



INFORMATION ONLY

Subject: Emerging Transit Plans

Date: February 25, 2016 Resubmitted: March 23, 2016

At the TTC Board meeting on February 25, 2016, Jennifer Keesmaat, Chief Planner and Executive Director, City of Toronto, will deliver a presentation on Emerging Transit Plans.

Original signed by

**Vincent Rodo
Chief Financial &
Administration Officer**

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Coordinated Transit Planning in Toronto

SmartTrack | GO RER
Scarborough | Relief Line | Waterfront Transit

TTC Board Presentation
February 25, 2016

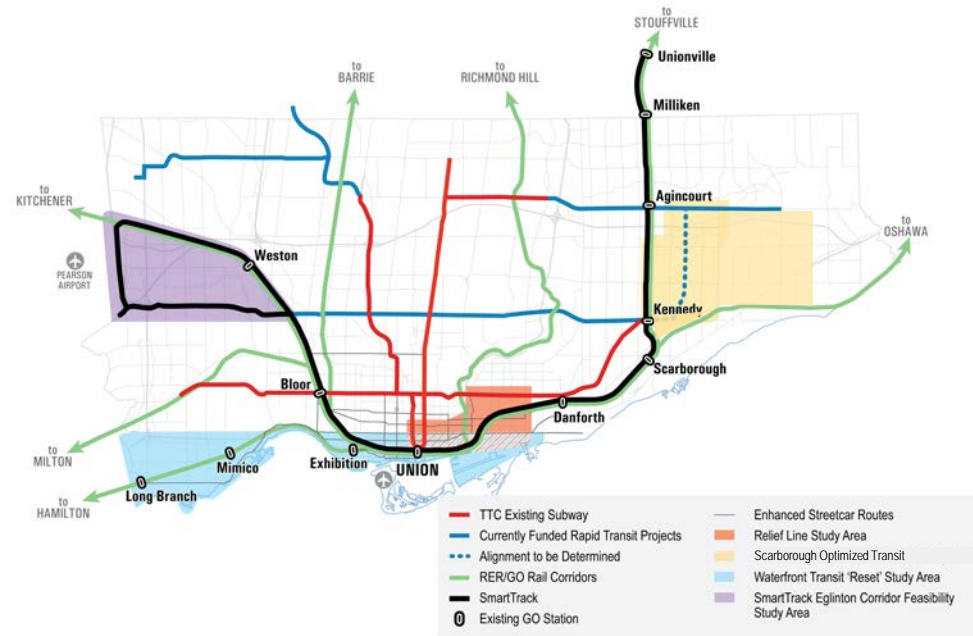
Transportation Planning Section | City Planning Division
Toronto Transit Commission



