ITASCA COUNTY
BOARD OF COMMISSIONERS

Itasca County Courthouse
123 NE 4th Street
Grand Rapids, MN 55744
(218) 327-2847

Tuesday, September 19, 2023 | 2:00 PM | Itasca County Boardroom

FINAL

SPECIAL SESSION MINUTES

I. CALL TO ORDER

Chair Ives called the meeting to order at 2:02 PM.

Attendee Name	Title	Status	Arrived
Cory Smith	District #1	Absent	
Terry Snyder	District #2	Present	2:02 PM
John Johnson	District #3	Present	2:02 PM
Burl Ives	District #4	Present	2:02 PM
Casey Venema	District #5	Present	2:02 PM

II. REGULAR AGENDA

1. Transverse Rumble Strips

County Engineer Karin Grandia provided information regarding the potential use of Transverse Rumble Strips.

RESULT:	INFORMATIONAL - NO ACTION TAKEN

III. ADJOURN

Chair Ives adjourned the meeting at 2:18 PM.

ATTEST

Burl Ives
Chair of the County Board

Brett Skyles
Clerk of the County Board

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Tuesday, September 19, 2023

REQUEST FOR BOARD ACTION: RBA-2023-3260

DEPARTMENT: Transportation
PRESENTER: Karin Grandia

TIME REQUESTED: 15 Minutes

AGENDA ITEM:
Transverse Rumble Strips

BOARD ACTION REQUESTED:
Informational

BACKGROUND: Vehicle crashes in rural areas often occur at intersections. Transverse rumble strips placed before a stop sign can be an effective safety measure that warns drivers approaching an intersection. They are a low cost, easily deployable safety countermeasure for intersection approaches. They are grooved into the pavement and provide an auditory and tactile warning to drivers and are effective in all conditions, but particularly when it's dark or visibility is low. They are intended to address the unintentional running of a stop sign. However, this represents only one scenario for right-angle crashes at rural through-stop intersections. For example, transverse rumble strips will not benefit drivers who have stopped, but misjudge gaps in traffic as they pull out onto the highway.

The main barrier to using transverse rumble strips is the noise that is generated from vehicles traversing the rumble strips can be an issue when residences are in close proximity to the intersection.

Possible criteria for determining locations for installations are:

- more than 5 miles from the last stop
- direction of travel (E/W vs N/S) - sunrise/sunset direction
- crash history
- nearby houses
- public notification of running stop signs

Placement of transverse rumble strips should be considered when other conventional methods have been tried. If overused, they may lose their ability to gain a motorist's attention.

COUNTY ATTORNEY REVIEW: N/A

SUPPORTING DOCUMENTATION:

1. Transverse Rumble Strips
2. Noise Thermometer - FHWA

RESULT:	**INFORMATIONAL - NO ACTION TAKEN**

Install Transverse Rumble Strips

Crash type addressed

Right angle and roadway departure crashes attributed to motorists unaware of Stop or Yield signs as they approach an intersection.

