



CMF / CRF Details

CMF ID: 5213

Modify paved shoulder width on rural frontage roads

Description: The average paved shoulder width represents the sum of the left and right paved shoulder widths divided by two.

Prior Condition: *No Prior Condition(s)*

Category: Shoulder treatments

Study: [Highway Safety Manual, 1st Edition, Various, 2010](#)

Star Quality Rating:	

Crash Modification Factor (CMF)	
Value:	$CMF = e^{-0.070(SW_{new} - SW_{existing})}$ <p>Where: SW_{new} = new (or proposed) average paved shoulder width in feet $SW_{existing}$ = existing average paved shoulder width in feet</p>
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)

Value: *(This value indicates an **increase** in crashes)*

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type: All

Crash Severity: All

Roadway Types: Minor Collector

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type: Rural

Traffic Volume: 100 to 6200 *Annual Average Daily Traffic (AADT)*

Time of Day:

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:	
Municipality:	
State:	
Country:	
Type of Methodology Used:	Not specified
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	
Date Added to Clearinghouse:	
Comments:	Both one-way and two-way frontage roads were considered in the development of the CMF. Development of this CMF was limited to shoulder widths ranging from 0 to 9 ft.

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