



## CMF / CRF Details

**CMF ID: 9914**

**Modify signal phasing (implement a leading pedestrian interval)**

**Description:**

**Prior Condition: Signal phasing without leading pedestrian interval**

**Category: Intersection traffic control**

**Study: [Safety Evaluation of Protected Left-Turn Phasing and Leading Pedestrian Intervals on Pedestrian Safety, Goughnour et al., 2018](#)**

**Star Quality Rating:**



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

### Crash Modification Factor (CMF)

**Value:** 1.09

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.18

### Crash Reduction Factor (CRF)

**Value:** -9 (This value indicates an **increase** in crashes)

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

18

### Applicability

**Crash Type:**

All

**Crash Severity:**

K (fatal),A (serious injury),B (minor injury),C (possible injury)

**Roadway Types:**

All

**Number of Lanes:**

**Road Division Type:**

**Speed Limit:**

**Area Type:**

Urban and suburban

**Traffic Volume:**

**Time of Day:**

All

### *If countermeasure is intersection-based*

**Intersection Type:**

Roadway/roadway (not interchange related)

**Intersection Geometry:**

Not specified

**Traffic Control:**

Signalized

**Major Road Traffic Volume:**

17781 to 49687 Annual Average Daily Traffic (AADT)

**Minor Road Traffic Volume:**

### Development Details

**Date Range of Data Used:**

2009 to 2015

**Municipality:**

Charlotte

**State:**

NC

<b>Country:</b>	
<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>	Mar-11-2019
<b>Comments:</b>	Crash Type = Total Injury Crashes. This CMF is for sites where LPIs were implemented either at all crossings (across major and minor roads) or only for crossings across the minor road (parallel to the major road).

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