



REPORT FOR ACTION

REimagining Yonge (Sheppard to Finch) Municipal Class Environmental Assessment Study

Date: January 5, 2018

To: Public Works and Infrastructure Committee

From: General Manager, Transportation Services

Wards: Ward 23 - Willowdale, Ward 24 - Willowdale

SUMMARY

Yonge Street from south of Sheppard Avenue to north of Finch Avenue is in the heart of North York Centre - one of four dynamic mixed-use Centres in Toronto focused on growth of commercial office and residential uses existing side by side. Centres with a healthy mix of uses help take pressure off public transit infrastructure and roads as they encourage people to live, work and play within a centralized geography.

Yonge Street is envisioned as a Complete Street that provides many transportation options and safe passage to the many destinations in this vibrant, growing neighbourhood. Improving Centres outside the core is critical to balanced growth and prosperity across the City and it is also key to the affordability of City services since new employment uses have a positive impact on City finances.

As a transportation asset, Yonge Street is at the end of its lifecycle - the roadway was last reconstructed in 1975 with roadway resurfacing occurring in 1994. Roadway reconstruction is needed on an approximately 50 year basis, with full reconstruction for Yonge Street required within five to ten years.

Today, the area has numerous challenges including boulevards that have deteriorated to such a degree that full reconstruction is necessary, inconsistent sidewalk widths and treatment of the public realm, a lack of pedestrian crossings and medians, and a lack of dedicated cycling facilities as well as concerns over traffic movement and pedestrian safety. Yonge Street has been identified as a priority corridor for safety improvements under the Vision Zero Road Safety Plan.

Transportation Services has carried out a Municipal Class Environmental Assessment (EA), referred to as "REimagining Yonge" that considers how the street can be improved at the time of reconstruction.

The overarching goals of the "REimagining Yonge" project are to provide consistency and vibrancy to the public realm in keeping with the economic importance of North York Centre, address state-of-good repair and safety issues along the corridor, provide cycling infrastructure connectivity, improve pedestrian amenities, and facilitate efficient traffic movement through better utilization of the surrounding road network.

- In Fall 2016, the "Transform Yonge" alternative (generally shown in Attachment 1) was identified as the preliminary preferred alternative. The preliminary preferred design would include a full reconstruction of Yonge Street within the City's existing right-of-way to include cycle tracks, a centre landscaped median, wider boulevards and enhanced pedestrian crossings to improve safety. To achieve the enhancements included in the design, the number of travel lanes on Yonge Street between Sheppard Avenue and Hendon Avenue/Bishop Avenue (north of Finch Avenue) would be reduced from six (6) to four (4) lanes (Option 4B). South of Sheppard Avenue, the number of travel lanes would be maintained (Option 4A).

In May 2017, the Public Works and Infrastructure Committee directed that further review be undertaken to assess the installation of cycling facilities on Doris Avenue and/or Beecroft Road, rather than on Yonge Street. In addition, the Public Works and Infrastructure Committee directed that wider consultation be undertaken on the project, particularly with local businesses.

This report includes the results of the original phase of study, focussed on Yonge Street and referred to as 'Stage 1' and the results of the new phase of work, referred to as 'Stage 2,' which included:

- a comprehensive review of design options to implement cycling facilities on Doris Avenue and/or Beecroft Road and Willowdale Avenue from Bishop Avenue to Steeles Avenue;
- additional project development to determine an option for a secondary preferred alternative that does not reduce traffic capacity on Yonge Street;
- traffic modelling work to assess the new design option(s);
- 30% design of a secondary preferred alternative; and
- additional stakeholder consultation, including wider business consultation.

The results of the Stage 2 analysis identified, "Enhance Yonge and Transform Beecroft" as the preliminary preferred alternative. This alternative involves reconstruction of both Yonge Street and Beecroft Road. It would provide dedicated cycle tracks on Beecroft Road, maintain traffic capacity in North York Centre and address the state of good repair issues on Yonge Street. The "Enhance Yonge and Transform Beecroft" alternative was then compared against the "Transform Yonge" alternative from Stage 1 to determine which option best meets the project objectives.

While the "Enhance Yonge and Transform Beecroft" alternative is a viable option for addressing the study objectives, "Transform Yonge", identified during the Stage 1 phase

of study, is being recommended as the overall preliminary preferred alternative as it better supports the objectives of the study based on the evaluation criteria and measures developed and can be implemented at a lower cost with less disruption to the North York Centre.

Should City Council endorse a recommended design for REimagining Yonge contained within this report, the detailed design stage of this project could be advanced in 2018 by using funding available under the federally-funded Public Transit Infrastructure Fund (PTIF) program.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. City Council endorse the recommended design for the reconstruction of Yonge Street from Florence Avenue / Avondale Avenue to the Finch Hydro Corridor as generally shown in Attachment 1.
2. City Council authorize the General Manager, Transportation Services to issue a Notice of Study Completion and file the REimagining Yonge EA Study in the public record for a minimum 30 days, in accordance with the requirements of the Municipal Class EA.
3. City Council direct Executive Committee at its meeting of February 6th, 2018, to amend the Transportation Services' Preliminary 2018-2027 Capital Budget and Plan to reflect the recommendations in this report, increasing the 2018 total project costs and cash flow by \$4.0 million gross, funded from \$2.0 million PTIF and \$2.0 million Capital Financing Reserve.

FINANCIAL IMPACT

The estimated capital cost of constructing the preferred alternative "Transform Yonge" is \$51.1 million, including detailed design, municipal servicing and utility relocations.

Funding for detailed design of this project in the amount of \$4.0 million was identified as part of the 2017-2026 Budget Committee Recommended Capital Budget and Plan for Transportation Services, funded by \$2.0 million debt and \$2.0 million from the Public Transportation Infrastructure Fund (PTIF). The project was not approved.

Accordingly, should Council authorize either the preferred or secondary alternatives for the REimagining Yonge EA Study, there will be a need to increase Transportation Services' Preliminary 2018-2027 Capital Budget and Plan by \$4.0 million gross, funded from \$2.0 million PTIF and \$2.0 million Capital Financing Reserve.

Funding for capital construction is not currently identified within the 2018-2027 Preliminary Capital Budget and Plan for Transportation Services. Opportunities to secure funding through the development review process, particularly as it relates to streetscape costs, are being pursued. Funding for the REimagining Yonge project would be considered against other unfunded City priorities as part of a future capital budget process.

Reconstruction of the Yonge Street corridor is required within five to ten years. Irrespective of the design carried forward, streetscape and safety improvements that should be implemented through a reconstruction of Yonge Street include replacement and extension of the centre landscaped median and improvements to the public realm, including new trees/planters, street furniture and street lighting, a balancing of sidewalk widths on both sides of the street where possible, etc.

Reconstructing this section of Yonge Street on simply a like-for-like basis without relocating curbs and without any improvements to the streetscape quality or safety, would cost approximately \$24-29 million. This includes approximately \$5 million to reconstruct and extend the existing median, but this approach is not recommended.

Reconstructing this section of Yonge Street with the streetscape and safety improvements noted, and without the cycle tracks or relocating curbs, would cost approximately \$29-\$39 million inclusive of detailed design, municipal servicing and potential utility relocations. Further work on preliminary design of this option would be required in order to develop these estimates further.

