



CMF / CRF Details

CMF ID: 10576

Roundabout geometry

Description: Various geometric elements of roundabout

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [Developing crash modification factors for roundabouts using a cross-sectional method, Al-Marafi et al., 2020](#)

Star Quality Rating:

Stars

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

Crash Modification Factor (CMF)

Value:

$$CMF = e^{0.020(Rx_1 - 60)}$$

Where Rx_1 is the exit radius on the major approach (m)

Adjusted Standard Error:

Unadjusted Standard Error:

Crash Reduction Factor (CRF)

Value:

(This value indicates an **increase** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type:

All

Crash Severity:

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

Roadway Types:

Not specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Not specified

Traffic Volume:

Time of Day:

If countermeasure is intersection-based

Intersection Type:

Roadway/roadway (not interchange related)

Intersection Geometry:

No values chosen.

Traffic Control:

Roundabout

Major Road Traffic Volume:

1288 to 16071 Annual Average Daily Traffic (AADT)

Minor Road Traffic Volume:

1200 to 10002 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used:

2010 to 2015

Municipality:

Toowoomba City

State:

Country:	Australia
Type of Methodology Used:	7
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-17-2020
Comments:	CMFunction for exit radius on the major approach (m)

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