



CMF / CRF Details

CMF ID: 2944

Replacement of traditional intersection with roundabout with a grade separated cycle path

Description: Installation of a roundabout with a grade separated cycle path in place of a traditional (signalized or unsignalized) intersection.

Prior Condition: Traditional signalized or unsignalized intersection

Category: Bicyclists

Study: [*Injury crashes with bicyclists at roundabouts: influence of some location characteristics and the design of cycle facilities, Daniels et al., 2009*](#)

Star Quality Rating:

 Stars

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

Crash Modification Factor (CMF)

Value: 0.56

Adjusted Standard Error:

Unadjusted Standard Error: 0.691

Crash Reduction Factor (CRF)

Value: 44 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 69.1

Applicability

Crash Type: Vehicle/bicycle

Crash Severity: All

Roadway Types: Not Specified

Number of Lanes:

Road Division Type: All

Speed Limit:

Area Type: Urban

Traffic Volume:

Time of Day: All

If countermeasure is intersection-based

Intersection Type: Roadway/roadway (not interchange related)

Intersection Geometry: Not specified

Traffic Control: Roundabout

Major Road Traffic Volume:

Minor Road Traffic Volume:

Development Details

Date Range of Data Used: 1991 to 2001

Municipality:

State:

Country: Belgium

Type of Methodology Used:	2
Sample Size Used:	Sites
Before Sample Size Used:	3 Sites
After Sample Size Used:	3 Sites

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-21-2011
Comments:	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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