What is a Roundabout?

A roundabout is a type of circular intersection, but is quite unlike a neighborhood traffic circle or large rotary. Roundabouts have been proven safer and more efficient than other types of circular intersections.

Roundabouts have certain essential distinguishing features:
- **Counterclockwise Flow.** Traffic travels counterclockwise around a center island.
- **Entry Yield Control.** Vehicles entering the roundabout yield to traffic already circulating.
- **Low Speed.** Curvature that results in lower vehicle speeds (15-25 mph) throughout the roundabout.

FHWA identified roundabouts as a **Proven Safety Countermeasure** because of their ability to substantially reduce the types of crashes that result in injury or loss of life. Roundabouts are designed to improve safety for all users, including pedestrians and bicycles. They also provide significant operational benefits compared to conventional intersections.

On average, roundabouts reduce severe crashes – those resulting in injury or loss of life – by 78-82%.

Educational Resources

- **Wisconsin Guidance on Reacting to Emergency Vehicles in Roundabouts**

- **Minnesota DOT Roundabout Animation**
  [www.dot.state.mn.us/roundabouts/emergency.html](http://www.dot.state.mn.us/roundabouts/emergency.html)

- **Washington State DOT Videos on Roundabouts and How to Drive Them**
  [https://www.youtube.com/watch?v=P3k65uSS-EE](https://www.youtube.com/watch?v=P3k65uSS-EE)
  [http://www.youtube.com/watch?v=MywmtskFiil](http://www.youtube.com/watch?v=MywmtskFiil)

- **British Columbia MOT Video on Navigating a Roundabout with Emergency Vehicles**
  [https://www.youtube.com/watch?v=Tk9n1uVa8LE](https://www.youtube.com/watch?v=Tk9n1uVa8LE)

For More Information

**Jeffrey Shaw, P.E., PTOE, PTP**
FHWA Office of Safety
708.283.3524 or jeffrey.shaw@dot.gov

**Hillary Isebrands, P.E., PhD**
FHWA Resource Center
720.963.3122 or hillary.isebrands@dot.gov

Strengthening Partnerships

Incorporating EMS into Strategic Highway Safety Plans

To learn more about roundabouts, please visit:
[safety.fhwa.dot.gov](http://safety.fhwa.dot.gov)
Designing for First Responders

Roundabouts are not designed to inhibit traffic. Rather, they are optimized for the safety and efficiency of all users. Roundabouts can be designed for large trucks, including a special purpose apparatus such as a ladder truck. This is accomplished by using features such as:

- Wider entry and exit lanes for efficient movement of traffic through the roundabout.
- Mountable aprons and curbs intended for use by vehicles with a wide and/or long wheelbase.
- Curvature and radii that allow for easy turning movements, including u-turns.

"Before the first roundabout was constructed in our city, our station arranged to visit one nearby so that we could experience it firsthand. That answered a lot of questions and helped build confidence in roundabouts."

- Brad Estochen
  Minnesota DOT Safety Engineer & Firefighter and EMT for the City of Woodbury

Frequently Asked Questions

When the first roundabout in a community is proposed, it is natural for first responders to have questions and concerns. Several of the most common questions are addressed below:

Q: Will all our vehicles be able to maneuver through a roundabout?
A: Roundabouts work for many types of large vehicles. Partnering with the road agency to conduct a "test drive" (laying out the roundabout in a large open area using cones and temporary devices) can help evaluate and influence the design.

Q: What about emergency response times?
A: At any intersection, traffic conditions vary throughout the day. Roundabouts can actually improve travel times by eliminating unnecessary stops and delays. Furthermore, the IAFF and other public health and safety organizations recognize that small differences in travel times rarely, if ever, impact incident or patient outcomes. 3,4

Q: How will drivers in our community know how to react to approaching emergency vehicles?
A: In this way, roundabouts are no different from other intersections – drivers must clear the intersection, pull off to the right, and let the emergency vehicle pass. To help educate drivers, there are many excellent resources available from states and cities where roundabouts are common. First responders can contribute to general roundabout education and outreach in a community by helping explain to the public how to react when an emergency vehicle approaches.

Q: Why consider roundabouts when we have traffic signal preemption in our city?
A: The use of preemption devices at signalized intersections remains a worthwhile option. However, in addition to being safer, roundabouts are viable in many places where traffic signals are not. Furthermore, even where signal preemption is used, first responders must obey state laws and department policies, and proceed cautiously – likely at speeds comparable to a roundabout.