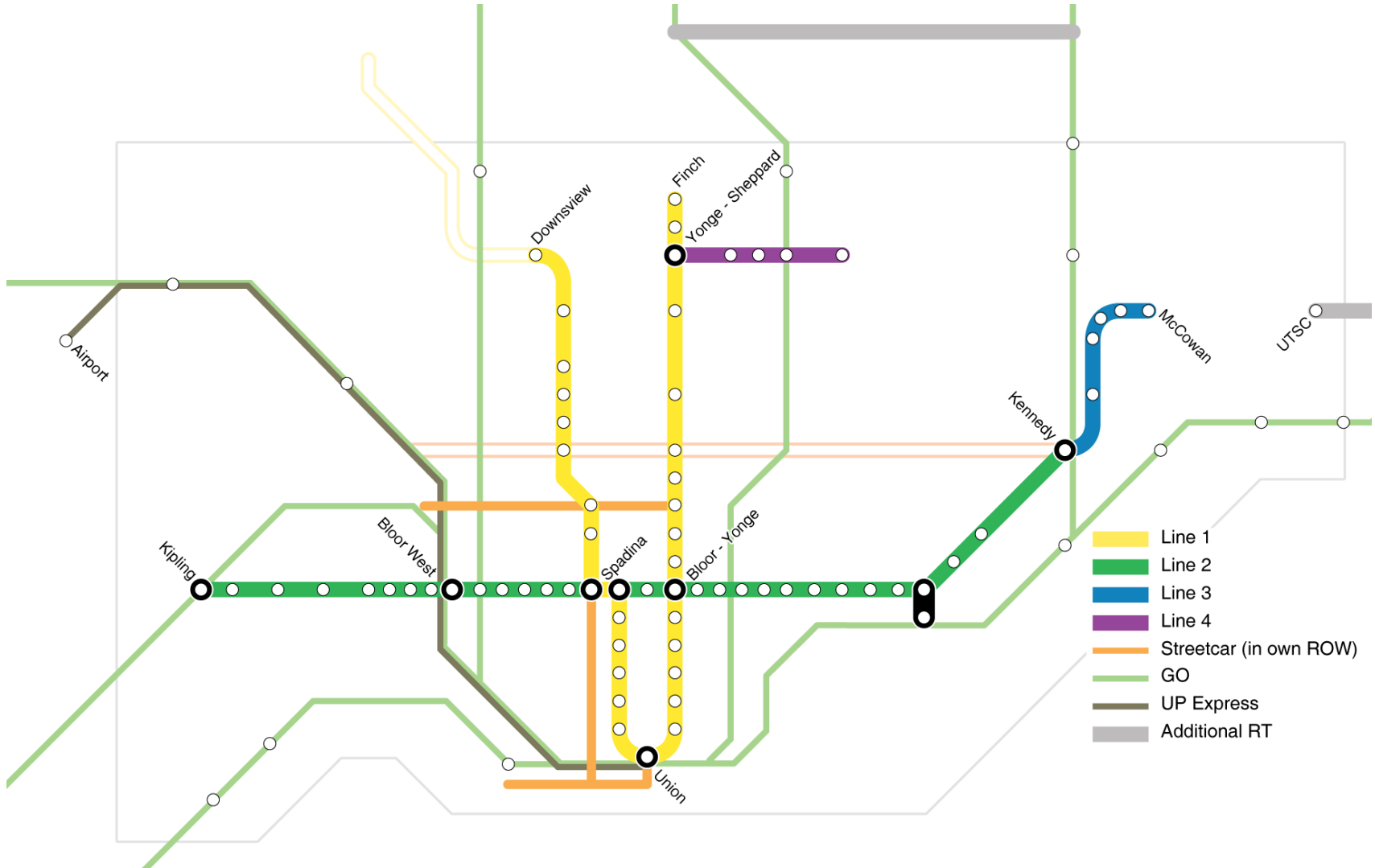
Our Coordinated Approach

The City, Metrolinx and the TTC are working together on integrated transit planning within Toronto.

