Attached to this bulletin is the updated Table 4-3 from Chapter 4 of the Roadway Design Guidelines. Snowplowable Raised Pavement Markers will not be required for undivided state routes with speeds less than 45 mph. In addition, the threshold for deciding which pavement markers to use on local roads will now be an ADT of 2000 vpd, increased from 1000.

Finally, item descriptions for Snowplowable markers have been changed to all capitals to match formatting of other item descriptions and the word “raised” added:

716-01.21  SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR) (1 COLOR) EACH
716-01.22  SNOWPLOWABLE RAISED PAVEMENT MARKERS (MONO-DIR)(1 COLOR) EACH
716-01.23  SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR)(2 COLOR) EACH

Effective March 29, 2019 letting (January 16, 2019 Turn-in), the following standard drawings have been revised.

Revised Standard Drawings:

<table>
<thead>
<tr>
<th>DRAWING NUMBER</th>
<th>REVISION DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-M-2</td>
<td>08-02-18</td>
<td>DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS</td>
</tr>
<tr>
<td>T-M-4</td>
<td>08-02-18</td>
<td>STANDARD INTERSECTION PAVEMENT MARKINGS</td>
</tr>
<tr>
<td>T-M-10</td>
<td>08-02-18</td>
<td>SIGNING AND PAVEMENT MARKINGS AT INTERSECTION CROSSINGS FOR SHARED-USE PATHS</td>
</tr>
<tr>
<td>T-M-11</td>
<td>08-02-18</td>
<td>SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANE OR ROUTES</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>T-M-15</td>
<td>08-02-18</td>
<td>ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES</td>
</tr>
<tr>
<td>T-M-15A</td>
<td>08-02-18</td>
<td>ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED RURAL ROUTES</td>
</tr>
<tr>
<td>T-M-16</td>
<td>08-02-18</td>
<td>ASPHALT SHOULDER RUMBLE STRIPE INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED RURAL ROUTES</td>
</tr>
<tr>
<td>T-M-16A</td>
<td>08-02-18</td>
<td>ASPHALT CENTERLINE RUMBLE STRIPE</td>
</tr>
</tbody>
</table>

The Roadway Design Guidelines available online do not reflect these changes; however, the updated sections are attached to this Instructional Bulletin.

[Signature]
Jennifer Lloyd, PE
Civil Engineering Director
Roadway Design Division

KJL:JDK:ADP:AKL
October 10, 2018
Temporary pavement markings on the intermediate layers of pavement open to traffic will be installed to permanent standards daily with reflective tape or reflectorized paint.

The temporary pavement markings will be paid for under the following item numbers: 716-05.01 Painted Pavement Marking (4” Line) per L.M., 716-05.20 Painted Pavement Marking (6” Line) per L.M., or 716-05.02 Painted Pavement Marking (8” Barrier Line) per L.F.

On Local Roads with the ADT < 2000, no permanent striping is required on the final surface if item number 716-05.01 Painted Pavement Marking (4” Line) is used as the temporary striping for the intermediate layers (see Table 4-3).

If the permanent marking material is thermoplastic, the contractor may elect to mark the final layer of pavement with reflectorized paint to permanent standards daily and wait until the paving operation has been completed before the permanent markings are installed. In this case, the temporary markings for the final layer will not be measured and paid for directly, but the costs are to be included in the price bid for the permanent markings.

**PERMANENT PAVEMENT MARKINGS (See 4-411.03 and 4-411.04)**

Designers should refer to Table 4-3 for pavement marking guidelines for all interstate and state routes. In addition to pavement marking guidelines, Table 4-3 provides guidance for the placement of rumble strips and rumble stripes. This guidance shall be used on all new, reconstruction, and resurfacing projects except in areas which require special treatment as determined on the Construction Field Review and approved by the Director of the Roadway Design Division.

