



**Traffic Engineering is often asked if a lower speed limit won't lower travel speeds and the number of accidents.**

#### **SAFETY AND SPEED**

Speed has an impact on the severity of a collision, but in many cases it is not the primary cause of the collision. In fact, research into this subject has not found a direct relationship between speed and the number of crashes on a particular type of roadway. The interstate highway system generally has a low crash rate but serves vehicles at very high speeds.

Crashes or collisions along a roadway are often caused by a combination of vehicles traveling at different speeds. The probability of a vehicle being involved in a collision increases if it is traveling faster or slower than the average traffic flow. Vehicles that collide at higher speeds experience an increase in fatalities.



#### **SETTING A SPEED LIMIT**

Drivers generally select their vehicle speed based on the roadway environment and characteristics and by the level of comfort and safety the driver perceives. This is why the 85th percentile speed of the vehicles already using a roadway (i.e., the speed at or below which 85 percent of vehicles travel) is one of the most important factors in the determination of a posted speed limit. Research indicates that roadways with posted speed limits at or near their 85th percentile vehicle speed will experience fewer collisions than roadways with speed limits above or below this level.

A speed limit that is posted too low (i.e., lower than what the majority of vehicles already travel) usually does not increase the safety of the roadway. As mentioned above, a driver generally selects a speed based on the roadway environment/characteristics and personal comfort, safety, and risk levels. For this reason, it is unlikely that a driver will reduce the speed of his or her vehicle unless there is an obvious need, and a posted speed limit that is unreasonably low will typically be ignored. This combination of speeds typically produces an increase in collision rates (see Figure 1), and the situation also produces an overall lack of respect for the concept of speed limit regulations (even when correctly posted).

Factors other than the 85th percentile speed of a roadway that are taken into account when determining a posted speed limit include surrounding land use, pedestrian/parking activity, road surface conditions, roadway geometry, and the collision history of a roadway. In some cases, the consideration of these factors can lead to a posted speed limit other than the 85th percentile speed of the roadway. For example, a posted speed limit may be reduced when entering a school zone that may not be apparent to the driver.