

## **Update on the "Feeling Congested?" Initiative – A Consultative Approach to Transportation Planning**

<b>Date:</b>	November 28, 2013
<b>To:</b>	Planning and Growth Management Committee
<b>From:</b>	Chief Planner and Executive Director, City Planning Division
<b>Ward:</b>	All Wards
<b>Reference Number:</b>	P:\2013\ClusterB\PLN\PGMC\PG13087

### **SUMMARY**

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The purpose of this report is to describe the approach underway to review the Official Plan’s transportation policies and to provide an update on the progress made to date.

The review presents a timely and necessary opportunity to strengthen the integration of the City’s land use and transportation policies, and to advance the Official Plan’s city-building vision of creating sustainable and complete communities. To do so, refined transportation planning policies will be proposed for integration into the Official Plan, including a city-wide bike policy framework, an approach to Complete Streets that is consistent with the cross-Divisional effort to produce Complete Streets guidelines, and a priority transit network. This will not be achieved through technical analysis alone; the “Feeling Congested?” initiative recognizes the critical need to inform the review process using an inclusive and innovative consultation program that works collaboratively with many audiences in the City, including key stakeholder groups.

The “Feeling Congested?” initiative is being pursued in three phases:

- Phase 1: Development and review of decision-making criteria and an assessment of revenue tools
- Phase 2: Identification of priority transit projects, a priority transit network, and refinements to other Official Plan transportation policies
- Phase 3: Alignment of the City's and Metrolinx's priorities for rapid transit investment and funding strategies.

Public consultation will be a key component of each phase.

Phase 1, which is now complete, focused on the first steps in developing a rapid transit decision making framework to provide more direction on how transportation infrastructure decisions should be made within a network planning context. These first steps involved defining the principles and identifying the related criteria against which rapid transit projects can be assessed. Eight criteria were put forward for public discussion and, with some refinements, met with strong acceptance.

The Phase 2 work has been undertaken in two parts, the first of which concluded with the production of the “Feeling Congested Phase 2 Toolkit” which was distributed for public discussion in June, 2013, and continues to be used to facilitate discussions. Work completed includes:

- Established the list of rapid transit projects to be evaluated by the decision making framework.
- Identified a detailed list of quantifiable measures to assess the eight evaluation criteria.
- Applied the measures to the rapid transit projects to develop preliminary options for future network development.
- Development of a draft city-wide bicycle policy framework.
- Introduction of the concept of “Complete Streets”.

The second part of Phase 2 is where we are today and represents on-going work that builds upon the foundations of the analysis presented in the “Toolkit”. These tasks involve:

- Refining the evaluation criteria and their measurements based on feedback received during the public consultation process.
- Applying the refined draft rapid transit decision making framework’s evaluation matrix to begin identifying “top-performing” projects.
- Incorporating the GO Rail proposals into the draft rapid transit decision making framework.
- Continuing to develop the draft bicycle policy framework and the “Complete Streets” concept.

Phase 3 will evolve from the on-going initiatives in Phase 2 and extend into other, transportation policy areas that have yet to be addressed, including:

- Developing a revised surface transit priority policy with a network of specific bus and streetcar routes for inclusion in the Official Plan.
- Developing revised policies on goods movement; transportation demand management (TDM); vehicle parking, and mobility hubs.
- Applying the “Strategic Fit” and “Implementation Screen” along with consideration of the available funding as the final stage in the rapid transit decision making framework.

A public consultation strategy is being developed for the final results of Phase 2. A proposed work program and schedule for the completion of the “Feeling Congested?” initiative is presented in the final section of this report. It is expected the review process will conclude in 2015 with a final round of public consultation and recommendations brought forward at the end of Phase 3.

## **RECOMMENDATIONS**

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1. The Planning and Growth Management Committee endorse the completion of the "Feeling Congested?" initiative to achieve the following objectives:
  - a. Review and refine the existing transportation policies in the Official Plan including the introduction of the "Complete Streets" concept for street design, the Bicycle Policy Framework Plan and aligning transportation planning with land use planning.
  - b. Ensure the Official Plan provides more direction related to transportation planning priorities by establishing decision-making criteria to inform how transportation infrastructure decisions, and especially transit expansion decisions, should be made.
  - c. Establish Toronto’s transportation priorities based on that decision-making framework.
  - d. Provide greater clarity to public and private sector partners on the direction of the City’s transportation infrastructure investment

### **Financial Impact**

The Deputy City Manager and Chief Financial Officer have reviewed this report and there is no financial impact.

### **DECISION HISTORY**

Section 26 of the Ontario Planning Act requires municipalities to conduct 5 year reviews of their Official Plans. At its meeting in May, 2011, the Planning and Growth Management Committee adopted, with amendment, the Chief Planner’s recommendations regarding the general work programme and public consultation strategy for the City’s 5 Year Official Plan Review and Municipal Comprehensive Review (see Item PG 5.5

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.PG5.5>)

The public consultation strategy for the Official Plan Review was launched in September, 2011. City Council’s more recent debates of rapid transit issues have resulted in staff being directed to accelerate the review of the Official Plan’s transportation policies and, through this process, to develop a new comprehensive rapid transit plan to be woven into the revised Official Plan.

Notably, when deliberating on the issue of rapid transit in the Sheppard Avenue East corridor at its March, 2012 meeting (see CC20.1 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.CC20.1>), City Council adopted the recommendation that:

- *City Council request the Chief Executive Officer, Toronto Transit Commission, in consultation with the City Manager, to develop and conduct a broad public consultation process to discuss the City's transit needs over the next 50 years in order to reach a public consensus on long term transit improvements and associated funding, such consultation to include:
  - a. ranking of needed City-wide transit improvements;
  - b. options that include, but are not limited to, subways, LRT's and bus ways; and
  - c. capital and operating cost estimates for each alternative.*

Further direction was given by Council when, in the course of debating the general question of rapid transit priorities at its July, 2012 meeting (see PG16.16 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PG16.16>), it adopted the recommendation that:

- *City Council direct the City Manager, Deputy City Manager, Cluster B and the Acting Chief Planner and Executive Director of City Planning, to report to the September meeting of the Planning and Growth Management Committee on the work underway arising from the decisions of City Council on February 8, 2012 and March 21, 2012 (CC17.1 and CC20.1), respecting transit related matters including:
  - a. the development of a Toronto Public Transit Expansion Plan;
  - b. consultation with the Toronto Transit Commission and Metrolinx;
  - c. review of all transit routes contained within the current Official Plan, Metrolinx Big Move, the previous Let's Move Plan and other previously approved City Council, Toronto Transit Commission and Provincial plans; and
  - d. public consultation planned for 2012 within each Community Council district, such discussions to include possible routes, priorities and financial models among other matters.*

Subsequently, a report from the Acting Chief Planner and Executive Director, City Planning, entitled "Official Plan Review: Transportation Planning Policy in Support of a Comprehensive Transit Plan" (August 29, 2012) presented a framework for the review of the City's official transportation policies in the context of the ongoing 5 year review of the Official Plan and set out a public consultation strategy to allow stakeholders to provide input to future policy directions. In considering this report at its meeting of September 13, 2012 (see PG17.17 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PG17.17>), the Planning and Growth Management Committee adopted the following recommendation:

- *Directed the Acting Chief Planner and Executive Director, City Planning to undertake recommended public consultation on Official Plan transportation policies including transit plans, and that the consultation strategy also engage municipalities, residents and businesses in the Greater Toronto Area through social media and other appropriate means.*

In addition, the Planning and Growth Management Committee at its meeting of February 28, 2013, in considering a presentation by TTC staff on the 'Downtown Rapid Transit Expansion Study (DRTES) Phase I Strategic Plan' (PG22.5) <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PG22.5>) adopted a motion that requested the Chief Planner and Executive Director, City Planning, in consultation with appropriate officials, to report on:

- *The nine other Metrolinx projects for the City of Toronto and confirm that these projects are consistent with the City's priorities for transit.*

This report responds to the above directions of Council and Committee.

## **ISSUE BACKGROUND**

The current Official Plan emphasizes the need to integrate land use and transportation planning. The Plan's transportation policies are primarily found in various sections of Chapter Two, "Shaping the City". The transportation policies are integral to supporting the Plan's city-building vision, particularly as that vision relates to managing growth in a sustainable manner and creating vibrant neighbourhoods that are part of complete communities.

The Official Plan's growth management strategy rests on the key concept of directing development to targeted growth areas, namely: the Downtown and Central Waterfront; the Centers; the Avenues, and the Employment Lands. These growth areas comprise about 25% of the City's land area and have relatively good road and transit access. The Plan's transportation policies build on this pattern of success by seeking to align future increases in transportation capacity to serve the future needs of the targeted growth areas and so support, direct and shape development towards the attainment of the overall city-building vision.

In the higher density, mixed use growth areas (Downtown, Centres and Avenues), the Plan's aim is to create a virtuous, self-reinforcing cycle of sustainable development growth by further improving transit service in these already transit-friendly areas to support future development. The Plan's policies also call for planning, engineering and urban design practices that will strengthen this cycle by making the mixed use areas more pedestrian and cycling friendly and, with greater opportunities for people to live and work locally, creating healthier more complete communities that are less dependent on the automobile.

Reducing automobile dependency also needs future development growth to be transit-oriented, as well as creating more opportunities for shorter trips so that cycling and walking can better compete with the car. Integrating land use and transportation planning is key because the overall aim is to increase accessibility. Accessibility has two components: mobility (transportation) and proximity (land use). Increasing mobility or the speed of travel allows more trip opportunities to be realized within a given time, whereas increased proximity achieves the same effect by bringing more trip-ends closer together. The Official Plan recognizes the importance of having mutually supportive land use and transportation policies that combine to maximize accessibility.