Time:	● ○ ○
Cost:	*Moderate*
CRF:	*28-35%*

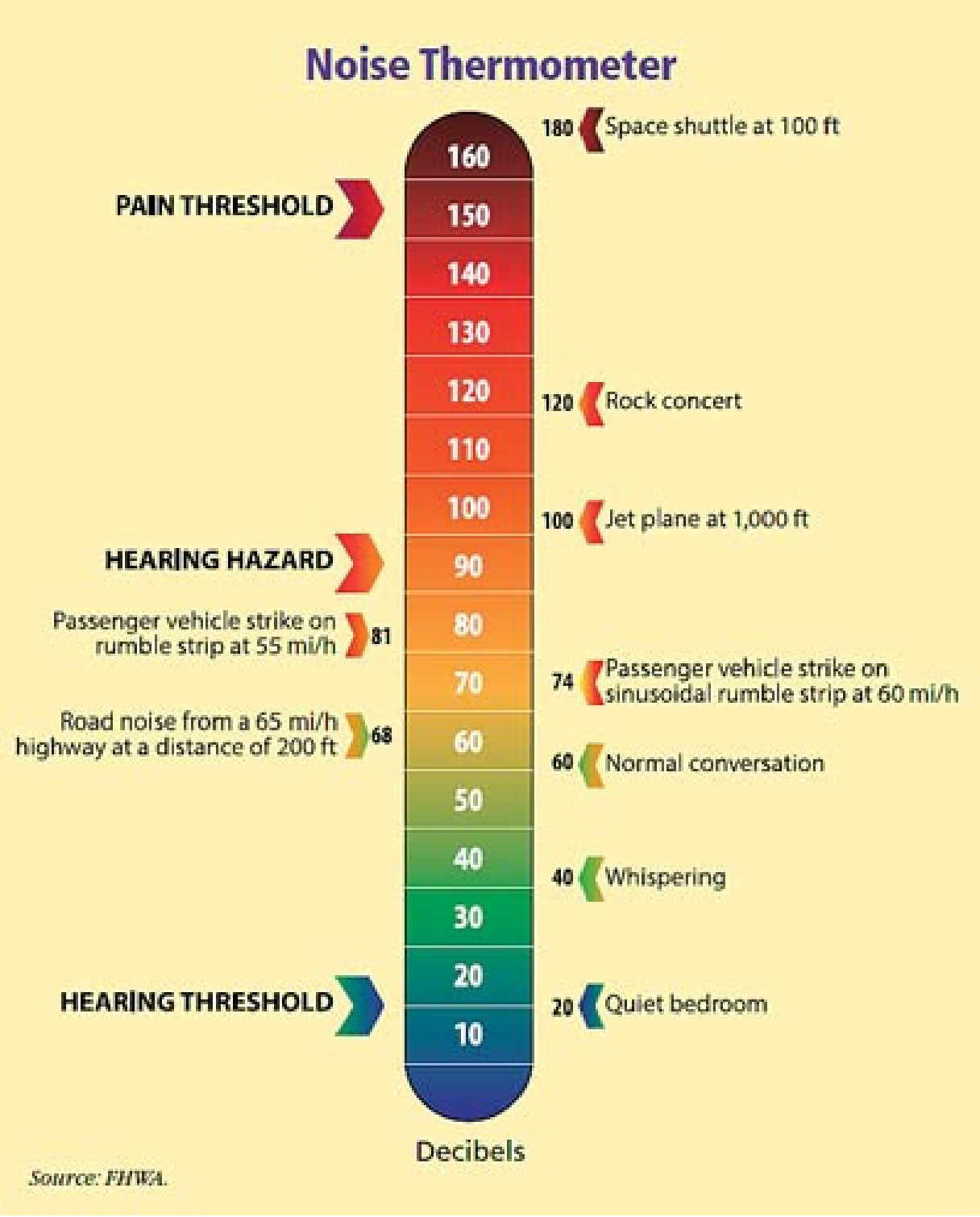
Where to use

Transverse rumble strips are installed in the travel lane for the purposes of providing an auditory and tactile sensation for each motorist approaching the intersection. They can be used at any stop or yield approach intersection, often in combination with advance signing to warn of the intersection ahead. Due to the noise generated by vehicles driving over the rumble strips, care must be taken to minimize disruption to nearby residences and businesses.

Why it works

When motorists are traveling along the roadway, they are sometimes unaware they are approaching an intersection. This is especially true on rural roads, as there may be fewer cues indicating an intersection ahead. Transverse rumble strips warn motorists that something unexpected is ahead that they need to pay attention to.

Unless otherwise noted, all Crash Reduction Factors (CRFs) in this document are from "Issue Brief 8: Toolbox of Countermeasures and Their Potential Effectiveness for Intersection Crashes," FHWA, 2009.


Noise Thermometer
180 Space shuttle at 100 ft
160
PAIN THRESHOLD
150
140
130
120
120 Rock concert
110
100
100 Jet plane at 1,000 ft
HEARING HAZARD
90
Passenger vehicle strike on rumble strip at 55 mi/h
81
80
70
74 Passenger vehicle strike on sinusoidal rumble strip at 60 mi/h
Road noise from a 65 mi/h highway at a distance of 200 ft
68
60
60 Normal conversation
50
40
40 Whispering
30
20
HEARING THRESHOLD
20 Quiet bedroom
10
Decibels
Source: FHWA.