The estimated capital cost of constructing the secondary alternative "Enhance Yonge and Transform Beecroft" is \$71.0 million, including \$49.0 million for Yonge Street and \$22 million for Beecroft Road. The estimated cost includes detailed design, municipal servicing and utility relocations for both Yonge Street and Beecroft Road, as well as property acquisition costs associated with properties on the west side of Greenview Avenue.

The Acting Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

The North York Centre Secondary Plan (which is primarily based on the Former City of North York's North York Centre Secondary Plan) was approved as part of the Official Plan in 2002, and subsequently approved by the OMB in 2006. The Secondary Plan provides area-specific policies to guide the redevelopment of North York Centre. The Secondary Plan provides a vision for Yonge Street with clear built form direction regarding permitted building heights, setbacks and step backs, a parks and open space concept plan as well as a strategy linked to an enhanced Yonge Street streetscape. The Secondary Plan also recommends the extension of the Yonge Street median and generally throughout North York Centre.

<https://www1.toronto.ca/planning/8-north-york-centre.pdf>

At its meeting on September 22, 2015, Public Works and Infrastructure Committee received a staff report PW7.5 "Ten Year Cycling Network Plan: Project Update and 2016 Implementation Program" which included a Major Corridor Study of Yonge Street between Sheppard Avenue and Finch Avenue, in conjunction with a streetscape study. This is being carried out through the REimagining Yonge (Sheppard to Finch) EA Study. <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PW7.5>

At its meeting of June 7, 8 and 9, 2016, City Council adopted in principle the Ten Year Cycling Network Plan which included the Major Corridor Study along Yonge Street, between Sheppard Avenue and Finch Avenue, being carried out through the Reimagining Yonge (Sheppard to Finch) EA Study. During this meeting, City Council directed the General Manager, Transportation Services to initiate an extension of the Major Corridor Study on Yonge Street, from Sheppard Avenue to Finch Avenue, to include Finch Avenue to Steeles Avenue as a separate study <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW13.11>

At its meeting on July 12, 13, 14 and 15, 2016, City Council approved the Vision Zero Road Safety Plan. Yonge Street from Sheppard Avenue to Steeles Avenue is one of 14 locations that has been identified for undertaking a road safety audit due to the number of killed or seriously injured (KSI) collisions. More details about Vision Zero, including mapping of key locations within the City that are being prioritized, is available here: <https://www1.toronto.ca/wps/portal/contentonly?vgnextoid=94bf4d6e50d19510VgnVCM10000071d60f89RCRD>

At its meeting of February 7, 2017, Executive Committee adopted a motion "that City Council decrease the 2017 - 2026 Budget Committee Recommended Capital Budget and Plan for Transportation Services by \$4.0 million in 2017 cash flows, and defer consideration of the Re-Imagining Yonge Street Sheppard to Finch capital project to the 2018 Budget process." <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.EX22.2>

At its meeting of February 15, 2017, City Council adopted the following: "City Council decrease the 2017 - 2026 Budget Committee Recommended Capital Budget and Plan for Transportation Services by \$4.0 million in 2017 cash flows, \$2.0 million debt and \$2.0 million Public Transit Infrastructure funds and defer consideration of the Re-Imagining Yonge Street Sheppard to Finch capital project to the 2018 Budget process, and:

- a) that City Council direct that the \$2.0 million City share towards this project be transferred to the Capital Financing Reserve;
- b) City Council direct the City Manager to identify use for the funds that can leverage the \$2.0 million Public Transit Infrastructure funds;
- c) City Council request the General Manager, Transportation Services to include, in the forthcoming report on this project, an update on the Major Corridor Study on Yonge Street; and

d) City Council direct the General Manager, Transportation Services to Report to the Public Works and Infrastructure Committee no later than the end of the second quarter of 2017 with a comprehensive plan to install painted bike lanes on the ring roads Doris Avenue and Beecroft Road, from Sheppard Avenue north to Finch Station with an option to continue North along Willowdale Avenue to Steeles Avenue."

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.EX22.2>

At its meeting of May 9, 2017, the Public Works and Infrastructure Committee adopted the REimagining Yonge (Sheppard to Finch) Municipal Class EA Study - Interim Project Status Update report and:

1. Directed the General Manager, Transportation Services to complete a further phase of design work including:

a. a comprehensive review of options to implement cycling facilities on Doris Avenue and/or Beecroft Road and Willowdale Avenue from Bishop Avenue to Steeles Avenue;

b. additional project development to determine an option for a secondary preferred alternative;

c. traffic modelling work to assess the new design option(s);

d. 30 percent design of a secondary preferred alternative; and

e. additional stakeholder consultation, including wider business consultation; and report to the Public Works and Infrastructure Committee in the fourth quarter of 2017 with the outcome of this work.

2. In accordance with Section 71-11.1 C of the City of Toronto Municipal Code Chapter 71 (Financial Code by-law), granted authority to amend Purchase Order No. 6043078 with MMM Group Limited, awarded under RFP # 9119-16-7015 for engineering and consultant services pertaining to the Yonge Street (Sheppard Avenue to the Finch Hydro Corridor) Environmental Assessment (EA) Study, by an additional amount of \$750,000, net of all taxes, revising the current total value from \$1,320,438 to \$2,070,438, net of all taxes to be funded from the 2017-2026 Budget Capital Budget and Plan for Transportation Services, including a 50 percent contribution from the federal Public Transit Infrastructure Fund.

3. Authorized extension of Purchase Order No. 6043078 with MMM Group Limited for engineering and consultant services pertaining to the Yonge Street (Sheppard Avenue to the Finch Hydro Corridor) Environmental Assessment (EA) Study to April 1, 2018.

COMMENTS

State of Good Repair

Despite being second to Downtown in civic importance, scale, and growth, investment in the state of good repair and the quality of the Yonge Street streetscape has not kept pace with the area's transportation network and the scale and density of development. The roadway and public realm along the Yonge Street corridor are in a state of disrepair and lack consistent infrastructure to support safe mobility. Road reconstruction of the Yonge Street corridor was last carried out in 1975, with roadway resurfacing last occurring in 1994. Reconstruction is typically needed on a 50 year cycle with full road reconstruction needed within five to ten years. Several segments along the corridor require immediate attention. Within the last two years, Transportation Services has carried out numerous temporary repairs to sidewalks to restore utility cuts along the corridor.

The Yonge Street streetscape has been enhanced incrementally over a long period of time, which has resulted in significant gaps and inconsistencies in the streetscape conditions. Over the course of the last decade, the condition of the boulevards has deteriorated (Figure 1 below) and the centre median on Yonge Street has yet to be extended as identified in the North York Centre Secondary Plan.

Figure 1 - The Current Streetscape Condition is in Disrepair



Safety

The City's Vision Zero Road Safety Plan (RSP) is a comprehensive and data-driven City-wide strategy endorsed by Council in July 2016, with the goal of reducing the number of Killed and Serious Injury (KSI) collisions on City roads over the next 5 years. The RSP emphasizes protection for vulnerable road users and includes various engineering, education and enforcement countermeasures.

As part of the RSP, Transportation Services has reviewed recent City-wide collision data and identified the section of Yonge Street, between Sheppard Avenue and Steeles Avenue, as a priority safety concern. Over an eight year period between January 2010 and December 2017, there were a total of 78 collisions involving pedestrians and an additional five (5) involving cyclists on Yonge Street within the project focus area. Of these collisions, eight (8) involved fatalities or serious injuries. Addressing the safety concerns on Yonge Street is a key objective of the recommendations made in this report.

