

Transportation Impacts: York University Busway

Date:	April 16, 2008
To:	North York Community Council
From:	Director, Transportation Services Division, North York District
Wards:	Ward 8 – York West, Wards 9 & 10 – York Centre
Reference Number:	p:\2008\ClusterB\TRA\NorthYork\ny08054 (7577)

SUMMARY

To obtain approval for the installation of the traffic control signals, roadway modifications (road alterations by-law), and traffic by-laws associated with the implementation of the York University Busway, from Downsview Station to the York University Campus.

The installation of above-noted traffic control measures will ensure that the York University Busway from Downsview Station to York University will operate as intended, which is to have a dedicated transit right-of-way on William R. Allen Road, Dufferin Street, Finch Hydro Corridor and York University Campus. The construction of the busway will reduce the significant delays currently experienced by buses servicing York University from Downsview Station.

RECOMMENDATIONS

Transportation Services Division, North York District recommends that City Council:

1. direct the City’s Legal Division to introduce in Council the appropriate “Road Alterations By-law” to permit the construction of the York University busway from Downsview Station to York University via William R. Allen Road, Finch Hydro Corridor, and York University Campus lands;

2. rescind the existing reserved lane designation for High Occupancy Vehicles on the northbound and southbound curb lanes of William R. Allen Road /Dufferin Street, between Sheppard Avenue West and Finch Avenue West;
3. reduce the existing speed limit of 70 km/h on William R. Allen Road, from Transit Road to Steeprock Drive/Overbrook Place, to 60 km/h;
4. approve the installation of traffic control signals at the intersection of William R. Allen Road and Downsview Station Bus Access located 245 metres south of Sheppard Avenue West, and in conjunction with the installation of these traffic control signals;
 - (a) prohibit pedestrian crossings on William R. Allen Road, from a point 30.5 metres north of the north curb line of the Downsview Station Bus Access to a point 30.5 metres south of the south of the curb line of Downsview Station Bus Access;
 - (b) prohibit eastbound entry at all times, from William R. Allen Road to the Downsview Station Bus Access, “Public Transit Vehicles excepted”;
 - (c) prohibit northbound entry at all times, from William R. Allen Road to the southbound “Public Transit Vehicles Only” lane at the Downsview Station Bus Access;
 - (d) prohibit northbound right turns at all times, from William R. Allen Road to the Downsview Station Bus Access;
 - (e) prohibit northbound and southbound “U-Turns” at all times at the intersection of William R. Allen Road and Downsview Station Bus Access;
 - (f) designate the northbound curb lane at William R. Allen Road and Sheppard Avenue West as a right turn only lane, buses excepted, from Sheppard Avenue West to a point 95 metres south;
 - (g) designate the easterly southbound lane on William R. Allen Road for “Public Transit Vehicles Only”, from Sheppard Avenue West to Downsview Station Bus Access (245 metres south of Sheppard Avenue West); and
 - (h) designate the northbound curb lane on William R. Allen Road for “Public Transit Vehicles Only”, from Downsview Station Bus Access to a point 95 metres south of Sheppard Avenue West
5. approve the installation of traffic control signals at the intersection of William R. Allen Road and De Boers Drive, located 155 metres north of Sheppard Avenue West, and in conjunction with the installation of these traffic control signals;

- (a) prohibit pedestrian crossings on William R. Allen Road, from a point 30.5 metres north of the north curb line of De Boers Drive to a point 30.5 metres south of the south curb line of De Boers Drive;
 - (b) designate the northbound curb lane on William R. Allen Road/Dufferin Street for “Public Transit Vehicles Only”, from Sheppard Avenue West to a point 60 metres south of Finch Avenue West;
 - (c) rescind the existing northbound curb lane, right turn only designation at Dufferin Street and Finch Avenue West;
 - (d) designate the northbound curb lane at Dufferin Street and Finch Avenue West as a right turn only lane, buses excepted, from Finch Avenue West to a point 60 metres south;
 - (e) rescind the existing northbound “U-Turn” prohibition on William R. Allen Road, 60 metres north of Sheppard Avenue West;
 - (f) designate the easterly northbound through lane on Dufferin Street for “Public Transit Vehicles Only”, from a point 60 metres south of Finch Avenue West to Finch Avenue West; and
 - (g) designate the southbound curb lane on Dufferin Street/William R. Allen Road for “Public Transit Vehicles Only”, from Finch Avenue West to Rimrock Road
6. approve the installation of traffic control signals at the intersection of Dufferin Street and the York University Busway (Finch Hydro Corridor) located 340 metres north of Finch Avenue West, and in conjunction with the installation of these traffic control signals;
- (a) prohibit pedestrian crossings on Dufferin Street, from a point 30.5 metres south of the south curb line of the York University Busway (Finch Hydro Corridor) to the south curb line of the York University Busway (Finch Hydro Corridor);
 - (b) prohibit northbound and southbound left and right turns at all times, from Dufferin Street to the York University Busway (Finch Hydro Corridor);
 - (c) prohibit northbound, westbound and eastbound entry, “Public Transit Vehicles” excepted, at all times, from Dufferin Street to the York University Busway (Finch Hydro Corridor);
 - (d) designate the northbound curb lane on Dufferin Street for “Public Transit Vehicles Only”, from Finch Avenue West to the York University Busway (Finch Hydro Corridor), located 340 metres north of Finch Avenue West;

