

EXPECTED IMPLEMENTATION JULY 2011

701 AUDIBLE AND VIBRATORY PAVEMENT MARKINGS.

(REV 11-4-10) (FA 1-4-11) (7-11)

ARTICLE 701-4 (Pages 787 - 788) is deleted and the following substituted:

701-4 Application.

701-4.1 General: Before applying traffic stripes and markings, remove any material that would adversely affect the bond of the traffic stripes by a method approved by the Engineer.

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

Apply traffic stripes or markings only to dry surfaces, 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 surface.

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and marking over existing markings, ensure that not more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Conduct field tests in accordance with FM 5-541. Take test readings representative of the striping performance. Remove and replace markings not meeting the requirements of this Section.

701-4.2 Thickness: Apply flat base lines having a thickness of 0.100 to 0.150 inches, exclusive of the audible bumps, when measured above the pavement surface.

As an alternative to the flat baseline, a profiled baseline meeting the following dimensions may be applied. For profiled thermoplastic markings make profile measurements above the pavement surface. Provide a baseline thickness not to exceed 0.050 inches. Provide individual profiles across the full width of the marking on approximately 1.0 inch centers with a space between profiles of approximately .25 inches and an average thickness of at least 0.110 inches above the baseline profile.

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

701-4.3 Dimensions of Audible Bumps: Apply the raised bumps with a profile such that the leading and trailing edges are sloped at a sufficient angle to create an audible and vibratory warning.

Bumps on shoulder and centerline markings shall be at least 0.45 inches at the highest point of the bump, above the pavement surface, including the base line. The height shall be measured after application of drop-on reflective elements. Bumps shall have a minimum baseline coverage dimension of 2.5 inches in both transverse and longitudinal directions. The bumps may have a drainage channel, the width of each drainage channel will not exceed 1/4 inch at the bottom of the channel. The longitudinal distance between bumps shall be approximately 30 inches.

701-4.4 Retroreflectivity: Apply white and yellow audible and vibratory markings that will attain an initial retroreflectance of not less than 300 mcd/lx·m² and not less than 250 mcd/lx·m², respectively. Measure, record and certify on a Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with FM 5-541.

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701-4.5 Color: Use pavement marking materials that meet the requirements of 971-1.

701-4.6 Reflective Elements: Apply reflective elements to all markings at the rates determined by the manufacturer's recommendations as identified for the QPL System.

701-4.7 Loss: If more than 1% of the bumps or more than three consecutive bumps are missing or broken (less than half a bump remaining) within the first 45 days under traffic, replace all failed bumps at no expense to the Department. If more than 2% of the bumps fail within the first 45 days under traffic, the replacement period will extend an additional 45 days from the date all replacement bumps were installed. If, at the end of the additional 45 days, more than 2% of all bumps (initial and replacement) fail, replace all failed bumps at no expense to the Department. Measure, record and certify on a Department approved form and submit to the Engineer, the loss of bumps.

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