



## CMF / CRF Details

**CMF ID: 5300**

**Install centerline rumble strips on roads with existing shoulder rumble strips**

**Description: Install centerline rumble strips on roads with existing shoulder rumble strips**

**Prior Condition: Shoulder Rumble Strips Only**

**Category: Roadway**

**Study: [Performance Analysis of Centerline and Shoulder Rumble Strips Installed in Combination in Washington State, D. Olson, M. Sujka, and B. Manchas, 2013](#)**

**Star Quality Rating:**



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

### Crash Modification Factor (CMF)

**Value:** 0.554

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.124

### Crash Reduction Factor (CRF)

**Value:** 44.6 (This value indicates a **decrease** in crashes)

**Adjusted Standard Error:**

<b>Unadjusted Standard Error:</b>	12.4
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### Applicability

<b>Crash Type:</b>	Head on,Run off road,Sideswipe
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Not specified
<b>Number of Lanes:</b>	2
<b>Road Division Type:</b>	
<b>Speed Limit:</b>	
<b>Area Type:</b>	Rural
<b>Traffic Volume:</b>	
<b>Time of Day:</b>	Not specified

### *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>	2002 to 2010
<b>Municipality:</b>	
<b>State:</b>	WA

<b>Country:</b>	
<b>Type of Methodology Used:</b>	Simple before/after
<b>Sample Size Used:</b>	Crashes
<b>Before Sample Size Used:</b>	40 Crashes
<b>After Sample Size Used:</b>	39 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>	Exposure is VMT Before MVMT = 242.42 After MVMT = 428.57 Crash type is total lane departures

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