conflict with new pavement markings. Do not use blackout paint or ghosting paint to blackout, hide, or disguise over existing pavement markings unless approved by the State Construction Office.~~

Before applying pavement markings, remove any material that would adversely affect the bond of the pavement markings by a method approved by the Engineer.

~~Before applying pavement markings to any portland cement concrete surface, apply a primer, sealer, or surface preparation adhesive of the type recommended by the manufacturer. Offset longitudinal lines at least 2 inches from any longitudinal joints of portland cement concrete pavement.~~

Apply pavement markings to clean, dry surfaces only, and when the ambient air and surface temperature is at least 50°F and rising for asphalt surfaces and 60°F and rising for concrete surfaces.

Apply pavement markings to the same tolerances in dimensions and in alignment specified in 710-5. When applying pavement markings over existing markings, ensure that no more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Apply thermoplastic material to the pavement by extrusion or other means approved by the Engineer. When thermoplastic pavement markings are to be removed and replaced, apply new thermoplastic pavement markings prior to opening to traffic.

Conduct field tests in accordance with FM 5-541. Take test readings representative of the pavement marking performance. Remove and replace pavement markings not meeting the requirements of this Section at no additional cost to the Department.

~~With the exception of short-term raised rumble strips, wait at least 14 days after constructing the final asphalt surface course to place thermoplastic pavement markings. Installation of thermoplastic on concrete requires a clean, dry surface. Follow the manufacturer’s recommendations for surface preparation for thermoplastic on concrete.~~ Provide temporary pavement markings during the interim period prior to opening the road to traffic.

Douberley, Marshall  
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**711-4.2 Asphalt:**

Apply pavement markings when the ambient air and surface temperature is at least 50°F and rising for asphalt surfaces.

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With the exception of short-term raised rumble strips, wait at least 14 days after constructing the final asphalt surface course to place thermoplastic pavement markings.

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**711-4.3 Concrete:**

Before applying pavement markings to any concrete pavement, prepare the surface in accordance with the manufacturer's recommendations. Offset longitudinal lines at least 2 inches from any longitudinal joints of concrete pavement.

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Apply pavement markings when the ambient air and surface temperature is at least 60°F and rising for concrete pavement.

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SUBARTICLE 711-4.4.3 is deleted and the following substituted: ¶

**711-4.4.3 Preformed Markings:** These markings are factory supplied with glass spheres and skid-resistant material. No additional glass spheres or skid-resistant material should be applied during installation. ¶

Apply glass spheres and skid-resistant material in accordance with the manufacturer's instructions. ¶

**711-10 Method of Measurement.**

The 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 conflicting markings will only be made for locations where the existing pavement surface is to remain ~~in~~ accordance with 102-5.8. Payment for removal of non-conflicting markings will be paid separately.

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.

Response: (5-20-19) These revisions do not align with the scope of this modification. The intent is to allow the use of thermoplastic pavement marking removal without requiring approval by the District Maintenance Office. No change made.

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