



# CMF / CRF Details

**CMF ID: 10228**

**Change posted speed limit from X MPH to Y MPH**

**Description: Change the posted speed limit from X miles per hour to Y miles per hour**

**Prior Condition: Posted speed limit of X MPH**

**Category: Speed management**

**Study: [Estimation of bicycle crash modification factors \(CMFs\) on urban facilities using zero inflated negative binomial models, Raihan et al., 2019](#)**

**Star Quality Rating:**

**8 Stars**

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

## Crash Modification Factor (CMF)

**Value:**

$$CMF = e^{(-0.09328*[Y-X])}$$

**Y = proposed posted speed limit in MPH**

**X = existing posted speed limit in MPH**

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

## Crash Reduction Factor (CRF)

Value:

$$CRF = 100 * (1 - e^{(-0.09328*[Y-X])})$$

**Y = proposed posted speed limit in MPH**

**X = existing posted speed limit in MPH**

Adjusted Standard Error:

Unadjusted Standard Error:

### Applicability

**Crash Type:**

Vehicle/bicycle

**Crash Severity:**

All

**Roadway Types:**

Not specified

**Number of Lanes:**

6

**Road Division Type:**

Divided by Median

**Speed Limit:**

40-55 MPH

**Area Type:**

Urban

**Traffic Volume:**

8000 to 98500 *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	
<b>Date Range of Data Used:</b>	2011 to 2014
<b>Municipality:</b>	
<b>State:</b>	FL
<b>Country:</b>	USA
<b>Type of Methodology Used:</b>	7
<b>Sample Size Used:</b>	

Other Details	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Dec-07-2019
<b>Comments:</b>	This CMF applies to vehicle/bicycle crashes on urban six-lane divided segments when average lane width is equal to 12 feet. Posted speed limit ranges from 40 to 55 MPH.

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