

COMMITTEE OF THE WHOLE – MAY 28, 2007

TRAFFIC SIGNAL HEAD REPLACEMENT AT THREE INTERSECTIONS WITH THE HIGHEST COLLISION RATES

Recommendation

The Commissioner of Engineering and Public Works in consultation with the Director of Reserves and Investments recommends:

1. That, subject to approval of the 2007 Capital Budget, the installation of LED signal heads at the subject three intersections be undertaken under project EN-1679-07, Traffic Signal Head Replacement; and
2. That the subject intersections be part of the Phase 1 replacement contract in 2007.

Economic Impact

The cost of approximately \$23,500 to install the Light Emitting Diode (LED) signal and pedestrian heads is above the proposed funding line in the 2007 Capital Budget.

These funds are part of a larger long term Capital program to replace all existing pedestrian and traffic signal heads with LED type fixtures. The cost to maintain the LED heads would have an impact on future Operating Budgets. As previously reported to the Budget Committee, the use of LED signal heads will substantially reduce the hydro and maintenance costs at LED signal locations. These three intersections will be part of the Phase 1 replacement program budgeted at \$124,000, which has been included in the draft 2007 Capital Budget.

Communications Plan

Traffic staff have discussed the use of LED heads with other Municipalities. Many municipalities reported that they do have a replacement program underway. There has been no public notice with respect to this program other than staff reports on various meeting agendas.

Purpose

To report on the estimate to replace old fibre-optic signal and pedestrian heads with new Light Emitting Diodes (LED) heads at the three intersections that had the highest collision rates in 2005, as a means of possibly addressing safety issues.

Background - Analysis and Options

At its meeting on June 26, 2006, Item 33, Report 37, Council directed:

- “1. That staff review the top three locations with the highest collision rates and provide a report addressing the safety issues.”**

In the annual report reviewing performance of signalized and unsignalized intersections, Engineering Services staff determined that the intersections at Ansley Grove Road and Embassy Drive/Blue Willow Drive, Clark Avenue and New Westminster Drive, and Ansley Grove Road and Windflower Gate/Pinedale Gate had the highest collision rates for the 2005 year.

Collision rates are determined by factors including the number of reportable collisions, and total volumes that travel through the intersection. Collision rates at intersections are measured in “collisions per million vehicles entering” (collisions/mve), or the average number of collisions for every one million vehicles that pass through the intersection.

At all three intersections, the traffic signal heads and pedestrian signal heads are fibre-optic technology. Complaints have been received that the signal heads are not bright enough to see at different times of the day, under varying weather conditions, or depending on the viewing angle. The newest technology available for signal heads is LED (Light Emitting Diodes). LED heads provide a brighter intensity, are known to last longer than fibre-optic bulbs, use less electricity and are environmentally friendly.

Replacement of the traffic signal heads and pedestrian signal heads at all three intersections would improve overall visibility of the various signal indications and hence aid in reducing the probability of collision, thereby improving safety.

Staff estimate the cost to replace all traffic signal heads (26) and pedestrian signal heads (24) to be \$23,500. The cost to maintain the new signal heads would have a minor impact on future Operating Budgets. If this work is approved within the 2007 Capital Budget, the work would commence in the Spring 2007.

Staff have also sent a copy of the June 26, 2006, Council extract to York Regional Police Services to provide increased enforcement of speeding and non-compliance of the existing traffic signals at the three subject intersections.

Relationship to Vaughan Vision 2007

This traffic study is consistent with Vaughan Vision 2007, which seeks to improve community safety through design, prevention, enforcement and education (1.1) through the review of the level of enforcement, compliance and monitoring of regulations relating to public safety (1.1.6).

This report is consistent with the priorities previously set by Council.

Regional Implications

The City program is consistent with a similar undertaking at the Region of York.

Conclusion

Staff recommend this report be received for information purposes.

