

# Roundabout Implementation Strategies, Public Education and Outreach

Mark Lenters



# Let's Check-in...

**VDOT** Virginia Department of Transportation

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### Traffic Information

511 offers real-time traffic info. Anytime you need it, anywhere you are.

### ▶ Roundabouts in Virginia

[Review committees](#) | [Resources](#) | [Brochure](#) (PDF, 1 MB)

Roundabouts are one of the safest types of intersection designs. The Virginia Department of Transportation (VDOT) employs roundabouts to increase safety and reduce delays at intersections. Roundabouts also help reduce:

- Crashes
- Traffic delays
- Fuel consumption
- Air pollution

- Committees
  - Standards
  - Brochures
- ...so what's left to do?



# Why are we still having problems implementing roundabouts?

- Trying to build widespread acceptance project by project hasn't worked... in some cases even after 200 sites
- Agencies aren't strategic or tactical in implementation
- Roundabouts represent change - a new device deserves more than just a policy and design guidelines
  - Half of the traffic systems success depends on user adaptation
- Outreach campaigns historically involve a one-time campaign
- Agencies are not publicizing their success



# A Model Strategic Implementation Plan – In Hindsight

1. Avoid isolating roundabouts - develop an internal team for innovative intersections/interchanges
  2. Build consensus strategically (top-down and inside-out)
  3. Quickly address nearby storm clouds (bad roundabouts)
  4. Update drivers' manuals and tests
  5. Maximize FHWA policy on roundabout funding (100%)
  6. Offer DOT help to locals for design review and outreach
  7. Engage the freight industry more proactively
- Repeat steps 2 to 7 for the next five to seven years



# Then...Enrich the Toolbox...

## Anatomy of a roundabout




- Center Island
- Truck Apron

Sample Movements

- Crosswalk
- Refuge Island

Bicyclist on Roadway

Bicyclist on Sidewalk

Pedestrian on Sidewalk

### Crossing as a PEDESTRIAN

- Cross only at designated crosswalks.
- NEVER cross to the center of a roundabout.

- Extend your arm and point to show the motorists that you intend to cross. Wait at the crosswalk for a safe gap in traffic.
- Cross the raised median island only when traffic yields or stops and there is a safe gap in traffic. Keep your arm up, pointing as you cross.
- Wait on the raised median island for a gap in the other direction of traffic. Remember to point to show traffic you intend to cross.

### BICYCLES on the road

Experienced bicyclists travel through the roundabout using the same general rules that apply to motorists.

On your approach, choose the proper lane for your route. Always yield to pedestrians in the crosswalks. Yield to traffic in the roundabout; only enter when there is a safe gap in traffic.

Stay in your lane and maintain a good pace. Don't hug the curb - this way, drivers will see you.

- 
- 
- 

### BICYCLES on the sidewalk



Dismount at the ramp leading to the sidewalk and walk your bicycle.

Use the sidewalks and crosswalks, following the same rules that apply to pedestrians.

Florida Traffic White Department  
 1960 The Woodlands, S.E.  
 Tallahassee, FL 32312  
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 TTY: 904-203-2073  
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[www.ourstonroundabout.com](http://www.ourstonroundabout.com)  
[www.ourstonengineering.com](http://www.ourstonengineering.com)

## How to Drive Through a Roundabout

### LARGE TRUCKS (WITH SEMI-TRAILERS)



As drivers approach a roundabout, it is imperative for them to read the signs. The signs will tell you what lane you need to be in to properly navigate the roundabout to exit at the desired location. Below is a step through of how to make left turns, right turns and through movements.

As truck drivers navigate a roundabout, their trailer will sometimes track into other lanes or they may have to use all available space, especially on smaller roundabouts.

Trucks must be in the correct lane at all times.

Keep traffic on your "right" side.

#### Making a LEFT TURN

- As you approach the roundabout, set up to choose the lane that allows you to keep traffic on your "right" side.
- Check for surrounding traffic.
- When clear, enter the circle, keeping in mind the trailer may off-track.
- When in the roundabout, continually check in all mirrors until you have cleared the roundabout. When navigating the roundabout, the trailer may off-track onto the truck apron.