- (e) designate the southbound curb lane on Dufferin Street for “Public Transit Vehicles Only”, from the York University Busway (Finch Hydro Corridor) located 340 metres north of Finch Avenue West to a point 70 metres north of Finch Avenue West;
 - (f) designate the southbound curb lane at Dufferin Street and Finch Avenue West as a right turn only lane, buses excepted, from Finch Avenue West to a point 70 metres north;
 - (g) prohibit pedestrians and cyclists at all times, on the York University Busway (Finch Hydro Corridor), from Dufferin Street to Keele Street;
 - (h) designate the eastbound and westbound traffic lanes on the York University Busway (Finch Hydro Corridor) for “Public Transit Vehicles Only”, from Dufferin Street to Keele Street; and
 - (i) implement a speed limit of 60 km/h on the York University Busway (Finch Hydro Corridor), from Dufferin Street to Keele Street
7. approve the installation of traffic control signals at the intersection of Alness Street and the York University Busway (Finch Hydro Corridor), located 340 metres north of Finch Avenue West, and in conjunction with the installation of these traffic control signals;
- (a) prohibit pedestrian crossings on Alness Street, from a point 30.5 metres south of the south curb line of the York University Busway (Finch Hydro Corridor) to a point 30.5 metres north of the north curb line of the York University Busway (Finch Hydro Corridor);
 - (b) prohibit northbound and southbound left and right turns at all times, from Alness Street to the York University Busway (Finch Hydro Corridor);
 - (c) prohibit westbound and eastbound entry, “Public Transit Vehicles” excepted, at all times, from Alness Street to the York University Busway (Finch Hydro Corridor);
 - (d) prohibit northbound right-turns-on-red at all times, from Keele Street to the Shell Canada Access (3975 Keele Street);
 - (e) prohibit eastbound through movements at all times, at Murray Ross Parkway and Keele Street;
 - (f) designate the northerly eastbound traffic lane on Murray Ross Parkway at Keele Street for left-turning vehicles only, from Keele Street to a point 45 metres west;

- (g) designate the southerly eastbound traffic lane on Murray Ross Parkway at Keele Street for right-turning vehicles only, from Keele Street to a point 45 metres west;
 - (h) designate the centre eastbound traffic lane on Murray Ross Parkway at Keele Street for “Public Transit Vehicles Only”, from Keele Street to a point 45 metres west;
 - (i) designate the westerly southbound traffic lane on Keele Street at Murray Ross Parkway for right-turning vehicles only, from Murray Ross Parkway to a point 45 metres north; and
 - (j) prohibit eastbound entry, “Public Transit Vehicles” excepted, at all times, from Keele Street and Murray Ross Parkway to the York University Busway (Finch Hydro Corridor)
8. approve the installation of traffic control signals at the intersection of Columbia Gate/Jack Evelyn Wiggins Drive/York University Busway and Murray Ross Parkway, and in conjunction with the installation of these traffic control signals;
- (a) prohibit westbound right-turns-on-red at all times, from Murray Ross Parkway to Jack Evelyn Wiggins Drive;
 - (b) prohibit northbound entry, “Public Transit Vehicles” excepted, at all times, from Murray Ross Parkway to the York University Busway (Finch Hydro Corridor);
 - (c) designate the westbound curb lane on Murray Ross Parkway for “Public Transit Vehicles Only”, from the York University Busway to a point 60 metres east of the York University Busway;
 - (d) prohibit pedestrians and cyclists at all times, on the York University Busway (York University Lands), from Murray Ross Parkway to York Boulevard; and
 - (e) designate the northbound and southbound traffic lanes on the York University Busway (York University Lands) for “Public Transit Vehicles Only”, from Murray Ross Parkway to York Boulevard; and
 - (f) implement a speed limit of 50 km/h on the York University Busway (York University lands), from Murray Ross Parkway to York Boulevard
9. approve the installation of traffic control signals at the intersection of James Gilles Road/York University Busway and The Pond Road, and in conjunction with the installation of these traffic control signals;
- (a) prohibit westbound right-turns-on-red at all times, from The Pond Road to James Gilles Road;