North York Centre Planning

The REimagining Yonge EA Study focuses on improving multi-modal travel for transit users, pedestrians, cyclists, and motor vehicle drivers. Key issues addressed during this study included road safety, public realm to support a healthy and vibrant centre, traffic impacts, cycling facilities and parking. This focus is supported by policies identified

in the Provincial Growth Plan for the Greater Golden Horseshoe (Growth Plan) and the North York Centre Secondary Plan. A number of other planning activities are also underway that will both inform, and be informed by, the REimagining Yonge EA Study including the Growth Plan for the Greater Golden Horseshoe (Growth Plan) and the North York Centre Secondary Plan.

The City of Toronto Official Plan directs growth to the Downtown, Centres and Avenues. The Centres are expected to grow as dynamic mixed-use areas with commercial office and residential uses existing side by side. Centres with a healthy mix of uses help take pressure off public transit infrastructure and roads as they encourage people to live, work and play within a centralized geography. Policies in the Centres encourage growth of residential and employment uses and require the city to assess and invest in the public realm while promoting strong pedestrian and cycling linkages. These, in turn, help improve the public realm usage by having a mix of uses attracting shoppers, residents and employees into the public realm day and evening, week and weekends.

Although there has been some commercial office development, mostly concentrated near the Sheppard/Yonge area in the North York Centre in the last decade, the development trend has been much more towards residential intensification than employment. Recent growth in the office sector Downtown has shown that a high quality public realm with easy access to public transit is essential to encouraging new employment uses. Addressing this deficiency is a key objective of REimagining Yonge. To encourage high quality employment opportunities in the Centre and a successful commercial office sector, the City must invest in the public realm, not just in beautification but in pedestrian and cycling linkages as well.

As directed by the Official Plan, the North York Centre Secondary Plan, the 10-Year Cycling Network Plan and Transform TO, there is a need to accommodate more trips by cycling. A map of the 10-Year Cycling Network Plan within the Study Area is shown in Attachment 2. The plan identifies Yonge Street, as a major corridor with high potential for cycling that should be studied further. In addition, York Region has completed the Yonge and Steeles Area Regional Transportation Study which recommends the implementation of dedicated cycling facilities on Yonge Street as part of the construction of a future subway extension.

Other planning and transportation studies that have been previously completed or are being carried out by the City and others in proximity to the Yonge Street corridor include the following:

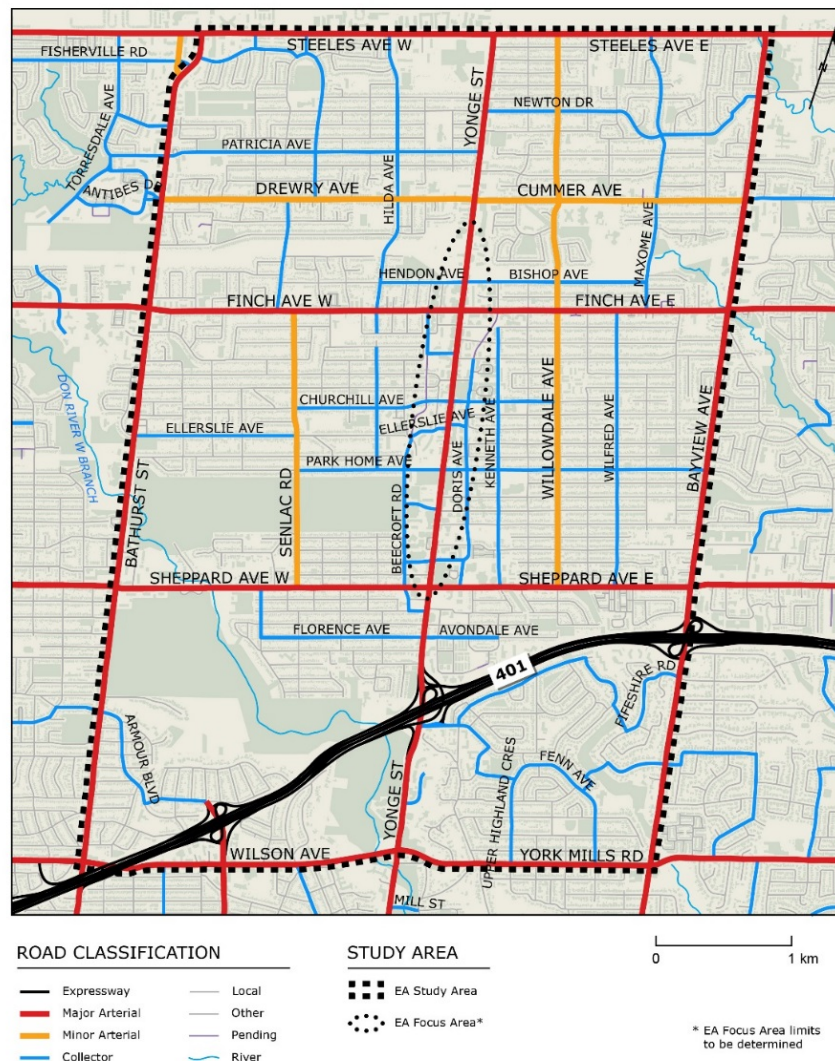
- North York Centre South Service Road: Doris Avenue, Bonnington Place and Tradewind Avenue Yonge Street and Highway 401 Interchange Improvements Study
- Yonge and Steeles Area Regional Transportation Study (York Region led)
- Yonge Street North Planning Study
- Uptown Service Road and the Associated Road Network

More details about these studies is available in Attachment 3.

Study Background

The REimagining Yonge EA Study was initiated in January 2016 to consider opportunities to improve travel for transit users, pedestrians, cyclists and motor vehicle drivers, enhance the streetscape and public realm and improve road safety. The study is being completed in accordance with the requirements of a Schedule 'C' project under the Municipal Class Environmental Assessment (MCEA) process.

Figure 2 - Study Area



The Study Area, shown in Figure 2, is bounded by Bathurst Street to the west, Bayview Avenue to the east, Steeles Avenue to the north and Wilson Avenue / York Mills Road to the south. The Study Focus Area includes Yonge Street from Florence Avenue / Avondale Avenue to the Finch Hydro Corridor Trail, in the vicinity of Hendon Avenue / Bishop Avenue. It also includes Beecroft Road and Doris Avenue and connecting streets.

