

**Stop Control with Crossing Maneuver -**

Crossing maneuver sight distance is based on the time it takes for the stopped vehicle to clear the intersection and the distance travelled in that time by an oncoming vehicle on the cross road. The distance may be calculated from

$$d = 0.28V(2.0 + t_a)$$

where:  $d$  = sight distance required along the major roadway from the intersection (m).  
 $V$  = design speed on the major roadway (kph)  
 $t_a$  = time required to accelerate and traverse the distance to clear the major roadway travelled way (s)

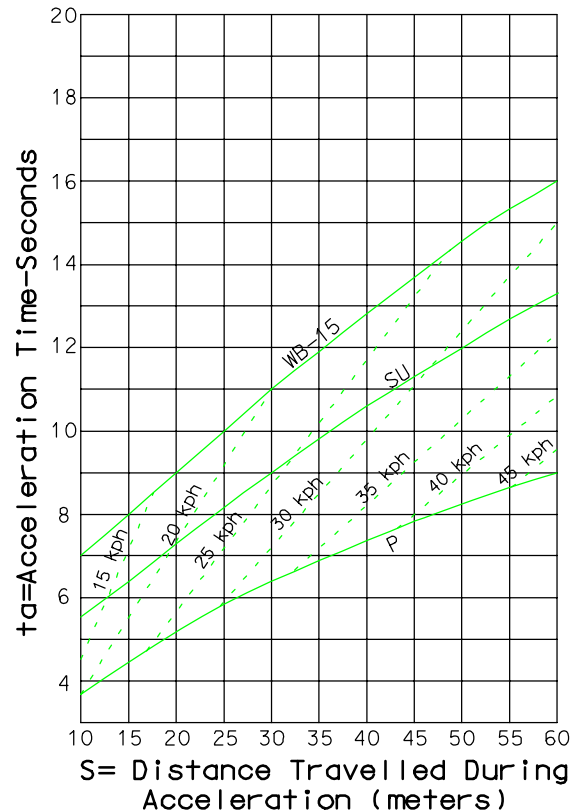
The solid line curves in Figure 400.05 labeled “P”, “SU” and “WB-15” are the recommended vehicle time-distance relationships to compute  $t_a$ . If significant grades are present,  $t_a$  should be adjusted per Table 400.02.

The distance that a crossing vehicle travels to clear a major roadway is:

$$S = D + W + L$$

where:  $D$  = distance from near edge-of-travelled way to the front of a stopped vehicle (typically 3.0 m).  
 $W$  = travelled way width along path of crossing vehicle (m)  
 $L$  = overall length of vehicle (m)

Calculated sight distance shall be checked against stopping sight distance. The larger of the distances shall be used.



*Figure 400.05*  
**Sight Distance at Intersections Acceleration from Stop.**  
*From AASHTO, 1004, “A Policy on Geometric Design of Highways and Streets”*