



## ROUNABOUT

### FACT SHEET

January 12, 2012

#### What is a roundabout\*?

The modern roundabout is a circular intersection with design features that promote safe and efficient traffic flow whereby vehicles travel counterclockwise around a raised center island, with entering traffic yielding the right-of-way to circulating traffic. Drivers approaching a roundabout must reduce speed, be prepared to stop for pedestrians and bicyclists, and look for potential conflicts with vehicles already in the circulatory roadway.

Roundabouts, like all intersections, are studied before constructed to determine if they are the appropriate type of intersection. Existing traffic signal (if present) will be removed if a roundabout is constructed.

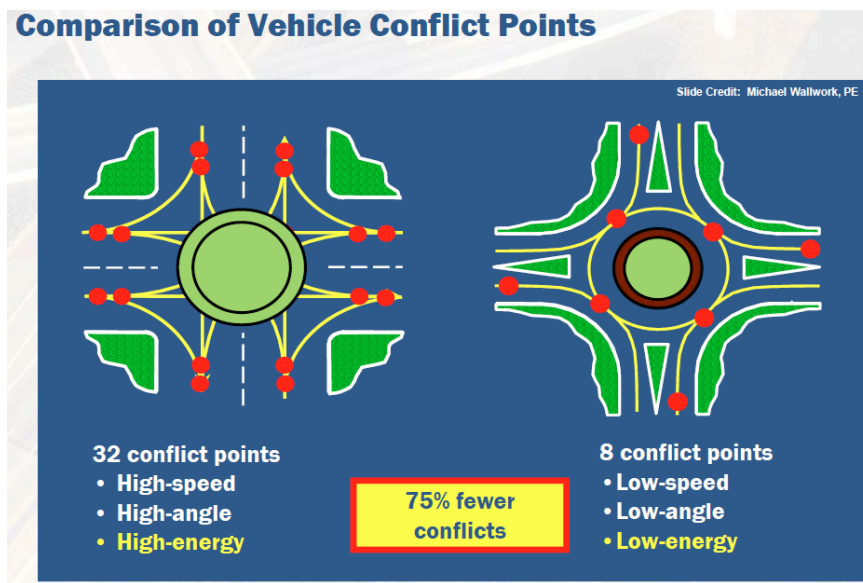


\*Rodegerdts, L., M Blogg, E. Wemple, E. Myers, M. Kyte, M. Dixon, G. List, A. Flannery, R. Troutbeck, W. Brilon, N. Wu, B. Persaud, C. Lyon, D. Harkey, D. Carter. *Roundabouts in the United States*. National Cooperative Highway Research Program Report 572. Transportation Research Board, National Academies of Science, Washington, D.C., 2007.

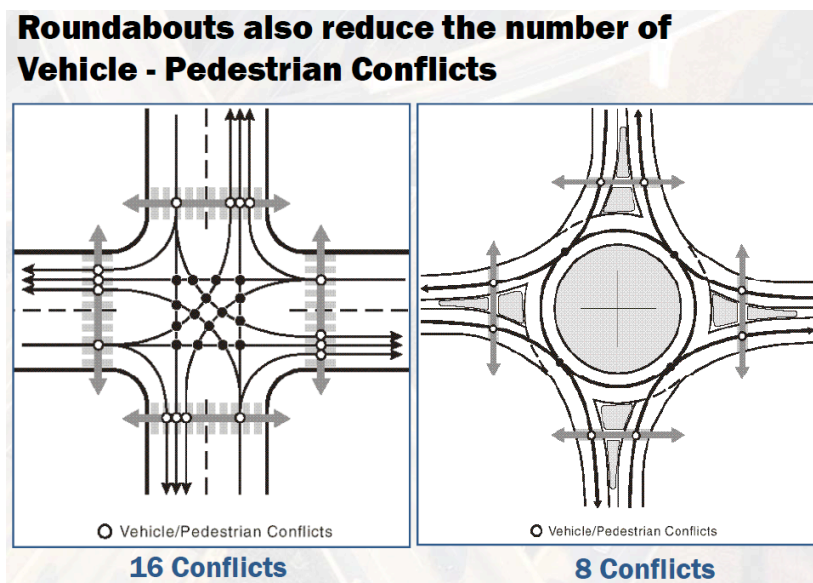
\*GDOT Modern Roundabouts, A Safer Intersection Choice, Mr. Scott Zehngraff, P.E., 2009

## Why consider a roundabout?

- Traffic safety
  - Reduce total crashes by 35% and injury crashes by 76%\*
  - Slower speeds are generally safer for pedestrians



- Pedestrian safety
  - Reduced vehicle speeds, focus on one traffic stream
  - Fewer lanes to cross
  - Splitter island provides refuge
  - Low vehicular speeds allow more time to react and are generally safer for pedestrians
  - Lower pedestrian exposure to traffic
  - May cause issues for visually impaired pedestrians



\*Rodegerdts, L., M Blogg, E. Wemple, E. Myers, M. Kyte, M. Dixon, G. List, A. Flannery, R. Troutbeck, W. Brilon, N. Wu, B. Persaud, C. Lyon, D. Harkey, D. Carter. *Roundabouts in the United States*. National Cooperative Highway Research Program Report 572. Transportation Research Board, National Academies of Science, Washington, D.C., 2007.

\*GDOT Modern Roundabouts, A Safer Intersection Choice, Mr. Scott Zehngraff, P.E., 2009

- Traffic calming
  - Reduce vehicle speeds using geometric design
- Bicyclist considerations
  - Can navigate roundabouts either as motor vehicles or pedestrians depending on the size of the intersection, traffic volumes, and their experience level
- Operational performance
  - Lower overall delay than other controlled sections
  - Specific users do not receive priority
- On-going operations and maintenance
  - Lower operating and maintenance costs than a traffic signal
- Approach roadway width
  - May not require lengthy turn lanes
  - Often have greater right-of-way needs at the intersection quadrants
- Environmental factors
  - Less noise, fuel consumption and fewer air quality impacts
- Access management
  - Facilitate U-turns, enabling left-turn restrictions at driveways
- Aesthetics
  - Islands offer opportunity for landscaping and art displays (monuments)
- Land use
  - Provide transition areas between different environments

### **Potential Site Constraints**

- Physical complications (ex. right-of-way limitations or utility conflicts among other factors) may make construction not feasible
- Proximity of sites that generate heavy vehicle traffic
- Possible creation of unacceptable major road delay
- Proximity of bottlenecks (ex. traffic backups from nearby traffic signals) may cause operation of roundabout to fail
- Heavy pedestrian or bicycle movements may require supplemental traffic control
- Intersections within a coordinated signal network may operate better with signalized intersection

\*Rodegerdts, L., M Blogg, E. Wemple, E. Myers, M. Kyte, M. Dixon, G. List, A. Flannery, R. Troutbeck, W. Brilon, N. Wu, B. Persaud, C. Lyon, D. Harkey, D. Carter. *Roundabouts in the United States*. National Cooperative Highway Research Program Report 572. Transportation Research Board, National Academies of Science, Washington, D.C., 2007.

\*GDOT Modern Roundabouts, A Safer Intersection Choice, Mr. Scott Zehngraff, P.E., 2009