Session 65

Chester Henson

Florida Dept. of Transportation

Selection of Pavement Markings

Topic Description

The session will discuss the revisions to the pavement marking specifications and concerns to designers and construction personnel. The session will also discuss when permanent striping materials other than thermoplastic markings should be used.

Speaker Biography

Chester has more than 35 years of transportation experience in the areas of planning, design, construction and management of highway, bridge, and general civil engineering projects. He is currently the State Traffic Standards Engineer and is responsible for policy, standards and specifications in the areas of signing, pavement marking, signalization and lightings.

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Session 65
Pavement Markings

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Areas of Revision

- **<u>Specifications</u>**

  Deleted Sections 701 & 702

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Deleted Sections

- **<u>Section 701</u> – Raised Rib Shoulder Warning Devices**

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Developmental Spec. 701
<u>Audible & Vibratory Markings</u>

Allows Rib Method Used by Vibraline

or Audible Bar Method Used by Inverted Rib Profile

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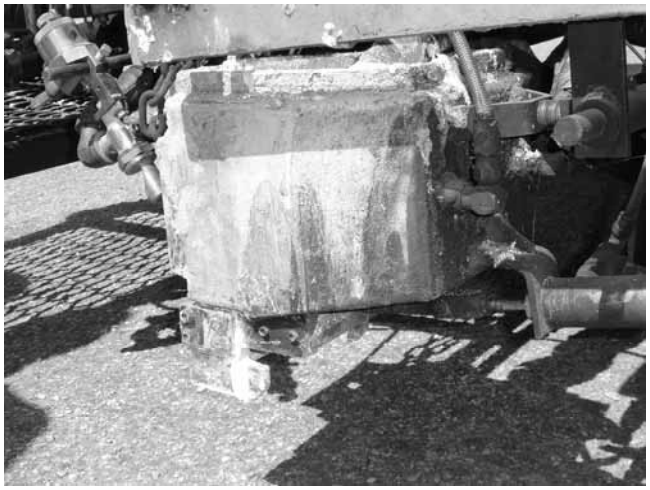
Vibraline Method



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Vibraline Method

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Vibraline Method

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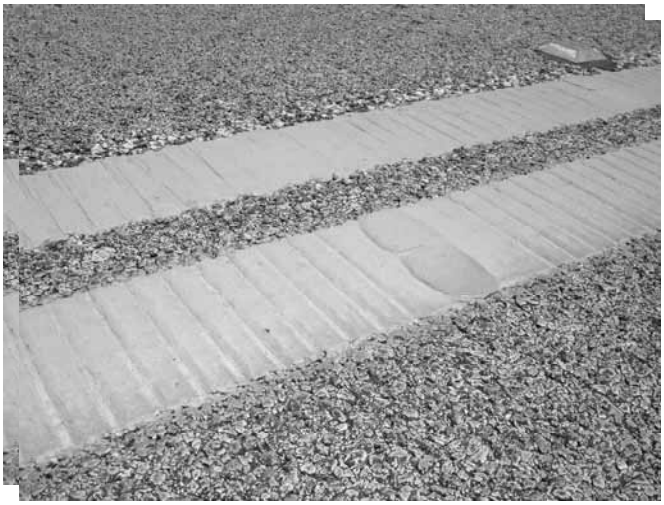
Audible Bar Method



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Audible Bar Method

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Developmental Spec. 701 Audible & Vibratory Markings

- Markings are Designed for Reducing Runoff Road and Head-On Collisions
- Secondary Benefit of Improved Wet Weather Retro Reflectivity

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Deleted Sections

- **<u>Section 702</u> – Inverted Profile, Wet Weather Traffic Stripes**

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<u>Developmental Spec. 702</u>

Allows Use of Inverted Profile Until Wet Weather Marking Specification is Completed

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Areas of Revision

- **Specifications**

  Deleted Section 701 & 702
  Added Section 709

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Section 709:
Two Reactive Component Markings

- **Retro Reflectivity of Markings Increased To:**

  450 mcd – White
  350 mcd – Yellow

- **180 Day Observation Period**

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Areas of Revision

- **Specifications**

  Deleted Section 701 & 702

  Added Section 709

  Revised Section 710

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Section 710: Painted Pavement Markings

- **Retro Reflectivity Work Zone and Final Surface Markings Increased To:**

  300 mcd – White

  250 mcd – Yellow

- **Contractor Responsible for Work Zone Markings for 6 Months**

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How Do The Changes In Section 710 Affect Designers???

