

Countermeasures for Reducing Right-Angle Crashes at Signalized Intersections

TTI compiled countermeasures from available literature¹ that show expected crash reduction for right angle crashes at signalized intersections.

For signalized intersections where red-light cameras (RLC) are installed, the crash reduction ranges from 8% to 47%.

Other countermeasures that reduce right-angle collisions at signalized intersections are presented in the table below.

Countermeasure	Crash Reduction
Utilize intersection speed cameras (similar to RLC but captures speed violations during the green phase)	31%
Install dynamic signal warning flashers	25%
Remove unwarranted signal	24%
Increase all red clearance interval	20%
Install red-light indicator lights (auxiliary lights mounted on signal apparatus, positioned so enforcement officer can see the red indication)	10%
Provide systemic low-cost treatments (signing and marking enhancements)	6 to 12%
Increase yellow interval and add all-red interval	4%

Increased officer enforcement and public awareness campaigns are additional strategies for which there are limited quantifiable effectiveness data.

¹ The list was compiled from information contained in the Highway Safety Manual, FHWA’s Crash Modification Factors (CMF) Clearinghouse, and recent conference/journal publications.