To date, the land use end of the Official Plan's accessibility goal is working very well and development is being successfully directed to the targeted mixed use growth areas. For example, 82% of new residential development is proposed in the targeted mixed use growth areas. What has not been seen to be working so well is the transportation side of the equation. Since the Plan's inception, investment in transit has continued to lag the City's economic and population growth. Despite policies aimed at improving pedestrian and cycling conditions, practical progress in these areas has also been slow. Yet, with plans for the number of people and jobs in the City to grow by 18% and 25% respectively between 2011 and 2031, there must be a greater commitment to increasing travel choices (by transit, cycling and walking) if traffic congestion is to be reduced and sustainable growth realized. Given attractive and viable alternatives, even more people will choose to leave their car at home.

The private sector is largely building where the Official Plan directs new development. However, it is the failure to fund the necessary, accompanying transportation infrastructure that has impeded the implementation of the virtuous cycle of sustainable development growth envisaged by the Official Plan. To some extent, particularly with respect to new investments in rapid transit lines, the Plan fails by not providing a sufficient level of detail. Map 4, Higher Order Transit and Map 5, Surface Transit Priority Network of the Official Plan illustrate where transit service will be improved or expanded in the future to serve the pattern of development growth anticipated in Map 2, Urban Structure. Combined, Maps 4 and 5 provide an array of transit improvement options but do not explicitly identify technologies, priorities or timelines nor are there policy statements to give direction on these matters.

Recent decisions by Council have directed Planning staff to develop a long-term, comprehensive rapid transit plan as part of the Official Plan review and public consultation process. This provides the opportunity to reinvigorate the City's commitment to transit by developing an explicit rapid transit decision making framework with clear criteria to inform how the rapid transit network should expand to support the City's broader city-building objectives. By exposing these criteria to extensive public discussion and showing how the decision making framework can be applied to test different transit policy options, a broader public understanding and greater support for funding expansions to the rapid transit network can be gained.

It is clear, based on the experience of past rapid transit plans for Toronto, that there is a need to make a long-term commitment to develop the system as an integrated network. It is important that individual project priorities are identified within a network-building context in order to expand upon the existing rapid transit system by building new lines that will make the future (2031) network even more responsive to the pattern of land use development and projected trip growth. Furthermore, the adoption of a comprehensive, city-wide, long-term rapid transit network plan will provide political and financial certainty and stimulate investment and economic growth in the City.

All too often in the past, rapid transit lines have been built in response to short-term expediencies and the system has grown through an ad hoc, one-line-at-a-time approach. Such lines can bring benefits to the areas through which they pass but may well overlook or forego the larger, network building benefits that result when lines are selected for their contribution to the achievement of a comprehensive, long term network plan. A disconnected, incremental, piecemeal approach to network development offers few advantages, not even that of flexibility. Monitoring processes can be built into network plans so that adjustments to shifting priorities can be accommodated in a rational manner and broad city-building objectives preserved. In something of a paradigm shift, the revised Official Plan rapid transit policies will give greater recognition and weight to the network approach, not just in developing a rapid transit system but in building an integrated transportation system that embraces all modes of travel at both the local and regional scales.

The current cycling and pedestrian policies are high-level and need to be made more prescriptive, detailed and specific. It is proposed that a bicycle policy framework be incorporated into the Official Plan to guide City staff and Council decisions about how and where to make investments and expand the bicycle network. To bolster the pedestrian policies it is proposed that the “complete streets” concept be explicitly introduced into the Official Plan to give formal recognition and support to the idea that City streets should be designed to safely balance the needs of all road users.

Although transportation is justifiably among the public’s top concerns in the City, there are reasons for optimism, particularly with respect to correcting for the lag in rapid transit funding. Currently, the City is experiencing an unprecedented investment of over \$12 billion in seven major rapid transit projects that are largely being funded by the Province, with lesser contributions from the City and Federal governments. These projects are expected to be completed by 2020 so there is much on the City’s rapid transit plate at present.

The Province, through its agency Metrolinx, produced a 25-year Regional Transportation Plan known as “The Big Move” in 2008. This comprehensive plan provides the framework for moving ahead on the region’s transportation agenda and all municipal plans will be required to conform with the provisions of “The Big Move”. In this light, the City’s review of its Official Plan is timely and will inform the City’s position on the Metrolinx regional transportation planning program.

There are other transportation policies in the Official Plan which will be brought forward for public review and Council direction, including those pertaining to auto travel, surface transit priority, travel demand management (TDM), mobility hubs, goods movement, vehicle parking and transportation rights-of-way protection.

Matching the many-faceted outcomes of transportation planning with those of land use planning to help achieve the desired city-building vision is a difficult task in a dynamic, complex, mature urban system the size of Toronto. Conveying a sense and understanding of the scope of this task to the public is important in achieving the level of acceptance of and belief in the Official Plan that is so necessary for its success. With everyone behind the Plan and feeling ownership of it, the vision for the City's future as articulated in the Official Plan will be realized. For this reason, this Official Plan review places significant emphasis on engagement.

## **COMMENTS**

### **1. "FEELING CONGESTED?" - GENERAL OVERVIEW**

To accomplish the review of the transportation policies of the Official Plan in the most effective and inclusive manner, the Chief Planner launched the exciting and creative "Feeling Congested?" initiative in January, 2013. From the outset, this initiative has placed great effort on developing a public consultation program that reaches out and engages as wide an audience as possible by both conventional and novel means. The attempt has been to bring a wide variety of new voices into the conversation and to remove barriers to participation wherever possible. By increasing access to evidence and data, as well as transportation planning methodologies, the intention has been for the "Feeling Congested?" initiative to foster a meaningful discussion of Toronto's transportation issues, leading towards a common understanding of the challenges facing us.

To summarize, the key objectives of the "Feeling Congested?" consultative process are:

1. Review and refine the existing transportation policies in Toronto's Official Plan.
2. Make Toronto's Official Plan more directional by establishing decision-making criteria to inform how transportation infrastructure decisions, and especially transit expansion decisions, should be made.
3. Establish Toronto's transportation priorities based on that decision-making framework.
4. Solicit the City of Toronto's feedback on Mextrolinx's next wave of priority projects and on Torontonians' opinions related to proposed funding tools.
5. Provide greater clarity to public and private sector partners on the direction of the City's transportation infrastructure investment.
6. Provide a stronger alignment between transit planning and land use planning.

The "Feeling Congested?" initiative is being pursued in three phases:



- Phase 1: Development and review of decision-making criteria and an assessment of revenue tools
- Phase 2: Identification of priority transit projects, a priority transit network, and refinements to other Official Plan transportation policies
- Phase 3: Alignment of the City's and Metrolinx's priorities for rapid transit investment and funding strategies.

Phase 1 has been completed and Phase 2 is currently underway. The early phases of the process focussed on the development of a decision making framework for rapid transit projects that prioritizes individual proposals within an overall transit network planning context.

## 2. "FEELING CONGESTED?" PHASE 1

Phase 1 of "Feeling Congested?" focussed on developing the criteria and methodology to define a rapid transit network and related priorities as well as to provide feedback to Metrolinx's Investment Strategy and "Next Wave" project proposals. When the current wave of transit construction in the City is complete in 2021, Toronto will be faced with difficult choices about how to prioritize transit investments. The current Official Plan does not contain an evaluation framework to help determine what these future transit priorities should be. Phase 1 of the "Feeling Congested?" initiative begins to address this shortcoming by taking the first steps in the development of a decision making framework to help identify rapid transit priorities in a network context. The ultimate objective is to put in place a clear and publicly accepted process for evaluating rapid transit proposals on a network scale that will give greater direction to the transit policies of the Official Plan and provide firmer guidance about how the transit network should evolve.

The proposed decision making framework comprises three stages:

- **Primary Evaluation** that establishes core criteria against which transit projects are scored. These scores measure the degree of "local policy fit" based on the policy direction of the existing Official Plan.
- **Implementation Screen** that addresses issues of deliverability, constructability, governance and project readiness.
- **Strategic Fit** which allows for consideration of broader elements that guide project programming such as the availability of funds, dollar savings from delivering projects in parallel or in succession and the additional network benefits of delivering two projects together.

The focus in Phase 1 of the "Feeling Congested?" initiative has been on the Primary Evaluation stage. The first task here was to identify a set of principles on which the evaluation process is to be founded, along with a set of measurable criteria that enable a consistent and comparable articulation of these principles. A review of more than 20 frameworks (including Metrolinx's) for evaluating transit projects produced by cities, counties, regions, countries and academics from around the world revealed substantial

consistency between the frameworks used in different jurisdictions. The generally accepted approach is to establish the goals of the projects and the tools or measures used to evaluate the projects' abilities to achieve them. The different evaluation frameworks which were reviewed tend to have common goals that cluster around three principles relevant to Toronto. These goals are that the rapid transit network should be developed for People, Places and Prosperity.

