

CROSSOVERS WITHOUT AND WITH CONNECTIONS

In commercial and industrial areas where property values are high and rights of way for wide medians are difficult to acquire, a paved flush traversable median 10' to 16' wide is the optimum design. Successful operation of a continuous left-turn lane requires adequate median openings should be designed with a minimum length of 40'. The shape of the median end should generally be symmetrical when the median width is less than 10' and the median opening length is not excessive, but the bullet nose can be effectively used to reduce the opening. For a median width of 10' or more, the bullet nose design should be used instead of a semicircular design. At 3-leg and 4-leg intersections, the length of the crossover and the shape of the median end is controlled by the width of the median and the turning radii. (See Figure C-1-3). A wide median opening can be reduced at skewed intersections by utilizing modifications of the bullet nose design. Additional information may be obtained from AASHTO's A Policy on Geometric Design of Highways and Streets (Median Openings).

INTERSECTION DESIGN

Signalized and Unsignalized:

At-grade intersections must provide adequately for anticipated turning and crossing movements. Figures C-1-4 and C-1-5 provide the designer with the basic types of intersection designs and recommendations pertinent to dimensions, radii, skews, angles, and the types of island separations, etc., to be considered. AASHTO's A Policy on Geometric Design of Highways and Streets (Intersections) should be reviewed for additional information to be considered in the design since the site conditions, alignment and grades, sight distance, the need for turning lanes and other factors enter into the type of intersection design which would satisfy the design hour volume of traffic, the character or composition of traffic, and the design speed.

Roundabouts:

Operational and safety characteristics of roundabouts should be compared with those of signalized and unsignalized intersections on all projects and be used if deemed appropriate. Roundabout designs should be based on Federal Highway Administration Publication Number FHWA-RD-00-067, Roundabouts: An Informational Guide at <http://www.tfhr.gov/safety/00068/htm> and <http://www.tfhr.gov/safety/00068.pdf>. Additional information can also be found in VDOT's Roundabout Brochure at <http://www.virginiadot.org/infoservice/faq-roundabouts.asp>. See Figure C-1-2.2 for Roundabout Details. When roundabout design is proposed, the Residency Administrator should consult the District Location & Design Engineer.