Existing Conditions

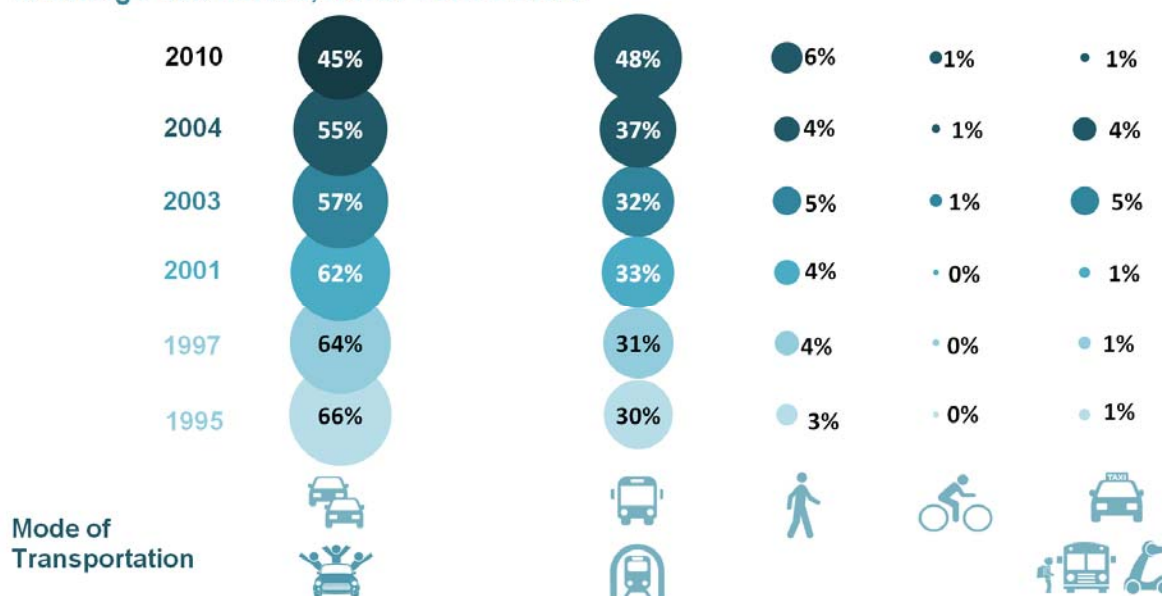
The public right-of-way along this section of the Yonge Street corridor varies from 30 m to 36 m. The public right-of-way along this section of the Beecroft Road corridor varies from 23 m to 38 m. The public right-of-way along this section of Doris Avenue corridor varies from 23 m to 43 m.

Transportation Mode Share

The transportation mode share from 1995 to 2010 and the projected mode share to 2031, is shown in Figure 3 below. This illustrates that more people are travelling to North York Centre by transit and active modes than driving. Recent National Housing Survey data from 2011 to 2016 indicates that this trend is continuing with a further increase of people using active modes of transportation. As such, multi-modal integration with transit is essential for the transportation network to accommodate the forecasted growth.

Figure 3 - Transportation Mode Share for North York Centre
Pedestrian Network

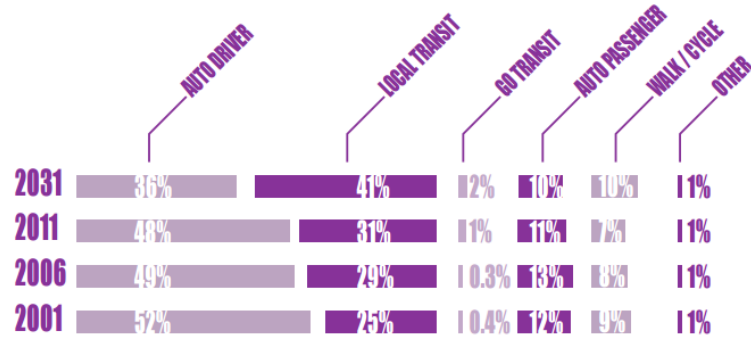
Morning Peak Period, North York Centre



Source: Travel Survey, North York Centre, Transportation Planning, North District, City of Toronto, 1995-2010.

TRAVEL BEHAVIOUR IS CHANGING.

NORTH YONGE: MODAL SPLIT OF TRIPS MADE BY AREA RESIDENTS



AUTO USAGE IS PROJECTED TO DECREASE
WITH THE INTRODUCTION OF IMPROVED LOCAL TRANSIT OPTIONS.

Source: North York Travel Survey, Transportation Planning North York District, City of Toronto, 2001

The Yonge Street corridor in North York Centre is among the densest residential areas in the City of Toronto. Consistent with the adopted Secondary Plan, buildings within the Study Focus Area are predominantly high-rise residential and office towers incorporating shops and restaurants at street level. With malls and convenience stores distributed along the corridor, most errands can be made on foot.

On Yonge Street, pedestrian crossing facilities are provided at signalized intersections, however, there are significant gaps between these crossings, particularly in the northern half of the corridor. There is an opportunity to better support pedestrian activity by increasing the number of signalized crossings and improving the design of intersections to reduce crossing distances and improve safety.

On Beecroft Road and Doris Avenue, sidewalks are provided on both sides of the street.

Cycling Network

There are currently no cycling facilities along the Yonge Street, Beecroft Road and Doris Avenue corridors. Dedicated cycling facilities in the area would support cycling as a viable mode and improve safety for cyclists currently using the road or sidewalk. Physically separated cycling facilities would offer protection from traffic while reducing conflicts with pedestrians.

Public Transit

On Yonge Street, Line 1 (the Yonge-University-Spadina Subway) provides a direct subway connection to downtown Toronto operating on a 2-3 minute headway during peak periods and a 5 minute headway during off-peak. Line 4 (the Sheppard Subway) runs between the Sheppard-Yonge and Don Mills stations, with headways of 5-6 minutes. The Finch Terminal is a key node in the regional surface transit network serving TTC, GO Transit, York Region Transit, and VIVA with approximately 2,200 buses each weekday.

There is no public transit on Beecroft Road or Doris Avenue.

Road Network and Traffic Operations

Within the study area, Yonge Street is a six (6) lane major arterial street with dedicated turning lanes at signalized intersections. The 24-Hour traffic volumes on Yonge Street between Sheppard Avenue and Finch Avenue is 55,000.

Overall, traffic demands are high on Yonge Street during the weekday peak periods, particularly south of Sheppard Avenue, where traffic to and from Highway 401 and points further south compete with local traffic.

- Traffic demands on Yonge Street during the weekday peak periods include significant volumes travelling to/from York Region with approximately 74% of traffic on Yonge Street originating from York Region during the weekday morning peak period and approximately 73% of traffic destined to York Region during the weekday afternoon peak period.
- Although it is a six lane roadway, due to the use of the curb space for parking, stopping and loading activities described below, Yonge functions as a four lane roadway during most hours of the day.
- On weekdays, the curb lanes are available to traffic for two hours in the morning and two hours in the afternoon with on-street paid parking generally permitted in the curb lanes during the off-peak periods
- During the peak hours when parking is prohibited, the curb lanes are predominantly used by buses stopping and right-turning vehicles, the latter often having to wait for pedestrians crossing north/south to clear the intersections
- Motorists have been observed to stop or park in the curb lane despite the restrictions
- The service roads, Beecroft Road and Doris Avenue are parallel corridors designed to facilitate traffic circulation within the area, while ensuring a smooth transition from the high-density Yonge Street to the stable residential areas surrounding it:
 - The 24-Hour traffic volumes on Beecroft Road and Doris Avenue between Sheppard Avenue and Finch Avenue are 18,000 and 13,500 respectively
 - Based on the transportation modelling conducted and existing traffic volumes, the service roads have surplus capacity to accommodate traffic volumes that may divert from Yonge Street
 - Planned future extensions of the service roads, including the extension of Doris Avenue south of Sheppard Avenue East and the northerly extension of Beecroft Road, will further increase this capacity

Parking

The North York Centre is well-served by both on-street and off-street parking with over 14,000 publicly accessible parking spaces within the Study Focus Area provided through a mix of both publicly and privately operated facilities, including approximately 13,000 off-street parking spaces and 715 on-street parking spaces. This is in addition to the extensive parking supply provided for residents of multi-storey residential buildings. Of the total parking supply, 5% is accommodated by the on-street parking spaces along Yonge Street and some intersecting streets.

The on-street parking supply on Yonge Street includes 255 parking spaces within the curb lanes that are available during off-peak times (parking is prohibited during the weekday peak hours from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m.).

