

## **RUBBERTOUGH® SIGNS ALLEVIATE LONG-TERM CROSSWALK SAFETY PROBLEM ON THE CAMPUS OF MICHIGAN STATE UNIVERSITY**

(East Lansing, MI – July 2002) - Michigan State University's East Lansing campus is home to 40,000 students who, during the course of a typical day, traverse a 20 -mile internal roadway system that includes many mid-block crosswalks.

Despite University Ordinances 32.02 and 32.13 which state in part: "Pedestrians' right-of-way at crosswalks ... where traffic control signals are not in place or in operation ... a vehicle shall yield the right-of-way to a pedestrian crossing the roadway within any marked crosswalk ...," university officials were becoming increasingly concerned that drivers were not adhering to the ordinance. A number of accidents and near misses occurred at several of the crosswalks.

In response to this situation, several intersections were reconstructed and signalized, and many lower cost signing and marking projects were implemented. Included was a re-engineering of the mid-block pedestrian crossings. Some were closed and new ones were created based on traffic counts, resulting in 40 mid-block crossings with "zebra" or "ladder" markings.

The crosswalk upgrades helped to some degree, according to Dr. Robert Maki, PE, Adjunct Specialist in the Civil and Environmental Engineering Department at MSU.

"We monitored the traffic behavior very closely after all the changes were made and decided that we still did not have satisfactory compliance with the ordinance," Dr. Maki reported. "But we finally saw some very tangible results when we tested yellow triangular "Yield to Pedestrian" signs that were positioned on the line immediately in advance of each crosswalk."



Fifteen "Yield to Pedestrian" signs mounted to RubberTough® posts from the Safe-Hit division of Quixote Transportation Safety, Chicago, Ill. were rotated around campus during the 2001 – 2002 school year. The signs were put out each day from 7 a.m. to 6 p.m. when traffic was at its heaviest.





The signs were mounted on a RubberTough® 32 lb. (14.5 kg) portable rubber base, which also featured a patented Swing Hinge® feature that allowed the post to bend but not break when impacted or run over by a vehicle. Traditional posts often broke when hit and had to be replaced. The RubberTough post flexed back into its original position due to the Swing Hinge, and its rubber base (manufactured from recycled tires) was heavy enough to ensure minimal movement upon impact at design speeds up to 45 mph (70 km/h).

Students working for the Office of the Traffic Engineer videotaped crosswalks for analysis. Incursions and conflicts were counted and recorded.

“We rotated the 15 signs between different locations on campus and the results were very impressive,” Dr. Maki says. “During the test, we observed at three Shaw Lane. Dr. Maki reports that Shaw lane is one of the highest traffic volume road on campus, with up to

20,000 vehicles per day traveling on it. For example, 12 vehicles stopped to yield to crossing pedestrians without the signs in place. With the signs in place, 221 vehicles stopped during a similar length of time.

“Also tremendously revealing was that there was little “halo effect” geographically or temporarily when the signs were removed,” adds. “It was actually a very astounding measurement. When the signs were in place, there was a noticeable orderly flow of pedestrian and vehicle traffic. When the signs were removed, the crosswalks reverted back to status quo.”

As a result of the test, Michigan State plans to order 30 more RubberTough units and a year round sign treatment plan is being planned with signs anchored permanently at designated crosswalks rather than on the mobile rubber bases. ◆

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