

SECTION 400

AT-GRADE INTERSECTIONS

401 GENERAL

An intersection is the area where two or more roadways connect. It includes the roadway and roadside facilities available for traffic movement. Each roadway radiating from an intersection is called an intersection leg.

Intersection design is very important to the overall roadway safety and level of service. Many accidents and safety problems occur at intersections. Intersection type and spacing control roadway capacity and travel time. Intersections handle a variety of conflicts among vehicles and pedestrians. Vehicles arriving, departing, merging, turning, and crossing traffic have to be accommodated within a relatively small area. These movements may be handled by various means, depending on the intersection type.

There are three categories of roadway intersections. This section deals with at-grade intersections. Grade separations (i.e., without ramps), and interchanges are discussed in Section 500.

402 DESIGN CONSIDERATIONS

Intersection design affects roadway efficiency, safety, capacity, operating cost and operating speed. Well designed intersections reduce the severity of user conflicts while accommodating their varied interests. Intersection design is a cooperative effort between roadway and traffic engineers, based on human factors, traffic considerations, physical elements and economic factors.

403 AT GRADE INTERSECTION TYPES

There are three basic types of at-grade intersections, the three-leg intersection, the four-leg intersection, and the multileg intersection. See Figure 400.01. Factors in determining the type of intersection include, the number of

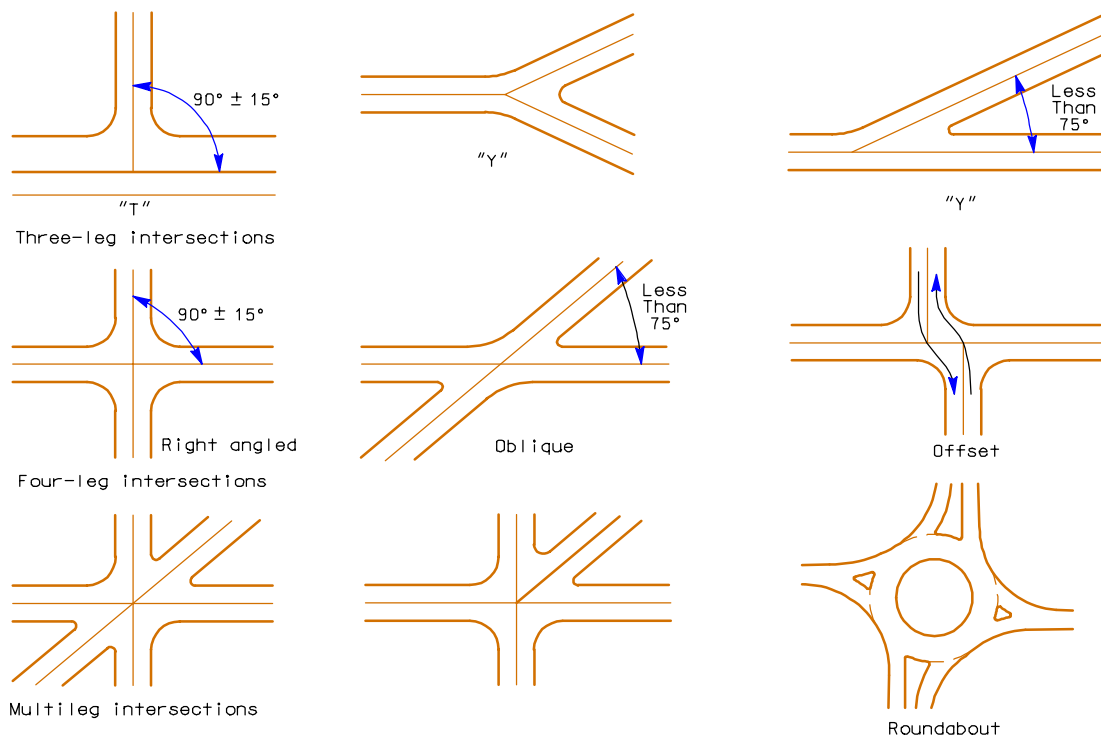


Figure 400.01
Basic Intersection Types