

INTERSECTION IMPROVEMENTS

Description

Intersections are crucial to a street's performance; they control a road's speed, safety, cost, and efficiency. Accommodation of turning movements directly affects safety and efficiency, making left turns the key design factor in intersection improvement and operation. As such, intersection turn lanes are discussed as a separate strategy.

However, other improvements can also be made to increase safety and capacity, thus reducing congestion on the road. The most common strategies include improving signal timing, removing elements that hinder sight distance, making drivers aware that they are approaching an intersection, and improving bicycle or pedestrian facilities at the intersection.

There are potential applications for intersections of many types: urban or rural, signalized or unsignalized, and major or minor streets. Raised medians, bicycle lanes, improved skew angles, reconfigured signal timing, and advance warning devices are all possible treatments to improve intersection safety and/or capacity.

How Will This Help?

- Maximize capacity and decrease delay by allowing a smoother flow of traffic.
- Increase safety through fewer collisions, including those involving pedestrians and bicyclists.
- Relatively low cost (as compared to intersection widening or reconstruction).

Success Stories

- Advance Warning of End of Green System (AWEGS) resulted in red-light-running reductions of 45 to 50 percent in College Station.
- Coordinated signal systems can improve capacity while reducing crashes. The Institute of Transportation Engineers (ITE) cites two studies that showed crash reductions of 25 to 38 percent.



Cost:	●●●○○
Time:	Short/Moderate
Impact:	Spot
Who:	City/State
Hurdles:	Right-of-Way

Implementation Issues

Intersection improvements can be costly if additional right-of-way is needed for the project. Space restrictions must be considered when choosing appropriate treatments that will meet future traffic needs.