




PO Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Halifax Regional Council
November 14, 2006

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:


Ken Reashor, P.Eng., Traffic Authority

DATE: October 25, 2006

SUBJECT: Pedestrian Signal Indicators

INFORMATION REPORT

ORIGIN

Item 10.6.1. raised at the June 20, 2006 meeting of Halifax Regional Council.

BACKGROUND

At the June 20, 2006 meeting of Halifax Regional Council, it was moved by Councillor Mosher, seconded by Councillor Younger, that staff provide a report on "intelligent pedestrian" signal indicators. Further, staff contact other municipalities with respect to their experience with the equipment.

DISCUSSION

The motion is in reference to Pedestrian Countdown Signals (PCS) at signalized intersections.

PCS are relatively new traffic control devices in North America which are presently used in some cities in conjunction with conventional pedestrian signals to provide information to pedestrians regarding the amount of time remaining to cross the street before opposing traffic gets a green light. The countdown timer starts at the beginning of the pedestrian clearance interval (the flashing Don't Walk symbol) and continues counting down the number of seconds remaining. At the end of the pedestrian clearance interval, the countdown device displays a zero and the solid Don't Walk indication appears. The objective of the countdown signals is to provide information to enable pedestrians to determine how long the pedestrian clearance phase will last and alleviate fears that they will be left stranded in the crosswalk when the opposing traffic light changes to green.

Because PCS are relatively new technology, the Transportation Association of Canada (TAC) determined a need to provide recommendations on national guidelines for their consistent use in Canada with the intention of including them as an optional device in the Manual of Uniform Traffic Control Devices for Canada (MUTCDC). A volunteer group of TAC's Traffic Operations and Management Standing Committee (TOMSC) conducted a North America-wide survey and literature review as part of this project which provided an overview of existing usage and attempted to identify conditions in which the PCS signals may be beneficial or detrimental. The 100+ page report was recently approved via a letter ballot of the TAC Chief Engineers' Council, however, a number of concerns and conditional support were expressed by some council members. The committee that developed the guidelines have therefore been asked to review this feedback and provide responses before any update to the MUTCDC is issued.

The TAC report's summary of findings from nineteen previous studies in jurisdictions across North America (based on reports of empirical field performance surveys, pedestrian interviews, before/after studies, and laboratory simulations) determined that generally:

- a majority of pedestrians did not understand the meaning of the conventional flashing Don't Walk signal;
- a majority of pedestrians preferred the PCS display because they "felt safer", even though they incorrectly believed that they were legally permitted to enter a crosswalk on the flashing Don't Walk signal;
- there was insufficient data to conclude that PCS reduced pedestrian-vehicle collisions, although some studies suggested that at least PCS do not appear to result in any increases in conflicts or crashes;
- there were no significant changes in vehicle speed, acceleration, signal violation or other driver compliance after PCS were installed.

The cost of retrofitting existing pedestrian signals with PCS is estimated to be approximately \$7000 for a typical four-legged intersection with eight countdown displays required. Three-legged intersections would only require six countdown signal heads and would be corresponding less.

The benefits of a PCS should consist of a reduction in pedestrian-related collisions at locations where they have been installed. So far, there is no confirmed evidence in the studies indicating this is the case. Determining the extent of such benefits has been difficult in the short term, since pedestrian-related collisions are relatively rare occurrences at individual locations and establishing a reliable database would require an extensive effort over several years. Since there are apparently both advantages and disadvantages to the implementation of the PCS in its current form, an appropriate strategy for HRM may be to wait until further research in jurisdictions which have used them determines whether or not they actually reduce pedestrian-vehicle collisions.

If the only benefit of PCS is that pedestrians “feel safer” because they think they know how much time they have left to cross, it is an expensive option. Especially since most studies recommend educating the public on the meaning of the countdown display and the fact that it remains illegal to enter the crosswalk once the flashing Don’t Walk signal is displayed.

It is the intention of Traffic Services to improve public understanding of how existing pedestrian signals operate by installing educational signs above all push buttons on traffic signal poles. This will be in conjunction with ongoing traffic safety awareness promotion focusing on crosswalk safety through newspaper articles, Transit bus panels, and television public service ads.

BUDGET IMPLICATIONS

There are no budget implications.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality’s Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES

There are no recommended alternatives.

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/agenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Vaughn Perrin, Traffic Analyst, 490-4822