



CMF / CRF Details

CMF ID: 10409

Install shoulder rumble strips

Description:

Prior Condition: *No Prior Condition(s)*

Category: Shoulder treatments

Study: [Evaluation of the safety effectiveness of lane departure countermeasures on two-lane undivided roadways using crash modification factors, Dissanayake and Galgamuwa, 2019](#)

Star Quality Rating:

8 Stars

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

Crash Modification Factor (CMF)

Value: 0.81

Adjusted Standard Error:

Unadjusted Standard Error: 0.071

Crash Reduction Factor (CRF)

Value: 19 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 7.1

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: | 2 |
| Road Division Type: | Undivided |
| Speed Limit: | |
| Area Type: | Rural |
| Traffic Volume: | 50 to 8550 <i>Annual Average Daily Traffic (AADT)</i> |
| Time of Day: | Not specified |

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: | 2009 to 2014 |
| Municipality: | |
| State: | KS |
| Country: | USA |

| | |
|----------------------------------|---|
| Type of Methodology Used: | 7 |
| Sample Size Used: | |

| Other Details | |
|---|--|
| Included in Highway Safety Manual? | No |
| Date Added to Clearinghouse: | Jun-01-2020 |
| Comments: | CMF for lane departure crashes on curved road segments |

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

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