The on-street parking supply on Beecroft Road includes 120 parking spaces.

The on-street parking supply on Doris Avenue includes 13 parking spaces on the east side of Doris Avenue that are available during off-peak times (parking is prohibited during the weekday peak hours from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m.).

Parking utilization studies within the Study Focus Area have demonstrated that the majority of the corridor experiences moderate utilization of on-street parking on weekdays. At the southern end of the section of Yonge Street demands in excess of 85% have been observed. On-street parking in the southern section of Beecroft Road, between North York Boulevard and Poyntz Avenue, experiences high use on weekdays, with utilization exceeding 85%. Lower utilization was observed on the section north of North York Boulevard, with utilization below 45% on weekdays.. The 13 on-street parking spaces on Doris Avenue between Sheppard Avenue East and Greenfield Avenue are also highly utilized.

Observations of Toronto Parking Authority and private off-street parking lots indicate that there is available capacity on weekdays. Utilization is high during daytimes on weekdays, moderate on weekday evenings and low on weekends, when offices are closed.

Public Spaces

As part of this study, three prominent public spaces have been identified on Yonge Street for integration with the public right-of-way. These include: *Olive Square* located on the east side of Yonge Street between Olive Avenue and Finch Avenue, *Mel Lastman Square* located in the heart of the North York Centre, and public space at the Joseph Shepard Federal Building located at the northwest corner of Yonge St. and Elmhurst Ave. These are key opportunities to create enhanced public space to showcase events, provide community gateways, and support a more engaged local community.

Stage 1 Phase of Work - Yonge Street

Alternative Solutions

Four alternative solutions for Yonge Street were developed through the first phase of study:

1. Do Nothing: no change to the existing conditions on Yonge Street
2. Enhance: focus on improving the streetscape - minor improvements to the streetscape and transportation operations at strategic locations
3. Modify: minor reconstruction in strategic locations, to improve the streetscape and pedestrian facilities, and the installation of cycling infrastructure
4. Transform: major reconstruction to create a multi-modal street and enhanced streetscape, including cycling infrastructure, and enhanced pedestrian facilities

More details about the components of each of the alternatives are shown in Attachment 4.

Evaluation criteria were used to assess the advantages and disadvantages of each alternative solution. The criteria reflect the environment as broadly defined by the Environmental Assessment Act (e.g. the natural, social and cultural environments). The complete set of criteria and measures used are included in Attachment 5.

Preliminary Preferred Alternative: Transform Yonge

Based on a comprehensive evaluation of alternatives for Yonge Street and input received from the public and other stakeholders, the preliminary preferred alternative identified through the EA process during the Stage 1 phase was "Transform Yonge". This would include a full reconstruction of Yonge Street within the City's existing right-of-way and the following:

- A full reconstruction of a 2.7 km stretch of Yonge Street and relocation of utilities, including catch basins, fire hydrants, etc. and new street lighting provided;
- Between Sheppard Avenue and Bishop Avenue/Hendon Avenue, the preliminary preferred design option was Option 4B and includes a reduction of Yonge Street from six (6) to four (4) lanes, cycle tracks, a centre landscaped median, and wider boulevards;
- Between Florence Avenue/Avondale Avenue and Sheppard Avenue, the preliminary preferred design option was Option 4A and includes a six (6) lane cross-section, cycle tracks, and a centre landscaped median;
- Two new signalized intersections are recommended at Yonge Street/Horsham Avenue and Yonge Street/Ellerslie Avenue/Norton Avenue to provide more crossing opportunities and improve pedestrian safety;
- A narrowing of some of the side streets at Yonge Street to reduce crossing distances and improve the pedestrian environment;
- Integration with Mel Lastman Square and opportunities for the long-term integration with the Joseph Shepard Federal Building and Olive Square;

- New full time on-street parking on side streets adjacent to Yonge Street and off-peak on-street parking on both Doris Avenue and Beecroft Road; and
- Completion of the connection of the east-west Finch Hydro Corridor multi-use trail across Yonge Street at Hendon Avenue/Bishop Avenue.

The plan and cross-section for each of the preliminary preferred design options, 4A and 4B, are shown in Attachment 6.

Stage 2 Phase of Work - Yonge Street as well as Beecroft Road/Doris Avenue

To develop and assess an alternative option that would not reduce traffic capacity on Yonge Street, alternatives for cycling facilities on Beecroft Road and/or Doris Avenue were considered as part of the Stage 2 phase of work.

The work was carried out through a three step process:

- Step 1 - Develop and evaluate alternative solutions to determine the preferred type of cycling facility and street design
- Step 2 - Identify the preferred street for the preliminary preferred alternative (ie. Beecroft Road, Doris Avenue or both)
- Step 3 - Determine the preferred overall alternative (Stage 1 preliminary preferred "Transform Yonge" vs Stage 2 preferred)

As previously indicated, Yonge Street will require a full reconstruction irrespective of what design is carried forward. A concept for Yonge Street that maintains six travel lanes and does not include cycling facilities was developed in conjunction with the Stage 2 phase of work.

The following describes the work carried out and conclusions for each step:

Step 1 - Develop and Evaluate Alternative Solutions

Four alternative solutions were developed for cycling facilities on Beecroft Road, Doris Avenue or both

1. Modify: maintain existing curbs, bike lanes installed with painted buffer, two southbound lanes and one northbound lane on Beecroft Road and two northbound lanes and one southbound lane on Doris Avenue and maintain off-peak parking southbound on Beecroft Road and northbound on Doris Avenue
2. Transform 1: full road reconstruction with curbs relocated, raised cycle tracks adjacent to the curb, maintain existing number of traffic lanes, off-peak parking maintained, trees replaced if there are impacts and public realm improvements and widened sidewalks, where feasible
3. Transform 2: full road reconstruction with curbs relocated, bidirectional cycling path in west boulevard of Beecroft Road and/or east boulevard of Doris Avenue, maintain existing number of traffic lanes, off-peak parking maintained, trees

replaced if there are impacts and public realm improvements and widened sidewalks, where feasible

4. Transform 3: full road reconstruction with curbs relocated, cycling paths in boulevards, two southbound lanes and one northbound lane on Beecroft Road and two northbound lanes and one southbound lane on Doris Avenue, maintain off-peak parking southbound on Beecroft Road and northbound on Doris Avenue, trees replaced if there are impacts and public realm improvements and widened sidewalks, where feasible

More details about each of the alternatives are shown in Attachment 7.

Based on feedback received through Stage 1, the evaluation criteria were updated and refined to reflect the key issues identified and used to assess the advantages and disadvantages of each alternative solution. The updated complete set of criteria and measures used are included in Attachment 8.

Based on a comprehensive evaluation of the alternative solutions for Beecroft Road and/or Doris Avenue and input received from the public and other stakeholders, the preliminary preferred type of cycling facility identified as part of Stage 2 - Step 1 process was "Transform 1". This alternative accommodates traffic and parking while providing separated cycle tracks to enhance cycling safety and comfort. The pedestrian realm on Beecroft Road and/or Doris Avenue would be improved by wider sidewalks, where feasible. More details about the evaluation are included in Attachment 9.

Step 2 - Select the preferred street for the preliminary preferred alternative "Transform 1"

The preliminary preferred type of cycling facility "Transform 1" was applied to both Beecroft Road and Doris Avenue to determine which street(s) should include cycling facilities. Based on a screening level evaluation, the preferred street for cycling facilities for "Transform 1" would be Beecroft Road. Compared to Doris Avenue, Beecroft Road can accommodate cycle tracks with fewer property impacts while better maintaining traffic operations. In addition, it has better long-term potential connections for cycling facilities to Steeles Avenue and across Highway 401 and can be built at a lower cost. More details about the evaluation are included in Attachment 10.