These three broad principles and eight specific criteria which can be used to evaluate them were put forward for public review during Phase I of the City's "Feeling Congested?" campaign. The eight criteria were also assessed as part of an Ipsos Reid survey of over 1,500 City residents. Based on the public's feedback, all of the criteria were seen to be of value but among the three most important criteria were: (i) Affordable; (ii) Experience, and; (iii) Supports Growth. In response to comments received, some of the criteria were refined to make them clearer and more distinct. The final list of the eight criteria carried forward consists of:

- **Choice** – develop an integrated network that connects different modes to provide for more travel options
- **Experience** – capacity to ease crowding/congestion; reduce travel times; make travel more reliable, safe and enjoyable
- **Social Equity** – provide everyone good access to work, school and other activities
- **Shaping the City** – use the transportation network as a tool to shape the residential development of the City
- **Healthy Neighbourhoods** – changes in the transportation network should strengthen and enhance existing neighbourhoods; promote safe walking and cycling within and between neighbourhoods
- **Public Health & Environment** – support and enhance natural areas; encourage people to reduce how far they drive
- **Affordable** – improvements to the transportation system should be affordable to build, maintain and operate
- **Supports Growth** - investment in public transportation should support economic development; allow workers to get to jobs more easily; allow goods to get to markets more efficiently

Although some of the criteria are complementary (e.g. improving Experience is likely to improve Public Health & Environment), it should also be recognized that, in some cases, tension or conflict can exist among the criteria. Obviously, the rapid transit proposals will not perform equally on each of the criterion and this variability provides the opportunity to test policy options regarding what type or quality of transit network results from weighting the criteria differently. For example, a policy to weight scores on the Social Equity criterion will often select, as top priority, those rapid transit projects that serve areas with lower population density and ridership levels, and which score poorly on the Experience and Shaping the City criteria. Similarly, to weight the Supports Growth criteria more heavily than the others results in the selection of top priority rapid transit proposals that produce a pattern of network expansion that favours serving business areas over that of serving residential areas. The systematic testing of transit policy

options based on different weightings of the evaluation criteria was formalized in Phase 2.

Phase I of the “Feeling Congested?” initiative also sought feedback regarding what revenue tools would be most appropriate for generating the funds required to build transit projects and expand the network. The City Manager's report of April, 2013 (see EX31.3 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.EX31.3>) summarizes the findings of Phase 1 public consultation process with respect to revenue tools. Funding considerations become an important part of the third and final "Strategic Fit" step of the rapid transit decision making framework.

In summary, the Phase 1 “Feeling Congested?” public consultation process included:

- A project website ([feelingcongested.ca](http://feelingcongested.ca)), including key facts and other important background material, as well as an interactive feedback tool (Metroquest) that attracted 12,000+ visits and 6,700+ responses;
- Four public meetings (West, East, North, Downtown) that attracted over 400 participants;
- A discussion panel held at St. Lawrence Centre that attracted over 400 participants;
- A working session with key stakeholder organizations (invitations were sent to 48 organizations and 26 organizations sent representatives);
- An active Twitter account, with 484 tweets and 1,292 followers;
- A Facebook page with 323 “likes”;
- Email submissions and letters (50); and,
- An earned media campaign that generated a media reach of over 51 million listeners/readers.

### **3. "FEELING CONGESTED?" PHASE 2 (PART 1)**

Phase 2 saw the application of the draft rapid transit decision making framework to an identified set of currently approved rapid transit proposals. In addition, a draft bicycle policy framework was developed along with the introduction to the "Complete Streets" approach to street design for inclusion in the revised Official Plan. These three themes of analysis were all presented in the "Feeling Congested? Phase 2 Toolkit" which included a 26 page booklet and a series of four cards designed to capture public feedback.

#### **3.1 Applying a Draft Rapid Transit Decision Making Framework**

An early task of Phase 2 was to establish the rapid transit projects to be evaluated by the decision making framework. Following the directive of PG16.16 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PG16.16> (July 11, 2012), these projects were identified as a total of 36 unfunded rapid transit projects (including 11 GO Rail proposals) that have previously been approved by either Metrolinx or the City (Attachment 1).

There is considerable overlap among the 25 non-GO Transit proposals of Metrolinx and the City. For example, of the 18 projects from Metrolinx's "The Big Move" (2008), only four fail to appear in the Official Plan. An early decision by Planning staff was to remove the proposal for rapid transit in the Finch Hydro Corridor from the project evaluation list for its failure on a number of city building criteria. Although the Hydro Corridor transit project is included in the current Official Plan, it was not made part of the regional transit network subsequently recommended by Metrolinx in "The Big Move". The 24 other unfunded, rapid transit projects can be grouped into four categories indicating their provenance by source of approval(s):

- Metrolinx "Next Wave" (4, of which 2 are already in the Official Plan);
- Metrolinx "The Big Move" beyond the "Next Wave" (14, of which 12 are already in the Official Plan);
- City's Official Plan Map 4 which are not in "The Big Move" (4);
- "Others" approved by City Council (2).

All 24 transit projects are considered "good" proposals and each is listed and described in Attachment 1 (along with the 11 GO Transit proposals).

In order to apply the criteria to the 24 rapid transit proposals, quantifiable measures had to be identified by which to assess their performance. By this means a numerical decision making framework was created.

At the core of the Draft Rapid Transit Decision Making Framework is a numerical evaluation matrix which comprises 23 rows (measures of the eight Criteria) and 24 columns (transit projects) (Attachment 2). This evaluation matrix forms the basis upon which to create a computer generated ranking of the 24 rapid transit projects determined by their scores across the 23 measures. The computer scores were then further evaluated by a number of informed professionals (experts) in the field to create a new base case "composite" scoring and ranking of the projects. The base-case scoring was then varied by assigning, in turn, a greater weight to each of the eight evaluation criteria. The scoring was also applied to selected combinations of weighted criteria. The results of five of the weighting options were selected and presented for illustrative purposes in a series of maps for public discussion in the "Feeling Congested? Phase 2 Toolkit". The ranking of individual rapid transit projects differs between the options requiring policy choices to be made in order to reach a final project prioritization and recommended network expansion program.

The public were invited to offer their feedback and comments about the decision making framework, the quantitative indicators and the policy choices to be made. Overall, the public response was of a positive and affirming nature.

However, the feedback received included a strong desire on some of the public's part for predictable and reliable service with affordable fares. These operational considerations speak more to the day-to-day experience of using public transit and are not directly

addressed by the decision-making framework that has been developed to guide the long-term expansion of the rapid transit network.

Of greater relevance to these more immediate operational concerns is the parallel analysis that City Planning and TTC staff are currently undertaking to select those heavily used bus and streetcar routes that should be designated for "surface transit priority" treatment in the Official Plan. The analysis builds on the TTC's "Bus Plan" (2009) that targeted 24 bus routes for more frequent and (some) express service. These priority surface transit lines fill in many of the blank or underserved areas on the rapid transit project maps to provide better overall network coverage and further feed the use of the rapid transit lines.

### **3.2 "Complete Streets" for "Complete Communities"**

The "Feeling Congested? Phase 2 Toolkit" introduced for public discussion the proposal to include the concept of "Complete Streets" in the revised Official Plan to give greater direction and firmer commitment to the City's approach to street design. The "Toolkit" provided an interim example of the definition of "Complete Streets" based on the US Safe and Complete Streets Act of 2011 which reads:

*The terms 'complete streets policy' and 'complete streets principle' mean a transportation law, policy, or principle at the local, State, regional, or Federal level that ensures:*

*(A) the safe and adequate accommodation, in all phases of project planning and development, of all users of the transportation system, including pedestrians, bicyclists, public transit users, children, older individuals, individuals with disabilities, motorists, and freight vehicles; and*

*(B) the consideration of the safety and convenience of all users in all phases of project planning and development.*

Currently, the design of streets in Toronto involves many divisions, agencies, stakeholders, as well as by-laws, design specifications and technical requirements. This sometimes results in competing and conflicting objectives, and a clear overarching mandate is required to guide solutions. A part of that mandate can be defined through the revised transportation policies of the Official Plan which should lend stronger support to the view that pedestrians and other vulnerable users of the streets must be given due consideration in the overall design solution. The "Complete Streets" concept has emerged from a global movement focused on encouraging good street design that provides a fair balance for all users and establishes the preconditions for building "Complete Communities".

In support of the policies to be introduced into the Official Plan and to assist in their implementation, staff in City Planning, Transportation Services, Engineering Construction Services and Toronto Water are currently working collaboratively to develop, through a parallel exercise, a Complete Streets Guidelines document that considers all of the technical standards, by-laws, and other guidelines that govern or

impact the planning and design of streets. The Guidelines will provide design options and establish a more co-ordinated and streamlined process for implementing the “Complete Streets” philosophy.

To a large extent, the “Complete Streets” philosophy is already captured in the built form and transportation policies of the existing Official Plan and in other City policy documents and guidelines such as the Walking Strategy and the Streetscape Manual. However, these policies need to be pulled together in a more cohesive, explicit and forceful manner under the banner of “Complete Streets”. Phase 3 will continue to more fully develop a set of policy proposals around the “Complete Streets” concept to present to the public for further understanding, feedback and acceptance. The public response from Phase 2 indicated support for strengthening the City's Official Plan's policies regarding street design.

### **3.3 Developing a Draft Bicycle Policy Framework**

Bicycles are an increasingly important element of our movement system, and making consistent, balanced decisions about how and where to invest in bicycle infrastructure is crucial to the health of the City’s transportation network.

A draft bicycle policy framework is being designed to guide City staff and Council decisions about how and where to make investments and to grow the bicycle network. An outline of the proposed framework was presented in the “Feeling Congested? Phase 2 Toolkit” for public discussion and input.

The proposed draft Bicycle Policy Framework presents an organizing structure and the key corridor elements required to structure an integrated, comprehensive bike network for the city.

There are two primary areas in the Framework:

- Area 1: Downtown, where cycling is already well-established and represents a relatively high proportion of trips overall. Cyclists in this area generally make daily trips of varying lengths.
- Area 2: Other areas, where cycling is less common, and generally limited to shorter, local trips.

The proposed Draft Bicycle Priority Framework is structured on a 2 km grid which represents the ideal minimum distance between cycling facilities. It is also structured on a 4-6 km major grid of ‘priority corridors’.

