



## 5I-8 Pedestrian Safety

Access management is usually promoted as a way to improve the safety of and driving conditions for motorists. Clearly, access management techniques can lead to roads and streets that are dramatically safer, much easier, and more pleasant for driving. However, research also indicates that several key access management techniques are also just as valuable for pedestrians as for motorists. These include:

- Reducing the overall number of driveways (particularly commercial driveways) per block or mile.
- Providing for greater distance separation between the driveways.

Every sidewalk or path that crosses a driveway represents at least four potential pedestrian/vehicle conflict points. Reducing the number of driveways per block reduces the number of conflict points proportionally. Greater separation of driveways helps pedestrian safety in that the operational areas of driveways do not overlap as much. Drivers (and pedestrians) have a difficult time mentally processing more than one conflict point at a time; greater separation helps them concentrate on one problem at a time.

Safety research also shows clearly that raised medians at street intersections and/or at mid-block locations are very important design features for pedestrians because they serve as refuges from traffic. As the table below shows, roads with raised medians are roughly twice as safe for pedestrians. The pedestrian crash rate is the number of crashes involving pedestrians divided by the millions of vehicle miles of motor vehicle travel on the road. The intersection rate includes crashes that occur at intersection; the mid-block figure includes all other crashes.

<b>Roadway Type</b>	<b>Median</b>	<b>Mid-Block Pedestrian Crash Rate</b>	<b>Intersection Pedestrian Crash Rate</b>
Undivided 4 lane	None	6.69	2.32
5 lane (TWLTL)	Painted	6.66	2.49
Divided 4 lane	Raised	3.86	0.97

Source: Oregon State University, 1998.

On the other hand, two-way left-turn lanes (TWLTL) are effective in reducing auto crashes on arterial roadways carrying moderate levels of traffic but offer no refuge for crossing pedestrians. The pedestrian safety characteristics of 5-lane TWLTL roads are just about the same as an undivided four-lane road. In order to be effective as a refuge for crossing pedestrians, a median must be at least 6 feet wide. A wide, flush (no raised curb) grass median will be a somewhat less effective pedestrian refuge than a raised median.

Other corridor design and access management features that can also help pedestrians are to:

- Set back sidewalks several feet from the street by providing a grass, paved, or brick parking. This allows pedestrians to see and be seen better and separates them from the traffic flow.
- Provide a clear zone free of visual obstructions such as signs, large trees or bushes, or parked vehicles that prevent pedestrians from being seen by drivers and that prevent pedestrians from seeing vehicles.
- Provide for a nearly flat cross grade on the sidewalk. This is also necessary to meet Americans with Disabilities Act (ADA) design requirements.
- Provide signalized mid-block crossings for pedestrians where feasible, especially if the distance between signalized intersections is long (1/2 mile).