Attachments

1. Location Map

Report prepared by

Mark Ranstoller, Senior Traffic Technologist, ext. 3141
Mike Dokman, Supervisor, Traffic Engineering, ext. 3118

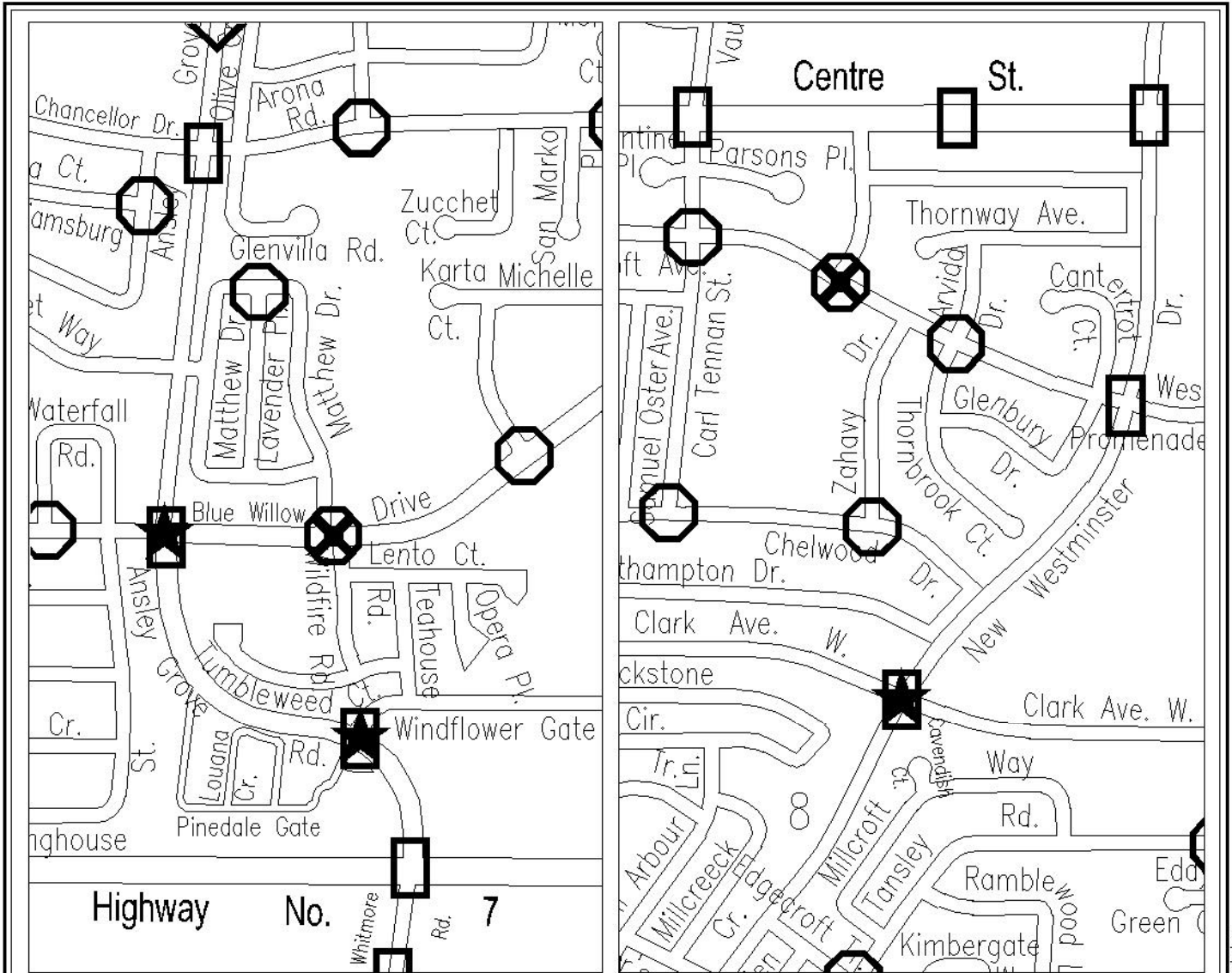
Respectfully submitted,

Bill Robinson, P. Eng.
Commissioner of Engineering and Public Works

Gary P. Carroll, P. Eng.
Director of Engineering Services






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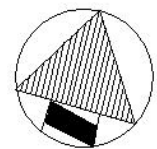
ATTACHMENT No. 1



TRAFFIC SIGNAL HEAD REPLACEMENT

LEGEND

-  INTERSECTION UNDER REVIEW
-  EXISTING TRAFFIC SIGNALS
-  EXISTING ALL-WAY STOP CONTROL
-  EXISTING SUPERVISED SCHOOL CROSSING
-  PEDESTRIAN SIGNAL OR HALF SIGNAL



NOT TO SCALE