With the preliminary preferred type of cycling facility "Transform 1" on Beecroft Road, a concept for Yonge Street was developed that maintains six travel lanes and does not include cycling facilities, as shown in Figure 5.

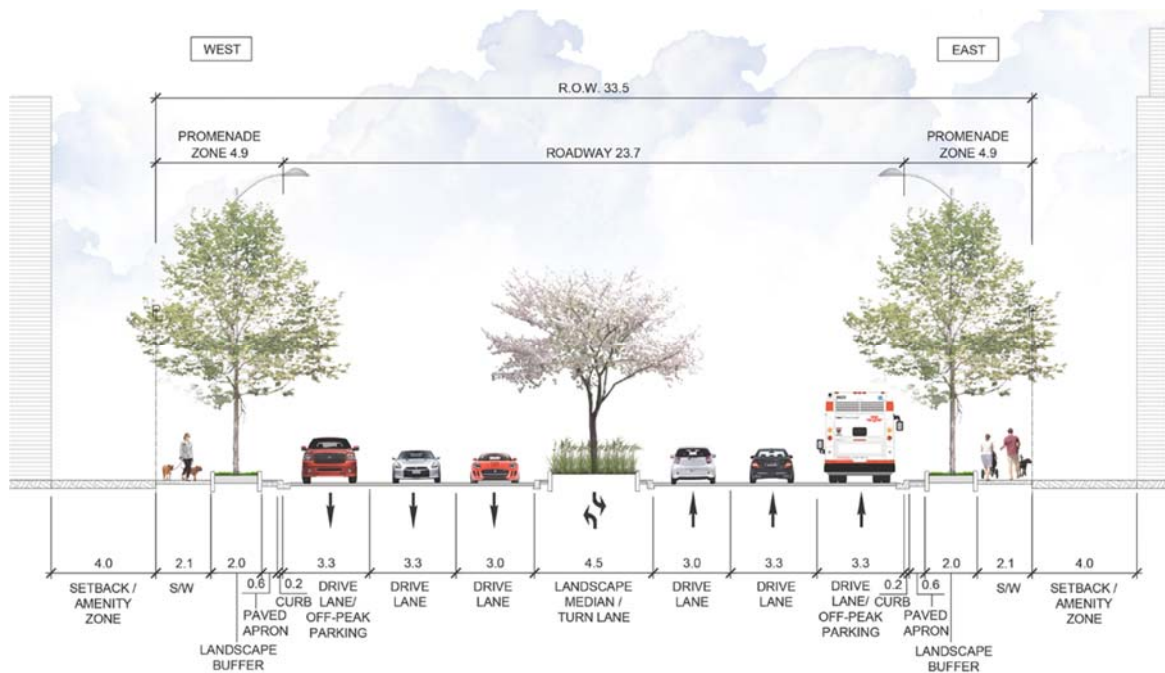


Figure 5 - Stage 2 Concept for Yonge Street

Based on the above, the Stage 2 - Step 2 preliminary preferred alternative for cycling facilities on Beecroft Road and/or Doris Avenue is "Enhance Yonge and Transform Beecroft".

Step 3 - Determine the preferred overall alternative

The "Enhance Yonge and Transform Beecroft" alternative solution was compared with the Stage 1 preliminary preferred alternative solution "Transform Yonge" to determine the preferred overall alternative:

1. Transform Yonge: full reconstruction of Yonge Street - reduction of travel lanes from six lanes to four lanes from Sheppard Avenue to Hendon Avenue/Bishop Avenue, wider boulevards, enhanced landscaped median, introduction of cycle tracks, integration with public spaces, wider sidewalks and enhanced pedestrian crossings to improve safety
2. Enhance Yonge and Transform Beecroft: full reconstruction of Yonge Street and Beecroft Road - addition of cycle tracks on Beecroft Road and reconstruction of Yonge Street with six travel lanes and some improvements to the sidewalks and road safety

The cross-sections for the two alternative solutions are shown in Attachment 11.

A summary of how well each of the alternatives meets the objectives of the study, based on the problem/opportunity statement established early in the EA process, is provided below:

Does it create a vibrant urban environment?

✓✓ While both alternatives support a vibrant urban environment on Yonge Street by providing improved sidewalks and road safety, opportunities to enhance public spaces, and a north-south cycling facility in North York Centre, the "Transform Yonge" alternative provides the best support for vibrancy through wider sidewalks, and public realm enhancements on Yonge Street. In addition, the "Transform Yonge" alternative provides better opportunities to integrate with important public spaces along Yonge Street such as Mel Lastman Square.

✓ The "Enhance Yonge and Transform Beecroft" alternative supports vibrancy by providing a more consistent streetscape for pedestrians on Yonge Street but with less space for public realm improvements. Limited sidewalk widenings on Yonge Street and Beecroft Road can be implemented, where possible.

Does it support mobility for all users?

With much of the road network operating close to capacity, choosing to expand transportation choices is the preferred strategic direction. The "Transform Yonge" alternative best meets this goal, by creating a multimodal Yonge Street, accommodating cyclists and pedestrians close to their destinations including the subway. More sidewalk space will better serve people accessing TTC and GO buses. With the implementation of the mitigating measures identified in Attachment 14, traffic operations are anticipated to be manageable with the "Transform Yonge" alternative.

Pedestrian Impacts

Measures are provided in both alternatives to improve safety on Yonge Street such as two new signalized crossings at Horsham Avenue and Eglinton Avenue, an extended median which provides a pedestrian refuge and eliminates left-turns to/from unsignalized intersections (thereby reducing the number of collisions at these locations) and narrower side street crossings.

✓✓ "Transform Yonge" would provide additional safety features such as wider sidewalks and shorter east/west crossing distances on Yonge St for pedestrians.

✓ The "Enhance Yonge and Transform Beecroft" alternative provides less sidewalk width for pedestrian movement on Yonge Street.

Cycling Impacts

✓✓ The "Transform Yonge" alternative includes a cycling facility on Yonge Street providing easy access to key destinations in the North York Centre.

✓✓ The "Enhance Yonge and Transform Beecroft" alternative includes a cycling facility on a parallel corridor (Beecroft Road) within a reasonable distance of Yonge Street (ranging from approximately 180 m to 280 m). East-west cycling connections between Beecroft Road and Yonge Street would be required with this alternative. Cycle tracks on Yonge Street or Beecroft Road could connect to existing and planned facilities as follows:

- *Finch Hydro Corridor Multi-Use Trail Extension* - an important multi-use trail that extends east-west across North York in Toronto. There is a missing link in the trail

approaching Yonge Street shown in Attachment 12 which is proposed to be completed in coordination with this project.

- *Willowdale Avenue* - as identified in the Cycling Network Plan, bicycle lanes are proposed for Willowdale Avenue between Sheppard Avenue and Steeles Avenue.

Other Connections - The connection south of the study focus area, across Highway 401 requires further consultation with the Ontario Ministry of Transportation. Other connections to be considered include a north-south cycling facility on the future extension of Beecroft Road from Hendon Avenue to Steeles Avenue West. York Region proposesto introduce dedicated cycling facilities on Yonge Street north of Steeles Avenue.

