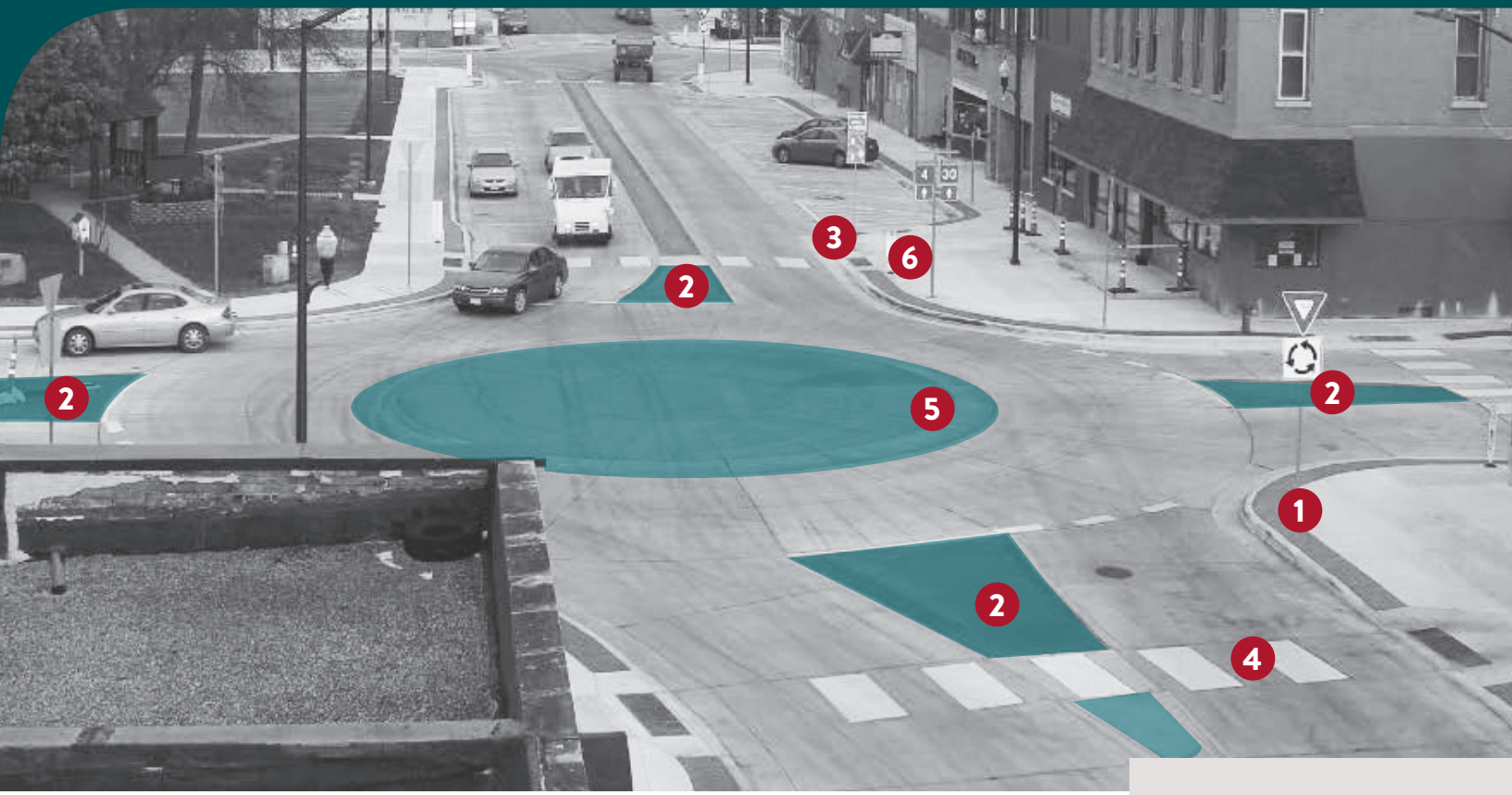

Mini Roundabouts

Reducing traffic speeds and improving pedestrian crossings

Mini roundabouts move traffic more efficiently and have better safety performance than most other types of intersection. Their low operating speeds and geometry all but eliminate severe crashes, and crossings are both shortened and simplified so that pedestrians only have to cross one direction of traffic at a time.

Two key features of mini roundabouts are:

- Mountable curb splitter islands and a mountable center islands that allow them to be used along routes with heavy vehicles.
- A small diameter circle footprint (50' to 80') and a small center island (16' to 45') allows them to be built within a typical intersection footprint.

Mini roundabouts typically serve as alternatives to uncontrolled and stop-controlled intersections in low-speed areas.

If replacing a stop-controlled intersection, mini roundabouts can reduce pedestrian crossing distances by 50% to 75%.[1]

1 **TIGHT TURNING RADIUS**
Slows right turning motorists and increases yielding.

2 **SPLITTER ISLAND**
Slows approaching traffic and creates space for two-stage pedestrian crossings.

3 **NARROW TRAVEL LANES**
Reduce pedestrian crossing distances and provide space for additional elements such as curb extensions, bike lanes, or medians.

4 **PEDESTRIAN CROSSING**
Reduces crossing stress for pedestrians.

5 **MOUNTABLE CENTER ISLAND**
Maximizes the traffic calming benefits while accommodating larger trucks.

1 Transportation Research Board. (2017). Mini-Roundabouts: Is the US Ready to Take Advantage of Their Benefits? [PowerPoint Slides and Webinar]. Retrieved from http://www.trb.org/Main/Blurbs/175682.aspx

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Mini Roundabouts Have Many Benefits

Implementation Benefits:

- Can be installed in existing intersection without expanding roadway width
- Low implementation and operational costs

Safety Benefits for All Users:

- Fewer conflict points between all users
- Slow traffic speeds, which reduce crash risk and severity

Pedestrian Benefits:

- Reduced pedestrian crossing distance
- The ability to cross only one travel lane at a time

Benefits for Drivers:

- Reduced traffic delays
- Mountable curbs, which allow trucks and heavy vehicles to make turns

Where To Use Them

Mini roundabouts work well at urban and suburban intersections of two- or three-lane roads. They can be installed at uncontrolled intersections or those suitable for stop control under the following conditions:

- Relatively few heavy vehicles use the intersection, ideally 3% of daily traffic or less[2]
- 15,000 daily vehicles or fewer use the roads
- Road speed limits are low (35 mph or less)

Roundabouts are an FHWA-proven safety countermeasure that reduce crashes by up to

81%[2]

2 Federal Highway Administration. Proven Safety Countermeasures: Roundabouts. FHWA-SA-17-055. https://safety.fhwa.dot.gov/provencountermeasures/roundabouts/

DESIGN RESOURCES

MnDOT Webpage: Roundabouts in Minnesota

NCHRP Report 672: Roundabouts: An Informational Guide

FHWA-HEP-16-005: Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts

FHWA Webpage: Roundabouts and Mini Roundabouts

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