



CMF / CRF Details

CMF ID: 2992

Convert High-Occupancy-Vehicle (HOV) lanes to High-Occupancy-Toll (HOT) lanes

Description: convert a High-Occupancy-Vehicle (HOV) interstate segment into a High-Occupancy-Toll (HOT) segment

Prior Condition: High-Occupancy-Vehicle (HOV) interstate segment

Category: Roadway

Study: [Safety Benefits of Converting HOV lanes to HOT lanes: Case Study of the I-394 MnPass, Cao et al., 2011](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.96

Adjusted Standard Error:

Unadjusted Standard Error:

Crash Reduction Factor (CRF)

Value: 4 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type:

All

Crash Severity:

C (possible injury)

Roadway Types:

Principal Arterial Interstate

Number of Lanes:

Road Division Type:

Divided by Median

Speed Limit:

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:

1998 to 2008

Municipality:

Minneapolis-St. Paul

State:	MN
Country:	U.S.A.
Type of Methodology Used:	Simple before/after
Sample Size Used:	
Before Sample Size Used:	349
After Sample Size Used:	168

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jul-15-2011
Comments:	This CMF was derived from a comparison group study, but the method does not follow Hauer's book. Injury severity is C (possible injury). Data on traffic volumes, speed limits, and thru lanes are not provided. The authors only have crash and volume data fo

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