

Roundabouts Introduction

June 9, 2025

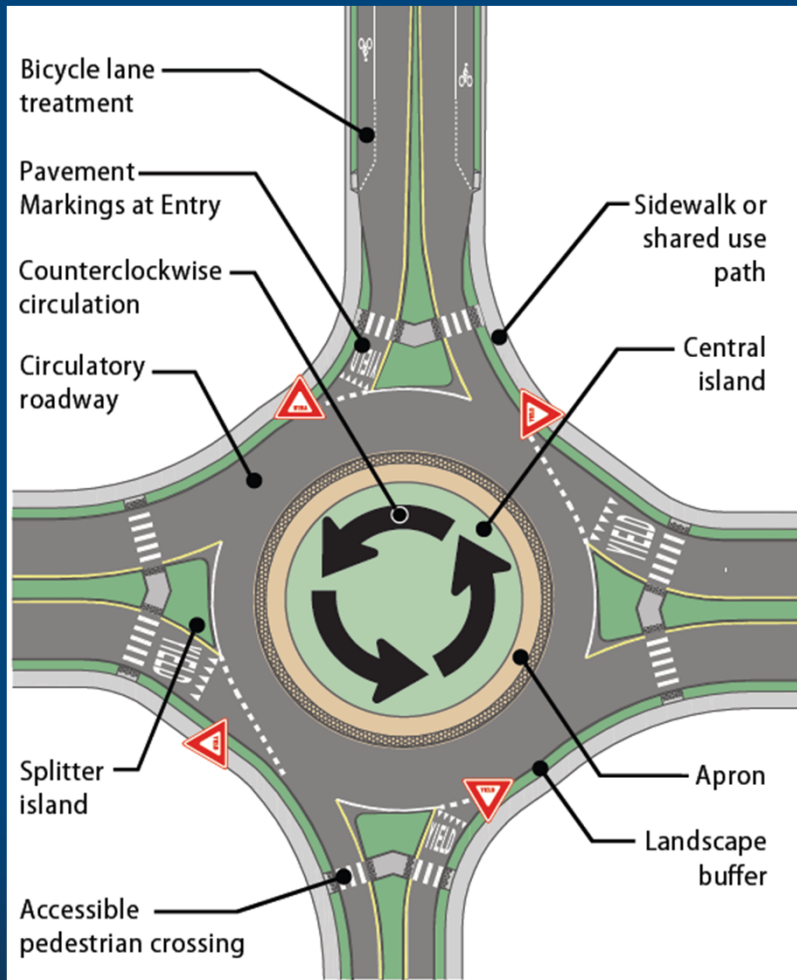


Agenda

- Roundabout Features and Benefits
- Study Intersection
- Roundabout Concept and Considerations
- Questions



Roundabout Features



Roundabout Schematic (Source: FHWA)

- Circulatory Roadway
- Low Speed
- Central Island
- Truck Apron
- Entry Yield Control
- Splitter Island
- Accessible Pedestrian Crossing

Types of Roundabouts

- Mini roundabout
- Single-lane roundabout
- Multi-lane roundabout



Mini Roundabout
Park Street and Locust Street, Town of Vienna, Virginia



Single-lane Roundabout, Warrenton, Virginia

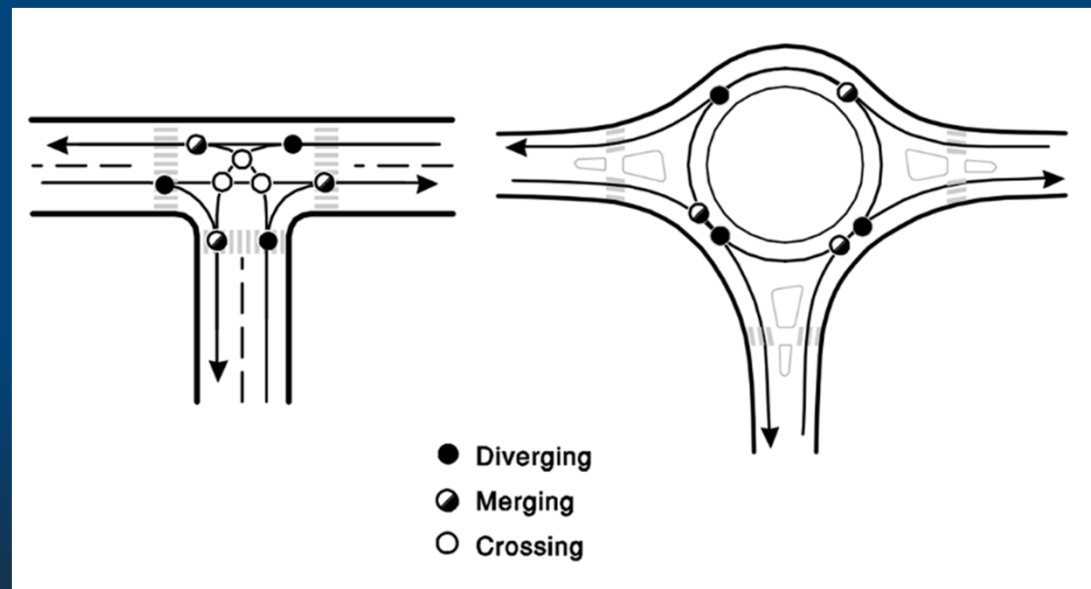


Multi-lane Roundabout, Blacksburg, Virginia



Roundabouts vs. Intersection

- Fewer conflict points
 - Vehicle-vehicle: reduced from 9 to 6
 - Vehicle-pedestrian: reduced from 12 to 6
- Designed to regulate speeds
- Resilience/Sustainability



Church Street and East Street Issues

- Prior configuration (Stop Control – Church St)
 - Traffic speeds
 - Pedestrian safety
 - Yield to pedestrian
 - Turning conflict
- Current (All-way Stop)
 - Large turning radius
 - Long crosswalk
 - Yield to pedestrian
 - Stop sign violation
 - Lighting



2022 (Stop Control on Church Street) Near Map



2023 All-way Stop Control Near Map

Mini Roundabout Concept



Safety Benefits



Operation and Other Benefits

- Improves operation efficiency and traffic flow
- Lower maintenance costs over its lifespan

- Appealing design for a gateway location to communities
- Reduces impervious surface and provides more opportunities for landscaping



Next Steps

- Completing study / conceptual design (1 month)
- Engineering and construction documents (10-12 months)
- Land acquisition (5-6 months)
- Utility relocation (8-9 months)
- Construction (5-6 months)
- Project completion: October 2027 - March 2028



Questions?

Example of Roundabout Conversion

Ravensworth Road / Fountain Head Drive, Annandale, VA



Example of Roundabout Conversion

Park Street / Locust Street, Vienna, VA

- Consideration for pedestrians
- Fit with community context
- Right size considering all users, environmental and R/W



Church Street and East Street

