

- ⚠️ **Safety**
 - Fewer conflict points than traditional intersections.
 - Reduces fatalities and injury crashes.
- 🚗 **Slower Vehicle Speeds**
 - Drivers have more time to react
 - Reduces crash severity
- 🚗 **Operations**
 - Operation is improved with smooth-flowing traffic with less stop-and-go than an all-way stop intersection.



Did you know?

Roundabouts are designed with buses, large trucks, and farm equipment in mind. Large vehicles are encouraged to use the truck apron, a slightly raised area around the inner circle in the center of the roundabout, to help navigate wider turns. DeIDOT has developed design criteria specifically to accommodate oversized farm vehicles for rural roundabouts.

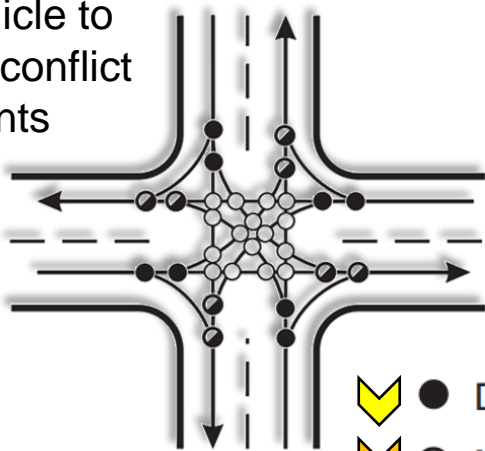
- 90%** reduction in fatal crashes
- 75%** reduction in injury crashes
- 30-40%** reduction in pedestrian crashes
- 10%** reduction in bicycle crashes






Roundabouts

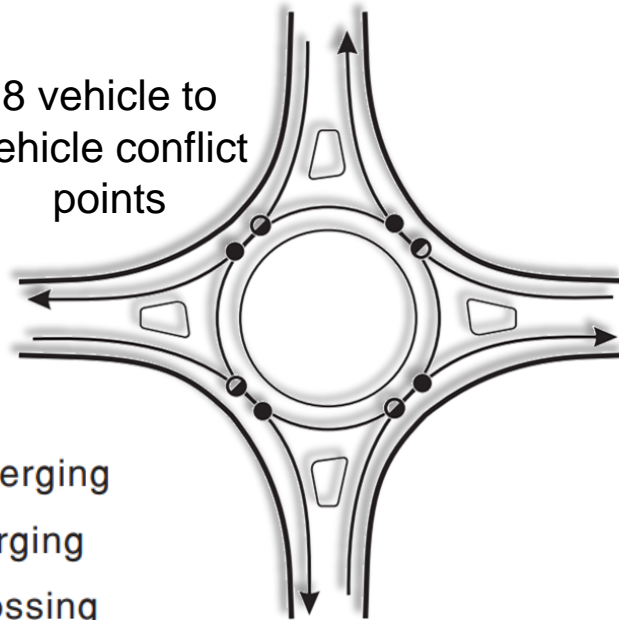
Roundabouts Reduce the Potential for Crashes Due to Fewer Conflict Points

32 vehicle to vehicle conflict points



-  ● Diverging
-  ● Merging
-  ○ Crossing

8 vehicle to vehicle conflict points

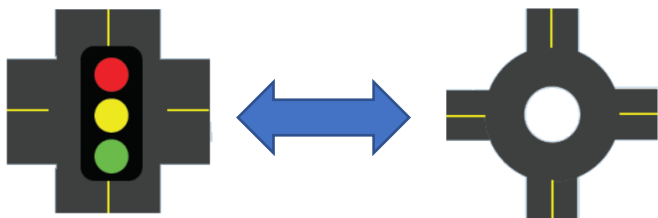


| | |
|---------------------------|---|
| Diverging Conflict | <ul style="list-style-type: none"> • Less Severe • Caused by the separating of two traffic streams. The most common types of crashes due to diverging conflicts are sideswipes and rear-end crashes. |
| Merging Conflict | <ul style="list-style-type: none"> • More Severe • Caused by the joining of two traffic streams. The most common types of crashes due to merge conflicts are sideswipes and rear-end crashes |
| Crossing Conflict | <ul style="list-style-type: none"> • Most Severe • Caused by the joining of two traffic streams. These are typically right-angle or head-on crashes and most likely to involve injuries or fatalities |

A roundabout reduces vehicular crossing by converting all movements to right turns. Separate turn lanes and traffic control (stop signs or signalization) can often reduce but not eliminate the number of crossing conflicts at a traditional intersection by separating conflicts in space and/or time. However, the most severe crashes at signalized intersections occur when there is a violation of the traffic control device designed to separate conflicts by time. **Therefore, the ability of single-lane roundabouts to reduce conflicts through physical, geometric features has been demonstrated to be more effective than the reliance on driver obedience of traffic control devices.**

Roundabouts: An Informational Guide, FHWA

Roundabouts



Roundabouts have been shown to reduce fatal and injury crashes compared to traffic signals due to slower speeds and the reduced number of conflict points.



Roundabouts cost less to implement. They are cheaper per year as there are no electric costs or signal equipment to maintain.



Roundabouts promote continuous traffic flow, especially in low flow or uncongested traffic. At intersections with unbalanced traffic flow, a traffic signal would be a better fit.



Roundabouts may need more right-of-way directly at the intersection but require less property on the approach due to the lack of turn lanes.

Roundabouts...

- ...reduce injury crashes and pedestrian crashes.
- ...reduce the severity of crashes.
- ...have 75% fewer conflict points than four-way intersections.
- ...allow drivers to have more time to judge and react to other cars or pedestrians
- ...produce slower vehicle speeds (under 30 mph).
- ...increase traffic capacity (efficient traffic flow 30-50% increase).
- ...improve traffic flow for intersections that handle a high number of left turns
- ...cost less to implement. No signal equipment to install and repair savings estimated at an average of \$5,000 per year in electricity and maintenance costs
- ...have a service life of 25 years (vs. the 10-year service life of signal equipment).
- ...allows space for aesthetic landscaping.