



FACTS ABOUT REDUCED CONFLICT INTERSECTIONS

46%

Reduction in crashes at unsignalized RCI intersections, compared to conventional intersections

(N.C. State final report to NCDOT in 2010)

15%

Reduction in crashes at signalized RCI intersections, compared to conventional intersections

(Federal Highway Administration report, Nov. 2017)

20%

Travel time savings on a signalized RCI corridor, compared to conventional corridors with traffic signals

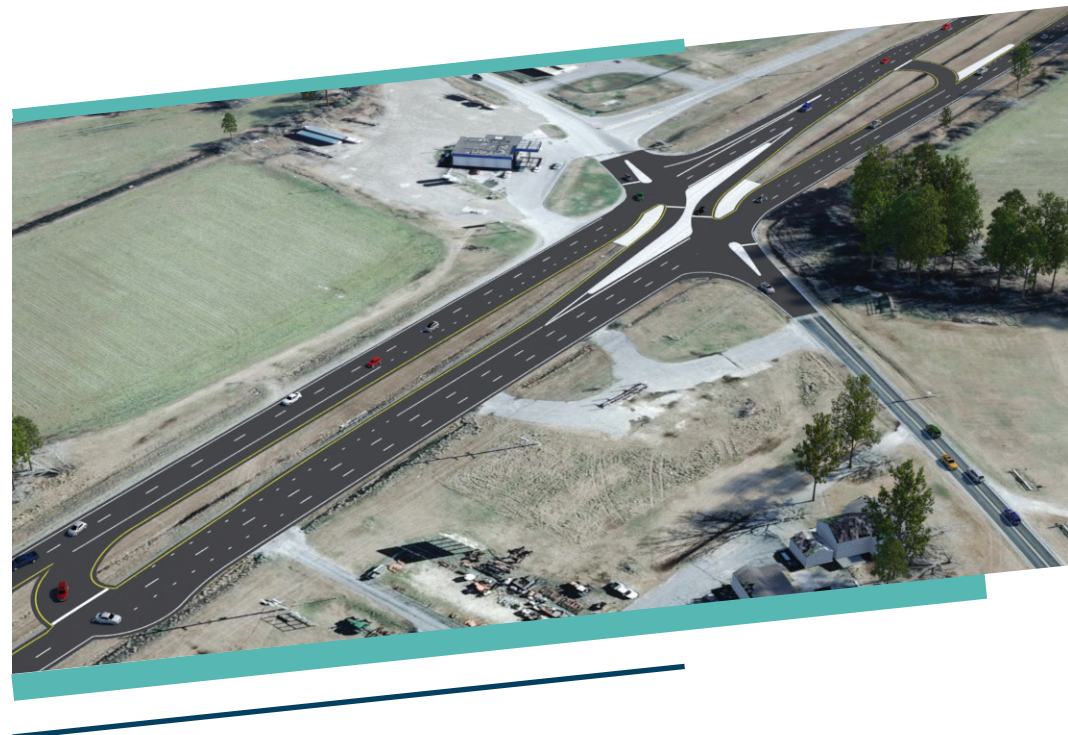
(N.C. State final report to NCDOT in 2010)

BUSINESS ACCESS AND REDUCED CONFLICT INTERSECTIONS

- ▶ According to the Federal Highway Administration, studies of businesses along highways in Florida, Iowa, Minnesota and Texas found a majority did as well or better than traditional intersections when medians were built. The design concept goes by different terms in different states.
- ▶ Customers will go to a business if they feel safe using the highway and accessing the business.
- ▶ Customers will come to the kind of business they desire regardless of a median.
- ▶ Convenience-type businesses may experience more traffic with a median because drivers are making a U-turn to reach their destinations.
- ▶ Many factors determine the success of a business, including competition.
- ▶ RCI corridors across North Carolina serve many thriving businesses.

Reduced Conflict Intersections

Innovative corridor designs to reduce travel delays, improve safety and handle heavier traffic volumes.



N.C. Department of Transportation

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.

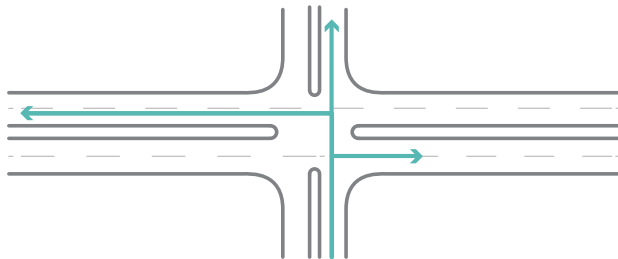
THE RIGHT WAY TO GO LEFT

A traditional four-way intersection has many conflict points where a crash can occur. If it has a traffic signal, several signal phases are required to move vehicles through the intersection. Because drivers can go in any direction from all four approaches, a traditional intersection decreases safety and traffic flow.

Reduced conflict intersections simplify how traffic is moved through the area, making travel safer and quicker. The most common design that reduces conflict redirects side-street drivers into turning right. After going right, they may do a U-turn in a dedicated lane, to go in another direction. By removing most of the crossing conflicts, the design typically results in less severe crashes.

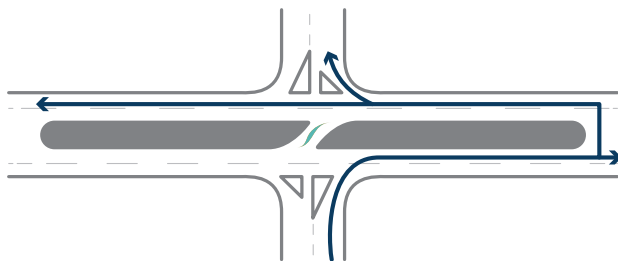
32
Points of conflict where vehicles can collide

CONVENTIONAL INTERSECTION
8 - Diverging 8 - Merging 16 - Crossing



14
Points of conflict where vehicles can collide

REDUCED CONFLICT INTERSECTION
6 - Diverging 6 - Merging 2 - Crossing



Diverging - When one traffic stream splits to form two
Merging - When traffic streams join to form one
Crossing - When two vehicles cross paths

WHY REDUCED CONFLICT INTERSECTIONS?

As urban areas grow and traffic congestion increases, the N.C. Department of Transportation continues to look for creative solutions for improving mobility and safety. Corridors with growing traffic volumes and high crash rates are good candidates for innovative designs called a Reduced Conflict Intersection (RCI). The designs also are known as superstreets and median U-turns, among other terms.

An RCI reduces the number of potential locations where vehicles can collide by more than half. The designs improve safety for drivers and pedestrians alike, boosting traffic flow and allowing drivers to reach their destinations more quickly.



HOW DOES A REDUCED CONFLICT INTERSECTION WORK?

With the most common type of RCI, drivers on the main road follow their usual paths, but raised medians redirect drivers from the side road. When there is a safe opening in traffic, drivers turn right to easily 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, to make a U-turn. There may be a traffic signal at this location.

BENEFITS OF A REDUCED CONFLICT INTERSECTION:

- ▶ Improves safety for motorists and pedestrians
- ▶ Can accommodate more traffic volume without increased delays
- ▶ Allows for the city or NCDOT to adjust the timing of the traffic signals to control the speed at which drivers move through the corridor
- ▶ Requires less right of way or property impacts than adding travel lanes or building interchanges and overpasses