



CMF / CRF Details

CMF ID: 6399

Change left-turn phase to protected phasing on one or more approaches

Description: Change from permissive, permissive/protected, or protected/permissive to protected phasing on one or more approaches at urban signalized intersection

Prior Condition: *No Prior Condition(s)*

Category: Intersection traffic control

Study: [*Safety effects of an extensive black spot treatment programme in Flanders-Belgium, De Pauw et al., 2014*](#)

Star Quality Rating:

8 Stars

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

Crash Modification Factor (CMF)

Value: 0.78

Adjusted Standard Error:

Unadjusted Standard Error: 0.06

Crash Reduction Factor (CRF)

Value: 22 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 6

Applicability

Crash Type:

All

Crash Severity:

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

Roadway Types:

Not specified

Number of Lanes:

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:

Not specified

Traffic Control:

Signalized

Major Road Traffic Volume:

Minor Road Traffic Volume:

Development Details

Date Range of Data Used:

2000 to 2008

Municipality:

State:

Country:

Belgium

Type of Methodology Used:	2
Sample Size Used:	

Other Details

Included in Highway Safety Manual?	No
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Date Added to Clearinghouse:	Mar-11-2015
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Comments:	Comparison group 1 (black spots treated after 2008) 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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