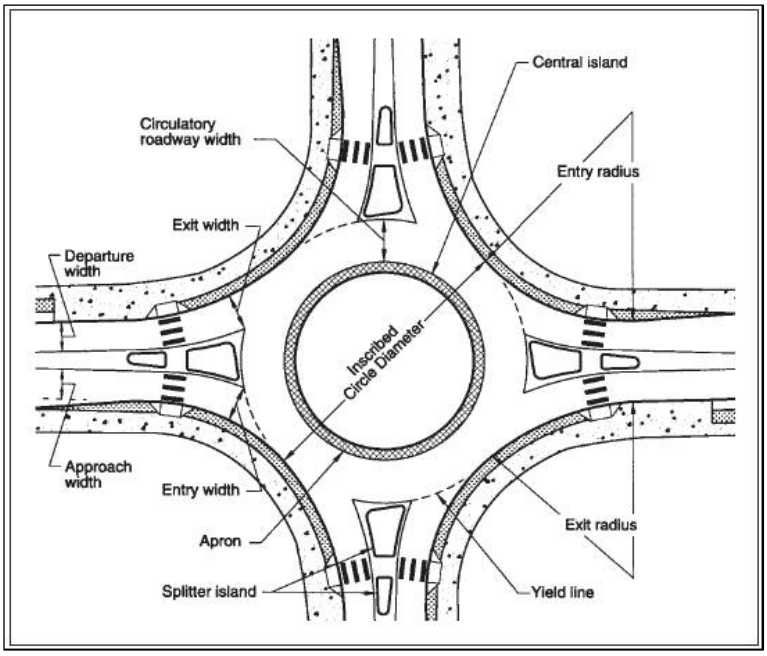
A PRIMER ON MODERN ROUNDABOUTS[1]

WHAT IS A ROUNDABOUT?

Although roundabouts and traffic circles are different in some critical features, the circular shape common in both helps to create the association in the minds of the public. It is important that the public understand the distinction between a roundabout and traffic circle in order to understand where it is feasible to place roundabouts and their benefits.



Roundabouts are a means of alternating the flow of traffic at an intersection where generally either traffic signal or an all-way stop control is required. A modern roundabout requires entering traffic to yield the right-of-way to traffic already in the roundabout. The design of a modern roundabout allows capacities comparable to signals but with generally a higher degree of safety.

Neighborhood traffic circles as we know them are used primarily to slow traffic as a traffic calming device.

INTERSECTION SAFETY

Many studies have found that roundabouts improve the overall safety performance of an intersection by eliminating conflicts, decreasing speeds, and decreasing speed differentials. The reasons for increased safety at roundabouts include:

- Roundabouts have fewer conflict points in comparison to conventional intersections.
- Low operating speeds associated with roundabouts provide drivers more time to react to a situation and reduce the severity of crashes if they occur.
- Pedestrians need only cross one direction of traffic at a time at each approach, with the splitter islands providing refuge to pedestrians in the centre of the approach.

[1] Excerpts from the Kansas State Roundabout Guide, 2003 and The FHWA Informational Guide on Roundabouts, 2000 and the author's own resources.

FREQUENTLY ASKED QUESTIONS

Why are other jurisdictions installing roundabouts?

Roundabouts can offer a good solution to safety and capacity problems at intersections. Roundabouts can also offer high capacity at intersections without requiring the expense of constructing and maintaining a traffic signal.

Aren't traffic signals safer than roundabouts for pedestrians?

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 crossings 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.

Are roundabouts safe near schools?

Over 40 roundabouts have been installed near schools in the United States. The early results of safety performance indicate very positive outcomes. There are two in your neighboring community at Saline High School.

Are roundabouts appropriate everywhere?

No. The choice of using a roundabout versus a traffic signal or unsignalized control is a case–by-case decision. Many jurisdictions installing roundabouts evaluate each candidate intersection individually to determine whether a roundabout or a traffic signal, two-way stop, or all way stop control is more effective.

Some roundabouts look awfully tight for trucks. Will they fit?

Roundabouts are designed specifically to accommodate large vehicles.

If I'm driving in a multilane roundabout, how do I choose which lane to enter and exit?

In general, approach a multilane roundabout the same way you would approach any other intersection. If you want to turn left, use the left-most lane and signal that you intend to turn left. If you want to turn right, use the right-most lane.