#### Making a RIGHT TURN

- Just like any right turn, trucks may need more space than just their lane. In some instances it may be all available space.
- Check for surrounding traffic.
- As you enter the roundabout, proceed with caution and be prepared to give right-of-way if needed.

#### Making a THROUGH MOVEMENT

- Trucks should enter the roundabout in the correct lane for their destination, when trying to keep traffic to their left when possible.
- Check for surrounding traffic.
- Continually check in all mirrors until you have cleared the roundabout. When navigating the roundabout, the trailer may off-track onto the truck apron.

Trucks make wide right turns.

Keep traffic on your "right" side.



# Start with the next generation - Children's Safety Villages



# Strive for more area-wide education campaigns:

Train Pedestrians to be more assertive...



# User Specific Training



## What is a roundabout?

- ▶ A roundabout is a one-way circular intersection engineered to maximize safety and reduce traffic congestion.
- ▶ The "yield at entry" rule reduces delay by eliminating unnecessary stopping. Drivers yield to traffic in the roundabout and enter only when there is a safe gap in traffic.
- ▶ Pavement markings and signs direct traffic into a one-way, counter-clockwise flow.
- ▶ Raised islands and painted crosswalks at roundabouts provide safer and more visible routes for pedestrians. Short crossing distances and slow moving traffic increase pedestrian safety.
- ▶ Pedestrians cross the street using the designated crosswalks. Raised islands are provided in the middle of each crossing so pedestrians only cross one direction of traffic at a time.
- ▶ Bicyclists using the roundabout can either exit the roadway at the bike ramps and use the sidewalk, or take the lane and enter the roundabout as a vehicle.

Driving in circles can be a good thing, if it means you get where you want to **quickly and safely.**

That's why the City of Fort Worth has begun incorporating roundabouts into our road network.

## Contact us

Questions, comments or concerns?

Please contact us in whichever way is most convenient.



Tel: 817-392-7738



TTY: 817-884-2313



[www.fortworthroundabouts.com](http://www.fortworthroundabouts.com)

[www.fortworthtexas.gov/tpw](http://www.fortworthtexas.gov/tpw)



Transportation and Public Works Department  
1000 Throckmorton St.  
Fort Worth, TX 76102

## Please drive safely

Roundabouts are replacing traffic signals all across America. However, since roundabouts are fairly new to our area, please expect a short adjustment period as drivers get used to them.

