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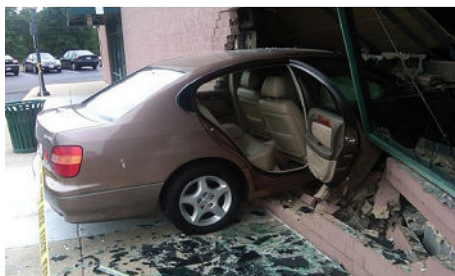
Low Speed Vehicle Barriers

It happens too often: a driver suddenly loses control of a car, sending it into a storefront or other pedestrian area. Property damage and serious injuries, sometimes fatal, can result from these accidents.

In an effort to minimize the damage caused by such crashes, ASTM International Committee F12 on Security Systems and Equipment is developing a proposed new standard, ASTM WK13074, Test Method for Low Speed Barriers for Errant Vehicles. The standard is under the jurisdiction of Subcommittee F12.10 on Systems Products and Services.

"Separating pedestrians from traffic and protecting storefronts from the impacts of cars that jump curbs as a result of operator error are compelling issues of public safety and building and public space design," says Robert Reiter, a member of Subcommittee F12.10, and a storefront safety consultant. The proposed new standard will begin to address this issue by providing testing parameters for lower speed vehicle barriers.

ASTM WK13074 will cover the bollards, barriers, gates, planters and other products used in the many instances not covered by high security K-rated bollards, which are designed to keep vehicles from intentionally coming through a security perimeter. "ASTM WK13074 will provide architects and engineers with tools to evaluate products and materials that will be put in place to provide simple security, pedestrian protection or denial of access to vehicles less than 4,500 pounds at traffic speeds of 30 miles per hour and under," says Dean Alberson, Ph.D., P.E., chairman of F12.10 and research engineer at the Texas Transportation Institute at



Texas A&M University. Adds Reiter, "Research, statistics and media reports confirm that such applications cover the majority of cases where vehicle/pedestrian injuries and property damage are occurring."

When approved, ASTM WK13074 will enable designers to properly size pedestrian protection devices based on lower energy threats such as passenger vehicles traveling at lower speeds. Manufacturers will have certified laboratories use the approved standard to obtain pedestrian ratings for their products. Currently, barriers such as these are not typically tested and their performance is largely unknown.

Reiter says that the prevailing standards for testing bollards and barriers are the K rating from the U.S. Department of State, and ASTM F2656, Test Method for Vehicle Crash Testing of Perimeter Barriers. Neither of these standards applies to most cases where bollards are used. "As opposed to K-rated bollards, most bollards are used for either simple access denial or pedestrian safety," Reiter says. "Most people don't live, work, shop or eat dinner at a high security facility."

The subcommittee is especially in-

terested in working with stakeholders who want a testing protocol that will provide definitive guidance for testing products to be incorporated into public safety programs, site security specifications and property protection features. Alberson adds that the subcommittee is also interested in participation from governmental entities as well as manufacturers and end users who are interested in contributing to the development of ASTM WK13074.

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