Items numbers for pavement markings are available on the TDOT web site at:

[https://www.tdot.tn.gov/APPLICATIONS/RoadwayItems](https://www.tdot.tn.gov/APPLICATIONS/RoadwayItems)

For projects using an Open-Graded Friction Course (OGFC) for the surface layer, only Enhanced Flat Line Thermoplastic (Item No 716-12.01 or 716-12.02) may be used for the edge, center, skip and lane lines. Use the width of line specified in table 4-3. The designer shall footnote the Enhanced Flat Line Thermoplastic Quantity with the following note: “Contractor shall use the ribbon method for application.”
<table>
<thead>
<tr>
<th>Road Classification</th>
<th>716-12.01 4” Enhanced Flatline</th>
<th>716-12.02 6” Enhanced Flatline</th>
<th>716-12.09 12” Enhanced Flatline</th>
<th>716-13.01 4” Spray Thermo...</th>
<th>716-13.02 6” Spray Thermo...</th>
<th>716-05.01 4” Paint</th>
<th>716-01.21 SRPM (Bi-Dir)(1-Color)</th>
<th>716-01.22 SRPM (mono)(1-color)</th>
<th>411-12.02 16” Rumble Strip Non-continuous</th>
<th>411-12.03 8” Rumble Stripe Continuous</th>
<th>411-12.04 4” Rumble Stripe</th>
<th>411-12.05 CL Rumble Stripe</th>
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<td>Interstate or Other Freeway</td>
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<td>Divided State Route Non-Freeway</td>
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<td>V ≥ 45</td>
<td>CL / Lane Lines</td>
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</tbody>
</table>

Table 4-3 (Sheet 1 of 3)
Permanent Pavement Markings, Raised Pavement Markers, Rumble Strip and Rumble Stripe Guidelines Notes
1. The contractor may elect to use either thermoplastic or preformed plastic for specialty striping items. These items include stop lines, cross walks, arrows, words, channelization, and other specialty striping items except lines.

2. The following footnote shall be added to all Specialty Striping Items: “The contractor may elect to substitute Preformed Plastic for Thermoplastic. Preformed Plastic shall be paid for at the same unit price as bid for Thermoplastic.”

3. Specialty striping items may be either paint or thermoplastic.

4. Snowplowable Raised Pavement Markers (SRPMs) shall conform to this guidance:
   a. SRPMs located along centerlines of 2 direction roadways (Yellow Stripe) shall be paid for under Item No. 716-01.21, “Snowplowable Raised Pavement Markers (Bi-Dir) (1-Color)” per each. Lenses shall be yellow.
   b. SRPMs on lane lines between lanes of the same travel (Broken White Stripes) direction on undivided roadways shall be paid under Item No. 716-01.22, “Snowplowable Raised Pavement Markers (Mono-Dir) (1-Color)” per each. Lenses shall be clear or white.
   c. SRPMs on lane lines between lanes of the same travel (Broken White Stripes) direction on divided roadways shall be paid for under Item No. 716-01.23, “Snowplowable Raised Pavement Markers (Bi-Dir) (2-Color)” per each. Lenses shall be clear or white on the upstream side (facing traffic), lenses shall be red facing downstream side (facing wrong-way traffic).
   d. Refer to T-M-series standard drawings for details. Three lane and multilane roads with 2-way traffic will normally require both mono-directional and bi-directional snowplowable raised pavement markers. Two lane roads will normally require bi-directional snowplowable raised pavement markers.
   e. Payment for the removal of Snowplowable Raised Pavement Markers shall be paid for under Item number 716-01.30 (Removal of Snowplowable Reflective Marker, per each). The cost shall not be included in the cost of installing the following items for Snowplowable Reflective Marker: 716-01.21, 716-01.22, and 716-01.23.

5. Rumble strips are not required on ramps.

6. Centerline Rumble Stripes may only be used if justified by crash history and if the road meets the following conditions:
   a. Design Speed of 45 mph or greater
   b. ADT of 1500 or greater
   c. Lane width of 12 feet or greater
   d. Undivided Section
   e. No passing or one way passing zone

7. For concrete shoulders, the rumble strip is to be placed in accordance with standard drawings RP-CS-1 or RP-CS-2. Item No. 501-03.10, Concrete Shoulder Rumble Strips, L.F. The length of scoring shall be measured as the actual length of pavement scored.

8. Rumble Strip for Interstate or Freeway, See STD DWG T-M-15
   Rumble Strip for Non-access controlled route, See STD DWG T-M-15A
   Edgeline Rumble Stripe, See STD DWG T-M-16
   Centerline Rumble Stripe, See STD DWG T-M-16A

9. See 4-411.03 and 4-411.04 for additional guidance regarding rumble strip and rumble stripe placement.

10. All resurfacing projects shall follow the guidance in Table 4-3 for pavement marking and rumble installations. Application of rumble shall be included on all rural roadway resurfacing projects if there is no existing rumble on the shoulder. Designers shall include rumble installations regardless of the pavement thickness. This should be included in the scope of resurfacing projects to assure the minimum roadway safety requirements are met. Pavement markings and rumble strips/stripes shall be applied to the roadway surface after it has been scraped clean of overgrown vegetation and swept of loose debris.

