



CMF / CRF Details

CMF ID: 4885

Convert a conventional unsignalized intersection to an unsignalized superstreet

Description: Convert a conventional unsignalized intersection to an unsignalized superstreet (also known as a restricted crossing U-turn intersection or a J-turn intersection)

Prior Condition: conventional unsignalized intersection

Category: Intersection geometry

Study: [Superstreet Benefits and Capacities, Hummer et al., 2010](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.25

Adjusted Standard Error:

Unadjusted Standard Error: 0.08

Crash Reduction Factor (CRF)

Value: 75 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:	
Unadjusted Standard Error:	8

Applicability

Crash Type:	Angle,Right turn
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Number of Lanes:	
Road Division Type:	Divided by Median
Speed Limit:	
Area Type:	Rural
Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	3-leg,4-leg
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	5900 to 33500 Annual Average Daily Traffic (AADT)
Minor Road Traffic Volume:	330 to 5000 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used:	1991 to 2010
Municipality:	

State:	NC
Country:	U.S.A.
Type of Methodology Used:	1
Sample Size Used:	Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-04-2012
Comments:	This CMF was obtained from Table 3.13 for "rear ends" crashes from the unsignalized set (p. 83). The years of data were obtained from Table 10.2 (p. 161). The sample size for the treatment group (total) was 156 crashes. According to the executive summary, all the superstreet sites have a rural area type (p. iv). The minimum and maximum major roadway AADTs were obtained from Table 10.4 (p. 163), and the minimum and maximum minor roadway AADTs were obtained from Table 10.5 (p. 164). The number of legs of intersections was obtained from Table 10.3 (p. 162). The after periods of some of the sites were rather short (i.e., < 1 yr). See Table 10.2 (p. 161). The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 to give 10 points as a benefit of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the disaggregate dataset used for CMF development.

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