



# CMF / CRF Details

CMF ID: 3398

Install edgeline rumble strips

Description:

Prior Condition: *No Prior Condition(s)*

Category: Roadway

Study: [NCHRP Report 641: Guidance for the Design and Application of Shoulder and Centerline Rumble Strips, Torbic et al., 2009](#)

Star Quality Rating:

4 Stars

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

## Crash Modification Factor (CMF)

Value: 0.86

Adjusted Standard Error:

Unadjusted Standard Error: 0.0855

## Crash Reduction Factor (CRF)

Value: 14 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 8.55

## Applicability

**Crash Type:** Run off road

**Crash Severity:** K (fatal),A (serious injury),B (minor injury),C (possible injury)

**Roadway Types:** Not Specified

**Number of Lanes:**

**Road Division Type:**

**Speed Limit:**

**Area Type:**

**Traffic Volume:** 180 to 92757 *Average Daily Traffic (ADT)*

**Time of Day:** All

### *If countermeasure is intersection-based*

**Intersection Type:**

**Intersection Geometry:**

**Traffic Control:**

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

## Development Details

**Date Range of Data Used:** 1997 to 2006

**Municipality:**

**State:** MN, MO, PA

**Country:** U.S.A.

**Type of Methodology Used:** 7

|                          |         |
|--------------------------|---------|
| <b>Sample Size Used:</b> | Crashes |
|--------------------------|---------|

| <b>Other Details</b> |  |
|----------------------|--|
|----------------------|--|

|   |    |
|---|----|
| <b>Included in Highway Safety Manual?</b> | No |
|---|----|

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|-------------------------------------|-------------|
| <b>Date Added to Clearinghouse:</b> | Mar-21-2011 |
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| <b>Comments:</b> | The authors collected data on thru lanes and speed limits but did not provide those data in the report (see p. 50). |
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