Table 4-3 (Sheet 2 of 3)
11. For STD DWGs TM-16 and TM-16A applications: The Designer or the Field Engineer may choose to alternate rumble stripe with profiled thermoplastic pavement marking when the following conditions exist:

a. On roadways with rigid pavement shoulders, when it is not practical or desirable to install ground-in rumble stripes on the inside and outside edge line pavement markings.

b. Edge lines on two-lane roadways that do not have paved shoulders.

c. Edge lines on bridges with narrow shoulders as a safety countermeasure for bridge parapet impacts.

Table 4-3 (Sheet 3 of 3)

4-716.36 SNOWPLOWABLE RAISED PAVEMENT MARKERS ON STATE ROUTES

Snowplowable raised pavement markers should be included on state routes with the exception of undivided state routes with speed < 45 mph. Reflective pavement markers are to be placed in accordance with the T-M- series standard drawings and the current edition of the MUTCD.

On resurfacing projects, the designer shall be responsible for verifying the existence of snowplowable raised pavement markers and for computing the quantity of these markers for removal. The designer shall also compute the quantity for new snowplowable raised pavement markers to be installed for these projects.

Spacing of raised pavement markers may be reduced or additional snowplowable raised pavement markers added in areas that require special treatment as determined by the design manager or at the construction field review. When additional snowplowable raised pavement markers are used, the markers shall be placed in accordance with the current edition of the MUTCD. Raised pavement markers may be omitted on urban roadways where roadway lighting is present. Raised pavement markers should not be used on the right edge line.

See Table 4-3 for guidance regarding type of markers to be used.


**Stop Line Placement Notes**

1. **Location** shall be determined by vehicle turning paths from intersection approach, and if stop lines are used, it is based on the portion of the driveway serving as the crosswalk related to signal head per Manual on Uniform Traffic Control Devices.

2. **Stop lines** shall be paid for under item 716-02.03, plastic pavement marking (longitudinal crosswalk) per each foot.

3. **Stop lines** required only on approaches controlled by stop signs or traffic signals.

---

**Longitudinal Cross-Walk Marking**

(for special emphasis, to be used where V > 45 MPH)

- **PAVEMENT MARKINGS** shall be paid for under item 716-02.03, plastic pavement marking (longitudinal crosswalk) per each foot.

---

**Transverse Cross-Walk Marking**

- **PAVEMENT MARKINGS** shall be paid for under item 716-02.03, plastic pavement marking (transverse crosswalk) per each foot.

---

**Pavement Marking Table**

<table>
<thead>
<tr>
<th>DESIGN SPEED</th>
<th>EDGE LINE</th>
<th>LANE LINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>V &gt; 45 MPH</td>
<td>6&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>V ≤ 45 MPH</td>
<td>4&quot;</td>
<td>4&quot;</td>
</tr>
</tbody>
</table>

---

**Cross-Walk Notes**

1. **Special Pavement and Pavement Textures** are not acceptable crosswalk markings. Therefore, special pavement and pavement textures shall only be used in conjunction with transverse crosswalk markings. Special pavements are to be designed to meet pavement design schedules and design loading. On state routes, details shall be reviewed and approved by the Department.

2. If special pavement, pavement textures, or any other architectural pavement materials are used, the architectural pavement materials shall provide a smooth, non-slip, walkable/resilient, stable, firm and slip-resistant surface in accordance with ADA standards.

---

**Pavement Marking Table**

- **STOP LINES** required only on approaches controlled by stop signs or traffic signals.

---

**Data Sheet**

- **PAVEMENT MATERIALS** are to be designed to meet pavement design schedules and design loading. On state routes, details shall be reviewed and approved by the Department.
GENERAL NOTES

4. SIGNS SHOULD BE PLACED APPROXIMATELY EVERY 1.25 MILE AT EVERY TURN, AND AT ALL SIGNALIZED INTERSECTIONS WHERE MULTIPLE SIDE ROAD/TURNS EXIST. IT IS NOT REQUIRED TO LOCATE SIGNS AT EVERY TURN. HOWEVER, SIGN SPACING SHOULD NOT EXCEED 0.25 MILE. SIGN SPACING SHOULD NOT EXCEED ONE MILE ON RURAL ROADS.