- (b) prohibit eastbound right turns at all times, from The Pond Road to the York University Busway;
 - (c) prohibit westbound left turns at all times, from The Pond Road to the York University Busway; and
 - (d) prohibit northbound and southbound entry at all times, from The Pond Road to the York University Busway, “Public Transit Vehicles” excepted
10. approve the installation of traffic control signals at the intersection of York Boulevard and the York University Busway, and in conjunction with the installation of these traffic control signals;
- (a) prohibit westbound left turns at all times, from York Boulevard to the York University Busway;
 - (b) prohibit eastbound right turns, “Public Transit Vehicles” excepted, at all times, from York Boulevard to the York University Busway;
 - (c) prohibit southbound through movements at all times, at the intersection of the Parking Lot Access/York Boulevard and the York University Busway; and
 - (d) prohibit southbound entry at all times, from York Boulevard to the York University Busway, “Public Transit Vehicles” excepted.

FINANCIAL IMPACT

All costs associated with the implementation of the York University Busway including the roadway improvements, installation of all new traffic control signals and the modifications to existing traffic control signals, will be borne by the Toronto Transit Commission (TTC).

The only exception to the funding provided by the TTC is the funding for the traffic control signals at the intersection of William R. Allen Road and De Boers Drive. These costs will be borne by the developers; 1609830 Ontario Inc. (Liberty Development) and Idomo, which are constructing the condominiums on the west side of William R. Allen Road and the new public roadway from William R. Allen Road to Kodiak Crescent. The costs associated with the installation of the traffic control signals at this intersection are estimated at \$150,000.

ISSUE BACKGROUND

In March 2003 the Toronto Transit Commission (TTC), in conjunction with the City of Toronto, commenced the undertaking of an Environmental Assessment on the feasibility of constructing a surface transit connection from the Spadina Subway (Downsview Station) to York University. The intent of the construction of a dedicated right-of-way was to improve the connectivity of the transit system in this area, given that the present transit service operates on the existing road network either in mixed traffic or in High Occupancy Vehicle Lanes.

It should be noted that the implementation of the busway, from Downsview Station to York University is intended as an interim improvement, until such time that the subway extension in this corridor is complete.

Ministry of Environment approval was obtained in the Spring of 2006 and the construction of the busway is scheduled to commence later this year.

COMMENTS

The implementation of the York University Busway is in keeping with the City of Toronto's Official Plan and will provide high-speed, reliable bus service from Downsview Station to York University via bus-only lanes on William R. Allen Road, Dufferin Street, the Finch Hydro Corridor, Murray Ross Parkway and on the York University Campus.

Additionally, the Toronto Transit Commission has indicated that the York University Busway will allow for more immediate improvements to the bus services between Downsview Subway Station and York University /Steeles Avenue West and, thereby, help build up transit ridership in this corridor prior to the extension of the Spadina Subway.

The York University busway will be implemented by modifying the operation of the existing roadway network as well as constructing two new road segments that will create lanes for the exclusive use of public transit vehicles. The existing public roadways that will be impacted are William R. Allen Road, Dufferin Street and Murray Ross Parkway. These roadways will be modified to facilitate the implementation of the York University Busway through some local widenings and the conversion of peak-period High Occupancy Vehicle lanes to exclusive lanes for public transit vehicles at all times. In addition to the modifications to existing roadways, two new road segments will be constructed; namely, an east-west connection within the Finch Hydro Corridor and a north-south connection on York University lands.

It should be noted that at all signalized intersections where the buses are in a dedicated bus-only facility, buses will receive an exclusive transit phase in order to minimize confusion for motorists and pedestrians in the area. All new traffic control signals will be equipped with Audible Pedestrian Signals (APS) and pedestrian countdown signals. It should also be noted that the City's Pedestrian and Cycling Infrastructure Unit is exploring the feasibility of implementing a pedestrian and cycling path through the Finch Hydro Corridor, adjacent to the busway.

