

March 5, 2015

**DEVELOPMENT & INFRASTRUCTURE SERVICES REPORT
ENGINEERING SERVICES 2015-20**

TO: Committee of the Whole

SUBJECT: Water Street Crossing - Update
File No.: T.08 T.30 Water

ORIGIN: Director, Engineering Services

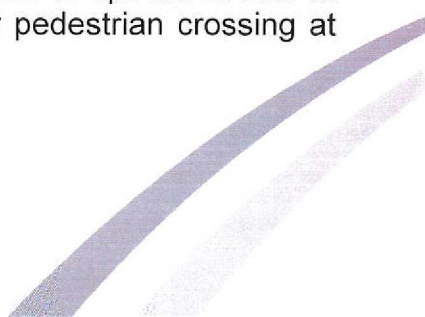
RECOMMENDATIONS

THAT Development and Infrastructure Services Report – ES 2015-20 dated March 5, 2015 regarding “Water Street Crossing - Update” be received and the following recommendations be adopted:

- 1. THAT the implementation of a pedestrian traffic signal not be pursued at this time;**
- 2. AND THAT a pedestrian refuge island be considered as the medium term solution to enhancing pedestrian safety;**
- 3. AND THAT a consultant be retained to design a pedestrian refuge island, conduct a safety review and provide costing, and that the report be brought back to Council for final approval;**
- 4. AND THAT a copy of this report and Council extract be forwarded to representatives of Metrolinx and York Region.**

BACKGROUND

The Tom Taylor Trail currently extends from the north limit to the south limit of the Town and crosses several busy streets. Where the trail intersects Davis Drive and Mulock Drive, the trail was designed to go underneath the road so that there is now a grade separation that makes crossing very safe. Water Street and Timothy Street are the two remaining at-grade level road crossings for the trail. With the popularity of the trail, and with the increase in special events at both the Riverwalk Commons and Fairy Lake Park, the need for a safer pedestrian crossing at Water Street is timely.



In 2007, Community Services Report PWES 2007-47 contained four potential measures to increase safety – a refuge island, tunneling under the road, pedestrian bridging over the road, and alternative paths. At the time, and as it continues today, paid-duty police officers have been utilized to provide safe passage, but only during large special events. Paid-duty police officers needed for Town-sponsored special events are paid for by the Town, and those required for community events exceeding crowds of 500 people are paid for by the organization. There are typically no paid-duty police officers to help patrons cross the street at other times.

When the CUSP (Riverwalk Commons) project was initiated, the installation of a pedestrian signal similar to the one on Main Street at Botsford Street was proposed for Water Street. The road section was re-designed to accommodate a pedestrian crossing signal and an additional right-turn lane was added for a bus stop to provide access to Fairy Lake Park. However, at the time of design and construction of the CUSP project, permission was not yet granted by Metrolinx (the rail operating authority) to include the pedestrian crossing light.

In 2012, a railway safety audit was conducted for the pedestrian crossing signal on Water Street. It recommended turn restrictions, sight line clearance, additional signage and signal pre-emption (i.e., coordination of road traffic signal lights and pedestrian crossing lights with the timing of train crossing beacons and safety gates) between the rail signal, the proposed pedestrian crossing signal, and the Main/Water and Water/Prospect intersections. In 2013, additional traffic work was undertaken to determine the cost of such pre-emption. The Town did not receive an approval from Metrolinx to proceed and the cost of implementing pre-emption infrastructure was not fully known. Based on the Town's experience with the rail crossing opposite London Road (south of Lock 3), the cost could be as much as triple the existing budget of \$200,000.

York Region is committed to helping provide the pre-emption for the Water/Prospect intersection which is under their jurisdiction, but obtaining accurate costing information from Metrolinx has been as difficult for them as it has been for the Town.

“ROAD BLOCKS” FOR A PEDESTRIAN CROSSING SIGNAL

While most traffic or pedestrian crossing signals are reasonably straightforward (as seen with the Gorham/Carlson or Main/London signals), this particular area is unique, having the following issues to mitigate:

1. Geometrics. The curve and downhill grade of Water Street (east of the tracks) offers unique challenges with traffic sight lines and stopping distances.
2. Stop Locations. With the proposed position of the PEDESTRIAN CROSSING SIGNAL on the west side of Doug Duncan Drive, the westbound stop bars for vehicles is on the east side of the intersection, but can only accommodate one vehicle between it and the tracks. The remaining queue must start east of the tracks, some 20 to 25 metres from the pedestrian crossing.
3. Turn Restrictions. The rail safety audit cited concerns with left-turning movements into both Fairy Lake Park and into the York Region Police parking lot.
4. Pedestrians. There is a marked increase in pedestrian traffic crossing Water Street. However, the patterns show surges of pedestrians during events and even during the evenings and weekends when there are no events.