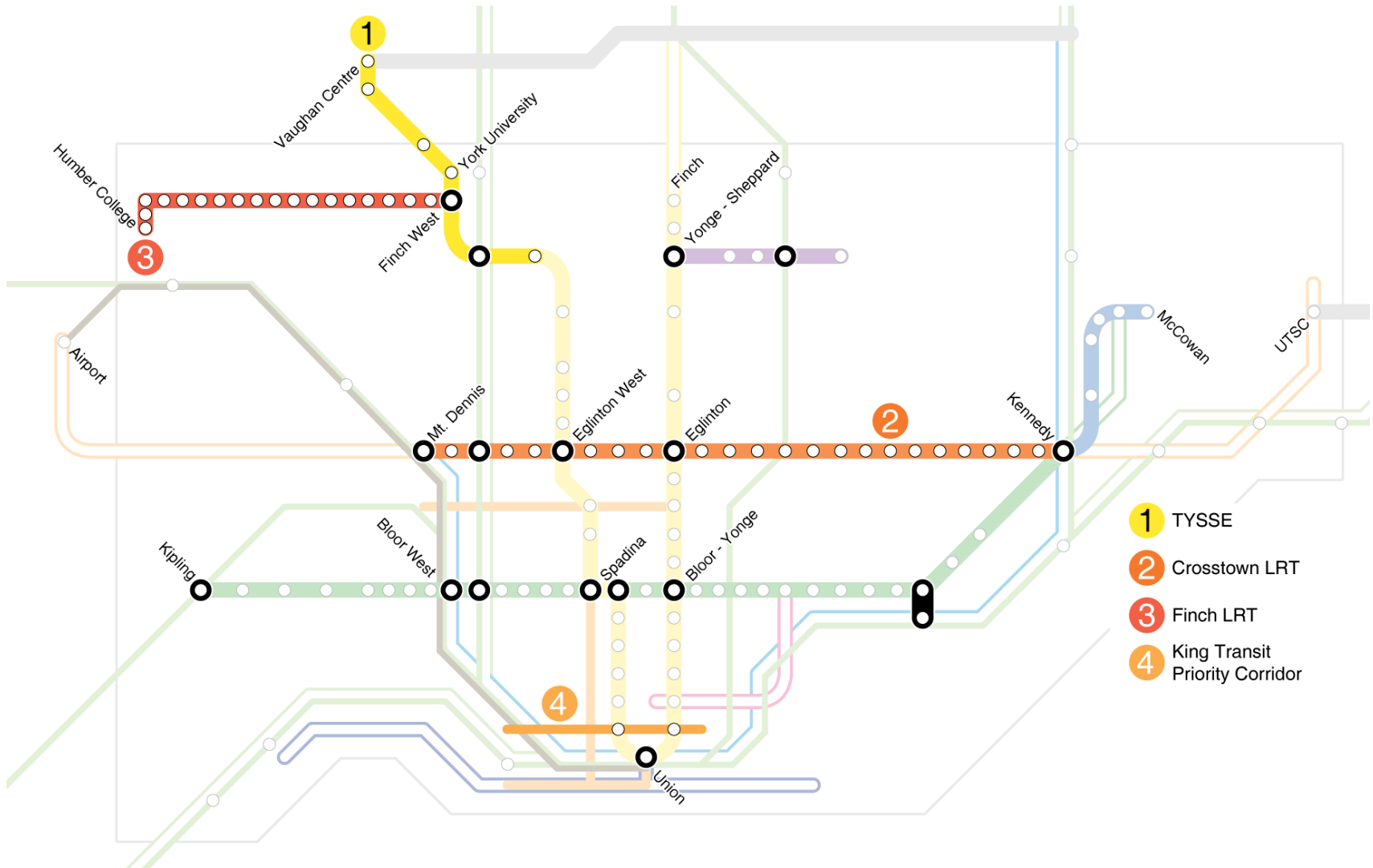
- Rapid transit projects design/ construction underway:
 - Toronto-York Spadina Subway Extension (TYSSE)
 - Eglinton Crosstown LRT
 - Finch West LRT
 - Sheppard East LRT
- Rapid transit joint planning underway:
 - GO RER and SmartTrack
- Rapid transit planning underway and being prioritized through the *Feeling Congested?* evaluation framework:
 - GO RER and SmartTrack
 - Scarborough Subway
 - Relief Line
 - Waterfront Transit Reset