5. BIKE LANES AND BIKE ROUTES ARE NOT PERMITTED ON ACCESS CONTROLLED FACILITIES.

6. IF BUFFER SPACE IS WIDER THAN 3', THE BUFFER MARKING SPACING MAX. 100' INTERVALS.

7. IF BIKE LANE IS PROPOSED ON PAVED SHOULDER, RUMBLE STRIPS SHOULD NOT BE USED WHEN THEIR INSTALLATION WOULD LEAVE A CLEAR SHOULDER PATHWAY LESS THAN 4' WIDE OR LESS THAN 5' WIDE IF THERE IS AN OBSTRUCTION.

8. MARKING TO BE PLACED IMMEDIATELY AFTER AN INTERSECTION AND SPACED AT INTERVALS NOT GREATER THAN 250 FEET.

9. SIGN SPACING SHOULD NOT EXCEED ONE MILE ON RURAL ROADS.

10. WHERE MULTIPLE SIDE ROADS/TURNS EXIST, IT IS NOT REQUIRED TO LOCATE SIGNS AT EVERY TURN; HOWEVER, SIGN SPACING SHOULD BE PLACED APPROXIMATELY EVERY 0.25 MILE, AT EVERY TURN, AND AT ALL SIGNALIZED INTERSECTIONS.

11. VARIABLE BUFFER WIDTH

12. SHOULDER VARIABLE WIDTH

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION
SIGNING AND PAINT MARKINGS FOR BICYCLE LANE OR ROUTES
06-01-17
T-M-11
TYPICAL RUMBLE STRIP INSTALLATION DETAILS
FOR INTERSTATES AND ACCESS CONTROLLED ROUTES

PLAN VIEW

RUMBLE STRIP GENERAL NOTES

MILLED-IN RUMBLE STRIP WITH 9/16" GROOVES, 1/16" DEEP, ON 12"± SPACE.

RUMBLE STRIP, ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NO.
411-12.01, SCORING SHOULDERS CONTINUOUS (VIEW WIDTH) PER L M.

SECTION A-A

SECTION B-B

TYPICAL RUMBLE STRIP INSTALLATION DETAILS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ASPHALT SHOULDER
RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATES AND ACCESS
CONTROLLED ROUTES

12/31/09 T-M-15

MINOR REVISION -- PHASE APPROVAL NOT REQUIRED

REDREW SHEET.
ITEM NUMBER DESCRIPTION. ADJUSTED
REV. 08-02-18: MODIFIED NOTE A AND
411-12.01, SCORING SHOULDERS (CONTINUOUS) (VIEW WIDTH), PER L M.

PLAN VIEW
TYPICAL RUMBLE STRIP INSTALLATION DETAILS
FOR NON-ACCESS CONTROLLED RURAL ROUTES

RUMBLE STRIP GENERAL NOTES

A. WHEN RUMBLE STRIPS ARE USED ON NON-ACCESS CONTROLLED FACILITIES, THEY SHOULD BE DISCONTINUED IN ADVANCE OF DRIVEWAYS, INTERSECTIONS, AND MEDIAN OPENINGS.

B. MILLED-IN RUMBLE STRIP WITH 5/16" X 1/4" GROOVES, 1/2" DEEP, ON 12" SPACING.

C. A 12' LONG GAP BETWEEN 60' LONG SECTIONS OF RUMBLE STRIPS IS REQUIRED TO ACCOMMODATE BICYCLES.

D. ON NON-ACCESS CONTROLLED ROUTES WITH A MEDIAN AND/OR INSIDE SHOULDERS, CONTINUOUS RUMBLE STRIPS SHOULD BE PLACED IN ACCORDANCE WITH STD. DWG. T-M-15. RUMBLE STRIPS ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NO. 11-12.01 SCORING SHOULDERS (CONTINUOUS) (16 IN. WIDTH) PER L.M.

E. DISCONTINUED IN ADVANCE OF DRIVEWAYS, INTERSECTIONS, AND MEDIAN OPENINGS. DISCONTINUED 50' IN ADVANCE OF THE INTERSECTION.

F. WHEN THE SIDE ROAD RADIUS IS GREATER THAN 30', RUMBLE STRIP APPLICATION SHOULD BE DISCONTINUED 50' IN ADVANCE OF THE INTERSECTION.

