ROUNDABOUTS | FREQUENTLY ASKED QUESTIONS

EFFECTIVENESS OF ROUNDABOUTS & DESIGN FEATURES USING ROUNDABOUTS

1 | Why do we use roundabouts?

Roundabouts can offer a good solution to safety and capacity problems at intersections.

- In Iowa, intersections that have been replaced with roundabouts have seen a reduction in crashes of all types.
- Roundabouts offer high capacity at intersections without requiring the expense of constructing and maintaining traffic signals.

2 | What are the benefits of roundabouts?

Compared to other intersection types, roundabouts have demonstrated benefits such as:

- Improved Traffic Safety
- Improved Pedestrian Safety
- Reduced Congestion
- Reduced Pollution and Fuel Usage
- Lower Operating and Maintenance Costs

3 | Is the roundabout like a 4-way stop?

Aside from the lack of a traffic signal, roundabouts and 4-way stops aren't similar.

4-Way Stops

- Yield to whomever arrives first/vehicle on the right

Roundabouts

- Yield to the left, like a right turn on red
- Each driver chooses a safe gap to enter and no drive "gets a turn"

4 | What are the features of a good roundabout design?

- Approach roads should be sufficiently curved, far enough in advance of the roundabout, to reduce speeds of entering drivers.
- Islands separating the approach and exit lanes, known as splitter islands, should extend far enough from the roundabout to provide pedestrian refuge and delineate the roundabout.
- Traffic signs, pavement markings, and lighting should be adequate so that drivers are aware that they are approaching a roundabout and should reduce their speed. With multi-lane roundabouts, signing and pavement markings should help drivers choose the appropriate lane when entering and exiting the roundabout.

5 | Aren't traffic signals safer than roundabouts for pedestrians?

It depends on the amount of pedestrians and vehicles. In many cases, a roundabout can offer a safer environment for pedestrians than a traffic signal because the pedestrian crossing at a roundabout is reduced to two simple crossing of one-way traffic moving at slow speeds. A pedestrian crossing at a traffic signal still needs to contend with vehicles turning right or left on green, vehicles turning right on red, and vehicles running the red light. The latter of these potential conflicts occur at high speeds and often result in injuries or fatalities to pedestrians.

6 | Are roundabouts always appropriate?

No. The choice of using a roundabout versus a traffic signal is a case-by-case decision that must take into account elements such as traffic volumes, land use, topography and corridor.

7 | Should I use my turn signals in a roundabout?

Yes, especially when exiting the roundabout. Doing so allows vehicles waiting to enter the roundabout to know your intentions.

8 | When do I enter a roundabout?

Roundabouts are not like four-way stops in the fact that there is not taking of turns among vehicle operators. Vehicle operators should enter the roundabout when there is a safe gap in the traffic flow.

9 | Should I stop inside the roundabout to let someone in?

No. Vehicle operators in the roundabout may slow down so that the safe gap becomes more obvious to the driver wanting to enter the roundabout; however, they should not stop. Vehicle operators should not stop after crossing the yield line and are actually in the roundabout circle.

10 | Can roundabouts accommodate larger vehicles?

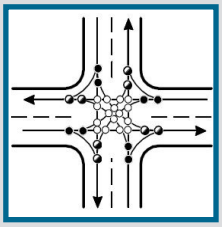
Yes. To accommodate vehicles with large turning radii such as trucks, buses, and tractor-trailers, roundabout provide an area between the circulatory roadway and the central island, known as a truck apron, over which the rear wheels of these vehicles can safely track. The truck generally is compose of a different colored material than the paved surface, usually a reddish colored concrete, to discourage routine use by smaller vehicles.

11 | Do drivers favor roundabouts?

Drivers may be skeptical, or even opposed to roundabouts when they are proposed. However, opinions quickly change when drivers become familiar with roundabouts.

A 2002 Institute study in three communities where single-lane roundabouts replaced stop sign-controlled intersections found 31 percent of drivers supported the runabouts before construction compared with 63 percent shortly after.

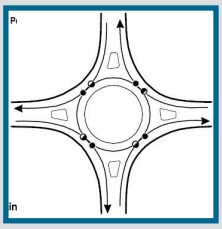
Another study surveyed drivers in three additional communities where single-lane roundabouts replaced stop signs or traffic signals. Overall, 36 percent of drivers supported the roundabouts before construction compared with 50 percent shortly after. Follow-up surveys conducted in these six communities after roundabouts had been in place for more than one year found the level of public support increased to about 70 percent on average.



Typical 4-leg Intersection

32 vehicle-to-vehicle conflict points

24 vehicle-to-pedestrian conflict points



4-leg Roundabout

8 vehicle-to-vehicle conflict points

8 vehicle-to-pedestrian conflict points

Appropriate Locations for a Roundabout

High crash rate locations

Intersections with large traffic delays

Complex geometry (more than four approach roads for example)

Frequent left-turn movements

Sources of Information

www.safety.fhwa.dot.gov
www.iowa.gov
www.dot.wi.gov
www.dot.state.mn.us