



# CMF / CRF Details

CMF ID: 1885

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. Deflection angle is less than 60 gon.

**Category:** Signs

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

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| Star Quality Rating:                 |                                      |
| <input type="text" value="3 Stars"/> | <a href="#">[View score details]</a> |

| Crash Modification Factor (CMF) |       |
|---------------------------------|-------|
| Value:                          | 1.526 |
| Adjusted Standard Error:        |       |
| Unadjusted Standard Error:      | 0.39  |

| Crash Reduction Factor (CRF) |  |
|------------------------------|--|
| Value:                       | -52.6 (This value indicates an <b>increase</b> in crashes) |
| Adjusted Standard Error:     |  |

**Unadjusted Standard Error:**

39

### 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>  | 9 |
| <b>After Sample Size Used:</b>   | 9 |

| <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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This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

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