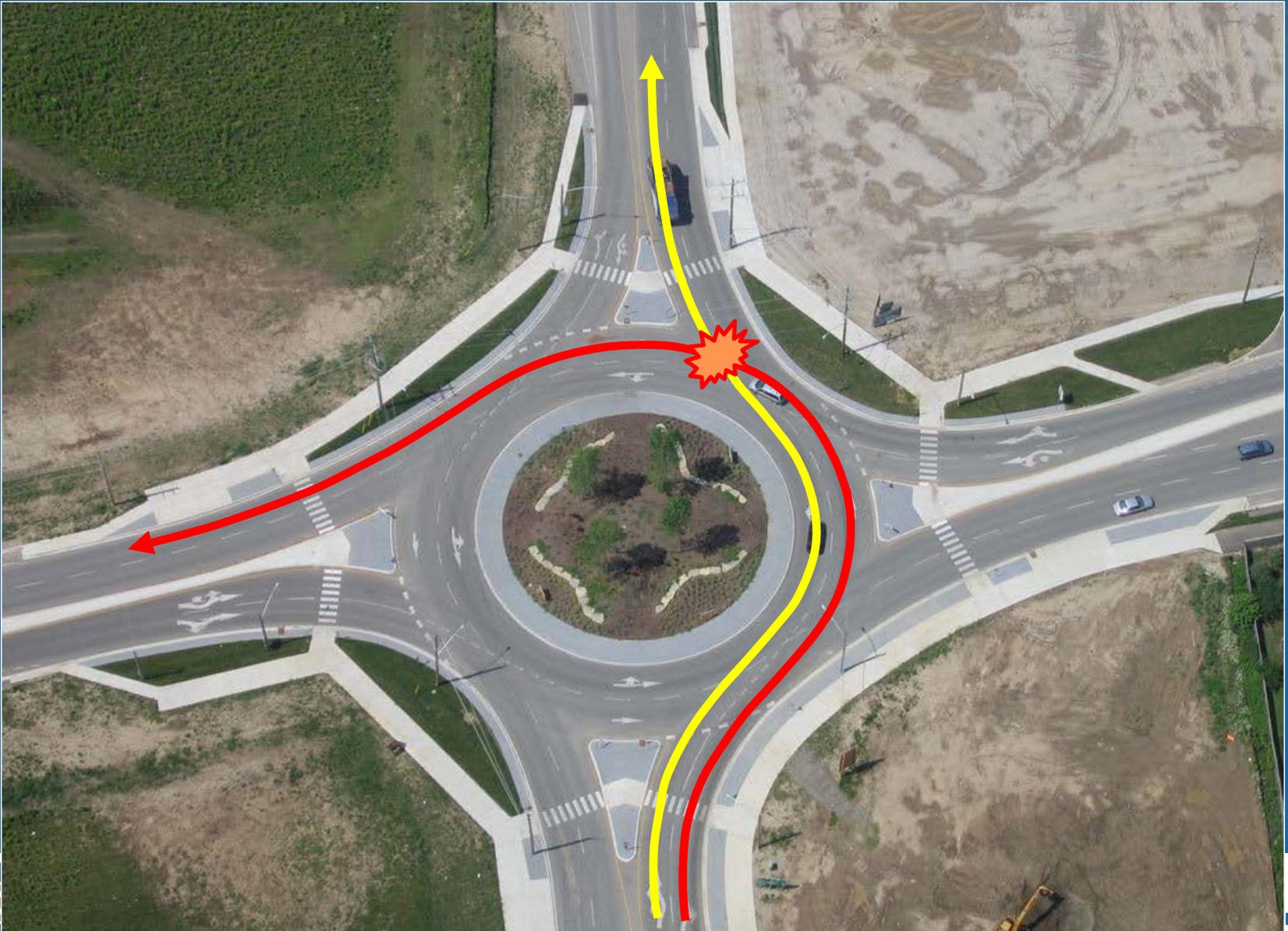
## Using a Roundabout PEDESTRIANS & BICYCLISTS



Brought to you by



# The Not-So-Obvious Left Turn Problem



# Select Lane – Stay In-Lane

WISCONSIN DEPARTMENT OF TRANSPORTATION  
U.S. Department of Transportation  
Federal Highway Administration

## Driving a Roundabout Turn by Turn

- ▶ Observe all standard road rules, including yielding for pedestrians in crosswalks.
- ▶ To safely and efficiently drive a roundabout:
  - Slow down.
  - Read advance signing and choose correct lane.
  - Yield to traffic in all lanes on your left before entering.
  - Stay in your lane to your exit.

Sample Turning Movements
Right Turn / Continue Straight
Continue Straight / Left Turn / U-turn

May 2013

## Always obey the signs and markings

As you get closer to the roundabout entrance, it is very important to observe the signs and arrows to determine which lane to use before entering a roundabout. Signs above the road and white arrows on the road will show the correct lane to use.



Roundabout ahead, slow down.



Guide signs near the entry to a roundabout show lane designations.