5. Metrolinx/GO Transit. Metrolinx wishes to establish its Regional Express Rail (RER) which means increased train traffic through the day and possibly on weekends, twinning the tracks, a possible grade separation and future electrification. Exact plans are unknown at this time.
6. Signal Confusion. With the close proximity of the pedestrian and rail signals, and even including the Main/Water traffic signals, there could be a potential for motorists to look past the closest signal to the next signal, thereby overlooking it or getting confused as to which signal applies.
7. Pre-emption. The simple costs associated with pre-emption are expected to be well beyond the existing budget of \$200,000. There is some concern that, with the Metrolinx expansion plans, the funds spent on pre-emption would become a throw-away cost in light of the future rail design changes.

COMMENTS

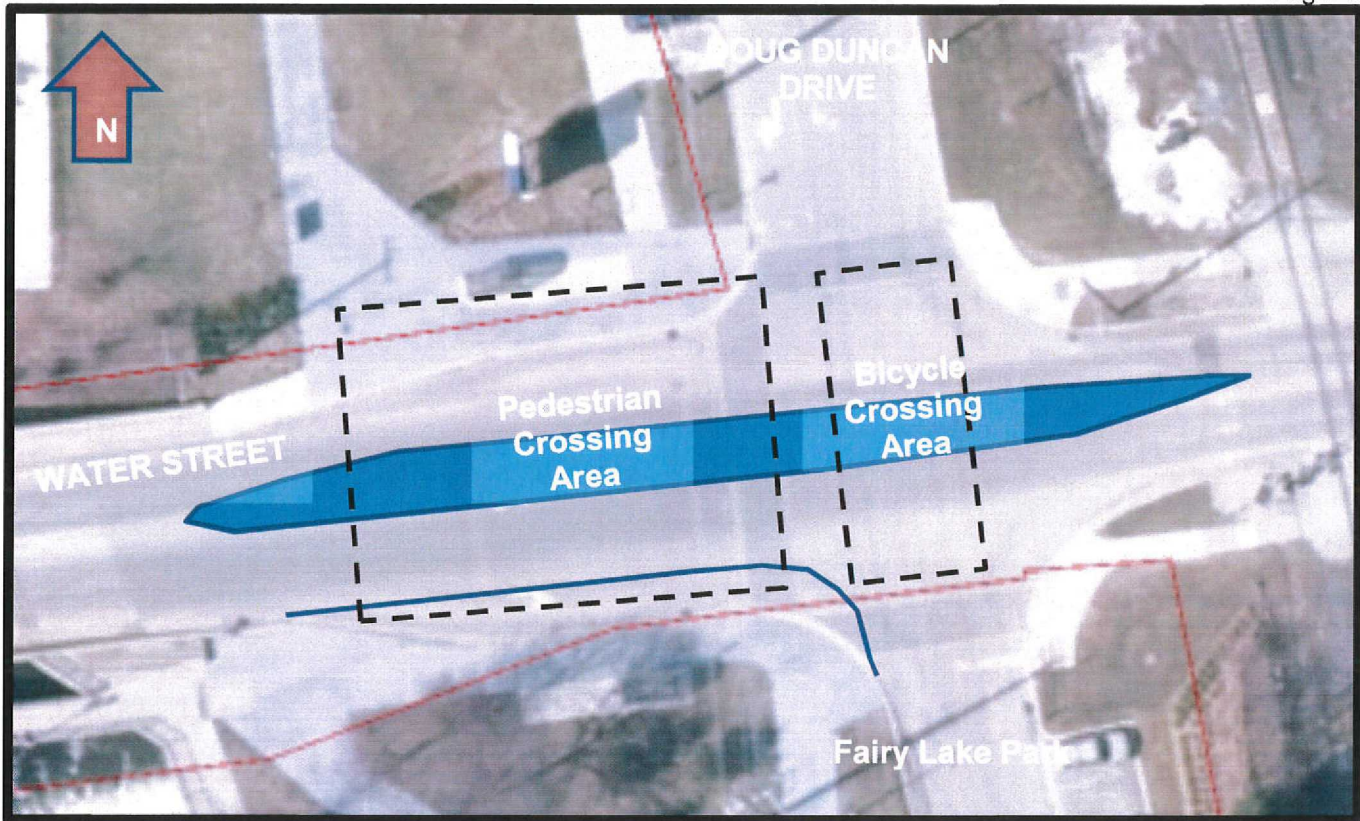
The number of design issues that are unique to this location, coupled with the costs and unknown future impacts of Metrolinx's expansion, causes staff to recommend proceeding with caution. It is recommended that the pedestrian crossing signal option not be pursued at this time. Instead, the following is being recommended:

Short Term.

For the short term (2015 and 2016), staff recommends that paid duty officers continue to be hired to help cross the road during those times when there are special events where large volumes of pedestrians would be crossing Water Street. During other time periods, the residents would have to yield to traffic or walk to the traffic signals at Main Street to cross the road, as they do now.

Medium Term.

As noted in the 2007 Community Services Report, a pedestrian refuge island would be a low cost, easy to implement solution that would enhance pedestrian safety while having a low impact on any future Metrolinx expansion plans. The preliminary concept plan shown below is an example of a large pedestrian refuge island that allows for multiple crossing opportunities, and physically restricts the left turning movements into and out of both Doug Duncan Drive and the Fairy Lake driveway.



The above design would include two separate crossing areas, room for public art and the removal of the eastbound right turn lane. This would be subject to a more detailed design, a road safety audit, and budget approval.

Therefore, it is recommended that staff explore the various designs possible and bring a formal design with costing information to Council prior to going out for public consultation. The process would be similar to a typical road reconstruction project.

Longer Term.

The longer term plans depend greatly on the Metrolinx expansion plans. Once Metrolinx has finalized its plans for the RER, it may be the right time to re-open discussions with them regarding a pre-emption approval. It may be possible and easier to eventually incorporate a pedestrian crossing signal into the pedestrian refuge island in the future. As well, Metrolinx may elect to grade-separate the rail/road intersection.

PUBLIC CONSULTATION

No public consultation was undertaken in the preparation of this report. If the recommendations are approved, then the process would incorporate a public consultation plan.

BUSINESS PLAN AND STRATEGIC PLAN LINKAGES

- Well-planned and connected...strategically planning for the future to improve information access and enhance travel to, from and within Newmarket.

HUMAN RESOURCE CONSIDERATIONS

No impact on current staffing levels.

IMPACT ON BUDGET

Operating Budget (Current and Future)

The cost of two paid duty officers plus a police vehicle for the duration of a 4-hour event is approximately \$925.00. Most Town events are approximately 4-hours in duration, but some may extend longer than this. The Town held five events in 2014, with one of the events (Canada Day festival) involving a complete closure of Water Street for the day. It is estimated that there are about 3 to 4 community events annually that involve crowds greater than 500 people in attendance. Therefore, the cost for the Town to maintain the current level of paid duty officer commitment ranges from \$4,500.00 to \$5,000.00 per year.

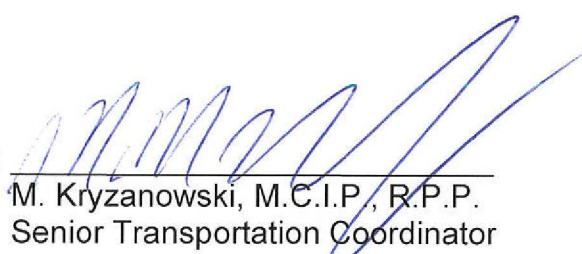
Capital Budget

To date, there is approximately \$124,000.00 remaining in the Water Street crossing budget (BU 3311015) which would be sufficient for the engineering and design of a pedestrian refuge island in 2015. Once the design is complete, a detailed construction cost can be determined and any remaining amount can be carried over to 2016 and applied to the construction, with additional funding to be requested through the regular budget process if needed.

CONTACT

For more information on this report, please contact Mark Kryzanowski at 905-895-5193 extension 2508; mkryzanowski@newmarket.ca.


Prepared by:




M. Kryzanowski, M.C.I.P., R.P.P.
Senior Transportation Coordinator



R. Bingham, C.E.T., Manager
Engineering & Technical Services



R. Prudhomme, M.Sc., P.Eng.
Director, Engineering Services



P. Noehammer, P.Eng., Commissioner
Development & Infrastructure Services