

Driveway-related Crashes

Much of access management involves managing traffic movements into and out of commercial driveways. The reason for this is that driveway traffic generates a large number of crashes on major roads and streets—arterials and collectors.

What types of accidents occur at commercial driveways?

Several research studies have been conducted on the nature of traffic accidents that occur at driveways. In particular, three multiyear studies of hundreds of crashes at more than 1,300 driveways in three different communities in Illinois found the following range of crash involvement at commercial driveways:

Turning Movement	Percent of Total Crashes at Commercial Driveways
Left-turning vehicles:	
Entering business driveways	43% to 78%
Exiting business driveways	14% to 31%
Right-turning vehicles:	
Entering business driveways	6% to 15%
Exiting business driveways	2% to 15%

Source: Paul Box and Associates, 1998.

Why is this important?

Although the results from Illinois varied widely by community, two main conclusions can be drawn:

1. Left-turning vehicles (exiting and entering) are involved in the majority of driveway-related crashes.
2. The movement responsible for more than 40 percent of all the crashes at a commercial driveway involves entering vehicles turning left.

The Douglas Avenue/Euclid Avenue corridor, which is a main east-west arterial route through the Des Moines, Iowa, metropolitan area provides a good illustration (see photographs). The level of access management varies significantly throughout this corridor. Where access is well managed, such as in the city of Urbandale or in Des Moines just east and west of Interstate 235, there are very few left-turn-related crashes. In areas where no left turns are permitted, there are, naturally, no left-turn-related crashes. On the other hand, along sections where there is little access management (no medians or turning lanes and a high number of driveways per mile) there is a high incidence of left-turn crashes.



Section of unmanaged access along the Douglas Avenue/Euclid Avenue corridor in Des Moines, Iowa. Result: a high incidence of left-turn crashes.



Section of managed access along the Douglas Avenue/Euclid Avenue corridor in Des Moines, Iowa. Result: very few left-turn-related crashes.

Developing and designing strategies and projects to accommodate and/or manage left-turning vehicles needs to be a main concern in managing access on arterial street corridors.

What do statistics about driveway accidents mean for access management projects?

These conclusions show why access management projects that effectively provide for, manage, or even eliminate left turns are so effective. Successful access management projects usually include such measures as driveway consolidation, two-way-left-turn lanes, dedicated right-turn lanes, and raised medians. Projects or designs that combine two or more means of managing left turns are usually very effective in increasing traffic safety. On the other hand, roads where left turns are not effectively managed may have relatively high crash rates.