

Frequently Asked Questions

about Roundabouts

What is a roundabout?

Roundabouts are circular intersections that require all entering traffic to yield at entry. Geometric features of a roundabout include channelized approaches, geometric curvature that ensures travel speeds within the roundabout are around 30mph or less, and diameters usually between 80ft to 200ft.

What is the purpose of a roundabout?

Roundabouts are designed to be safer and more efficient than a traditional intersection. The geometry creates a low speed (20-30mph) environment inside the circulatory roadway, as well as at the entry and exit locations. The geometry also prevents high angle crashes such as “T-bone” and left turn angle crashes. Lower angle, low speed crashes tend to be less severe than higher angle, high speed crashes.

More efficient operation results from the yield at entry – drivers only have to watch for traffic from the left, and if there is an adequate gap available, they can enter the roundabout without stopping. Once in the roundabout, drivers have the right-of-way, so they will not have to stop or yield to exit. If the driver does need to yield at entry to traffic inside the roundabout, their delays are brief and typically less than the time they would have been delayed at a traffic signal.

How much traffic can a roundabout accommodate?

According to **Roundabouts: An Informational Guide** (Publication No. FHWA-RD-00-067), the maximum Average Daily Traffic (ADT) for a single-lane, four-leg roundabout is greater than 20,000 vehicles per day. For double-lane roundabouts, 40,000 to 50,000 vehicles per day can be accommodated, depending on the traffic patterns.

How do semis, oversized loads, farm equipment, and other large vehicles navigate roundabouts?

The design of the intersection will allow oversized loads and other large vehicles to navigate the roundabout while still providing adequate visual and physical indicators to guide and slow passenger vehicles. One way this is accomplished is with truck aprons – an area between the central island and the traveled way that is mountable by larger vehicles but not used by passenger vehicles.

Do roundabouts have an elevation or slope?

Like all roads, roundabouts have some “slope” to drain rain water off of the roadway. Like all “flat” roads, the slope is very slight and typically unnoticeable to roadway users.

What about drivers who are not familiar with roundabouts?

Roundabouts are designed to be simple to use. The geometry cues drivers to slow down, allowing more time for decisions. Once the driver reaches the yield line, he/she yields to traffic already in the roundabout. The only decision remaining is if the driver wants to take the first exit to turn right, the second exit to continue straight, the third exit to turn left, or the fourth exit to make a U-turn. These steps are illustrated in the Driving Roundabouts [figure](#) and [animation](#).

Are roundabouts worth the cost to install them?

ODOT, like other state and local agencies, is operating with reduced funding and is very conscious of the need to utilize funding in a manner that produces the greatest benefit for the least cost. While roundabouts may often be more expensive, they do cost less than the average cost of a single fatal car crash (taking into account lost earnings, lost household production, property damage, medical costs, and other factors). AAA estimates that a single fatal motor vehicle crash costs the nation \$6 million. ODOT considers roundabouts to be very cost-effective if they reduce fatalities and injuries.

How do roundabouts affect air quality?

Replacement of signalized intersections with roundabouts has been found to reduce vehicle emissions and fuel consumption by 30% or more. This is due to the reduction in idle time by vehicles waiting for the light to change.