The regulatory speed limit on the busway within the Finch Hydro Corridor will be 60 km/h, while the speed limit on the York University lands component of the busway will be 50 km/h.

Existing Conditions

William R. Allen Road is a six-lane major arterial roadway. The section of roadway between Transit Road and Sheppard Avenue West is divided by a concrete barrier wall, whereas the section between Sheppard Avenue West and Steepprock Drive is undivided. It should also be noted that the northbound and southbound curb lanes between Sheppard Avenue West and Finch Avenue West are designated as High Occupancy Vehicle (HOV) lanes during peak periods. The daily two-way traffic flow on William R. Allen Road is approximately 62,000 vehicles, and the posted speed limit is 70 km/h, from Transit Road to Steepprock Drive.

At Steepprock Drive, William R. Allen Road terminates and continues as Dufferin Street. Dufferin Street, from Steepprock Drive to Steeles Avenue West is also designated as a major-arterial roadway. The section of roadway south of Finch Avenue West consists of seven lanes of traffic with the centre lane being designated as two-way centre left turn lane, while the section north of Finch Avenue West consists of five lanes of traffic with a painted centre median with left turn lanes introduced as required. The daily two-way traffic flow on this section of roadway is also approximately 62,000 vehicles, and the posted speed limit is 60 km/h.

At present, the Finch Hydro Corridor between Dufferin Street and Keele Street is an open field consisting of the hydro transmission towers. It should be noted that Alness Street and the Canadian National Railway lines currently cross the Finch Hydro Corridor. Pedestrians and motorists are prohibited from accessing this area.

Murray Ross Parkway is designated as a collector roadway and consists of two inbound lanes and three outbound lanes and intersects with Keele Street on the west side. The intersection of Keele Street and Murray Ross Parkway is currently controlled by traffic control signals. It should be noted that the east leg of the intersection is a private driveway servicing the Shell Canada Oil Depot.

The York University Lands are currently vacant lands and are located along the south-easterly end of the campus. Immediately to the west of the proposed north-south connection of the York University Busway, is a new residential subdivision (Downsview Village-Tribute Homes) that is partially complete.

The following sections will describe the roadway modifications that will be required to facilitate the implementation of the York University Busway.

William R. Allen Road, Transit Road to Sheppard Avenue West

In this section of roadway, the TTC will be constructing a new signalized access from Downsview Station intersecting with William R. Allen Road, approximately 245 metres south of Sheppard Avenue West, and north of the existing TTC Commuter Parking Lot Access. A dedicated transit right-of-way in the southbound direction will also be constructed, which will be separated from mixed traffic by a raised barrier on either side. In the northbound direction, a transit lane will be added between the new signalized access and Sheppard Avenue West.

It should also be noted that currently there are three northbound lanes on this section of roadway for mixed use traffic. In order to ensure that the TTC has unrestricted egress from the new signalized access, the northbound curb lane will be closed from Transit Road to the new signalized access, resulting in only two northbound mixed use traffic lanes. The northbound curb lane will be closed by means of constructing a new boulevard in some areas and pavement marking delineation in other areas. The southbound traffic lanes will not be reduced.

The proposed changes to the roadway are detailed in Attachments 2 & 3.

William R. Allen Road, Sheppard Avenue West to Steepprock Drive

A new signalized intersection will be constructed approximately 155 metres north of Sheppard Avenue West. The new intersecting roadway will be known as De Boers Drive, and will provide access to the existing Idomo Store and proposed condominiums.

The existing southbound and northbound HOV lane designation will be removed and a northbound “Bus Only” lane will be implemented, from Sheppard Avenue West to Steepprock Drive. In the southbound direction, the “Bus Only” lane will operate between Sheppard Avenue West and Rimrock Road, and at this point the buses will shift into the southbound middle lane in order to access the “Bus Only” lane south of Sheppard Avenue West.

The proposed changes to the roadway are detailed in Attachments 4 & 5.

Dufferin Street, Steepprock Drive to the Finch Hydro Corridor

The existing HOV lane designation in both directions will be removed and replaced with “Public Transit Vehicles Only” lanes.

The intersection of Dufferin Street and Finch Avenue West will be modified by widening the northbound approach to introduce an exclusive northbound right turn lane.

In addition to the above-noted widening, the section of Dufferin Street, between Finch Avenue West and the Finch Hydro Corridor will be widened to a seven-lane cross-section with the southbound and northbound curb lanes being dedicated as “Public Transit Vehicles Only” lanes.