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Work Zone Markings

- Don't Just Assume Painted Work Zone Markings
- Designer Should Consider How Long the Phase Will Be In Place
- Designer Should Consider Traffic And Area Where Markings Are To Be Installed

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Areas of Revision

- **Specifications**

  Deleted Section 701 & 702

  Added Section 709

  Revised Section 710

  Revised Section 711

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Section 711: Thermoplastic Markings

- **Retro Reflectivity of Markings Increased**
  To: 450 mcd – White
  350 mcd – Yellow
- **Double Drop Bead Application on New Thermoplastic (Type 4 & Type 1)**
- **Refurbishment Min. of 60 mils with Single Drop Bead Application (Type 3)**

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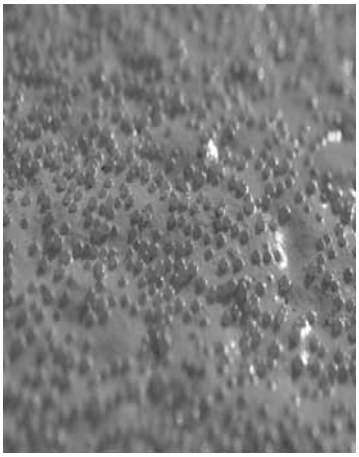
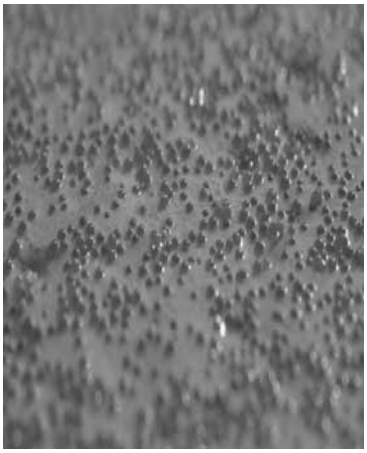
Thermoplastic Marking Double Drop Beads





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Section 711 Cont.: <u>Thermoplastic Markings</u>

- **Reflectivity For Arrows, Messages and Transverse Lines – 300 mcd**
- **Skid Requirement for Pedestrian Crosswalks and Bike Lane Symbols**
- **180 Day Observation Period**

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Areas of Revision

- **Specifications**

  Deleted Section 701 & 702

  Added Section 709

  Revised Section 710 & 711

  Revised Section 713

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Section 713: Permanent Tape Markings

- **Two Classifications: Standard**
  High Performance

- **Retro Reflectivity for Standard:**
  300 mcd - White
  250 mcd – Yellow

- **Retro Reflectivity for High Performance:**
  450 mcd - White
  350 mcd - Yellow

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Section 713 Cont.: Permanent Tape Markings

- **Two Classifications:**
  - **Standard**
  - **High Performance**
- **Service Life for Standard:**
  - **3 Years**
- **Service Life for High Performance:**
  - **5 Years**

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How Do The Changes In Section 713 Affect Designers???

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Permanent Markings

- **Reflectivity Of Longitudinal Lines:**
  - **450 mcd – White**
  - **350 mcd – Yellow**
- **If You Are Using Permanent Tape All Longitudinal Lines Should Be High Performance**

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Areas of Revision

- **Specifications**
  - **Deleted Section 701 & 702**
  - **Added Section 709**
  - **Revised Section 710, 711 & 713**
- **Pay Items**
  - **Revised Basis of Estimates:**
    Items 709, 710, 711 & 713

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Old Pay Items

6” White Solid Two Component – Net Mile
(709- 31- 61)

6” White Solid Paint Line – Net Mile
(710- 23- 61)

6” White Solid Thermo Line – Net Mile
(711- 37- 61)

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New Pay Items

Two Reactive Component:
709- 1A-BCD

Paint:
710- 1A-BCD

Thermoplastic:
711- 1A-BCD

Tape:
713-1AA-BCD

Where A=Class
B= Color
C=Type
D=Width

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Common Problems With Skip Pavement Marking Pay Items

Type of Marking:

Skip - GM (3/9 and 10/30 Only)

Skip – LF (6/10)

Dotted/Guideline – LF (2/4)

No Restrictions On Amount

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Selection of Markings

Need to Consider:

- **Condition of Existing Marking**
- **How Long Marking Needs to Last**
- **Type of Surface**
- **Cost**

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Service Life of Materials

Work Zone Paint – 6 months
Final Surface Paint – 6 months to 1 year
High Build Paint – 2 years
Hot Spray Thermo – 2 years
Refurbishment Thermo – 3 years
Standard Tape – 3 years
Two Reactive Component – 3 to 5 years
Standard Thermo – 5 years
High Performance Tape – 5 years

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Type of Surface

Open Graded Asphalt:

Thermo

Close Graded Asphalt:

Thermo & Tape

Concrete:

Thermo, Tape & Two Reactive Component

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Cost

Bid Item	Unit	Thermo	2 Reactive Comp.	Tape
6" White Open Graded	GM	$ 900		
6" White Dense Graded	GM	$ 1,150		$ 7,500
6"White Open Graded	NM	$ 2,750	$ 3,700	$ 19,000
6" White Dense Graded	NM	$ 1,950		

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Questions???