



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:



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

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
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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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