

AASHTO specifically states that “a driveway should not be located within the functional boundary of an intersection”. The functional area on the approach to an intersection consists of three basic elements: perception-reaction decision distance, maneuver distance, and queue-storage distance. These elements are identified in Figure 4-3. The distance traveled during the perception-reaction time will depend on such factors as vehicle speed. Where there is a left or right turn lane, the maneuver distance includes the length needed for both braking and lane changing. In the absence of turn lanes, it involves braking to a comfortable stop. The storage length should be sufficient to accommodate the longest queue expected most of the time.

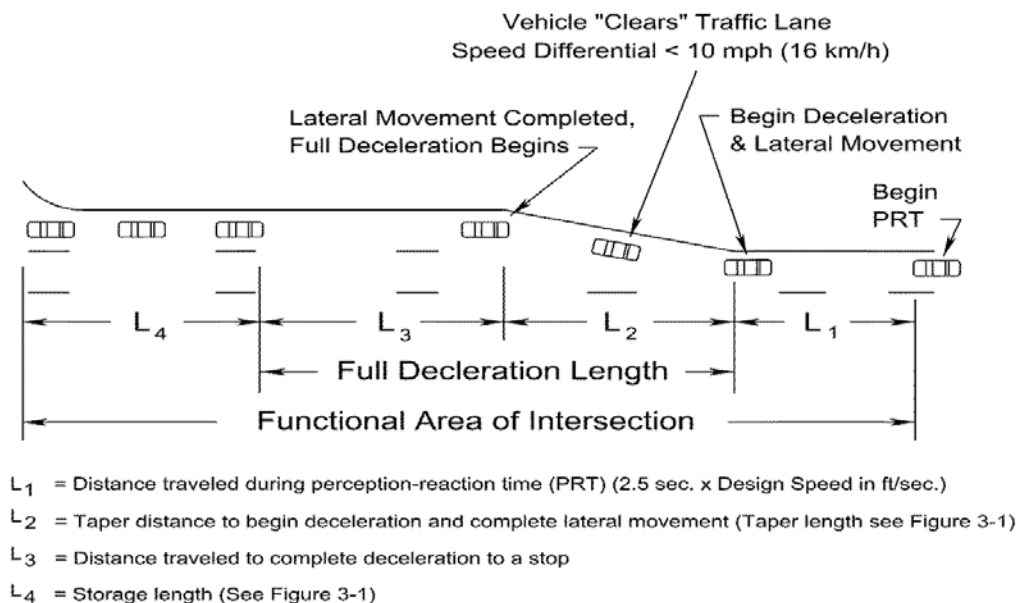


FIGURE 4-3 ELEMENTS OF THE FUNCTIONAL AREA OF INTERSECTION

SOURCE: 2011 AASHTO Green Book, Chapter 9, Section 9.7.2¹

Restricting Left Turn Movements at Commercial Entrances

The most effective way to prevent left turn movements at entrances is through the use of restrictive medians. Where space for a raised median is available within the road (AASHTO recommends a minimum median width of 4 feet), it can be installed along the front of the entrance for a sufficient distance to prevent left turns (see Medians in section 3 for additional information).

Another alternative when there is not enough space for a raised median is the use of flexible traffic posts with reflective striping to serve as a visual and physical barrier to left turn ingress and egress at an entrance.

Finally, although less effective than restrictive medians, channelization islands can be installed within the commercial entrance throat to prevent left turn ingress and/or egress movements to create a right-in and/or right-out entrance on an undivided highway. Figure 4-4 presents illustrations of commercial entrance channelization island options.

* Rev. 1/14