

UNSIGNALIZED INTERSECTION SAFETY STRATEGIES



Eliminate Parking that Restricts Sight Distance

WHERE TO USE

Unsignalized intersections with restricted sight distance due to parking.



This photo depicts a “parking box” that prevents vehicles from parking too close to the intersection and obstructing the side street driver’s line of sight.

DETAILS

Adequate sight distance for drivers at stop-controlled approaches to intersections has long been recognized as among the most important factors contributing to overall intersection safety. Although geometrically an intersection might have adequate sight distance, parking within the sight triangle might restrict it and should, therefore, be taken into consideration. Increased enforcement of existing parking prohibitions may be needed to ensure the successful implementation of this strategy.

Intersection sight distance (ISD) related crashes include angle- and turning-related crashes.

KEY TO SUCCESS

Effectively diagnose whether a specific crash pattern observed at an intersection is, in fact, related to restricted sight distance due to parking. Currently this is a judgment made by an experienced safety analyst. It may often require detailed study of individual crash reports for the intersection, as well as field visits and measurements.

ISSUES

The most difficult aspect of this strategy is the reaction of owners of adjacent properties and users who may be negatively impacted by the removal of nearby parking spaces. Public compliance with parking restrictions may present a problem.



TIME FRAME ●○○○

Projects involving eliminating parking can typically be accomplished in 3 months or less, assuming that the removal of the parking is not controversial.

COSTS ●○○○

Costs will generally be low and will include signing and enforcement costs. Some targeted enforcement may be required, but this may usually be accomplished within the normal patrol activities of the agency(ies) within whose jurisdiction the intersection is located.

EFFECTIVENESS

TRIED: There is no research that adequately quantifies the effectiveness of improving sight distance at unsignalized intersections due to elimination of parking. Based on existing literature, it has been estimated that if the available sight distance in any quadrant of an intersection is less than or equal to the design sight distance for a speed of 12 mph less than the actual 85th-percentile speed of the approach, then the frequency of related crashes at the intersection would be increased by approximately 5%. Each additional quadrant accounts for an approximate 4% decrease in crashes. Thus, a project may be 5 to 17% effective in reducing related crashes, depending upon the severity of the existing sight restriction and the number of intersection quadrants affected.

Estimates of the safety effectiveness of eliminating parking that restricts sight distance have not been developed yet.

COMPATIBILITY

This strategy can be used in conjunction with most other strategies for improving safety at unsignalized intersections.

SUPPLEMENTAL INFORMATION

This strategy should be incorporated in highway design policies and highway maintenance manuals.

The involvement of law enforcement agencies with jurisdiction for the intersection will be important. This should be sought at the earliest possible point in the process.

For more details on this and other countermeasures: <http://safety.transportation.org>

For more information contact:

FHWA Office of Safety Design
E71, 1200 New Jersey Avenue SE
Washington, D.C. 20590
(202) 366-9064
<http://safety.fhwa.dot.gov>

FHWA Resource Center - Safety and Design Team
19900 Governor's Drive, Suite 301
Olympia Fields, IL 60461
(708) 283-3545
<http://www.fhwa.dot.gov/resourcecenter>



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