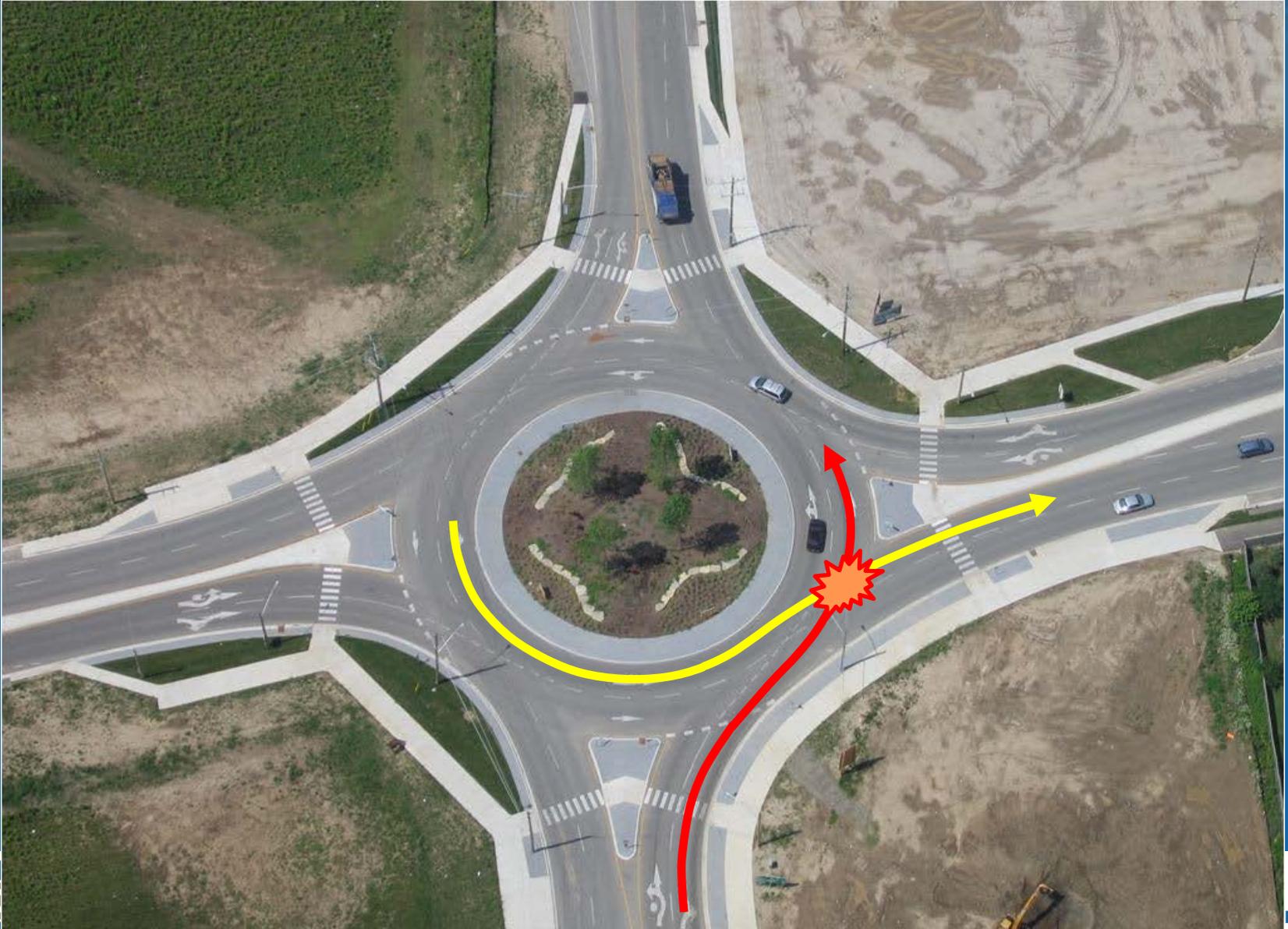
Yield to all traffic in the roundabout.