Our Rapid Transit Network Today



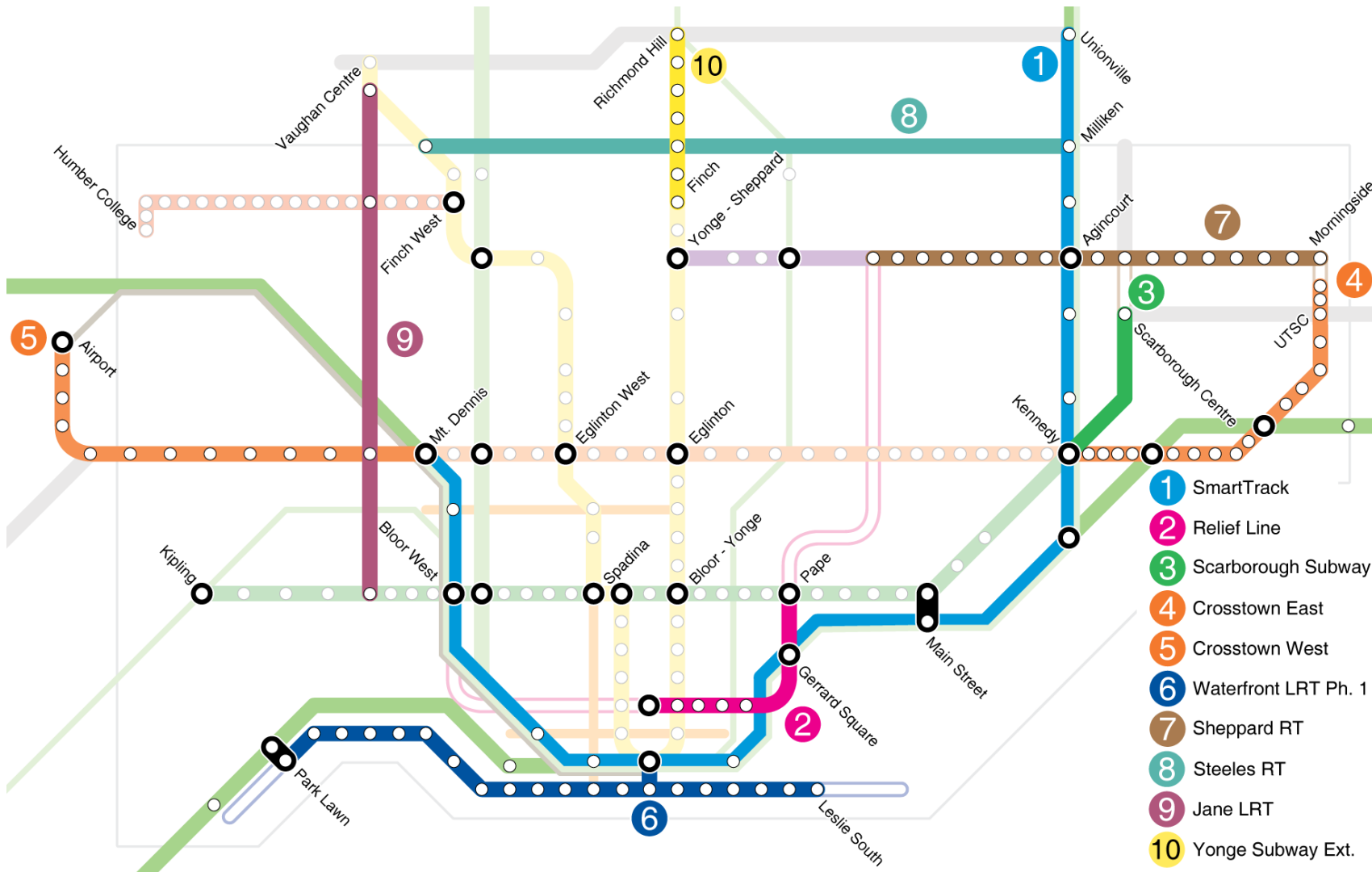
Our Rapid Transit Network Being Built Within the Next 6 Years