Although the proposed Framework does not specify streets or public areas to be designated as cycling facilities, consideration will be given to establishing University Avenue, Yonge Street, Bloor Street-Danforth Avenue, and Eglinton Avenue as Priority Corridors.

The public consultation process revealed a strong, and among some, enthusiastic support for strengthening the Official Plan's policies on promoting cycling across the City. There was general agreement that the current Official Plan's cycling policies are of too general a nature and need to be made more specific and directive to be effective.

### **3.4 Summary of Public Consultation.**

The Phase 2 consultation process included:

- The production of a user friendly "Toolkit" for public distribution;
- A project website (feelingcongested.ca), including key facts, white board video, and other important background material, as well as an interactive feedback tool that attracted over 2,000 visits;
- Ten surprise intercepts with over 60 volunteers from the City of Toronto and the general public that engaged over 7,000 people at transit locations across Toronto;
- Four meetings on-the-move (Walking, Cycling, Driving, TTC bus tour) that attracted 150+ participants;
- Two discussion panel that attracted over 300 participants;
- Two working sessions with key stakeholder organizations (invitations were sent to 48 organizations and 26 attended);
- An active Twitter account, with 674 tweets and 1,682 followers and 3,748 total interactions (as of October 30th, 2013);
- Ward based Councillor hosted workshops (24);
- A Facebook page with 359 "likes";
- Extensive media coverage; and
- Social Advertising Campaign.

## **4. "FEELING CONGESTED?" PHASE 2 (PART 2, UNDERWAY)**

Currently, work to further substantiate and prepare for another round of public engagement is proceeding on all three of the major themes of the "Feeling Congested?" initiative: (i) developing a comprehensive rapid transit network plan; (ii) advancing the "Complete Communities" concept, and (iii) developing a bicycle policy framework. Other revised Official Plan transportation policies, such as those relating to transportation demand management (TDM), parking, goods movement and mobility hubs, will also be brought forward for public discussion.

### **4.1 Refining the Evaluation Criteria and their Measurement.**

The quantitative indicators used in the decision making framework have been refined to reflect the comments received during first part of Phase II. The refinements are intended to make the measures more precise and better reflect how each proposed line fits into the rapid transit network as a whole. Also, a significant effort has been put into gathering data from outside the City's borders to be able to extend the measures to cover the

entirety of lines instead of just those parts falling within the City. The limited coverage of some of the measures was identified in the comments from Phase II as one of the weaknesses of the framework. The full list of currently used measures and their descriptions can be found in Attachment 3. The following briefly summarizes some of the key points which guided the selection of the measures.

### **Experience**

The true impact of a line is not captured by looking at the ridership on the line. Due to the network nature of rapid transit (and transportation in general), a new line will result in a redistribution of travel across the entire network. As such, the key measure is new ridership in the system. The current crowding occurring due to the capacity limitations of the Yonge subway is a significant constraint to the system as a whole. Therefore, the impacts of a proposed rapid transit project on ridership levels on the Yonge line south of Bloor, where the capacity is most constrained, is taken as an evaluation measure. An accessibility measure (described in more detail below) has also been incorporated to evaluate the impact of each line on the ease by which transit users can access opportunities across the region.

### **Choice**

The number of transfer stations and number of alternative connections available give a theoretical sense of the ease and ability to transfer between different lines which open up different possibilities for travelling through the network. A better connected network will have more of both of these. The average number of transfers gives a sense of how the network is used in practice to get people where they want to go. A more direct and easier to navigate network will have fewer transfers.

### **Social Equity**

One goal for the transit system is to extend it to cover all areas of the City and so coverage is used as a measure. Priority Neighbourhoods are used as a proxy for areas of the City which are currently underserved by services as compared to other areas of the City. To serve more of the residents of these areas and to improve the accessibility of these areas to bring them closer to parity with the rest of the City would be to ensure that everyone has good access to work, school and other activities.

### **Shaping the City**

The Official Plan promotes a vision of transit-supportive, mixed-use development occurring along the Avenues throughout the City. To support these land use goals, lines passing through Mixed-Use Growth Areas score higher than other lines, as do those lines which serve areas of higher projected population growth. In addition to serving future development, the Official Plan also calls for improved service for the existing population and population served per line length is taken as an evaluation measure.

### **Healthy Neighbourhoods**

The Healthy Neighbourhoods criterion, by its nature, is mostly affected by specific design details of the line but there are larger aspects of the line which are significant. The Official Plan recognizes that new rapid-transit services can be very disruptive to the



neighbourhoods through which they pass as they tend to require intensification around stops to be successful. As such, lines passing through "Neighbourhood" and "Apartment Neighbourhood" designated lands are penalized and areas with a relative balance of population and employment are favoured. Also, the Transit Convenience Index is designed to provide a comparative measure of how easy or convenient it is for riders to access the proposed rapid transit project by walking or cycling.

### **Public Health and Environment**

Public Health and Environment are combined in a single criterion because they are so closely related. A reduction in vehicle kilometres travelled (VKT) will tend to benefit both public health and the environment through the associated reduction in emissions of various pollutants. These emissions reductions can also be achieved from increases in the transit mode share. A greater share of trips by transit also likely means an increase in the amount of walk or cycle access to transit. Public Health and Environment issues will be further considered in the "Strategic Fit" component of the decision making framework.

### **Supports Growth**

The Official Plan recognizes that the rapid transit network is an important contributor to and shaper of economic growth and can influence the pattern of employment growth in the City. As such, lines which pass through areas designated for economic growth by the Official Plan score higher than other lines, as do lines that serve areas with higher projected employment growth. The Official Plan also calls for enhanced services and infrastructure to bolster existing employment areas and so the number of existing jobs that would be served along a proposed rapid transit project is also considered.

### **Affordable**

The Affordable criterion assesses whether the line is affordable from the system operator's perspective to build, maintain and operate. It is critical to look at the lifecycle costs of projects to fairly compare them in order to determine which option serves riders at the lowest cost. Unfortunately, only capital cost estimates of the lines are available at this time but maintenance and operating costs will be incorporated in future work.

## **4.2 Identifying "Top-Performing" Projects**

The process of testing various criteria weighting combinations in Phase 2 revealed that, regardless of which combination is tested, there are some rapid transit projects that consistently outperform many of the others. The projects that have consistently scored as the top five unfunded rapid transit proposals are the Waterfont West LRT, Don Mills LRT, Relief Line (East), Scarborough Malvern LRT and Waterfont East LRT. The next five rapid transit proposals include Durham-Scarborough BRT, Jane LRT, Steeles West LRT/BRT, Relief Line (extension to Eglinton Avenue), and Eglinton LRT extension to Pearson Airport.

Underperforming transit lines are in many ways still worthy projects, however, on the basis of the preliminary Phase 2 analysis, they may not appear suitable for inclusion in any near-term rapid transit network building program. As such, these transit projects

could be excluded from the final evaluation steps of the rapid transit decision making framework process.

### **4.3 “Accessibility” as a Key Evaluation Metric**

Accessibility is a theoretical construct which is more about travel opportunities than revealed choices or outcomes. Accessibility is a combined measure of mobility and proximity, enhanced by either increasing the speed of getting from point A to B (mobility) and/or by bringing points A and B closer together (proximity).

Accessibility measures have been developed as numerical ways to describe how easy it is for people to get to where they want to go in terms of the number of trip destinations which can be reached from a given origin within a certain period of travel time. Recently such measures have entered the mainstream with the popularization of "Walkscore" and similar indices. Typically, accessibility measures are tailored to look at certain types of trips (work, school, medical) over certain geographic areas within a given travel time band by a particular mode.

City Planning staff are currently exploring the applicability of specially crafted accessibility measures related to certain of the Toronto evaluation criteria. These improved measures will be incorporated within the rapid transit decision making framework to assess, at the regional level, the impact that a proposed rapid transit project has on expanding the choice for different types of travel opportunities. To date, this work has resulted in the application of three indices:

- (1) Transit Jobs Accessibility Index to be applied to the Experience criteria;
- (2) Priority Neighbourhoods Jobs Accessibility Index Differential to be applied to the Social Equity Criteria, and
- (3) Transit Convenience Index to be applied to the Healthy Neighbourhoods criteria.

Further details regarding how these measures are calculated can be found in Attachment 4.

The application of Accessibility Indices to the evaluation matrix results in a substantial re-ordering of transit project priorities among the top performing routes. The Accessibility Indices provide excellent measures of how, for certain criteria, each rapid transit project enhances overall network effectiveness to serve the given land use pattern.

### **4.4 Incorporating GO Rail Proposals into the Rapid Transit Decision Making Framework**

An important part of the Phase 3 “Feeling Congested?” work program is the incorporation of the 11 GO Rail proposals into the Rapid transit Decision Making Framework. The GO Rail network is fundamentally different from other rapid transit services in the City. GO Rail charges premium fares and primarily serves peak-period

commuter flows into and out of Union Station with the focus on serving longer, inter-regional trips requiring higher travel speeds and wider station spacings. In this light, GO Rail projects represent a separate class of rapid transit projects from the other 24, more local, projects that are being evaluated. To a degree, the evaluation criteria are relevant to all types of transportation projects but, up to this point, the measures have been applied to assess the more local impacts of rapid transit projects operating primarily within the City.

A major difficulty in evaluating the GO projects in the same framework as the other 24 projects is that the service characteristics of the proposed GO Rail projects are much less well defined than the other projects. Operating speeds, headways, fare structure and even station locations on the proposed GO lines have not been described to the same level of detail as for the other projects. All of these factors play significant roles in determining the attractiveness of the lines and their ridership as well as their impact on the accessibility measures for the region. Without reasonable assumptions about station locations, none of the measures can be calculated. It is not clear whether the GO system will continue with its relatively lengthy station spacings or if distances between stations will become shorter as a result of some of the proposed projects, such as electrification. The framework used for the other 24 projects only considers new stations. For those GO Rail proposals which do not include new stations, it is unclear as to what stations would be evaluated in the framework.

