



Statewide Traffic Engineers Meeting

Rumble Strip(e)

June 16, 2011

Simone Ardoin

Assistant Road Design Engineer Administrator

Terminology

- Rumble Strip
- Rumble Stripe
 - Centerline
 - Shoulder
 - Edge line

MEMORANDUM

Existing Policy

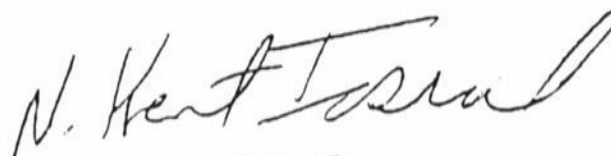
TO: Each District Administrator
Attention: Each District Design, Water Resources
and Development Engineer ✓

SUBJECT: Rumble Strips on Asphaltic Concrete Shoulders

- **12/1997 – Shoulder Rumble Strips to be placed on all 4 lane divided highways with paved shoulders**

Transmitted herewith is a copy of the details and specifications for installing rumble strips on asphaltic concrete shoulders. These details should be included on all projects for four lane divided highways with paved HMA shoulders along with the appropriate pay items. This policy is in effect for all projects beginning with the letting on or after December 17, 1997.

If you need any additional information or have any questions, please contact me or Mrs. Janice Williams.



N. Kent Israel, P. E.
Road Design Engineer

NKI/jw
Attachments
C: Mr. R. E. Dillon, Jr. (w/att.)

Centerline Rumble Strip(e)

- Prior to the 2010 Interim Policy, use was limited to abnormal crash locations



IN REPLY REFER TO
FILE NO.

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Interim Policy

REFERRED TO
Guy Leonard
Simon Anderson

REFERRED FOR ACTION
 ANSWER FOR MY SIGNATURE
 FOR FILE
 FOR YOUR INFORMATION
 FOR SIGNATURE
 RETURN TO ME
 PLEASE SEE ME
 PLEASE TELEPHONE ME
 FOR APPROVAL
 PLEASE ADVISE ME

BY *[Signature]* DATE 8-16-10
 BY _____ DATE _____
 BY _____ DATE _____

MEMORANDUM

• 08/2010 – Centerline Rumble Strips

- 2 lane rural roadways
- $\geq 11'$ Lanes

FROM: Mr. Richard Savoie, P.E. *RS*
Chief Engineer

- 55 m.p.h. speed limit

SUBJECT: Interim Policy for the Placement of Centerline Rumble Strips

- Asphalt pavement age ≤ 10 years

- 6" wide, 1/2" deep, 7" long on 12" centers
- Centerline rumble strips may be placed on two lane roadways if the following conditions are met: at least 10 foot lanes, 55 mph speed limit, rural classification, and asphaltic pavement not older than 10 years. The centerline rumble shall be interrupted for major intersections and for concrete bridges as defined by the District Traffic Operations Engineer.

The rumble dimensions shall be as follows: 6" wide, 1/2" deep, and 7" long on 12" centers. The pavement markings shall follow PM-01. See attached detail.

The Department shall work on finalizing this policy into an EDSM and standard detail. The target date for the final policy in EDSM format is January 31, 2011. Any exceptions to this interim policy will be handled on a case by case basis.

Attachment

RECOMMENDED FOR APPROVAL _____	DATE _____
RECOMMENDED FOR APPROVAL _____	DATE _____
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APPROVED _____	DATE _____

District Wide Projects

Centerline Rumble Strips

- All 9 Districts
- 2159 centerline miles
- \$14.3 million
- Bid between May 2010 and March 2011

Proposed Rumble Policy

- Committee of Safety, Traffic, and Design Engineers from DOTD and FHWA
- Rumble use limited to speeds ≥ 45 mph
- Consideration of land usage is important, especially when placing rumbles in urbanized areas

Centerline - Two Lane Undivided

- Paved surface $>24'$, use 16" wide rumble (encompasses stripes)
- Paved surface $>20'$ and $\leq 24'$, use 6" or 7" rumble (fits between stripes)(width to be determined)
- Paved surface $\leq 20'$, use 6" or 7" only when crash history warrants

Centerline - Multi Lane Undivided

- Use 12" wide rumble (fits between stripes)

Shoulder/Edge Rumble - Two Lane Undivided

- Paved Shoulder Width $\geq 2'$, use 16" wide rumble stripe. (approximately 6" of rumble is in lane and 10" on shoulder)
- Paved Shoulder Width $\geq 1'$ and $< 2'$, use 6"-7" rumble stripe
- Paved shoulder width $0'$ to $< 1'$, use 4" rumble stripe
- Paved surface $\leq 20'$, no rumble is to be used

Shoulder/Edge Rumble – Divided Highways

- Same as Two Lane Undivided for both inside and outside shoulders

ADDITIONAL NOTES

- Based on above criteria, shoulder $\geq 5'$ would accommodate the 4' area needed behind the rumble for cyclists.
- If the shoulder is between 2' and 5' and the route is determined to be on the suitability map or future goal map for cyclists, the narrower 6"-7" rumble stripe is to be used. The narrower width rumble stripe would maintain sufficient area for cyclists on an existing 4' shoulder and would also provide some refuge on shoulders $< 4'$ in width.
- Gaps in the shoulder rumbles are to be spaced at regular intervals and utilized on all routes, with the exception of Interstate routes, in consideration of any current or future cyclists.
- If shoulder widths vary between two ranges, use the rumble width for the average shoulder width.
- Raised Pavement Markers may be used in lieu of ground or formed rumbles.
- Terminate centerline and shoulder rumbles at guard rail and/or bridge locations.
- CMF for centerline rumble on a 2 lane undivided highway = 0.94

FURTHER DISCUSSION

- Transverse Rumbles
- Define Gap lengths for cyclists, intersecting streets and major driveways
- Future Research – Ground in Rumble Strips – detriment to pavement structure?

District 04 Project Showing Stripe



District 04 Project



Problems Encountered



Centerline Rumble Strip

LA 1019

First Project Completed in LA



THANK YOU

Special Thanks to:
Traffic Engineering Management Section
Highway Safety Section
Road Design Section
District 62
FHWA