



# CMF / CRF Details

CMF ID: 3017

**Add Two-Way-Left-Turn-Lane (TWLTL) to the major approach of an unsignalized 4-leg intersection**

**Description:** Add Two-Way-Left-Turn-Lane (TWLTL) to the major approach of an unsignalized 4-leg intersection

**Prior Condition:** unsignalized 4-leg intersection with no two-way left-turn lane on major road

**Category:** Access management

**Study:** [\*The Group Least Absolute Shrinkage and Selection Operator "GLASSO" Technique: Application in Variable Selection and Crash Prediction at Unsignalized Intersections, Haleem and Abdel-Aty, 2010\*](#)

Star Quality Rating:	
8 Stars	

Crash Modification Factor (CMF)	
Value:	0.66
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	34 (This value indicates a <b>decrease</b> in crashes)
Adjusted Standard Error:	

**Unadjusted Standard Error:**

### Applicability

**Crash Type:**

All

**Crash Severity:**

All

**Roadway Types:**

Not Specified

**Number of Lanes:**

2 to 8

**Road Division Type:**

**Speed Limit:**

**Area Type:**

All

**Traffic Volume:**

**Time of Day:**

All

### *If countermeasure is intersection-based*

**Intersection Type:**

Roadway/roadway (not interchange related)

**Intersection Geometry:**

4-leg

**Traffic Control:**

Stop-controlled

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

### Development Details

**Date Range of Data Used:**

2003 to 2006

**Municipality:**

**State:**

FL

<b>Country:</b>	U.S.A.
<b>Type of Methodology Used:</b>	7
<b>Sample Size Used:</b>	1735

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Jul-15-2011
<b>Comments:</b>	

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