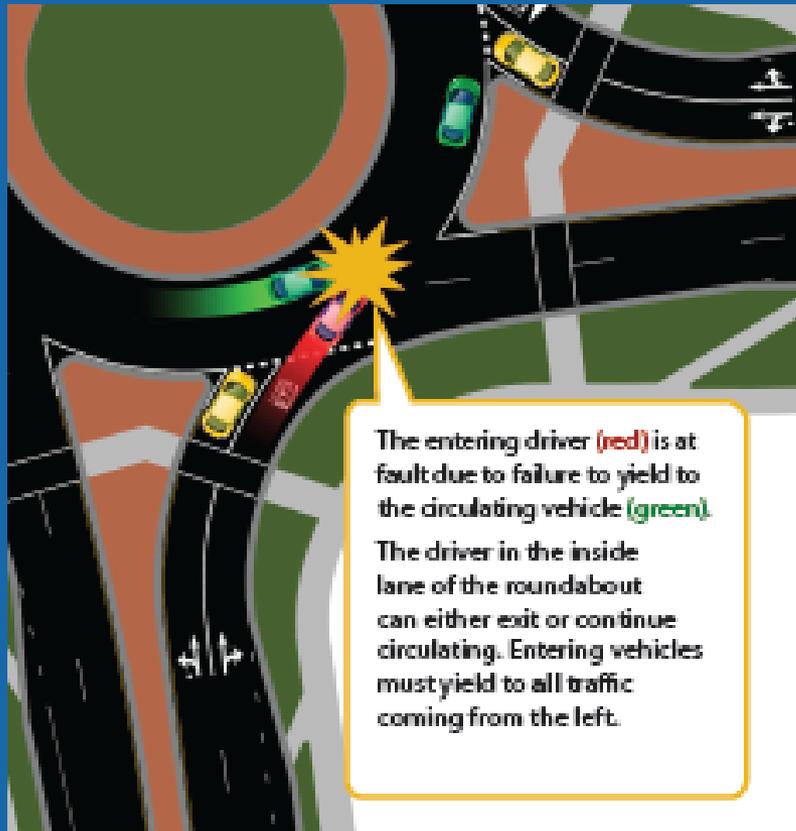
Roundabout traffic travels one-way.



# The Failure to Yield Problem



# Failure to Yield Exit Conflict



## How to Drive Through a Roundabout

# ALWAYS YIELD TO ALL CIRCULATING TRAFFIC

**KEY**

- Stopped/At Fault
- Yielding
- Circulating

**YIELD**  
The "Golden Rule" of roundabouts.

When you enter the roundabout you must yield to circulating traffic.

Drivers in the circle have the right-of-way. An approaching motorist has to wait for a safe gap in the flow of traffic before entering.

Enter only when there is a safe gap in traffic.

Circulating traffic has the right of way. Continue to your exit and do not stop within the roundabout.

Drivers must yield to pedestrians and bicyclists using the crosswalks.

Yield to all traffic coming from the left.

The entering driver (red) is at fault due to failure to yield to the circulating vehicle (green). The driver in the inside lane of the roundabout can either exit or continue circulating. Entering vehicles must yield to all traffic coming from the left.

**FORT WORTH.**

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Fort Worth, TX 76102  
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[www.fortworthtexas.gov/transportation](http://www.fortworthtexas.gov/transportation)  
[www.fortworthtexas.gov/spec](http://www.fortworthtexas.gov/spec)

Take nothing for granted in who you need to reach...

### How to Drive Through a Roundabout

## SCHOOL BUS



**KEY**

-  School Bus
-  Yielding
-  Circulating

**YIELD**  
The "Golden Rule" of roundabouts.

When you enter the roundabout, you must yield to circulating traffic, pedestrians and bicyclists.

Drivers in the circle have the right of way. A motorist approaching a roundabout should wait for a safe gap in traffic before entering.

**FORT WORTH.**

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[www.fortworthtexas.gov/tpw](http://www.fortworthtexas.gov/tpw)

Enter only when there is a safe gap in traffic.

Circulating traffic has the right of way. Continue to your exit and do not stop within the roundabout.

Drivers must yield to pedestrians and bicyclists using the crosswalks.

Yield to all traffic coming from the left.

The driver in the inside lane of the roundabout can either exit or continue circulating. Entering vehicles must yield to all traffic coming from the left.



# Emergency responders

What to do when an...  
**EMERGENCY VEHICLE**  
APPROACHES A ROUNDABOUT

**KEY**

- Stopped
- Yielding
- In Motion
- Ambulance

After you exit the roundabout, move to the right and stop so the emergency vehicle can safely pass.

If you are already in the roundabout, **do not stop** because the emergency vehicle may not be able to safely pass.

Do not enter a roundabout when an emergency vehicle is approaching from another direction.

Prior to entering the roundabout, move to the right so the emergency vehicle can safely pass.

