



CMF / CRF Details

CMF ID: 10401

Provide 2-ft paved shoulders (both sides)

Description: Provide 2-ft paved shoulders on both sides of 2-lane rural roads

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

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Crash Modification Factor (CMF)

Value: 0.93

Adjusted Standard Error:

Unadjusted Standard Error: 0.02

Crash Reduction Factor (CRF)

Value: 7 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 2

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: Undivided

Speed Limit:

Area Type: Rural

Traffic Volume: 50 to 8550 *Annual Average Daily Traffic (AADT)*

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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