Research In Progress

Acquire Data on the Relationship between Travel Speeds and Crashes I

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The objectives of this project were to capture on-road travel speed data from motor vehicles, to provide national estimates of these speeds on differing roadway classes, and to provide data on the relationship of travel speeds to crashes on differing roadway classes. This was the first of a planned series of surveys of national travel speeds. The objective over the longer term is to examine the relationship of trends in speeds with trends in crashes.

A field survey was conducted during spring and summer 2007 to measure travel speeds and prepare nationally-representative speed estimates for all types of motor vehicles on freeways, arterial highways, and collector roads across the United States. Over 10 million vehicle speeds were measured at more than 700 sites included in the geographic cluster sample of 20 Primary Sampling Units (PSUs). Each PSU was a city, county, or group of two or three counties representing combinations of regions of the United States, level of urbanization, and type of topography (flat, hilly, mountainous). Speeds were acquired on randomly drawn road segments on limited access highways, major and minor arterial roads, and collector roads. Speed measurement sites were selected in road segments with low, medium or high degrees of horizontal and vertical curvature or gradient. Speed data was measured using small, self-contained, on-road sensors that data collectors temporarily place on the road surface for a single 24-hour period at each road site.

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