G. RUMBLE STRIPS SHOULD ONLY BE PLACED ON PAVED SHOULDERS THAT ARE GREATER THAN OR EQUAL TO 8'. USE RUMBLE STRIP ON ROADWAYS WITH PAVED SHOULDER LENGTH LESS THAN 8'.

H. RUMBLE STRIP, ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NO. 11-12.02 SCORING SHOULDERS (NON-CONTINUOUS) (16 IN. WIDTH) PER L.M.

I. RUMBLE STIPES SHOULD NOT TYPICALLY BE INSTALLED AT DESIGN SPEED < 45 MPH.
TYPICAL RUMBLE STRIPE INSTALLATION DETAILS
FOR NON-ACCESS CONTROLLED RURAL ROUTES

RUMBLE STRIPE GENERAL NOTES

A. WHEN RUMBLE STRIPES ARE USED ON NON-ACCESS CONTROLLED FACILITIES, THEY SHOULD BE DISCONTINUED IN ADVANCE OF DRIVEWAYS, INTERSECTIONS, AND MEDIUM OPENINGS.

B. MILLED-IN RUMBLE STRIPE WITH 1/2" GROOVES, 1/2" DEEP, ON 12" - 1 1/2" SPACING.

C. WHEN RUMBLE STRIPES ARE INSTALLED ON ACCESS CONTROLLED ROUTES, THE RUMBLE STRIPE IS TO BE INSTALLED CONTINUOUSLY WITHOUT THE 15' GAP. RUMBLE STRIPE WIDTH SHALL BE 16" FREE OF RALEY ON T-M-11.

D. A 15' LONG GAP BETWEEN 60' LONG SECTIONS OF RUMBLE STRIPES ARE REQUIRED TO ACCOMMODATE BICYCLES.

E. WHEN THE SIDE ROAD RADIUS IS GREATER THAN 30', RUMBLE STRIPE APPLICATION SHOULD BE DISCONTINUED 50' IN ADVANCE.

F. RUMBLE STRIPES, ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NOS.: 411-12.32 SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) [MIN. WIDTH], PER LM 411-12.34 SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) [MAX. WIDTH], PER LM.

G. PAINT MARKINGS, ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NOS.: 716-13.32 SPRAY THERMOPOINT MARKING [80 mil] [MIN. LINE], PER LM.

H. THE COLOR OF ANY EDGE LINE OR CENTER LINE ASSOCIATED WITH LONGITUDINAL RUMBLE STRIPE SHALL BE IN ACCORDANCE WITH SECTION 4A.03 OF THE MUTCD.

I. APPLICATIONS OF RUMBLE STRIPES SHOWN ON THE DRAWINGS ARE TO ACCOMMODATE BICYCLES TO THE MAXIMUM EXTENT ON THE ROADWAY OR SHOULDER.

J. RUMBLE STRIPES SHOULD NOT TYPICALLY BE INSTALLED AT DESIGN SPEED > 45 MPH.

K. THE DESIGNER OR THE FIELD ENGINEER MAY CHOOSE TO ALTERNATE RUMBLE STRIPES WITH PROFITED THERMOPLASTIC PAINT MARKINGS WHEN THE FOLLOWING CONDITIONS EXIST:

1) WHEN IT IS NOT PRACTICAL OR DESIRABLE TO INSTALL MILLED-IN RUMBLE STRIPES FOR INSIDE AND OUTSIDE EDGE LINES ON ROADWAYS WITH NO SHOULDER.
2) WHEN EDGE LINES ON TWO-LANE ROADWAYS THAT DO NOT HAVE PAVED SHOULDERS.
3) WHEN EDGE LINES ON BRIDGES WITH NARROW SHOULDERS, AS A SAFETY COUNTERMEASURE FOR BICYCLE PARAMETER IMPACTS.

L. ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NOS.: 716-14.01 PROFITED THERMOPOINT MARKING [80 mil], PER LM.

M. 716-14.02 PROFITED THERMOPOINT MARKING [80 mil], PER LM.
FOR NO PASSING ZONES OR ONE WAY PASSING ZONES

**RUMBLE STRIPE GENERAL NOTES**

- FOR IMPROVEMENTS OR RECONSTRUCTION OF EXISTING ROADS, RUMBLE STRIPES MAY BE USED AS NEEDED DUE TO CRASH HISTORY. FOR NEW CONSTRUCTION, CENTERLINE RUMBLE STRIPES MAY BE SPECIFIED IF THE FOLLOWING CONDITIONS EXIST:
  1. DESIGN SPEED > 45 MPH
  2. ADT OF 1500 OR MORE
  3. LANE WIDTH > 12' MINIMUM
  4. ROAD SEGMENT IS A NO PASSING OR ONE WAY PASSING ZONE
  5. ROAD SEGMENT IS A TWO OR FOUR LANE UNDIVIDED SECTION

- WHEN RUMBLE STRIPES ARE SPECIFIED, PAINTING MARKING ITEM NUMBER SHALL BE 716-12.02, ENHANCED FLATLINE THERMO PAINT MARKING (6 IN) LINE) PER L.M.