Together, these considerations make a restructuring of the evaluation framework when it is applied to non-local projects essential for a fair comparison. The criteria have to be applied in a less structured, more qualitative manner, with an eye to what is reasonable and likely to occur given the vague project definitions. During the individual rating, the GO Rail projects will be judged in the same way as the local projects, considering both the individual measures and the statements regarding what factors each criterion is intended to gauge. The broader regional aspects of the project will be considered during the "Strategic Fit" stage of the evaluation process. Ultimately, the goal is to produce a comprehensive rapid transit decision making framework that is able to blend the development of the GO Rail network with the development of the local rapid transit network to produce a maximally efficient outcome.

## **5. PHASE 3 CONTINUING ANALYSIS AND PUBLIC CONSULTATION**

Although the discussion of developing a comprehensive rapid transit network plan has somewhat dominated the summary of Phases 1 and 2 of the "Feeling Congested?" initiative, substantial work in other important areas of transportation policy is underway in Phase 3 as part of the Official Plan review. Particular mention has already been made of the continuing review of cycling policies and the formal adoption of the "Complete Streets" philosophy into the Official Plan. These two initiatives are currently the subject of productive internal discussion among inter-divisional City staff and there is a collaborative effort underway to bring forward more detailed policy proposals in these areas for public input and Council direction.

Less visible, to this point, is the continuing work of City and TTC staffs to frame a revised surface transit priority policy with a network of identified bus and streetcar priority routes for inclusion in the Official Plan. As noted above, part of this work will build upon the TTC's "Bus Plan" (2009) which identified where service upgrades are most needed. A clear definition of what is meant by "surface transit priority measures" needs to be agreed on and the conditions under which the application of these measures might be warranted need to be elaborated. Buses and streetcars are just two of the many competitors for scarce road space and one mode cannot automatically be given priority over the concerns of all the others. An element of pragmatism has to be brought into the application of most urban planning policies. However, the TTC's bus and streetcar routes are vital parts of the City's transit system. Approximately seventy percent of all TTC trips involve travel by bus or streetcar. The extensive surface route network feeds and supports the sparser rapid transit network and bus and streetcar services are key to serving those interstitial areas of poor rapid transit coverage.

Inter-divisional and agency reviews of a range of other Official Plan transportation policies are also currently underway. Included are policies on: goods movement; transportation demand management (TDM); vehicle parking, and Mobility Hubs. In this context, it should be noted that a number of recent reports from Toronto Public Health have urged for greater recognition in the Official Plan of the important connection that land use and transportation planning have for the health of those living and working in the City. There is a new emphasis on developing "active cities" that encourage people to walk, cycle and take transit. Policies to address all these transportation planning issues are being developed at the staff level and the expectation is that they will be brought forward for public consultation in Phase 3 of the "Feeling Congested?" initiative.

A final piece in the formulation of a comprehensive rapid transit network plan is the undertaking of the concluding "Strategic Fit" and "Implementation Screen" steps of the three-step rapid transit decision making framework. The primary evaluation matrix generates a transparent and largely numerical assessment of rapid transit network priorities under different policy choices or criteria weightings. The primary evaluation analysis informs but does not determine the final recommendations on the development of a comprehensive rapid transit network plan.

The Strategic Fit step allows for consideration of broader elements that guide project programming, such as:

- The availability of funds;
- Dollar savings from delivering projects in parallel or in tandem;
- The additional network benefits of delivering two projects together;
- The necessary speed of capacity expansion which will guide the balance of investment in the short versus long term;
- The need to over-program to allow for program slippage, and/or;
- The assessment of the project's contribution towards completing the city's transportation network in a geographically balanced manner.

These considerations have been operationalized and are described further in Attachment 5.

The Strategic Fit step will be informed by public and stakeholder consultation, including Metrolinx and the TTC. This may result in projects being individually ranked or alternatively put in to two or three groupings with different priority levels.

Finally, the Implementation Screen addresses the issues of deliverability and constructability of a project – the practical challenges of how a particular project may be built, and the variegated nuances in design, site characteristics, etc. that are unique to each project.

Such a rapid transit decision making framework will establish a firm connection between the goals and vision of the Official Plan. Evidence will support a sound prioritization process, and maximize the benefit of spending on transit.

## **5.1 Work Program and Schedule**

Interim progress reports to Planning and Growth Management Committee will be advanced in the second quarter of 2014 documenting further progress made towards completing the Phase Two work program.

The first report, in April, will recommend revisions to other transportation policies which could potentially be endorsed by the Planning and Growth Management Committee and Council in advance of the conclusion of the "Feeling Congested?" campaign. For example, proposed revisions to policies pertaining to travel demand management, goods movement, and the protection of road rights-of-way could advance subject to the outcome of public and stakeholder consultations planned for the first quarter of 2014. Consultation events to be organized will include workshops and public open houses in addition to updates to the "Feeling Congested?" website and a social media campaign.

The second report, in June, will provide an update on work focussed on determining preliminary priority transit projects, taking into consideration both City of Toronto and regional transit initiatives. The report will also detail emerging directions pertaining to the "Bicycle Policy Framework" and "Complete Streets" policies that are consistent with the cross-Divisional effort to produce Complete Streets guidelines. These topics will also be the subject of an updated "Feeling Congested? Phase 2 Toolkit" which will be distributed widely to Councillors and stakeholders, and will be mirrored on the "Feeling Congested?" web-site for broader public dissemination. The report will also outline next steps concerning ongoing work for the balance of 2014 and the first quarter of 2015.

Completion of the "Feeling Congested?" campaign is scheduled by the second quarter of 2015 and will conclude with the finalization of a draft comprehensive transit plan, a "Bicycle Priority Framework" and "Complete Streets" policies and any other outstanding transportation policies reviews.

A statutory public meeting will be held in accordance with the requirements of the Planning Act following the endorsement of all draft Official Plan transportation policy amendments by City Council, likely in the third quarter of 2015.

## **CONCLUSIONS**

This report describes the approach being taken to review the Official Plan's transportation policies and to provide an update on the progress made to date. The review is a timely opportunity to further strengthen the integration of the City's land use and transportation policies and advance the Official Plan's city-building vision of creating sustainable and complete communities.

The "Feeling Congested?" initiative is being pursued in three phases:

- Phase 1: Development and review of decision-making criteria and an assessment of revenue tools
- Phase 2: Identification of priority transit projects, a priority transit network, and refinements to other Official Plan transportation policies
- Phase 3: Alignment of the City's and Metrolinx's priorities for rapid transit investment and funding strategies.

Public consultation will be a key component of each phase. It is expected the review process will conclude in 2015 with a final round of public consultation and recommendations brought forward at the end of Phase 3.

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## **SIGNATURE**

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## **ATTACHMENTS**

Attachment 1: Project List  
Attachment 2: Preliminary Rapid Transit Project Scoring Matrix (Spring 2013)  
Attachment 3: Description of Numerical Measures for each of the Eight Criteria  
Attachment 4: Measuring the Concept of Accessibility  
Attachment 5: Preliminary Strategic Fit Evaluation Framework

## Attachment 1: Project List

**Table 1: List of Metrolinx and City of Toronto Unfunded Rapid Transit Proposals (excluding GO Rail)**

<u>Projects</u>	<u>Metrolinx</u>	<u>City of Toronto</u> <sup>1,2</sup>
1. Downtown Relief Line (subway)	X	X
2. Yonge Subway Extension	X	X
3. Durham-Scarborough (BRT)	X	
4. Dundas Street West (BRT)	X	X
5. Don Mills Road (LRT)	X	X
6. Eglinton Crosstown West Extension (LRT)	X	X
7. Finch West Extension to Pearson (LRT)	X	
8. Finch West Extension to Yonge Street (LRT)	X	X
9. Highway 427 South (Pearson to Kipling) (BRT)	X	
10. Highway 427 North (Pearson to Brampton) (BRT)	X	
11. Jane Street (LRT)	X	X
12. McCowan Road (BRT)	X	X <sup>3</sup>
13. Scarborough LRT Extension	X	X <sup>4</sup>
14. Scarborough Malvern (LRT)	X	X
15. Sheppard East Extension to Meadowvale (LRT)	X	X
16. Steeles West, Jane to Milliken GO (BRT/LRT)	X	X
17. Steeles East, Milliken GO to Oshawa (BRT/LRT)	X	
18. Waterfront West (LRT)	X	X
19. Bloor Danforth Subway Extension to Sherway		X
20. Kingston Road (BRT)		X
21. Sheppard West Subway (Yonge to Downsview)		X
22. Waterfront East (LRT)		X
23. Downtown Relief Line Extension (subway)		X
24. St. Clair Extension to Jane Street (LRT)		X

**Notes to Table 1:**

1. City of Toronto projects consist of those shown on Map 4 of the Official Plan and other projects endorsed by actions of Council since the adoption of the Plan.
2. City Council, at its meeting of May 7, 8, 9, 2013, in considering Clause EX 31.3 "Metrolinx Transportation Growth Funding" referred a number of rapid transit



