



Florida Department of Transportation

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ROADWAY DESIGN BULLETIN 08-07 ESTIMATES BULLETIN 08-05

DATE: May 9, 2008

TO: District Design Engineers, District Traffic Operations Engineers, District Maintenance Engineers, District Estimates Coordinators, District Safety Engineers

FROM: Phillip "Greg" Davis, P.E., State Estimates Engineer
David C. O'Hagan, P.E., State Roadway Design Engineer

COPIES TO: Ananth Prasad, Lora Hollingsworth, Brian Blanchard, Duane Brautigam

SUBJECT: Audible and Vibratory Pavement Markings

ISSUE BACKGROUND: The Department has required the use of rumble strips on shoulders of limited access facilities since the early 1990's. Rumble strips were not proposed on other portions of the state system due to the impact on bicyclists using the shoulders. Crash data for lane departure crashes indicates the serious injury and fatality rate on Rural (Urban 1) and Urban 2 & 3 flush shoulder roadways is twice the rate of those on limited access facilities. Rumble strips are a proven cost-effective countermeasure to lane departure crashes brought on by driver drowsiness, distraction, and/or inattention. Due to the significant number of lane departure crashes, it is one of the four emphasis areas in the Department's *Strategic Highway Safety Plan*. The Roadway Design Office has evaluated various audible and vibratory pavement markings that could be used on non limited access facilities with considerations for all modes of transportation. An audible and vibratory policy was presented to and approved by the Executive Committee on March 19, 2008.

IMPLEMENTATION: Effective with the January 2009 letting, audible and vibratory pavement markings shall be installed on all rural construction projects excluding limited access facilities. Audible and vibratory pavement markings shall be included on the outside edge lines for all two lane and multi-lane undivided rural projects. They shall also be included on the inside and outside edge lines for all multi-lane divided rural projects. Audible and vibratory pavement markings should be used on centerline markings of two lane rural roadways only where there is a history of centerline cross over crashes. Audible & vibratory markings shall also be considered on flush shoulder roadways within Urban 2 and Urban 3 boundaries. Noise is the primary consideration within these areas.

Where possible, audible and vibratory pavement markings shall be incorporated on projects with letting dates in September thru December of 2008. These projects shall utilize Developmental Specification Section 701 Audible and Vibratory Pavement Marking which can be requested from the State Specification Office.

The following new pay items will be effective for projects with letting dates of September 1, 2008 or later:

701- 1A-BCD AUDIBLE AND VIBRATORY PAVEMENT MARKINGS

A= Class*	C= Type of Marking
1 (Standard)	1 (Solid) NM
	2 (Skip) GM
B= Color	D= Width
1 (White)	1 (6")
2 (Yellow)	

ADDITIONAL INSTRUCTIONS:

Developmental Specification Section 702 Inverted Rib Profile Markings for wet weather audible markings may be used on a case by case basis where the District Safety Engineer believes there to be a history of nighttime wet weather related crashes. For tracking purposes, the District Safety Engineer shall notify the State Specifications Office when Development Specification 702 is used on any project.

The Developmental Section 702 pay items (906-702- AA) shall be used when using the developmental specification.

If you have any questions regarding the use of the above items, please contact Chester Henson in the State Roadway Design Office at 850-414-41 17.