- 1 TYSSSE
- 2 Crosstown LRT
- 3 Finch LRT
- 4 King Transit Priority Corridor

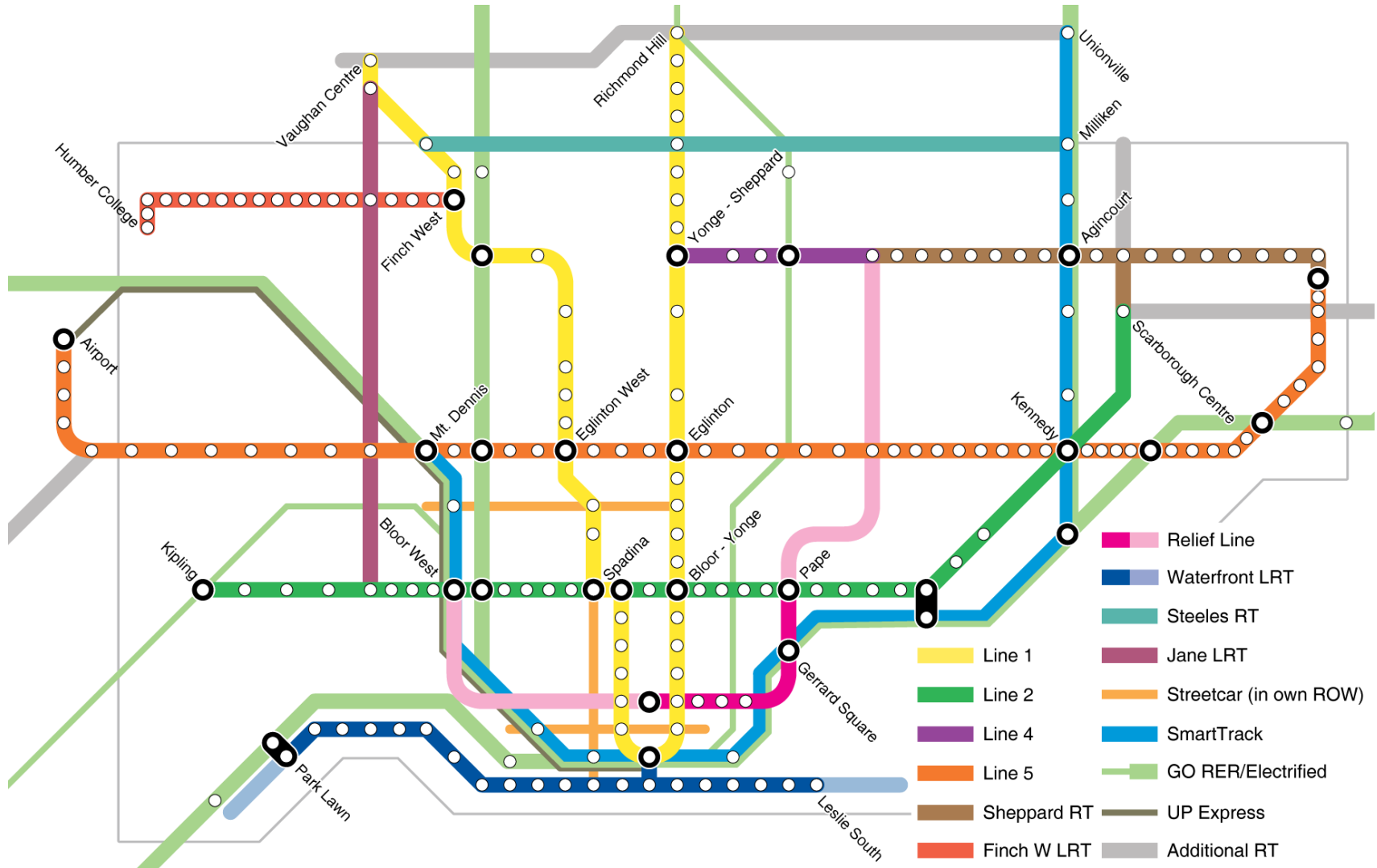
Our Rapid Transit Network

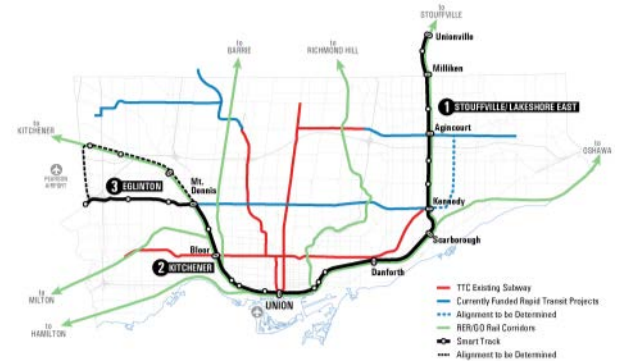
Recommended To Be Built Within the Next 15 Years



