



Driving Roundabouts

Roundabout Benefits

Improve safety

A study by the Insurance Institute for Highway Safety indicates roundabouts reduce crashes by 75 percent at intersections where stop signs or signals were previously used for traffic control. There are several reasons why roundabouts are safe:

- Less potential for serious crashes – since vehicles all travel around the center island in the same direction, head-on and left-hand turn (T-bone) collisions are eliminated.
- Low travel speeds – because drivers must yield to traffic before entering a roundabout, they naturally slow down. The few collisions that occur in roundabouts are typically minor with few injuries, since they occur at low speeds of 15 – 20 miles per hour.
- No red lights to run – roundabouts are designed to keep traffic flowing without requiring vehicles to stop, so the incentive for drivers to speed up to make it through a yellow or red light is removed.

Reduce delay and improve traffic flow

Contrary to many peoples' perceptions, roundabouts actually move traffic through an intersection faster, and with less congestion on approaching roads. Roundabouts promote a continuous flow of traffic. Unlike intersections with traffic signals, you don't have to wait for a green light at a roundabout to get through the intersection. Traffic is not required to stop – only yield – so the intersection can handle more traffic in the same amount of time.

Studies by Kansas State University <http://www.ksu.edu/roundabouts/> have measured traffic flow at intersections before and after conversion to roundabouts. In each case, installing a roundabout led to a 20 percent reduction in delays. The proportion of vehicles that had to stop – just long enough for a gap in traffic – was also reduced.

Save money

The cost difference between building a roundabout and a traffic signal is comparable. A roundabout may need more property within the actual intersection, but takes up less space on the streets approaching the roundabout. Roundabouts usually require less overall property to build than a signal with turn lanes because traffic doesn't have to line up and wait for a green light. In addition to reducing congestion and increasing safety, roundabouts eliminate hardware, maintenance and electrical costs associated with traffic signals, which can amount to approximately \$5,000 per year. In addition, many communities are favorable to the aesthetics of a well-designed and landscaped roundabout.

Good locations for roundabouts

Roundabouts are safe and efficient, but they are not the ideal solution for every intersection. We look at several numerous factors when deciding to build a roundabout at a specific intersection. Engineers consider these characteristics when determining the best solution for a particular intersection:

- **Accident history** – data about the number of accidents, type of crash, speeds, and other

contributing factors are analyzed.

- **Intersection operation** – the level of current and projected travel delay being experienced, and backups on each leg of the intersection.
- **Types of vehicles using the intersection** – we look at the different kinds of vehicles that use the intersection. This is especially important for intersections frequently used by large trucks.
- **Cost** – this includes the societal cost of accidents, right-of-way (land purchase) requirements, and long-term maintenance needs.

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