



## CMF / CRF Details

**CMF ID: 6828**

**Widen shoulder**

**Description:**

**Prior Condition: Narrower paved shoulder than after condition**

**Category: Shoulder treatments**

**Study: [Safety Impacts of Highway Shoulder Attributes in Illinois, Bamzai et al., 2011](#)**

**Star Quality Rating:**



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

### Crash Modification Factor (CMF)

**Value:** 0.81

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

### Crash Reduction Factor (CRF)

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

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

### Applicability

**Crash Type:**

Fixed object,Head on,Run off road,Sideswipe

**Crash Severity:**

A (serious injury),B (minor injury),C (possible injury)

**Roadway Types:**

Principal Arterial Interstate

**Number of Lanes:**

**Road Division Type:**

Divided by Median

**Speed Limit:**

45-65

**Area Type:**

Urban

**Traffic Volume:**

**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:**

2000 to 2006

**Municipality:**

**State:**

IL

<b>Country:</b>	USA
<b>Type of Methodology Used:</b>	2
<b>Sample Size Used:</b>	

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Jun-22-2015
<b>Comments:</b>	This CMF applies to urban interstates with a combined lane width and outside paved shoulder width greater than 20 ft. This CMF applies to shoulder related crashes, defined as head-on, fixed object, sideswipe opposite direction, and run-off-road.

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