**EMERGENCY VEHICLES**

Drivers are trained to pull over when an emergency vehicle is coming because it's the law. In the case of roundabouts, the Wisconsin Department of Transportation (WisDOT) states that motorists must clear a roundabout if they hear (or see) an emergency vehicle coming.

Motorists should immediately exit the roundabout at the next right.



# Reach out to the Goods Movement Industry

They are very influential and capable of shutting down a roundabout program.

Don't forget OSOW!



## How to Drive Through a Roundabout

### LARGE TRUCKS (WITH SEMI-TRAILERS)

As drivers approach a roundabout, it is imperative for them to read the signs. The signs will tell you what lane you need to be in to properly navigate the roundabout to exit at the desired location. Below is a step through of how to make left turns, right turns and through movements.

As truck drivers navigate a roundabout, their trailer will sometimes track into other lanes or they may have to use all available space, especially on smaller roundabouts.

Drivers must be aware of other vehicles at all times.

The Truck Apron is a concrete area designed specifically for large trucks to use.



#### Making a LEFT TURN

1. As you approach the roundabout, set up to choose the lane that allows you to keep traffic on your "sight" side.
2. Check for surrounding traffic.
3. When clear, enter the circle, keeping in mind the trailer may off-track.
4. When in the roundabout, continually check in all mirrors until you have cleared the roundabout. When navigating the roundabout, the trailer may off-track onto the truck apron.



#### Making a RIGHT TURN

1. Just like any right turn, trucks may need more space than just their lane. In some instances it may be all available space.
2. Check for surrounding traffic.
3. As you enter the roundabout, proceed with caution and be prepared to give right-of-way if needed.



#### Making a THROUGH MOVEMENT

1. Trucks should enter the roundabout in the correct lane for their destination, trying to keep traffic to their left when possible.
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# Project Level Tactical Outreach

## Match the Audience + Tools + Timing

- Top-down and internal to external

<p><b>Communication Products</b> (This is a working document that will eventually be presented to the TIER 1 and TIER 2 contact groups)</p>		Roundabout Public-Working Points																							
		Roundabout Brochure (Content from MNDOT w/ proj. specific info)	FAQ info sheet (w/questions from previous PM)	RAB project map (w/Key driving points)	Project Fact Sheet	Training Video (Clipped down version of MNDOT video)	Truck Fact Sheet	Emergency Vehicle Fact Sheet	Pedestrian Fact Sheet	Bicyclist Fact Sheet	Motorcycle Fact Sheet	How to Animation (FLASH MEDIA)	Project Website	Newsletter for Public Meeting	Roundabout Drawing (foamcore board)	General how-to drive a roundabout (foamcore board)	Simulation of Roundabout Operation VSSM (if necessary)	Scaled Roll Plot with toy cars and trucks	Powerpoint Slide Presentation	Public Comment Form	Construction Staging Boards (most likely at second PIM)	Commercial and residential access diagrams during construction	Roadside driver training	Construction updates	
Roll-out & Target Groups		Prior to first Public Meeting								Public Meeting (PIM)				TBD											
<b>COMMUNICATIONS TARGETS</b>		<b>COMMUNICATION COORDINATOR</b>																							
<b>TIER ONE</b>		<b>**SEE BELOW FOR SCHEDULE</b>																							
Internal County/City Staff	Dakota County/Lakeville																								
Communication Managers	Dakota County/Lakeville																								
Traffic Specialists	Dakota County/Lakeville																								
Engineers	Dakota County/Lakeville																								
Public Works/Maintenance	Dakota County/Lakeville																								
Emergency Services	Stonebrooke w/County & City																								
<b>TIER TWO: LOCAL OFFICIALS</b>																									
City officials	Dakota County/Lakeville (Stonebrooke TBD)																								
County officials	Dakota County/Lakeville (Stonebrooke TBD)																								
<b>TIER TWO: MEDIA</b>																									
Lakeville Cable	City of Lakeville (Stonebrooke TBD)																								
Local Newspaper	TBD																								
Newsletters/Mailing for Public Meeting	Stonebrooke w/County & City																								
<b>TIER TWO: MISC.</b>																									
School District	Obtain Contact and Include on Lists																								
Busing (Schmitt and Sons)	Obtain Contact and Include on Lists																								
Railroad (will also be met with seperately)	Stonebrooke w/County & City																								