- proposals to the Chief Planner and Executive Director City Planning for consideration in the report scheduled for Planning and Growth Management Committee in November, 2013, which would add to the list of City proposals in Table 1 as follows:
- a) Replace the Scarborough RT line with an underground extension of the Bloor-Danforth subway line to Scarborough Town Centre and north to Sheppard Avenue;
  - b) The extension of the Sheppard Subway line from Don Mills Station to Scarborough City Centre;
  - c) Construct a subway along Finch Avenue west from the University-Spadina Subway line to Humber College; and,
  - d) Further extension of the Sheppard East LRT from Meadowvale to the Toronto Zoo.
3. The Official Plan only provides for the McCowan BRT between Scarborough City Centre and Finch Avenue
  4. City Council, at its meeting of July 16, 17 and 18, 2013, gave further approval to the replacement of the Scarborough RT line by extending the Bloor-Danforth subway line, subject to certain funding agreements being in place. Subsequently, at its meeting of October 8, 9, 10 and 11, 2013, City Council approved the funding for the construction of this subway line extension (CC39.5 - <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.CC39.5>)

**Table 2: Description of Metrolinx and City of Toronto Unfunded Rapid Transit Proposals (excluding GO Rail)**

NO.	PROJECT DESCRIPTION
1	<p><u>Downtown Relief Line (subway)</u></p> <p>The concept is to provide future relief to the Yonge Subway line, particularly at the critical Bloor-Yonge interchange station, by building a new subway line from the existing Danforth subway line to the Downtown with a possible westward extension along the existing rail corridor (CNR Newmarket Sub) to the Dundas West Station on the Bloor subway line. The station locations, Don River crossing point and alignment of the east DRL have yet to be determined. Apart from providing much needed relief to the Yonge Line, the DRL will serve the continued growth of Downtown's regionally important employment area. In addition, the line has the potential to serve other areas of future population and employment growth. The Downtown Rapid Transit Expansion Study (2012) found that the high-cost westward extension is unlikely to be needed in the foreseeable future if lower cost options, such as giving greater priority to streetcars, are implemented.</p>
2	<p><u>Yonge Subway Extension</u></p> <p>The six-kilometre subway extension from Finch Station to Steeles Ave and beyond to Richmond Hill will encourage development at Richmond Hill / Markham Langstaff Gateway centre. The line will connect to other rapid transit services including York vivaNext, GO and the TTC and serves extensive Mixed-Use Growth Areas.</p>
3	<p><u>Durham-Scarborough (BRT)</u></p> <p>The Durham – Scarborough BRT will serve one of Durham’s busiest travel corridors as well as Ellesmere Road in the City of Toronto. The line will provide an important connection to the University of Toronto's Scarborough Campus and to Scarborough City Centre and the Scarborough Rapid Transit line.</p>

NO.	PROJECT DESCRIPTION
4	<p><u>Dundas Street West (BRT)</u></p> <p>Dundas Street is a major east-west corridor in the GTHA, linking Toronto, Mississauga and Halton Region. The proposed Dundas Street BRT will provide 40 kilometres of new dedicated bus rapid transit lanes on Dundas Street, from Brant Street in Burlington to Kipling Station in Toronto. The 3km of line in Toronto will serve extensive Mixed-Use Growth Areas and other Targeted Growth Areas.</p>
5	<p><u>Don Mills Road (LRT)</u></p> <p>A transit route extending from the Bloor-Danforth subway (Pape Station) to connect with the Don Mills Road corridor at O'Connor extending north into York Region terminating at Highway 7 would provide a major north-south transit connection east of the Yonge Subway in an already heavily used transit corridor. This line would serve the Flemingdon Park-O'Connor Priority Neighbourhood as well as several Targeted Growth Areas. The section of this line between Danforth Avenue and Eglinton Avenue would not be built if the DRL East Extension was in place.</p>
6	<p><u>Eglinton Crosstown West Extension (LRT)</u></p> <p>An 11km extension of the Eglinton LRT line from Black Creek west to Pearson Airport, via Renforth Drive. This line would complete a rapid transit connection between Pearson and Midtown through the middle of Etobicoke. The line would directly serve employment areas around the airport and the Weston-Mt Dennis Priority Neighbourhood.</p>
7	<p><u>Finch West Extension to Pearson (LRT)</u></p> <p>The alignment of this 8.5km extension from Humber College to Pearson Airport has not yet been determined. This line would complete a rapid transit connection through northern Etobicoke to Pearson from the Finch West station on the Spadina subway extension. The line would serve most of the employment area around the airport and provide a direct link from them to the Priority Neighbourhoods of Jamestown and Jane-Finch.</p>
8	<p><u>Finch West Extension to Yonge Street (LRT)</u></p> <p>This 6.3km extension would connect the Spadina subway (Finch West Station) to the Yonge subway. This connection would greatly enhance accessibility between significant portions of the north part of the City. It would also serve the Westminster-Branson Priority Neighbourhood and a number of significant employment areas.</p>
9	<p><u>Highway 427 South (Pearson to Kipling) (BRT)</u></p> <p>Bloor-Danforth subway (Kipling Station) to Pearson Airport via Dundas/Hwy 427. This line would enhance the existing bus service between the Bloor-Danforth subway and Pearson Airport by placing it in dedicated lanes improving the reliability of the service.</p>

NO.	PROJECT DESCRIPTION
10	<p><u>Highway 427 North (Pearson to Brampton) (BRT)</u></p> <p>Queen Street (Brampton) to Pearson Airport. This line as proposed would only pass through the City without stops as it connects Pearson Airport to the east-west busway through York on Highway 7 and Peel along Queen Street.</p>
11	<p><u>Jane Street (LRT)</u></p> <p>Bloor-Danforth Subway (Jane Station) north to Steeles Avenue, and beyond to connect to the Spadina subway extension at the Vaughan Corporate Centre. This line provides a major north-south connection in the west part of the City in an already heavily used transit corridor. It serves the Jane-Finch and Weston-Mt Dennis Priority Neighbourhoods as well as significant Mixed-Use Areas within the corridor.</p>
12	<p><u>McCowan Road (BRT)</u></p> <p>A BRT route from Progress Ave north to Steeles Avenue, and beyond to the developing Markham Centre. This would provide new connectivity between the Scarborough City Centre and Markham Centre in addition to serving Targeted Growth Areas.</p>
13	<p><u>Scarborough LRT Extension</u></p> <p>This line represents a further 3.3km extension of the Scarborough RT replacement project from the planned terminus at Sheppard Avenue to Malvern Town Centre. This extension would bring rapid transit service to the Malvern Priority Neighbourhood better connecting it to the rest of the City.</p>
14	<p><u>Scarborough Malvern (LRT)</u></p> <p>A 13.3km LRT line from Kennedy Station east along Eglinton Avenue to Kingston Rd and north along Morningside Avenue ending at McLevin Avenue to connect to the Scarborough LRT Extension to Malvern. The line includes a short diversion at Military Trail to serve U of T's Scarborough campus. This line would serve large areas of southern and eastern Scarborough including substantial Mixed-Use Areas and a number of Targeted Growth Areas. It would also bring rapid transit service to the Priority Neighbourhoods of Eglinton East-Kennedy Park, Scarborough Village, Kingston-Galloway and Malvern.</p>
15	<p><u>Sheppard East Extension to Meadowvale (LRT)</u></p> <p>Extend Sheppard East LRT from Morningside to Meadowvale and potentially into the Toronto Zoo. This would further serve the Targeted Growth Areas at the currently proposed terminus of the Sheppard East LRT and would provide a rapid transit connection to the major attraction of the Toronto Zoo.</p>
16	<p><u>Steeles West, Jane to Milliken GO (BRT/ LRT)</u></p> <p>A 17km line from the Spadina subway extension east along Steeles Avenue to the Milliken GO Rail Station. This line would connect to many other rapid transit services along the Toronto-York border including the Spadina subway extension, a potential Yonge subway extension and the Barrie, Richmond Hill and Stouffville GO Rail lines. It</p>

NO.	PROJECT DESCRIPTION
	would also serve York University, significant Targeted Growth Areas and the Westminster-Branson and Steeles-L'Amoreaux Priority Neighbourhoods.
17	<p><u>Steeles East, Milliken GO to Oshawa (BRT/ LRT)</u></p> <p>From Milliken GO Rail station east along Steeles Avenue to Oshawa. This line would extend the Steeles LRT/BRT through more Targeted Growth Areas with connections to the proposed Havelock GO Rail line, the proposed Seaton Go Rail line in Durham Region and the existing Lakeshore GO Rail line.</p>
18	<p><u>Waterfront West (LRT)</u></p> <p>The exact route of this lengthy surface LRT line has yet to be determined. Conceptually, from Union Station to Park Lawn Road, it would follow Bremner Blvd, Fort York Blvd, the existing rail corridor and the existing separated streetcar right-of-way along the Queensway. West of Park Lawn Road, the line would be in the roadway of Lake Shore Blvd, possibly extending as far west as the vicinity of the Port Credit GO station. Within the City, the line would serve a number of Mixed-Use Growth Areas and other Targeted Growth Areas, including the Exhibition Grounds, and would also improve transit access to the high density residential developments along the western waterfront.</p>
19	<p><u>Bloor-Danforth Subway Extension to Sherway Gardens</u></p> <p>Kipling Station to Sherway Gardens/Dixie GO Station. This line serves extensive Targeted Growth Areas in southwest Etobicoke and would shorten the distance within Toronto which Mississauga buses must travel to connect with the subway.</p>
20	<p><u>Kingston Road (BRT)</u></p> <p>This route would extend from Victoria Park subway station on the Bloor-Danforth subway, along Kingston Road to meet the Scarborough Malvern LRT at Eglinton Avenue. This line serves Mixed-Use Areas as well as the Priority Neighbourhoods of Crescent Town and Scarborough Village. It also has the potential to connect to the Lakeshore GO Rail line.</p>
21	<p><u>Sheppard West Subway (Yonge to Downsview)</u></p> <p>This subway line would provide a direct connection between the Yonge and Spadina subways by extending the existing Sheppard subway line 4km west. The line would only add one station to the subway network but potentially adds some operational flexibility and greatly enhances accessibility across the north of the City.</p>
22	<p><u>Waterfront East (LRT)</u></p> <p>This line would run along Queens Quay between the intersection of Queen Street and Leslie Street and Union Station by way of Commissioners Street. The connection from Queens Quay to Union Station has not yet been determined. This line is necessary to unlock the full development potential of the Port Lands, which envisages the development of more than 3 million square feet of commercial and retail space and housing for 12,500 people in the first phase alone.</p>

