Hayden Poon

October 11th, 2023

York Regional Council
York Region Administrative Centre
17250 Yonge Street
Newmarket, ON L3Y 6Z1

Item G.2.1: Bus Rapid Transit Prioritization

Dear York Regional Council,

I am writing in regard to item G.2.1: Bus Rapid Transit Prioritization on the October 11th, 2023 Committee of the Whole - Week 1 meeting.

I support staff recommendations to prioritize the Phase 1 Projects:

- Enterprise Boulevard – Birchmount Road to Kennedy Road (via YMCA Boulevard),
- Kennedy Road / Highway 7 YMCA Blvd/Kennedy Road to Highway 7 and over to McCowan Road), and
- Jane Street North – Highway 7 to Major Mackenzie Drive

I am glad to see York Region moving on with the preliminary engineering work for the Phase 1 BRT Projects. I would like to offer the following comments for staff consideration during the preliminary engineering work, based on my experience riding on VIVA:

Most speed advantages from the dedicated bus lanes are lost by poor signal progression along the VIVA rapidways

Despite the dedicated bus lanes implemented along the VIVA rapidways, the potential speed advantages they offer are often negated by the suboptimal signal progression in the area. I find myself frustrated as buses get stuck at traffic lights, diminishing the efficiency and convenience of the dedicated lanes. Improving signal coordination and prioritizing bus flow could unlock the full potential of these lanes, ensuring that they truly enhance the rapid transit experience for passengers.

Example 1: Highway 7 / Town Centre Boulevard & Highway 7 / Courtyard Lane

> At the intersection of Highway 7 / Town Centre Boulevard, VIVA Purple eastbound buses can go straight with the through traffic on Highway 7, or go straight when the dedicated bus signal (a vertical white bar) appears. This intersection has a signal cycle of 2 minutes 35 seconds.
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> At the intersection of Highway 7 / Courtyard Lane, VIVA Purple eastbound buses have to wait for a dedicated bus signal (a vertical white bar) to merge from the median bus lanes to the curb-side HOV lanes. However, the desiccated bus signal will only turn on once in a signal cycle of 2 minutes and 20 seconds.

The signal cycles between the two intersections are not the same. Therefore, poor signal progression is guaranteed to happen for the majority of the time. With the poor signal progression from Highway 7 / Town Centre Blvd, the bus is extremely likely to just miss the timing of the dedicated bus signal at Highway 7 / Courtyard Lane and be forced to wait an additional 2 minutes and 20 seconds.

Example 2: Highway 7 / Highway 404

The section of the VIVA rapidway underneath Highway 404 consists of a single reversible bus lane due to space constraints. VIVA Purple/Purple A buses travelling in both directions have to wait for a dedicated green light before proceeding underneath Highway 404. From my observations, the signal runs on a fixed schedule and periodically cycles between eastbound and westbound bus traffic. The signal will turn green on one side even though there is no bus traffic. This creates a situation when there is a bus trying to go in one direction (e.g. eastbound), with no bus coming from the opposite direction (e.g. westbound) yet the bus cannot proceed as the signal from the opposite direction (e.g. westbound) is still green. The bus has to wait a long time for the signal to turn red from the opposite direction plus the necessary clearance time before it can get a green signal to proceed.

Consider the implementation of smart traffic signals for the entire length of the Phase 1 Projects

In 2018, the City of Toronto launched a pilot project to install 22 smart traffic signals along portions of Yonge Street and Sheppard Avenue in the City of Toronto. On Sheppard Avenue, they found a 2.6% decrease in travel time with the smart traffic signal system compared to the City's legacy traffic control system. In 2020, the City of Toronto Council decided to expand the smart traffic signal system to over 500 locations in the next 5 years[1].

Implementing intelligent traffic signal systems could be the key to addressing the signal progression issues that currently plague the VIVA rapidway. By harnessing cutting-edge technology and real-time data, these smart signals can adapt to traffic conditions, prioritize buses, and optimize traffic flow. Such an innovative approach has the potential to not only maximize the benefits of dedicated bus lanes but also improve overall traffic efficiency and reduce congestion, making the Phase 1 Projects a model of sustainable and efficient transportation.

Therefore, I strongly recommend that the York Regional Council considers the integration of smart traffic signals on all future BRT projects as a pivotal step towards achieving our shared goals of reduced congestion, improved transit efficiency, and a brighter, more sustainable future for our region.

Sincerely,
Hayden Poon
City of Markham Resident

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[1] “MoveTO 2021-25: Congestion Management Interim Action Plan and Non-Competitive Contract for Smart Signals”, City of Toronto, https://www.toronto.ca/legdocs/mmis/2020/ie/bgrd/backgroundfile-157804.pdf