



CMF / CRF Details

CMF ID: 5263

Install centerline and shoulder rumble strips

Description: Milled or rolled rumble strips.

Prior Condition: No centerline or rumble strips present

Category: Roadway

Study: [*Rumble Strips in North Dakota: A Comparison of Road Segments, Safety, and Crash Patterns*, A. Kubas, P. Kayabas, K. Vachal, and M. Berwick, 2013](#)



Star Quality Rating:	[View score details]
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Crash Modification Factor (CMF)

Value:	0.55
Adjusted Standard Error:	
Unadjusted Standard Error:	0.535

Crash Reduction Factor (CRF)

Value:	45 <i>(This value indicates a decrease in crashes)</i>
Adjusted Standard Error:	

Unadjusted Standard Error:	53.5
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Applicability

Crash Type:	All
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Crash Severity:	K (fatal)
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Roadway Types:	Not specified
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Number of Lanes:	2
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Road Division Type:	Undivided
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Speed Limit:	
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Area Type:	Rural
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Traffic Volume:	
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Time of Day:	All
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If countermeasure is intersection-based

Intersection Type:	
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Intersection Geometry:	
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Traffic Control:	
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Major Road Traffic Volume:	
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Minor Road Traffic Volume:	
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Development Details

Date Range of Data Used:	2007 to 2011
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Municipality:	
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State:	ND
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Country:	
Type of Methodology Used:	3
Sample Size Used:	Crashes
Before Sample Size Used:	3 Crashes
After Sample Size Used:	2 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-02-2013
Comments:	Traffic volume was reported in VMT. VMT before was 86,522,040 vehicle-miles and 104,286,686 after.

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