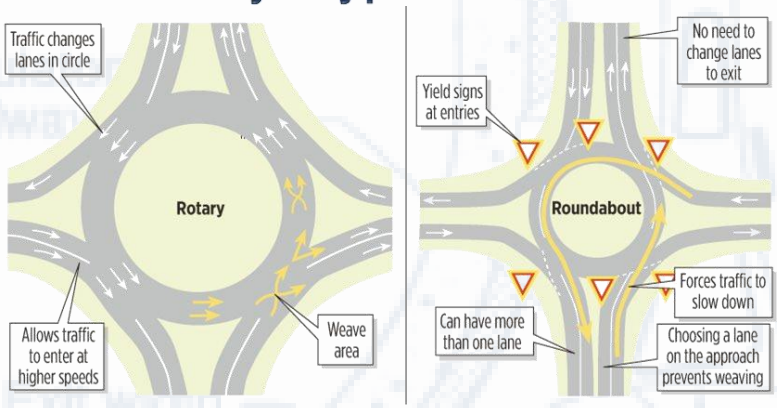
Roundabout Benefits

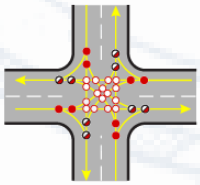
"Rotary" Type Intersections vs. Modern Roundabouts



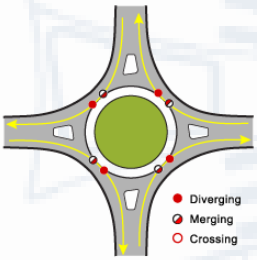
- Modern roundabouts are smaller and impact less of the surrounding area.
- Modern roundabouts are designed for slower entry, circulating, and exit speeds
- Approach traffic on modern roundabouts always yields to circulatory traffic
- Modern roundabouts are designed with raised splitter islands to slow and deflect traffic prior to entry
- Modern roundabouts facilitate safer pedestrian crossings

Modern Roundabouts vs. Traffic Signals at Intersections

- While installing a traffic signal is effective in some cases, roundabouts are safer because they eliminate many conflict points and only have right-in and right-out movements.
- Installing a traffic signal can sometimes increase crashes because more vehicles are coming to a stop.
- Roundabouts reduce delay and improve traffic flow
- Installing a traffic signal at the wrong location can cause undue delay and driver frustration.
- While the initial cost of a roundabout can be higher, the total cost over the life of the project is similar to that of a traffic signal when power and maintenance costs are figured in.
- Typically less right-of-way is needed for a roundabout.
- Roundabouts are more aesthetically pleasing and can provide numerous landscaping options.
- Vehicles must yield at roundabouts but are not required to stop if the roundabout is clear. This leads to fewer vehicles while stopped at an intersection.



A comparison of conflict points:
A four-way intersection vs. a modern roundabout



Safety

- When implementing a roundabout, national stats show an expected decrease in total crashes of 35%, a decrease in injury crashes by 76%, and a decrease in fatal crashes by 89%
- To date in South Carolina, the SCDOT Safety Office has constructed 16 roundabouts, 9 of which have before and after crash data available. There has been a decrease in total crashes by 74%, a decrease in injury crashes by 68%, and a decrease in fatal crashes by 100%.
- Roundabouts force drivers to slow down to speeds of 15-20 mph, so crashes that do occur are usually minor.
- Roundabouts promote a continuous flow of traffic.

Pedestrian & Bicycles

- Splitter islands provide a safe refuge area for pedestrians, so that they only need to cross one direction of traffic at a time.
- Crossing distances are short, and traffic speeds are lower than at traditional intersections.
- Bicycles can ride along with traffic in a roundabout and easily make any maneuver a vehicle can.

Large & Emergency Vehicles

- Large vehicles can navigate a roundabout through the use of a raised concrete truck apron. The truck's cab stays on the asphalt circulatory roadway, and the trailer can ride on the apron.
- All emergency vehicles can easily navigate a roundabout.