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**RESEARCH
SNAPSHOT**

ESTIMATING PEDESTRIAN ACCIDENT EXPOSURE:

PROTOCOL REPORT

Walking promotes health and is environmentally benign. Yet pedestrians suffer a disproportionate share of death and injuries in traffic incidents in California. Although walking trips make up only eight percent of all trips in the state, pedestrians are involved in 17 percent of all traffic accidents. In 2004, 694 pedestrians were killed and 13,892 injured in the state.

In the field of pedestrian safety, risk analysis involves assessing factors that contribute to the danger that a pedestrian will be struck by a vehicle. These factors may include physical characteristics of the street, such as lack of sidewalks; behavioral issues, such as pedestrian or driver alcohol use; as well as other environmental variables. In order to fully understand how these factors contribute to risk, it is necessary to collect information on pedestrian exposure.

There are many ways to measure pedestrian exposure, but pedestrian volumes are the most frequently used. This protocol, which is intended to be useful to traffic engineers and planners, consultants, and researchers interested in measuring pedestrian exposure, aims to improve pedestrian data collection in the state of California by providing information and guidance for each decision point in the data collection process. Each chapter will assist the user in measuring pedestrian exposure for a variety of purposes and contexts. Purposes may include comparisons of the safety effects of pedestrian infrastructure; comparisons of pedestrian risk among different population groups; or comparisons of risk by mode of travel (e.g. walking versus bicycling). The geographic contexts may range from the entire state of California to a specific pedestrian crossing. Because each possible purpose and context will have a unique set of considerations and constraints, this protocol focuses on matching data collection methods with different study needs.

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