



# CMF / CRF Details

CMF ID: 1867

Install a combination of chevron signs, curve warning signs, and/or sequential flashing beacons

**Description:** Along a curve with a small radius, large deflection angle, available sight distance smaller than stopping sight distance, and superelevation smaller than demanded at design and operating speed

**Prior Condition:** No curve delineation treatment. Radius is greater than 300 m.

**Category:** Signs

**Study:** [Safety Evaluation of Curve Delineation Improvements An Empirical Bayes Observational Before-After Study, Montella, 2009](#)

Star Quality Rating:	
4 Stars	<a href="#">[View score details]</a>

Crash Modification Factor (CMF)	
Value:	0.608
Adjusted Standard Error:	
Unadjusted Standard Error:	0.14

Crash Reduction Factor (CRF)	
Value:	39.2 (This value indicates a <b>decrease</b> in crashes)
Adjusted Standard Error:	

**Unadjusted Standard Error:**

14

### Applicability

**Crash Type:**

All

**Crash Severity:**

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

**Roadway Types:**

Principal Arterial Other Freeways and Expressways

**Number of Lanes:**

4

**Road Division Type:**

**Speed Limit:**

**Area Type:**

Not specified

**Traffic Volume:**

7400 to 13975 *Annual Average Daily Traffic (AADT)*

**Time of Day:**

All

### *If countermeasure is intersection-based*

**Intersection Type:**

**Intersection Geometry:**

**Traffic Control:**

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

### Development Details

**Date Range of Data Used:**

2001 to 2005

**Municipality:**

Trans European Road Network, Italy

**State:**

<b>Country:</b>	
<b>Type of Methodology Used:</b>	2
<b>Sample Size Used:</b>	
<b>Before Sample Size Used:</b>	4
<b>After Sample Size Used:</b>	4

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Dec-01-2009
<b>Comments:</b>	

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