

VDOT Policy

VDOT recognizes that roundabouts are frequently able to address the above safety and operational objectives better than other types of intersections in both urban and rural environments and on high-speed and low-speed highways.

Therefore, it is VDOT policy that roundabouts be considered when a project includes reconstructing or constructing new intersection(s), signalized or unsignalized. As a minimum, the roundabout alternative shall be reviewed to determine conceptual project impacts including safety, land impacts and construction. If the roundabout appears to be a feasible alternative, then a traffic analysis and preliminary layout should be created and analyzed in further detail. In such case the Engineer shall provide an analysis of each intersection to determine if a roundabout is a feasible alternative based on site constraints, including right-of-way, environmental factors and other design constraints. The advantages and disadvantages of constructing a roundabout shall be documented for each intersection.

When the analysis shows that a roundabout is a feasible alternative, it is considered the Department's preferred alternative due to the proven substantial safety and operational benefits.

Roundabouts should not be considered as a feasible alternative when the following criteria exist:

- Where adequate horizontal and/or vertical approach sight distances cannot be met.
- When there are signalized intersections close to the proposed roundabout.
- Where high volume entrances are in close proximity (within 100') to the outer edge of the inscribed diameter.
- Where left turns are not the predominant turning movement.
- When deemed unsuitable due to other engineering factors by the District or Central Office Roundabout Review Committee.

Design/Resources

The maximum daily service volume of a single-lane roundabout varies between 20,000 and 26,000 vehicles per day (2,000 - 2,600 peak hour volume), depending on the left turn percentages and the distribution of traffic between the major and minor roads.

For Truck Apron Curb use cell Mod. CG3 found in the cell library.*

Roundabout designs shall be based on NCHRP Report 672, Roundabouts: An Informational Guide, Second Edition. See the following link:

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_672.pdf.

Additional information can also be found in VDOT's Roundabout Brochure at <http://www.virginia-dot.org/info/resources/Roundabouts.pdf> and on VDOT's roundabout web site at [Roundabouts in Virginia](#).

* Rev. 1/13