Traffic Impacts

Multi-modal transportation modelling using Aimsun was carried out based on the City's 2011 and 2031 planning horizon to assess the impact of the proposed changes to the study area. Analysis was undertaken to test alternatives against existing and future baseline 2031 conditions with various scenarios modelled for each alternative. A summary of each of the scenarios modelled is included in Attachment 13.

All traffic modelling scenarios were developed in consultation with the TTC and GO Transit and account for future planned service changes. The "Enhance Yonge and Transform Beecroft" alternative maintains the existing road network and travel lanes and as such, would operate similar to a "do nothing" scenario.

Detailed modelling of traffic conditions at horizons 2021 and 2031 indicate that only minimal changes to the network performance are expected with either the "Transform Yonge" and "Enhance Yonge and Transform Beecroft" alternatives. Performance measures for each alternative including change in travel time and change in average speed are shown in Table 1.

Performance Measure	Year	TRANSFORM YONGE			ENHANCE YONGE & TRANSFORM BEECROFT		
Change in Travel Time * (Finch – Sheppard) (minutes)	2021	Beecroft +1	Yonge +1	Doris +1	Beecroft +1	Yonge +1	Doris +1
	2031	+1	+2	+1	+1	+1.5	+1
Change in Average Speed in North York Centre*	2021	-1			-1		
(km/h)	2031	-2			-1		
*AM peak period results are shown. Impacts for AM peak are more significant than PM peak.							

Table 1 - Results of performance measures for each alternative

✓ The "Transform Yonge" alternative would involve a reduction in the existing traffic capacity however, traffic modelling demonstrates that the 2031 conditions with four lanes on Yonge Street are expected to be similar to the 2031 future background conditions (six lanes), particularly once optimized through the application of mitigation measures to improve traffic operations as described in the following section. The alternatives perform in a similar way for the following reasons:

- Much of the traffic delay occurs south of Sheppard Avenue where the number of traffic lanes is the same for both alternatives;
- There is unused capacity on the service roads Doris and Beecroft and on parallel arterial and collector streets. Some traffic will divert to Doris, Beecroft, Bathurst, Bayview or further away, balancing performance across the network;
- Planned development is the key factor influencing future traffic conditions in this area and traffic volumes are expected to increase by 3% in 2021 and 9% in 2031 due to population and employment growth; and
- Under Transform Yonge, some GO bus stops would be consolidated, minimizing the impact of passenger loading and unloading activities.

✓✓ The "Enhance Yonge and Transform Beecroft" maintains the existing capacity on both Yonge Street and Beecroft and better supports the movement of vehicles. To ensure that future traffic operations continue to operate under satisfactory conditions with both the "Transform Yonge" and "Enhance Yonge and Transform Beecroft" alternatives, a number of key recommendations for traffic operations improvements are being made that can be grouped under three key initiatives as follows:

1. Improving traffic operations on Yonge Street;
2. Improving traffic operations on the service roads; and
3. Improving the connections to/from the service roads.

Such initiatives could be implemented for either alternative in both the near-term and long-term and are summarized in Attachment 14.

Curbside Activity

✓ The "Transform Yonge" alternative would require the removal of loading activities/deliveries, including pick-up/drop-off on Yonge Street. However, rear laneways are currently available behind most businesses along Yonge Street to accommodate loading activities/deliveries. Where development has recently occurred on Yonge Street, on-site loading facilities have been secured by the City as part of the development process. Pick-up/drop-off activities can be accommodated on the side streets.

✓✓ The "Enhance Yonge and Transform Beecroft" maintains curbside activity allowing for loading activities/deliveries, including pick-up/drop, to occur from Yonge Street.

Parking

✓The "Transform Yonge" alternative would result in the removal of 255 on-street parking spaces on Yonge Street. To offset the removal of these parking spaces, 330 new on-street parking spaces would be introduced, primarily focused on the side streets and the North York service roads. This would increase the overall on-street parking supply in the study area by 75 spaces. A map illustrating the proposed parking spaces for "Transform Yonge" is shown in Attachment 15.

✓✓The "Enhance Yonge and Transform Beecroft" alternative does not result in any loss of parking. Additional full-time parking could be provided on side streets, and off-peak parking on Beecroft Road and/or Doris Avenue.

Does it create an attractive and consistent streetscape?

✓✓ The "Transform Yonge" alternative provides more opportunities for improving the streetscape on Yonge Street, creating an attractive pedestrian promenade with more street trees. There are no impacts to the streetscape on Beecroft Road with this alternative.

✓ While the "Enhance Yonge and Transform Beecroft" alternative would result in an improved streetscape on Yonge Street, there would be fewer opportunities for wider sidewalks and street trees. There would be minimal improvements to the streetscape on Beecroft Road with this alternative. Removal of approximately 170 trees would be required on Beecroft Road but could be replaced at other locations within the community.

Does it support economic activity?

✓✓ The "Transform Yonge" alternative creates a more attractive environment for ground-floor businesses by providing opportunities for restaurant patios and outdoor cafes that enhance vibrancy and attract more customers.

✓ The "Enhance Yonge and Transform Beecroft" alternative provides minimal support for economic activity through the reconstruction of Yonge Street. While it maintains existing traffic capacity it does not offer other supports for business.

How do the costs compare?

✓✓ The "Transform Yonge" alternative involves reconstruction of Yonge Street only. The estimated preliminary cost of the "Transform Yonge" alternative is \$51.1 million.

✓The "Enhance Yonge and Transform Beecroft" alternative includes a full reconstruction of both Yonge Street and Beecroft Road. The estimated preliminary cost of the "Enhance Yonge and Transform Beecroft" alternative is \$71.0 million.

Property Impacts

✓✓ There are no impacts on private property associated with the "Transform Yonge" alternative.

✓The "Enhance Yonge and Transform Beecroft" alternative does not result in any property impacts on Yonge Street. On Beecroft Road, there are no impacts on private property from Poyntz Avenue to Finch Avenue. Beecroft Road extends north of Finch Avenue as Greenview Avenue. This section, between Finch Avenue and Hendon

Avenue, requires acquisition of five properties in order to accommodate the cross-section of the "Enhance Yonge and Transform Beecroft" alternative. The North York Centre Secondary Plan indicates a future extension of Beecroft Road to Drewry Avenue to complete the North York Centre North Service Road.

How do the construction impacts compare?

✓✓ The "Transform Yonge" alternative includes a shorter construction duration. Reconstruction of Yonge Street is anticipated to be approximately two years.

✓ With the "Enhance Yonge and Transform Beecroft" alternative, the duration of construction would be extended to up to four years with Yonge Street being reconstructed first followed by the reconstruction of Beecroft Road. This alternative would impact traffic operations over a longer period and delay the introduction of cycling facilities in North York Centre.