Access and egress to the Finch Hydro Corridor will be via a new signalized intersection which will be located approximately 340 metres north of Finch Avenue West. This intersection configuration will be constructed in such a manner that the northbound buses will not be required to conduct a northbound left turn movement, but rather a westbound through movement.

The proposed changes to the roadway are detailed in Attachments 6, 7 & 8.

Finch Hydro Corridor, Dufferin Street to Keele Street

This section of roadway will have a roadway width of approximately 7.5 metres and will be solely utilized by public transit vehicles, from Dufferin Street to Keele Street. A new signalized intersection will be constructed at Alness Street to provide the TTC with priority across Alness Street and a fifth leg will be constructed at the existing signalized intersection of Keele Street and Murray Ross Parkway.

The proposed changes to the roadway are detailed in Attachments 9 & 10.

Murray Ross Parkway, Keele Street to Columbia Gate/Jack Evelyn Wiggins Drive

The road improvements that are required along this section of roadway are as follows:

- signalization of the intersection of Murray Ross Parkway at Columbia Gate/Jack Evelyn Wiggins Drive/York University Busway;
- construction of the north-south intersecting component of the busway that will run parallel to Jack Evelyn Wiggins Drive;
- widening of Murray Ross Parkway to the north, to facilitate the installation of an east-west dedicated transit lane; and
- construction of an eastbound far side bus-bay on the south side of Murray Ross Parkway

The proposed changes to the roadway are detailed in Attachment 11.

North/South Busway (York University Campus), Murray Ross Parkway to York Boulevard

This section of the busway will have the same roadway width as the portion within the Finch Hydro Corridor, approximately 7.5 metres, and will be solely utilized by public transit vehicles, from Murray Ross Parkway to York Boulevard. Two new signalized intersections will be constructed to provide the TTC with priority across The Pond Road and York Boulevard.

The proposed changes to the roadway are detailed in Attachments 12 & 13.

Councillor Augimeri, Feldman and Perruzza have been advised of the contents of this report.

CONTACT

Martin D. Maguire, P.Eng.
Manager, Traffic Operations
Transportation Services Division, North York District
Tel: 416-395-7463
Fax: 416-395-7544
Email: mmaguir@toronto.ca

SIGNATURE

Myles Currie, B.A.
Director

ATTACHMENTS

- Attachment 1: Map – Overview of York University Busway Route (ny08054_map01)
- Attachment 2: Map – William R. Allen Rd, Transit Rd to Sheppard Av W; Northbound Lane Closures (ny08054_map02)
- Attachment 3: Map – William R. Allen Rd, Transit Rd to Sheppard Av W; New Traffic Control Signal & Bus Only Lanes (ny08054_map03)
- Attachment 4: Map – William R. Allen Rd, Sheppard Av W to Steepprock Dr; New Traffic Control Signals at De Boers Dr Lanes (ny08054_map04)
- Attachment 5: Map – William R. Allen Rd, Sheppard Av W to Steepprock Dr; Bus Only Lanes (ny08054_map05)
- Attachment 6: Map – Dufferin St, Steepprock Dr to Finch Hydro Corridor; Intersection Modifications at Finch Av W (ny08054_map06)
- Attachment 7: Map – Dufferin St, Steepprock Dr to Finch Hydro Corridor; Roadway Widening (ny08054_map07)
- Attachment 8: Map – Dufferin St, Steepprock Dr to Finch Hydro Corridor; New Traffic Control Signal (ny08054_map08)
- Attachment 9: Map – Finch Hydro Corridor, Dufferin St to Keele St; New Traffic Control Signal at Alness St (ny08054_map09)
- Attachment 10: Map – Finch Hydro Corridor, Dufferin St to Keele St; Traffic Control Signal/Intersection Modifications at Keele St (ny08054_map10)
- Attachment 11: Map – Murray Ross Parkway at Columbia Gate/Jack Evelyn Wiggins Drive/Busway; New Traffic Control Signals & Intersection Modifications (ny08054_map11)
- Attachment 12: Map – York University Campus, Murray Ross Parkway to York Blvd; New Traffic Control Signals & Intersection Modifications at The Pond Rd (ny08054_map12)
- Attachment 13: Map – York University Campus, Murray Ross Parkway to York Blvd; New Traffic Control Signals & Intersection Modifications at York Blvd (ny08054_map13)