

IN-PAVEMENT FLASHING LIGHT CROSSWALKS: BACTS LEADS THE WAY FOR THE STATE OF MAINE

During the 2004 construction season, BACTS installed three in-pavement flashing-light crosswalk systems at selected sites in Brewer, Old Town, and Orono. These systems feature rows of high-intensity lights embedded nearly flush with the pavement along the painted crosswalk lines. The lights flash amber for the normal duration of a crossing signal phase whenever a pedestrian pushes the actuator button to cross. Because the lights are intermittent rather than constantly flashing, they have been shown to increase motorist attentiveness and yielding to pedestrians in crosswalks by up to 45%. They are particularly useful during the low-light conditions near dawn and dusk, when pedestrians can be hardest to see. Although they have been used with great success in many other parts of the United States and Europe, this is the first known use of in-pavement flashing crosswalk lights in Maine.

BACTS Director Rob Kenerson first learned of this innovative technology at a conference workshop in 1999. A fatal pedestrian crash had recently occurred on College Avenue in Orono, and Rob thought that a flashing light crosswalk system near Alford Arena might help to increase pedestrian visibility and motorist responsiveness to pedestrians in the crosswalk. He received permission from MaineDOT to use \$50,000 of BACTS planning funds to install two crosswalk systems as a safety demonstration project. However, the cost of the equipment has decreased since the money was first allocated, making it possible to install three systems this year while remaining within the proposed \$50,000 budget.

Project manager Sandi Duchesne developed a project criteria matrix and invited all BACTS communities to submit candidate locations for the new technology. These were ranked in order of appropriateness. Several locations scored very high in the criteria ranking, but for various reasons community leaders decided that they did not want to participate at this time. In the end, the following three locations were selected for the demonstration project installations:

- *College Avenue at north entrance of steam plant parking lot, Orono
- *South Main Street south of Pendleton Street, Brewer
- *Center Street at Elm Street, Old Town

A different vendor and equipment type was selected for each installation, in order to make comparisons in price, durability, longevity, ease of installation, and overall quality of service from the vendor. This information will be provided to BACTS municipalities to help guide their purchase of additional crosswalk systems in the future, if the demonstration proves to be successful. Professor Per Gårder from the University of Maine is conducting before-and-after studies to determine the effects of the new crosslight signals on driver behavior and pedestrian visibility. The project has generated considerable interest at MaineDOT in Augusta, as this is a relatively low-cost safety improvement with the potential to benefit many Maine cities and towns. The flashing light crosswalk helps pedestrians get across the street safely without creating long delays for through motor traffic, and is particularly appropriate for mid-block locations and intersections where a full-stop traffic signal with pedestrian phase is not warranted.

A big question for the new crosswalk systems is how well they will perform during the winter months, when subjected to snowplow blades and icing conditions. The need for snowplow-proof

equipment eliminated many potential vendors from consideration. All of the selected vendors have guaranteed their installed systems for winter operation, but that will be one of the major points for comparison and performance evaluation over the next few months. At least one public works employee was heard to remark (jokingly, we hope) that his snowplow crews would undoubtedly take on the new lights as a personal challenge!

If you have any comments or questions about the new crosswalk systems, please call Sandi at 942-6389x201, or email: sduchesne@emdc.org .