NO.	PROJECT DESCRIPTION
23	<p><u>Downtown Relief Line Extension (subway)</u></p> <p>This line would extend the DRL from its eastern terminus on the Bloor/Danforth line northwards in the vicinity of the Don Mills corridor to connect to the Eglinton Crosstown line. No exact alignment for this extension has yet been determined. This branch of the proposed DRL has the potential to further offload the Yonge subway and reduce the congestion at Yonge-Bloor station allowing further intensification or extension of the Yonge corridor. This line would not be built if the full Don Mills LRT down to the Danforth subway line was in place.</p>
24	<p><u>St. Clair Extension to Jane Street (LRT)</u></p> <p>This short 1.5km extension of the existing St. Clair streetcar right-of-way from Gunns Road Loop to Jane would connect the existing St Clair streetcar separated right-of-way with the proposed Jane LRT enhancing overall system connectivity.</p>

**Table 3: Description of Metrolinx GO Rail Proposals**

NO	PROJECT DESCRIPTION
<b>METROLINX "NEXT WAVE" PROJECTS (UNFUNDED)</b>	
G1	<p><u>Electrification of GO Kitchener Line and Union Pearson Express</u>                      Electrification of the Kitchener line and the Union Pearson Express will enable an increase in service levels, shorter station spacings and faster travel times at lower operating costs. The environmental assessment (EA) for electrification of the Union Pearson Express is currently underway and is expected to be completed by 2014.</p>
G2	<p><u>GO Lakeshore Express Rail Service</u>                      The GO Lakeshore Express Rail (including electrification) project will provide more frequent, faster, and higher capacity service on the Lakeshore West and Lakeshore East lines at lower operating costs. In the long-term, electrification of GO Rail services could have a transformative effect with more frequent service and the potential for more frequent station stops.</p>
G3 G4 G5	<p><u>GO Rail Service Expansion – Richmond Hill Line: Aurora Road to Union Station</u>  <u>GO Rail Service Expansion – Stouffville Line: Mount Joy to Union Station</u>  <u>GO Rail Service Expansion – Barrie Line: Bradford to Union Station</u>                      The current two-way, all-day service already in place on the Lakeshore lines will be introduced on the GO Rail lines serving the areas between Union Station and Richmond Hill, Mount Joy and Bradford GO stations allowing more communities to enjoy fast and reliable regional transit service in and out of downtown Toronto throughout weekdays and on weekends.</p>
<b>METROLINX "OTHER" PROJECTS (UNFUNDED)</b>	
G6	<p><u>Crosstown GO Rail Corridor</u>                      Dundas West Station (Bloor-Danforth subway) to Summerhill Station (Yonge subway) and beyond, using the existing rail track corridor (CPR-CNR North Toronto Sub). This line would allow GO trains to service the Dupont corridor and Yonge/Summerhill area. It could also potentially off-load some of the passenger demand from Union Station by providing GO Rail access points from the north to the core of the City.</p>
G7	<p><u>Havelock GO Rail Corridor</u>                      From Locust Hill (Markham) to Union Station via the Richmond Hill line or Summerhill Station using the existing rail track corridor (CPR Havelock Sub). This would increase the accessibility from areas of regional population growth to the region's prime employment centre in the Downtown.</p>
G8	<p><u>Seaton GO Rail Corridor</u>                      From Seaton to Union Station via the Richmond Hill line or Summerhill Station using the existing rail track corridor (CPR Belleville Sub). This would increase the accessibility from areas of regional population growth to the region's prime employment centre in the Downtown.</p>
G9	<p><u>Bolton GO Rail Corridor</u>                      From Bolton to Union Station using the existing rail track corridor (CPR MacTier Sub). This would increase the accessibility from areas of regional population growth to the region's prime employment centre in the Downtown.</p>

G10	<u>GO Express Rail Service – Milton Line: Cooksville to Union Station</u>
G11	<u>GO Express Rail Service – Richmond Hill Line: Richmond Hill/Langstaff Gateway to Union Station</u>
<p>These Express Rail projects will provide more frequent, faster, and higher capacity service on their respective lines. Electrification would enable an even greater increase in service levels and faster travel times at lower operating costs. In the long-term, electrification of GO Rail services could have a transformative effect with more frequent service and the potential for more frequent station stops.</p>	

## Attachment 2: Preliminary Rapid Transit Project Scoring Matrix (Spring 2013)

The table on this page illustrates how each rapid transit project under consideration scores against each weighted criteria. In other words, the score you see is for a scenario in which the corresponding criteria is weighted more heavily than the others.

EVALUATION CRITERIA	PROJECTS IN THE BIG MOVE REGIONAL TRANSPORTATION PLAN																		PROJECTS NOT IN THE BIG MOVE					
	Next Wave				Others														OP Map 4				Others	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
	Relief Line (Downtown to Danforth)	Yonge North Subway Extension	Durham-Scarborough BRT	Dundas Street BRT	Don Mills LRT	Eglinton LRT West Extension	Finch West LRT West Extension	Finch West LRT East Extension	Highway 427 Airport BRT South	Highway 427 Airport BRT North	Jane LRT	McCowan Road BRT	Scarborough RT/LRT Extension	Scarborough Malvern LRT	Sheppard East LRT Extension	Steeles LRT/BRT West	Steeles LRT/BRT East	Waterfront West LRT	Bloor-Danforth Subway West Extension	Kingston Road BRT	Sheppard West Corridor	Waterfront East LRT	Relief Line Extension (Danforth to Eglinton)	St. Clair Streetcar/LRT Extension
CHOICE	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
EXPERIENCE	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
SOCIAL EQUITY	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
SHAPING THE CITY	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
HEALTHY NEIGHBOURHOODS	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
PUBLIC HEALTH & THE ENVIRONMENT	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
AFFORDABILITY	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
SUPPORTS GROWTH	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
ALL CRITERIA EQUALLY WEIGHTED	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High

Very Low Score  
 Low Score  
 Moderate Score  
 High score  
 Very high score



### Attachment 3: Description of Numerical measures for each of the Eight Criteria

Criterion	Measure	Description
Experience	Transit ridership change	The 2031 forecasted change in the number of transit riders travelling during the AM peak period.
	Impact on Yonge subway	The 2031 forecasted change in the peak point ridership on the Yonge subway during the AM peak period. A diversion of riders to other routes will improve user experience.
	Transit Jobs Accessibility Index	The change in the time it takes to access jobs using transit.
Choice	Number of transfer stations	The number of stations on the line with transfers available to other rapid transit (Subway, LRT, BRT, GO Rail) lines. More transfer stations increases choice.
	Change in average number of transfers made	The 2031 forecasted change in the average number of transfers required to complete a trip during the AM peak period. Fewer transfers are better.
	Number of connections available	The number of opportunities to transfer to other rapid transit (Subway, LRT, BRT, GO Rail) routes.
Social Equity	Priority Neighbourhood residents served	The number of Priority Neighbourhood residents who live within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail).
	Priority Neighbourhood Jobs Accessibility Index Differential	A change in the time it takes for Priority Neighbourhood residents to access jobs using transit compared to the average for residents of the city.
	Increase in coverage	Additional percentage of the city's land area within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail).
Shaping the City	Service to residential growth areas	The percentage of the line passing through areas targeted for residential development.
	Projected population growth	Projected growth in population to 2031 within walking distance (500m) of the line (measured in terms of average growth per kilometre of transit).
	Existing population served	The number of people who live within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail) (measured in terms of people per kilometre of transit).
Healthy Neighbourhoods	Neighbourhood Impact	Proportion of the land within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail) that is not designated for growth. The goal is to preserve stable residential neighbourhoods.
	Population Employment Balance	The diversity of uses within walking distance (500m) of the line, calculated as the ratio of population to employment. A more balanced ratio is desirable.
	Transit Convenience Index	A comparison of the total travel time (including time to get to a transit station, time waiting for a vehicle to arrive, boarding time and in-vehicle time) to in-vehicle travel time only.

Public Health and Environment	Change in Vehicle Kilometres Travelled	The 2031 forecasted change in total kilometres travelled by cars during the AM peak hour as a result of the construction of the line.
	Auto mode share	The 2031 forecasted difference in the percentage of trips using cars. A lower percentage is desirable.
Supports Growth	Service to employment growth areas	Proportion of the land within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail) which is designated for employment growth.
	Projected employment growth	Projected growth in employment to 2031 within walking distance (500m) of the line (measured in terms of average growth per kilometre of transit).
	Existing employment served	The number of jobs within walking distance (500m) of rapid transit (Subway, LRT, BRT, GO Rail) (measured in terms of number of jobs per kilometre of transit).
Affordable	Capital cost per rider	Total capital cost of the line divided by the 2031 forecasted increase in total ridership.

#### Attachment 4: Measuring the Concept of Accessibility

Accessibility is a theoretical construct which is more about travel opportunities than revealed choices or outcomes. Accessibility is a combined measure of mobility and proximity, enhanced by either increasing the speed of getting from point A to B (mobility) and/or by bringing points A and B closer together (proximity). As a product of both travel time and the geographic location of urban activities, accessibility measures reflect both the temporal and spatial dimensions of travel.

