

Reduced Conflict Intersections



Corridors with growing traffic volumes and high crash rates are good candidates for a reduced-conflict intersection.

A reduced conflict intersection – sometimes referred to as a superstreet, a synchronized street or a median U-turn – is a general term used to describe several types of designs that can be used to improve safety and traffic flow on a highway.

There are variations to the designs, but they all function the same by reducing by almost half the number of potential locations, or conflict points, where drivers and pedestrians

can collide.

Simplifying How Traffic Moves

The most common type of reduced conflict intersection design eliminates left turns from side roads onto busy main roads.

Raised medians direct traffic from the side road into turning right. When there is a safe opening in traffic, drivers enter the flow of traffic on the main route. To go the other direction, or cross the highway, they pull into a dedicated lane – typically less than 1,000 feet away – and make a U-turn. There might be a traffic signal at this location.

In cases of dual right-turn lanes from the side road at a signalized intersection, drivers should stay in the left lane, if they intend to make the U-turn once on the main corridor.

Reducing the Risk of Crashes

A traditional four-way intersection has many potential conflict points. Because drivers can go in any direction from all four approaches, the likelihood of a crash is increased.

Reports in [2010 from North Carolina State University](#) and in [2017 from the Federal Highway Administration](#) found that:

Examples of Reduced Conflict Intersections



- Reduced conflict intersections without traffic signals reduced crashes 46 percent compared to conventional intersections.
- Reduced conflict intersections with traffic signals reduced crashes 15 percent compared to conventional intersections.

If an intersection has a traffic signal several phases are required to move drivers through the intersection, increasing travel time. The 2010 NC State report, however, found there was still a 20 percent time savings on a signalized reduced-conflict intersection corridor compared to conventional corridors with traffic signals.

Other Benefits of Reduced Conflict Intersections

In addition to simplifying how traffic moves and reducing the risk of collisions, reduced conflict intersections also:

- Improve safety for motorists and pedestrians
- Can accommodate more traffic without increased delays
- Allow for a city or the N.C. Department of Transportation to adjust the timing of traffic signals to control the speed at which drivers move through the corridor
- Require less right of way or property impacts than adding travel lanes or building interchanges and overpasses

Economic Impact of Reduced Conflict Intersections

Economic researchers for the University of North Carolina at Wilmington spent over two years studying more than 400 reduced conflict intersections around the state for a report sponsored by NCDOT and published in 2022.

Below are some key findings of the [2022 economic impact study](#):

- While some locations showed a positive and significant increase in economic activity, many others had neither a negative nor positive effect, suggesting the traffic safety benefits gained by the design do not generally harm a business.
- Businesses with a large number of customers and that are busiest later in the day are more likely to believe the design makes it easier for customers to reach them.
- Reduced conflict intersections have the potential to support home values.

Residents and homeowners tended to value the improved traffic flow and traffic safety that result from a reduced conflict intersection, even if they experienced longer wait times to enter the main corridor from a side street without a traffic signal.

Frequently Asked Questions

∨ How will a raised median affect my business?

∨ What do the national data studies show about medians and their impact on business activity?

∨ What kind of studies has the NCDOT done?

∨ How will construction affect customer access to my business?

∨ How do reduced conflict intersections and medians improve travel?

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