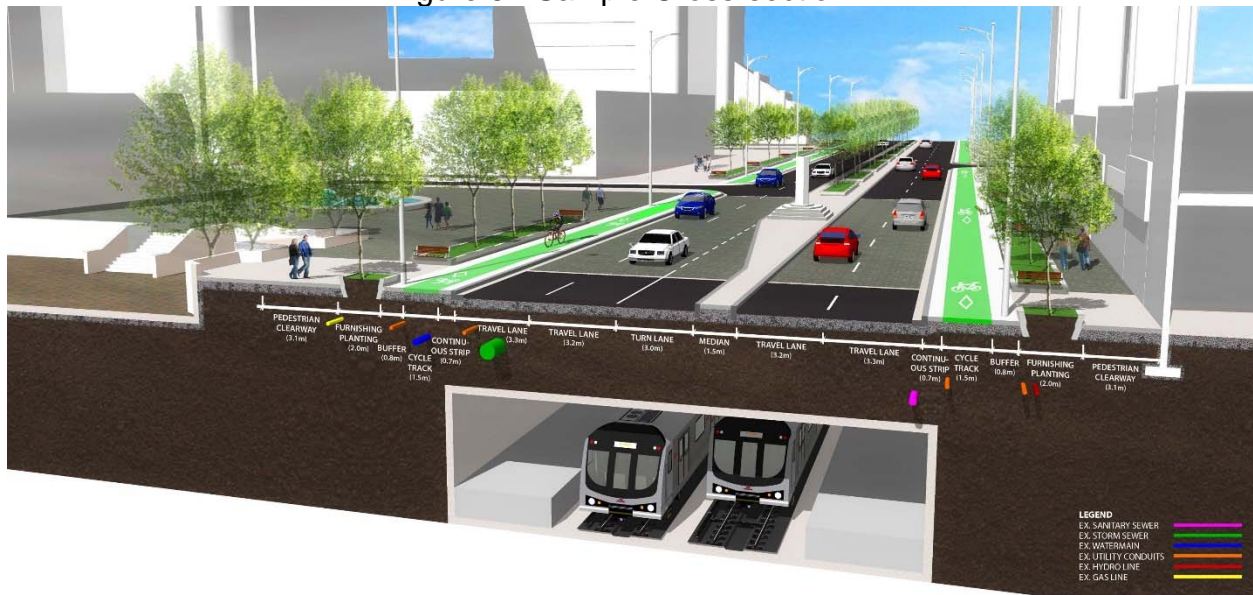
Overall Recommendation

Based on how each alternative addresses the objectives of the study and using the updated evaluation criteria and input received from the public and other stakeholders, two alternatives were identified as viable alternatives through the EA process.

While the "Enhance Yonge and Transform Beecroft" alternative is a viable option for addressing the study objectives, "Transform Yonge", identified during the Stage 1 phase of study, is being recommended as the overall preliminary preferred alternative as it better supports the objectives of the study based on the evaluation criteria and measures developed and can be implemented at a lower cost with less disruption to the North York Centre.

The "Transform Yonge" alternative will significantly enhance the public realm on Yonge Street, maintain adequate traffic operations, is the least costly of the two alternatives, and can be implemented over a shorter timeframe. A rendering of the preliminary preferred design for "Transform Yonge" in the vicinity of the Joseph Shepard Federal Building is shown below.

Figure 5 - Sample Cross-section



Yonge Street EA - Joseph Shepard Building Plaza - Street Section

MMM GROUP

Public Consultation

Stage 1 Phase of Work - Yonge Street

During the Stage 1 and Stage 2 phase of work, the project team consulted with a wide range of internal and external stakeholders. Comprehensive public engagement was undertaken for this study to create opportunities for on-going dialogue, feedback, and collaboration, and build relationships with local stakeholders, while meeting the consultation requirements of the Municipal Class EA process.

Public consultation activities took place at key stages of the Stage 1 study, including: a Jane's Walk and a walking tour with local students from Claude Watson School for the Arts, the use of online and field surveys, three public open houses, project team participation in a Planners in Public Spaces outreach and two design charrette workshops. The study was presented twice to the Design Review Panel. Extensive efforts to notify the public about consultation opportunities were undertaken, including: published ads in local newspapers, the use of flyer drops where over 198,000 flyers were distributed to the local community, and development of a project web page.

Stage 2 Phase of Work - Yonge Street as well as a review of Beecroft Road / Doris Avenue

Public consultation activities took place at key stages of the Stage 2 study, including: two public open houses, project team participation in a Planners in Public Spaces outreach, and one residents association meeting. Similar to the Stage 1 phase of work, extensive efforts to notify the public about consultation opportunities were undertaken, including: published ads in local newspapers, the use of flyer drops where over 132,000 flyers were distributed to the local community, and the use of a project web page to provide regular project updates.

Existing and future traffic congestion was a key concern raised throughout this study. While stakeholders agreed that improvements to the public realm on Yonge Street,

including the provision of wider sidewalk and cycling facilities should be made, general concern was raised with these improvements being achieved through a reduction in the number of traffic lanes on Yonge Street.

During the study, the City heard support from the public and stakeholders for cycling facilities in North York Centre. There was a mix of support for cycling facilities on Yonge Street through "Transform Yonge" or on Beecroft Road through "Enhance Yonge and Transform Beecroft".

Consultation with Businesses

During the Stage 1 phase of work, local businesses were notified of the study. However, there were challenges connecting with the local business community as there is currently no Business Improvement Area within North York Centre and language was also a possible barrier for some businesses. During the Stage 2 phase of work, outreach included door-to-door engagement with all businesses to determine their level of interest in the study and local business and property management surveys. In addition, three business stakeholder meetings were held with Farsi, Korean and Chinese translators available. Public Drop-in notices, business surveys and Public Drop-In Event materials were also made available in Farsi, Korean and Chinese.

During the study, the City heard from some businesses concerned that the "Transform Yonge" alternative may result in additional traffic congestion and a loss in parking on Yonge Street, which may affect their business.

More details about the public and local business engagement process, including the various activities and events that took place and feedback received from each event, are shown in Attachment 16.

Schedule and Implementation

Should City Council endorse a recommended option for REimagining Yonge contained within this report, the detailed design stage of this project could be advanced in 2018 by using funding available under the federally-funded Public Transit Infrastructure Fund (PTIF) program.

Subject to available funding and the progress of detailed design, delivery of the road reconstruction could commence in 2020. Construction of the entire project is anticipated to require two full construction seasons. The project team has had ongoing dialogue with utility companies, the TTC and GO Transit to ensure that the proposed reconstruction of Yonge Street has been fully coordinated with any other planned capital works.

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ATTACHMENTS

Attachment 1: Transform Yonge
Attachment 2: Ten Year Cycle Network Plan in Study Area
Attachment 3: Summary of North York Centre Planning Studies
Attachment 4: Alternative Solutions for Stage 1 Phase of Work – Yonge Street
Attachment 5: Evaluation Criteria for Stage 1 Phase of Work – Yonge Street
Attachment 6: Preliminary Preferred Design Options (Plan and Cross-Section) - Stage 1 Phase of Work – Yonge Street
Attachment 7: Alternative Solutions for Beecroft Road, Doris Avenue or both - Stage 2 Phase of Work – Yonge Street as well as Beecroft Road/Doris Avenue
Attachment 8: Updated Criteria and Measures
Attachment 9: Evaluation of Stage 2 Alternatives (Step 1)
Attachment 10: Evaluation of Selection of Preferred Street for Preliminary Preferred Alternative "Transform 1" (Step 2)
Attachment 11: Cross-Sections for the Preliminary Preferred Stage 1 and Stage 2 Alternatives
Attachment 12: Finch Hydro Corridor Multi-Use Trail Concept Plan
Attachment 13: Scenarios Modelled for Traffic Assessment
Attachment 14: Recommendations for Mitigation of Traffic Impacts for "Transform Yonge" and "Enhance Yonge and Transform Beecroft" Alternatives
Attachment 15: Proposed Parking Density for "Transform Yonge"
Attachment 16: Public Engagement Program and Feedback Received