A common urban accessibility measure is based on finding the number of jobs which can be reached using a particular mode within a specified time-band from a given point or, more typically, area within the city. Each point or area would have its own accessibility measure which could be mapped to see how job accessibility varies across the city. As a variant to this approach, a job accessibility measure has been developed for the city as a whole to evaluate the impact of a proposed rapid transit project at the urban scale. This overall measure has been developed from data at the traffic zone level. The Greater Toronto and Hamilton Area (GTHA) comprises 1,703 traffic zones of which 463 are in the City of Toronto. A graphical representation of the traffic zones can be found in Figure 1. The Regional Transportation Network Model enables the calculation of transit travel times between all the traffic zones in the GTHA.



Figure 1: Greater Toronto and Hamilton Area Traffic Zones and Enlargement of Toronto Traffic Zones

The accessibility measure is derived from summing all the opportunities for person-job linkages which can be reached within a given time-band, say 45-minutes transit travel time. A person-job linkage is a hypothetical connection between one person and one job. If there are ten people and five jobs then there are 50 person-job linkage opportunities (10x5). To determine the job accessibility measure for a particular traffic zone (say the red one in Figure 2) we multiply the population of the zone by the total employment in all of the zones which can be reached within the time threshold using transit (say the green ones and red one in Figure 2). Person-job linkage opportunities within a single

zone are assumed to always be reachable regardless of the time threshold. The total number of person-job linkage opportunities reachable within a given time-band for the entire City is taken as the sum of such opportunities for all of the traffic zones in the GTHA. The total number of person-job linkages is taken as the product of the population of the GTHA and the total employment of the GTHA. Thus, the Jobs Accessibility measured as the proportion of these linkages which are reachable within the time threshold is:

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Where:

$Z$  is the set of zones in the GTHA

$P_i$  is the number of people living in zone  $i$

$E_j$  is the number of jobs in zone  $j$

$TT_{mij}$  is the travel time from zone  $i$  to zone  $j$  using mode  $m$  (minutes)

$Th$  is the time threshold (minutes)

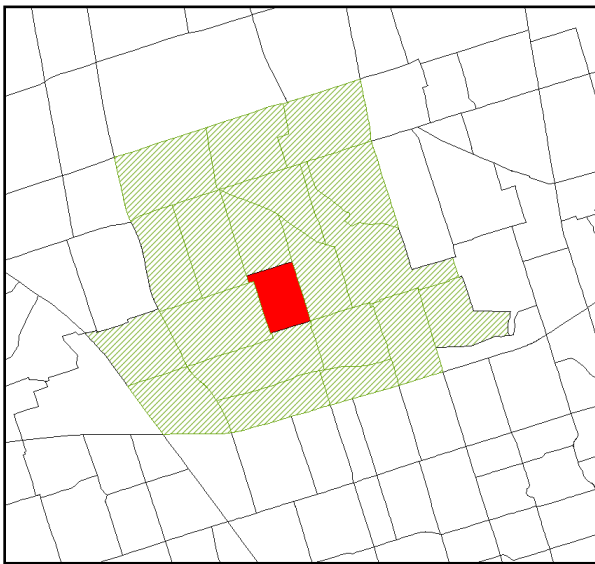


Figure 2: Example Zone and Reachable Zones

To look at accessibility for only one transit travel time-band does not distinguish between jobs that can be easily reached within the time-band and those that are out at the limit of the time-band. The larger the time-band, the more important this distinction becomes. Consequently, a more refined measure of accessibility, which recognizes that a person-job opportunity which can be reached quickly is more valuable than a distant one, is required. To achieve this, the Job Accessibility measure was calculated for several, finer gradations of time-bands in order to approximate an accessibility versus time-band curve (Figure 3).

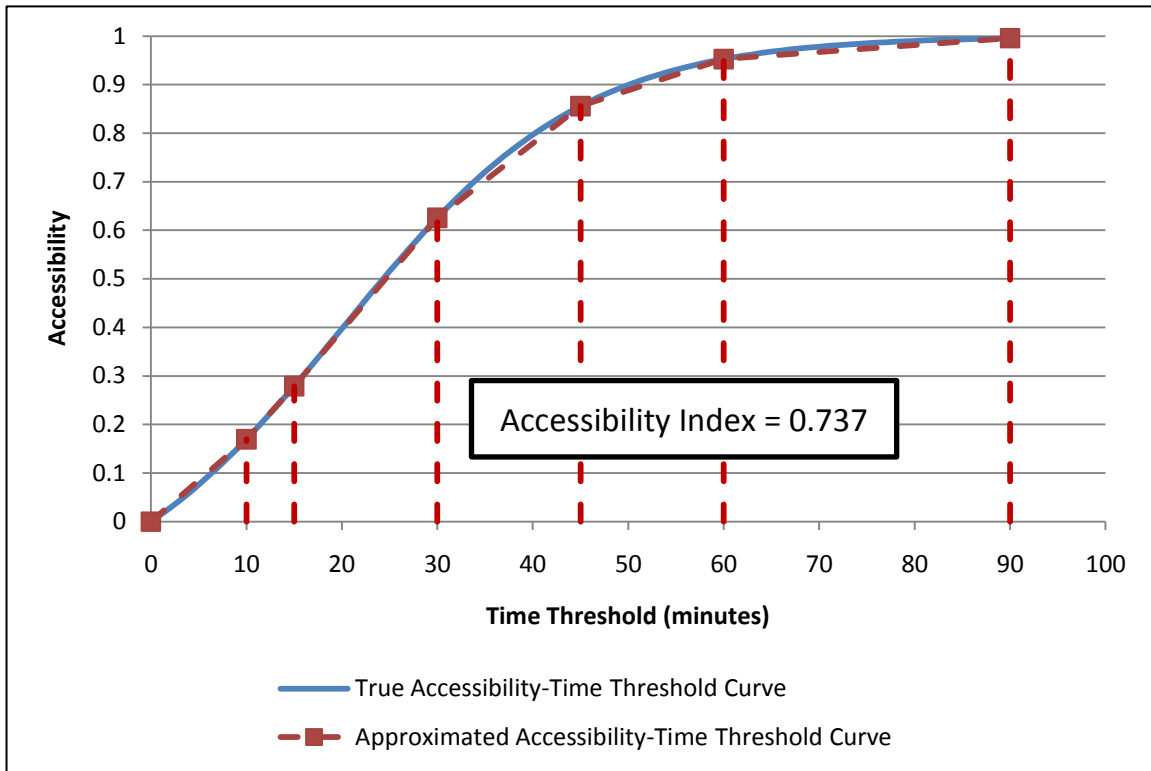


Figure 3: Comparison of True to Approximated Accessibility Curves

To describe such a curve, an Accessibility Index was calculated which represents the proportion of the accessibility versus time-band space contained under the curve. This Index can fall between zero and one, where a “zero” would indicate that there are no person-job linkage opportunities available within the highest time-band (90 minutes) and a “one” would indicate that all of the person-job linkage opportunities are available within the shortest time-band (10 minutes). As a result, the Index naturally weights more easily reachable person-job linkage opportunities since jobs reachable within one threshold will also be reachable within all higher thresholds. Each of the 24 proposed rapid transit projects can be assessed in terms of how it raises or lowers the accessibility index when added to the transit network.

## Attachment 5: Preliminary Strategic Fit Evaluation Framework

ID	Criterion	Description	Possible Measures
1	Fit with City Building Objectives	To what extent does the project support the development of the targeted growth areas and meet the future travel needs of Toronto residents?	Is the project transformative from a City Building perspective?
			Will the project be built to standards that would beautify the City, encourage active transportation, preserve built heritage and complement existing land uses?
			Will natural areas or neighbourhoods be negatively affected temporarily or permanently by the project? (vegetation, runoff, noise, particulates, vibration, etc)
			Does it serve Priority Neighbourhoods or other disadvantaged communities in a meaningful way? Does it disproportionately negatively affect them?
2	Fit with Regional Objectives	To what extent is the project consistent with and supportive of the transportation/land use planning objectives of "The Big Move" and other regional municipal plans?	Does the project serve the needs of communities outside of Toronto in a way which is consistent with broader planning guidelines?
			Is the ridership on the project predominantly made up of Torontonians or others?
			Can local firms provide most of the work required to complete the project?
3	Constructability and Project Readiness	To what extent have actions been undertaken to advance the project, such as preliminary design or land acquisition?	What level of analysis has the project's attributes been subjected to? Have all assumptions been validated?
			How quickly can the project be built to serve the needs of the City? (Environmental Assessment, Design, Construction)
			Will the project cause temporary or permanent disruptions to the local residents and businesses which cannot be mitigated?
4	Synergy with Other Network Elements	To what extent are there beneficial (or possibly negative) interactions between the construction and operation of the project with other past or planned infrastructure investments?	Do the ridership numbers depend on the choice of technology (because of existence/non-existence of transfers, etc)?
			Does the project rely on the existence or non-existence of another project for its success?
			Does the construction of the project preclude the construction

			of other possible projects?
			Does the project add operating flexibility or redundancy to the network?
5	Leveraging Available Funding Opportunities	To what extent have partners been engaged to secure government or private sector investment and ensure the project is fully funded?	Is there sufficient funding committed or likely to be committed by Metrolinx, Regional Partners or others to pay for the capital, maintenance and operating costs of the project?
			What are the effects on fares due to the level of committed funding?
			Are there other projects (new lines or improved operations) which would serve the same needs at lower cost?
			Could efficiencies be found if this project was scheduled in parallel or series with other transit or non-transit projects?