TYPICAL SHOULDER INSTALLATION (CONCRETE PAVEMENT)

- **Lane Edge Stripe**: 4 1/2" (114 mm)
- **Cold Milled Rumble Strip**: 6" (150 mm)
- **Edge of Travel Lane**: 4" (101 mm)
- **Direction of Travel**: 6" (150 mm)

**Intermittent Rumble Strip Spacing**:
- Greater than 4 ft (1.2 m) / 12 ft (3.7 m) using a constant interval pattern
- Greater than 4 ft (1.2 m) / 12 ft (3.7 m) for asphalt pavement

**TYPICAL APPLICATION**

- **Intermittent Rumble Strips**: Formed outside shoulders
- **Continuous Rumble Strips**: For public approaches

**INTERSTATE APPLICATION**

- **Lane Edge Stripe**: 4 1/2" (114 mm)
- **Edge of Travel Lane**: 6" (150 mm)

**DISCONTINUE INTERMITTENT RUMBLE STRIPS**

- In front of
  - Guardrail if the shoulder is less than 6' (1.8 m) in width
  - Exit and entrance ramps

**NOTE**

- Do not install rumble strips over concrete bridge decks or where installed, such as concrete barrier rail prevent improper placement.

**INTERMEDIATE RUMBLE STRIP DETAIL**

**Table**

<table>
<thead>
<tr>
<th>Depth (mm)</th>
<th>Radius (mm)</th>
<th>Spacing (mm)</th>
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<tbody>
<tr>
<td>25</td>
<td>25</td>
<td>300</td>
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</tbody>
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**RUMBLE STRIP DETAIL**

- Units shown in brackets [ ] are metric and are in millimeters (mm)
- Unless otherwise specified, use engineering judgment on a case-by-case basis to determine if rumble strip installation is appropriate.
INTERMITTENT RUMBLE STRIP SPACING

GUARDRAIL IF THE SHOULDER IS LESS THAN 6' [1.8 m] IN WIDTH.

DISCONTINUE INTERMITTENT RUMBLE STRIPS IN FRONT OF

60' [18.3 m] CYCLE PATTERN

RUMBLE STRIPS

47'-0" TO 47'-8"

[3.7 m TO 3.9 m] GAP

12'-4" TO 13'-0"

DIRECTION OF TRAVEL

(ASPHALT PAVEMENT)

TYPICAL SHOULDER INSTALLATION

LANE EDGE STRIPE

12" [300]

RUMBLE STRIP

COLD MILLED

TRAVEL LANE

EDGECUTTING

DISTANCE OF TRAVEL

TYPICAL APPLICATION

RUMBLE STRIP DETAIL

NOTES:

1. DO NOT INSTALL RUMBLE STRIPS OVER CONCRETE PAVEMENT.

2. INSTALLATION ON SHOULDERS LESS THAN 4' [1.2 m] WILL BE DECIDED ON A CASE-BY-CASE BASIS.

UNITS SHOWN IN BRACKETS [ ] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
### TABLE 1: DIMENSIONS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>ENGLISH DIMENSIONS</th>
<th>METRIC DIMENSIONS</th>
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<tbody>
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<td>&lt; 2.0' SHOULDER</td>
<td>&lt; 0.6 m SHOULDER</td>
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<tr>
<td></td>
<td>&gt; 2.0' SHOULDER</td>
<td>&gt; 0.6 m SHOULDER</td>
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### TABLE 2: SECTION A-A

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<th>ENGLISH DIMENSIONS</th>
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<td>B</td>
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<tr>
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<td>3</td>
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<td>8</td>
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### TABLE 3: SECTION B-B

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<td>B</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

### NOTES:

- Do not install centerline rumble strips on concrete bridge decks unless otherwise specified.
- Use engineering judgment on a case-by-case basis to determine if centerline rumble strip installation is appropriate.
- Consider milling existing centerline rumble strips prior to a second seal and cover application.
- DO NOT INSTALL CENTERLINE RUMBLE STRIPS ON CONCRETE BRIDGE DECKS.

### PUBLIC APPROACH

- As suggested within designated city or urban limits.

### EFFECTIVE:

- SEPTEMBER 2014
- JANUARY 2018
- APRIL 2019

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**DETAILED DRAWING**

**REFERENCE**

**Dwg. No.** 411-05

**SECTION** 411

**RUMBLE STRIPS**