



## CMF / CRF Details

CMF ID: 1875

**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 less than 300 m.**

**Category: Signs**

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

Star Quality Rating:



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

### Crash Modification Factor (CMF)

**Value:** 0.867

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.31

### Crash Reduction Factor (CRF)

**Value:** 13.3 (This value indicates a **decrease** in crashes)

<b>Adjusted Standard Error:</b>	
<b>Unadjusted Standard Error:</b>	31

### Applicability

<b>Crash Type:</b>	Angle,Fixed object,Head on,Rear end,Rear to rear,Sideswipe,Single vehicle
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Principal Arterial Other Freeways and Expressways
<b>Number of Lanes:</b>	4
<b>Road Division Type:</b>	
<b>Speed Limit:</b>	
<b>Area Type:</b>	Not specified
<b>Traffic Volume:</b>	7400 to 13975 <i>Annual Average Daily Traffic (AADT)</i>
<b>Time of Day:</b>	All

### *If countermeasure is intersection-based*

<b>Intersection Type:</b>	
<b>Intersection Geometry:</b>	
<b>Traffic Control:</b>	
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

### Development Details

<b>Date Range of Data Used:</b>	2001 to 2005
<b>Municipality:</b>	Trans European Road Network, Italy

<b>State:</b>	
<b>Country:</b>	
<b>Type of Methodology Used:</b>	Before/after using empirical Bayes or full Bayes
<b>Sample Size Used:</b>	
<b>Before Sample Size Used:</b>	10
<b>After Sample Size Used:</b>	10

<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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