# Employ better visuals

## Renderings + Animation + Webcam



 **FREESE  
AND  
NICHOLS**



[www.ghd.com](http://www.ghd.com)

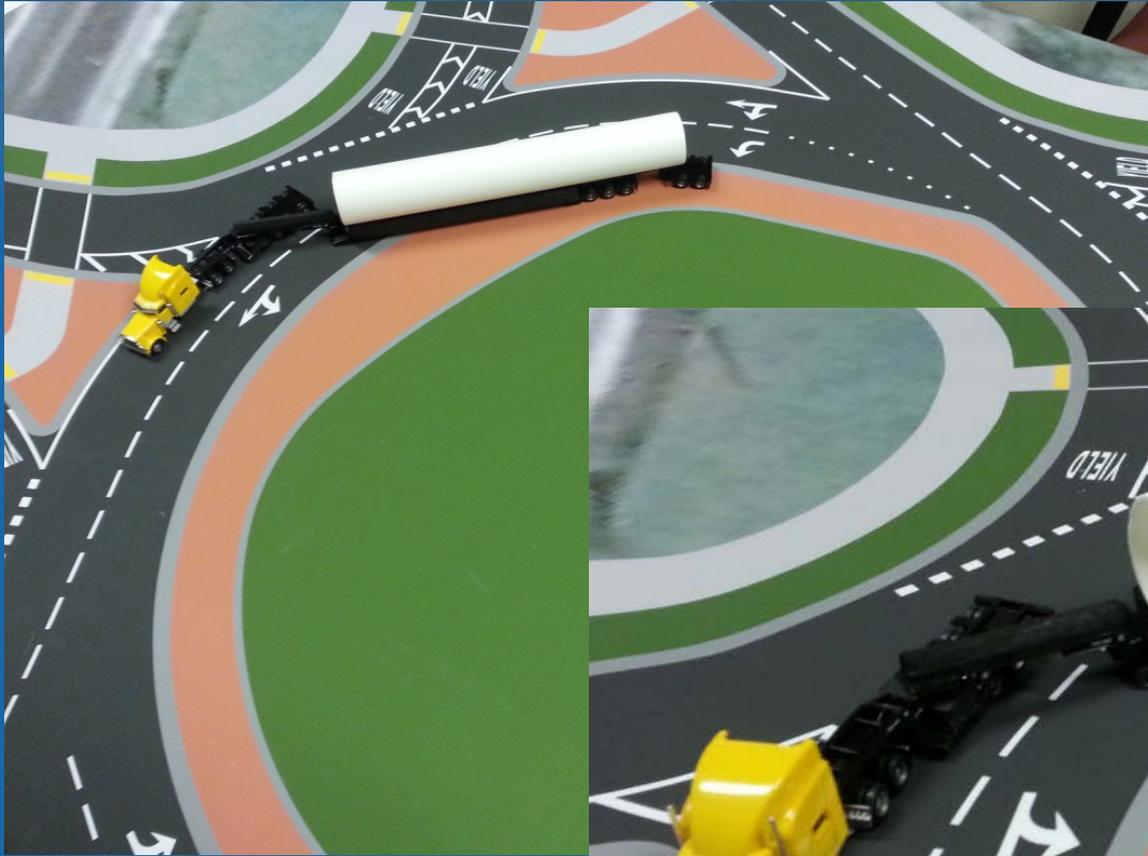
The home of Ourston Roundabout Engineering

[www.ourston.com](http://www.ourston.com)

