



CMF / CRF Details

CMF ID: 8947

Implement systemic signing and visibility improvements at signalized intersections

Description: Replace all signal heads. Replace pedestrian signal heads, pushbuttons, and signs. Install backplates with retroreflective borders on all signal heads. Re-stripe stop lines. Re-stripe crosswalks. Install advance warning signs. Install overhead signs (e.g., R1012, R35L, R35R in the MUTCD(4)). Install curb ramps.

Prior Condition: Signalized intersection without systemic signing and visibility improvements

Category: Intersection traffic control

Study: [*Safety Effects of Low-Cost Systemic Safety Improvements at Signalized and Stop-Controlled Intersections, Le et al., 2017*](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.784

Adjusted Standard Error:

Unadjusted Standard Error: 0.057

Crash Reduction Factor (CRF)

| | |
|-----------------------------------|---|
| Value: | 21.6 <i>(This value indicates a decrease in crashes)</i> |
| Adjusted Standard Error: | |
| Unadjusted Standard Error: | 5.7 |

Applicability

| | |
|----------------------------|-----|
| Crash Type: | All |
| Crash Severity: | All |
| Roadway Types: | All |
| Number of Lanes: | 2 |
| Road Division Type: | |
| Speed Limit: | |
| Area Type: | All |
| Traffic Volume: | |
| Time of Day: | All |

If countermeasure is intersection-based

| | |
|-----------------------------------|---|
| Intersection Type: | |
| Intersection Geometry: | 3-leg,4-leg |
| Traffic Control: | Signalized |
| Major Road Traffic Volume: | 4272 to 41100 Annual Average Daily Traffic (AADT) |
| Minor Road Traffic Volume: | 111 to 20000 Annual Average Daily Traffic (AADT) |

Development Details

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|----------------------------------|--------------|
| Date Range of Data Used: | 2005 to 2014 |
| Municipality: | |
| State: | SC |
| Country: | |
| Type of Methodology Used: | 2 |
| Sample Size Used: | |

| Other Details | |
|---|---|
| Included in Highway Safety Manual? | No |
| Date Added to Clearinghouse: | Nov-17-2017 |
| Comments: | CMF for 2 mainline lanes and 2 cross street lanes intersections. The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 to give 10 points as a benefit of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the disaggregate dataset used for CMF development. |

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