

85th Percentile Speed

On most local streets, the speed limit is posted as 25 miles per hour (mph). In all residential and business districts where a limit is not posted, 25 mph this is the implied limit. Speed limits on higher-capacity streets including major collector and arterial streets are set based on engineering and traffic surveys that include a review of speed data, design parameters, and operational issues.

Traffic engineers rely on the 85th percentile rule to help establish speed limits on non-local streets. Typically, the speed limit is set to the speed that separates the bottom 85% of vehicle speeds from the top 15%. For example, if speeds of 100 vehicles are measured and 85 vehicles are traveling at 37 mph or less, the speed limit for the subject street could be set at 35 mph. Statistically, the 85th percentile speed is slightly greater than the speed that is one [standard deviation](#) above the mean of a [normal distribution](#).

The theory behind this approach is that most drivers will travel at a speed that is reasonable and prudent for a given roadway segment. Most U.S. jurisdictions report using the 85th percentile speed as the basis for their limits. However, California law permits jurisdictions to implement and enforce lower speed limits where slower speeds are desired to better accommodate bicycle and pedestrian movement, especially in residential and business districts. Specific criteria regarding building density fronting on a street and a lack of bicycle facilities or sidewalks/paths can be used to justify reductions in speed limits initially set based on the 85th percentile speed.

What is the 85th Percentile Speed?

The 85th percentile speed is the speed at or below which 85 percent of the motorists drive on a given road unaffected by slower traffic or poor weather. This speed indicates the speed that most motorists on the road consider safe and reasonable under ideal conditions. It is a good guideline for the appropriate speed limit for that road.