- CENTERLINE RUMBLE STRIPES SHALL NOT BE USED ON BRIDGES.

- THE PAVEMENT JOINT SHALL NOT BE MILLED.

- RUMBLE STRIPE SHALL NOT BE USED IN RESIDENTIAL OR COMMERCIAL AREAS.

- SCORING FOR RUMBLE STRIPES TO BE PAID FOR UNDER ITEM NUMBER 411-12.09, SCORING FOR CENTERLINE RUMBLE PAINT (6 IN H2 LINE) 12'24" SPACING, PER L.M. INCLUDES BOTH LEFT AND RIGHT SIDE PER L.M.

- FOR BASED PAVEMENT MARKING SPACING, SEE STD. Dwg. T-M-16. IN LOCATIONS WHERE RPMS ARE PRESENT, STAGGER RUMBLES SUCH THAT RPMS ARE CENTERED BETWEEN RUMBLES.

- THE DESIGNER OR THE FIELD ENGINEER MAY CHOOSE TO ALTERNATE RUMBLE STRIPES WITH PROFILED THERMOPLASTIC PAINT MARKING WHEN THE FOLLOWING CONDITIONS EXIST:

  1. WHEN IT IS NOT PRACTICAL OR DESIRABLE TO INSTALL MILLED-IN RUMBLE STRIPES FOR INSIDE AND OUTSIDE EDGE LINES ON ROADWAYS WITH NO PAVEMENT SHOULDERS.
  2. WHEN CENTERLINE MARKING IS ALSO DISCONTINUED.
  3. WHEN THERE ARE EDGE LINES ON BRIDGES WITH NARROW SHOULDERS.
  4. WHEN THERE ARE EDGE LINES ON BRIDGES WITH NARROW SHOULDERS, AS A SAFETY COUNTERMEASURE FOR BRIDGE PARAPET IMPACTS.

- ALL COST OF INSTALLATION SHALL BE INCLUDED IN ITEM NO:
  716-14.01, PROFILED THERMO PAINT MARKING AUDIBLE (6 IN), PER L.M.
  716-14.02, PROFILED THERMO PAINT MARKING AUDIBLE (6 IN), PER L.M.

- RUMBLE STRIPE SHOULD NOT BE USED IN RESIDENTIAL OR COMMERCIAL AREAS.

- RUMBLE STRIPE SHALL BE DISCONTINUED WHENEVER THE CENTERLINE MARKING IS ALSO DISCONTINUED.

- RUMBLE STRIPE SHOULD NOT BE USED IN RESIDENTIAL OR COMMERCIAL AREAS.

- WHEN RUMBLE STRIPES ARE SPECIFIED, PAINTING MARKING ITEM NUMBER SHALL BE 716-12.02, ENHANCED FLATLINE THERMO PAINT MARKING (6 IN) LINE) PER L.M.

- CENTERLINE RUMBLE STRIPES SHALL NOT BE USED ON BRIDGES.

- THE PAVEMENT JOINT SHALL NOT BE MILLED.

- RUMBLE STRIPE SHALL NOT BE USED IN RESIDENTIAL OR COMMERCIAL AREAS.

- SCORING FOR RUMBLE STRIPES TO BE PAID FOR UNDER ITEM NUMBER 411-12.09, SCORING FOR CENTERLINE RUMBLE PAINT (6 IN H2 LINE) 12'24" SPACING, PER L.M. INCLUDES BOTH LEFT AND RIGHT SIDE PER L.M.

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  3. WHEN THERE ARE EDGE LINES ON BRIDGES WITH NARROW SHOULDERS.
  4. WHEN THERE ARE EDGE LINES ON BRIDGES WITH NARROW SHOULDERS, AS A SAFETY COUNTERMEASURE FOR BRIDGE PARAPET IMPACTS.

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