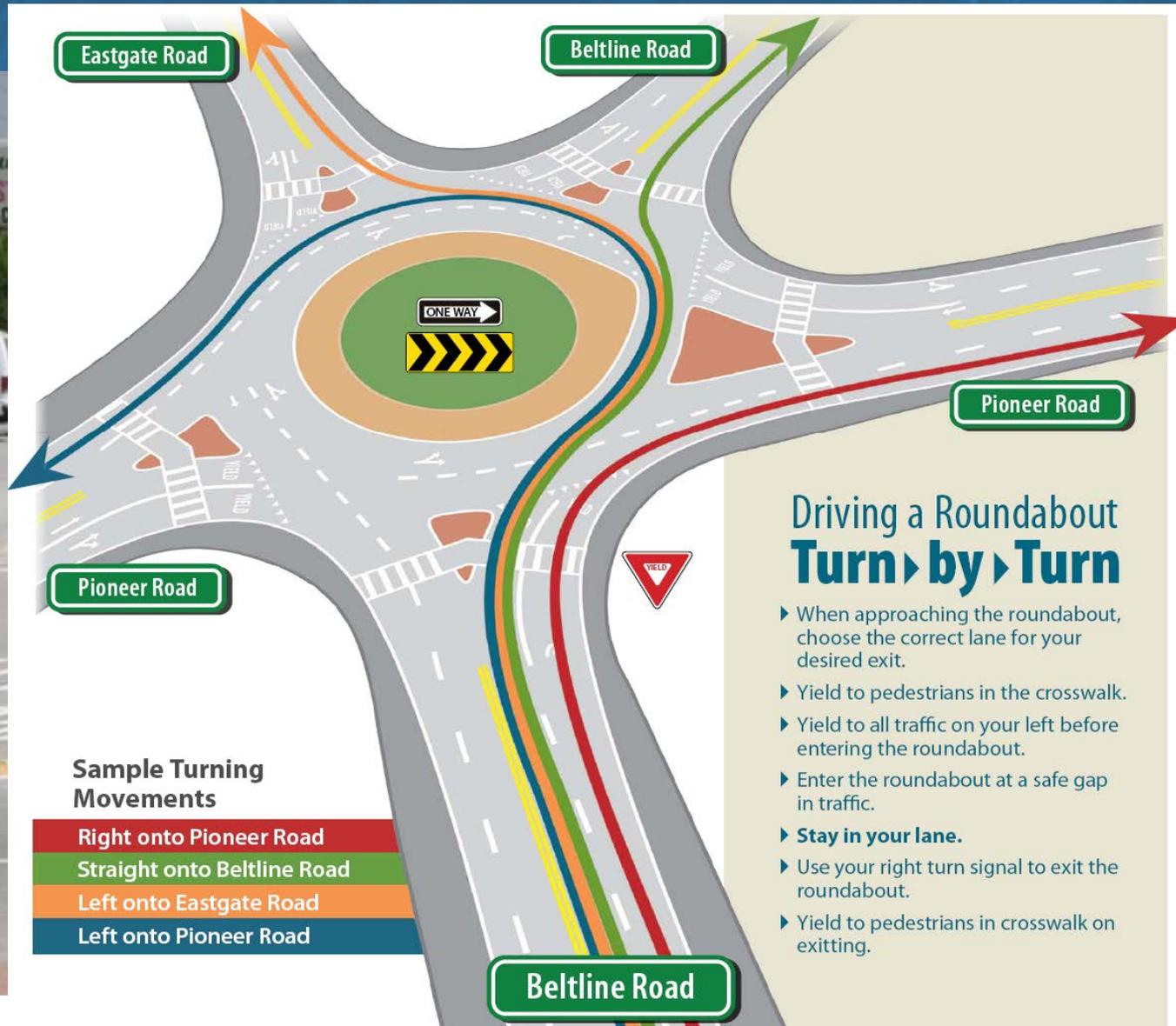
# Scale Model (1:87 = 'HO' scale)



# Scale Model (1:87 = 'HO' scale)



# Conduct in-field driver training



# Partner with local agencies to hold a grand opening event



# What We Are Learning...

- Roundabout programs may experience an evolution from resistance/success/resistance over time.
- Most have seen the gap between like and dislike widen in the past five years.
- The change that drivers need to make is significant. Empathize regarding the change in driver behavior that is necessary but that the change is worth it.
- Multiple varied campaigns may be required to adapt to evolving experience