What should I do when I'm in a roundabout when an emergency vehicle arrives?

The roadway in the roundabout is usually wide enough for you to pull as far to the right as possible; however, it is generally better to completely clear the intersection and pull off to the side past the roundabout.

How about riding a bicycle through a roundabout?

A bicyclist has a number of options at a roundabout, and your choice will depend on your degree of comfort and experience level with riding in traffic. You can choose to circulate as a vehicle or use the sidewalk.

SITES WHERE ROUNDABOUTS ARE OFTEN ADVANTAGEOUS

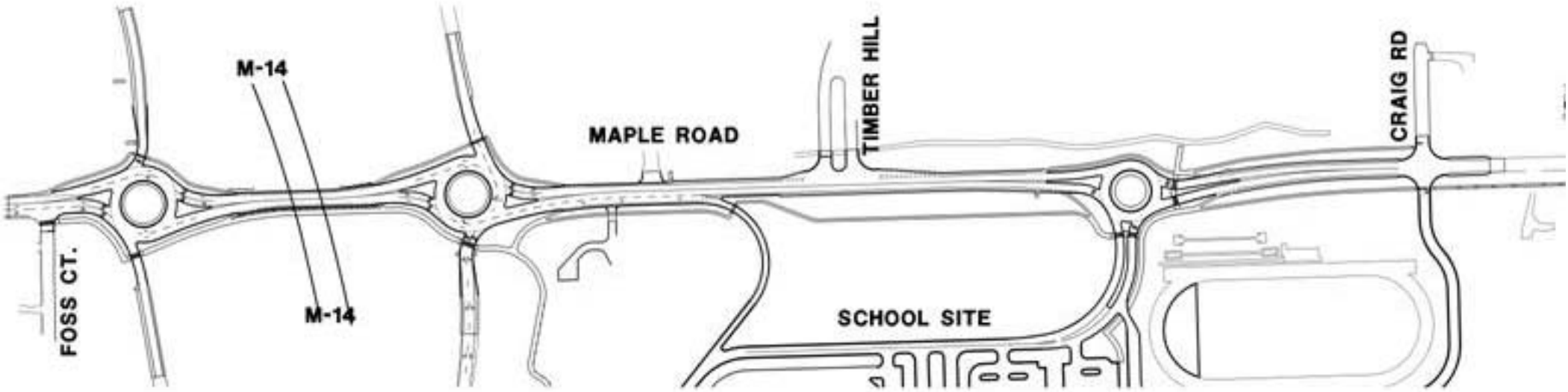
Roundabouts are often advantageous over other traffic control at intersections with the following characteristics and conditions:

- Locations with high crash incidence including high injury severity crashes.
- Intersections with a high percentage of turning movements.
- Intersections that must accommodate U-turns. Roundabouts can be used to control access on arterials.
- Intersections at a gateway or entry point to a neighborhood, commercial development, or urban area.
- Where a community enhancement may be desirable.
- Where widening one or more approach may be difficult or cost-prohibitive, such as at bridge terminals.
- Where traffic growth is expected to be high and future traffic patterns are uncertain.
- Where the speed environment of the road changes (for instance, at the fringe of an urban environment).
- Locations with a need to provide a transition between land use environments (such as between residential and commercial uses).
- Roads with a historical problem of excessive speeds.
- Closely spaced intersections to replace traffic signals.

SITES WHERE ROUNDABOUTS ARE NOT FAVORED

There are site conditions that often present complications or difficulties for installing roundabouts. Extra caution should be exercised when considering roundabouts at these locations:

- Intersections in close proximity to a signalized intersection where queues may spill back into the roundabout.
- Next to a railway crossing.
- Intersections where road allowance is not sufficient to locate the desired circle size.
- Within an existing coordinated arterial signal-system unless it is to replace all the signals in that system.
- Intersections with a heavy flow of through traffic on the major street opposed by light traffic on the minor street. If traffic signals aren't, required then a roundabout is probably not required either.
- Intersections with physical or geometric complications.
- Locations with steep grades and unfavorable topography that may limit visibility of the entry and complicate construction.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MAPLE ROAD
TIMBER HILL
CRAIG RD
FOSS CT.
SCHOOL SITE