



## CMF / CRF Details

**CMF ID: 5262**

**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:**



[\[View score details\]](#)

### Crash Modification Factor (CMF)

**Value:** 0.98

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.103

### Crash Reduction Factor (CRF)

**Value:** 2 (This value indicates a **decrease** in crashes)

**Adjusted Standard Error:**

<b>Unadjusted Standard Error:</b>	10.3
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### Applicability

<b>Crash Type:</b>	All
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Not specified
<b>Number of Lanes:</b>	2
<b>Road Division Type:</b>	Undivided
<b>Speed Limit:</b>	
<b>Area Type:</b>	Rural
<b>Traffic Volume:</b>	
<b>Time of Day:</b>	All

*If countermeasure is intersection-based*

<b>Intersection Type:</b>	
<b>Intersection Geometry:</b>	
<b>Traffic Control:</b>	
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

### Development Details

<b>Date Range of Data Used:</b>	2007 to 2011
<b>Municipality:</b>	
<b>State:</b>	ND

<b>Country:</b>	
<b>Type of Methodology Used:</b>	Simple before/after
<b>Sample Size Used:</b>	Crashes
<b>Before Sample Size Used:</b>	184 Crashes
<b>After Sample Size Used:</b>	217 Crashes

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

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