



## CMF / CRF Details

**CMF ID: 6683**

**Pave shoulder**

**Description:**

**Prior Condition: Deteriorated shoulder**

**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:** 0.77

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

### Crash Reduction Factor (CRF)

**Value:** 23 (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:**

K (fatal)

**Roadway Types:**

Principal Arterial Interstate

**Number of Lanes:**

**Road Division Type:**

Divided by Median

**Speed Limit:**

65

**Area Type:**

Rural

**Traffic Volume:**

30000 *Annual Average Daily Traffic (AADT)*

**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>	Before/after using empirical Bayes or full Bayes
<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 rural interstates with less than or equal to 30,000 vehicles per day. Crash types include head-on, sideswipe same direction (for multilane highways), sideswipe opposite direction, fixed object, and overturn in road or roadside

---

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

*The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.*