Our Rapid Transit Network

Recommended To Be Built Within the Next 15 Years



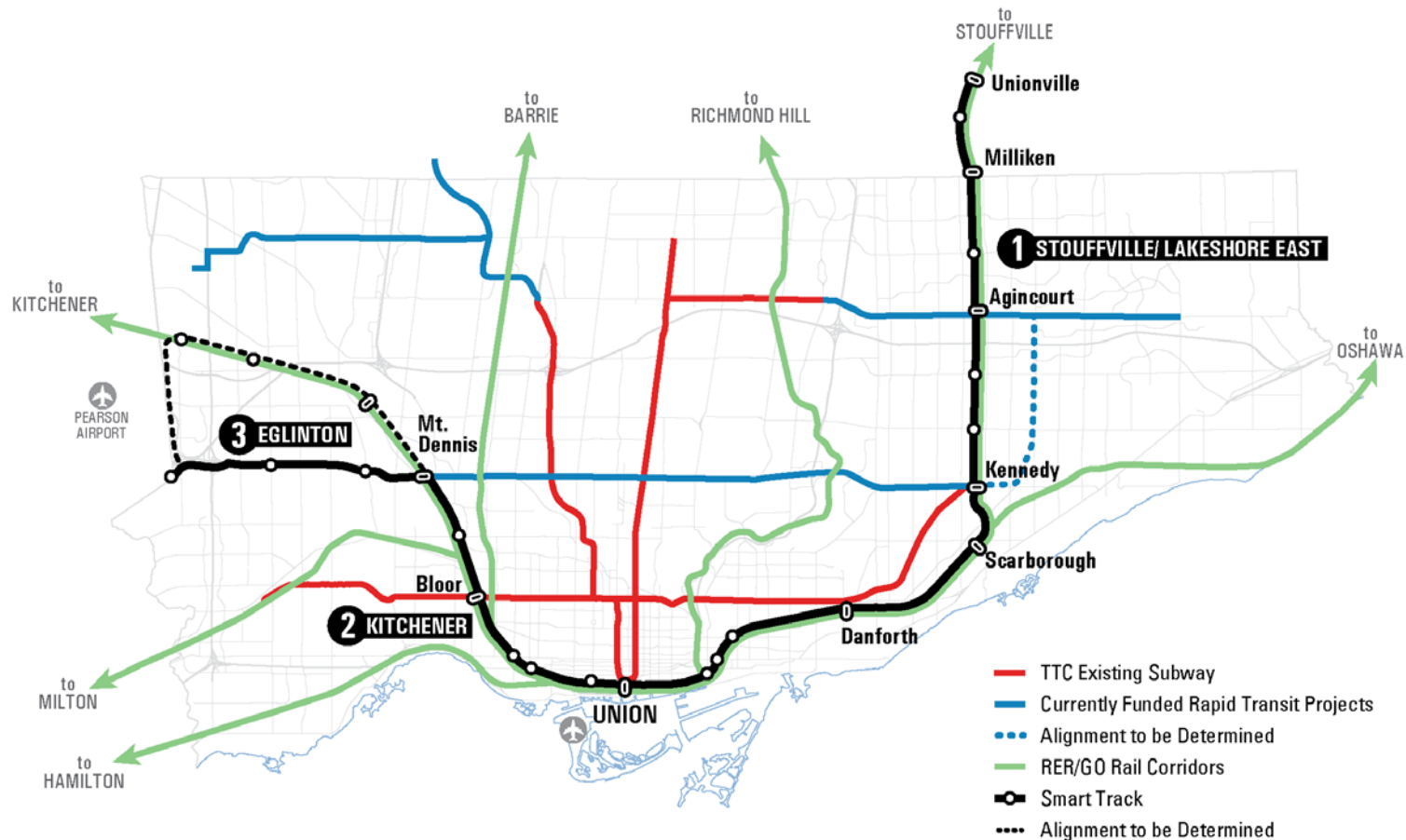


SmartTrack/GO RER

GO RER is Foundation for SmartTrack

SmartTrack / GO RER

- The City, the TTC and Metrolinx are assessing the opportunities to integrate SmartTrack with GO RER.



Integrated GO RER/SmartTrack

Scenarios Being Tested

Option A



- 5 new stations
 - Locations to be finalized through GO RER new stations analysis and discussions between Metrolinx and the City
 - Stations tested include Gerrard, Unilever, Bathurst-Spadina, Liberty Village, St. Clair West
- Kitchener and Stouffville through service

Option B



- 8 new stations
 - Locations to be finalized through GO RER new stations analysis and discussions between Metrolinx and the City
 - Stations tested include St. Clair, Liberty Village, Bathurst-Spadina, Unilever, Gerrard-Carlaw, Ellesmere, Lawrence, and Finch
- Kitchener and Stouffville through service

Integrated GO RER/SmartTrack

Scenarios Being Tested

Option C



Option D



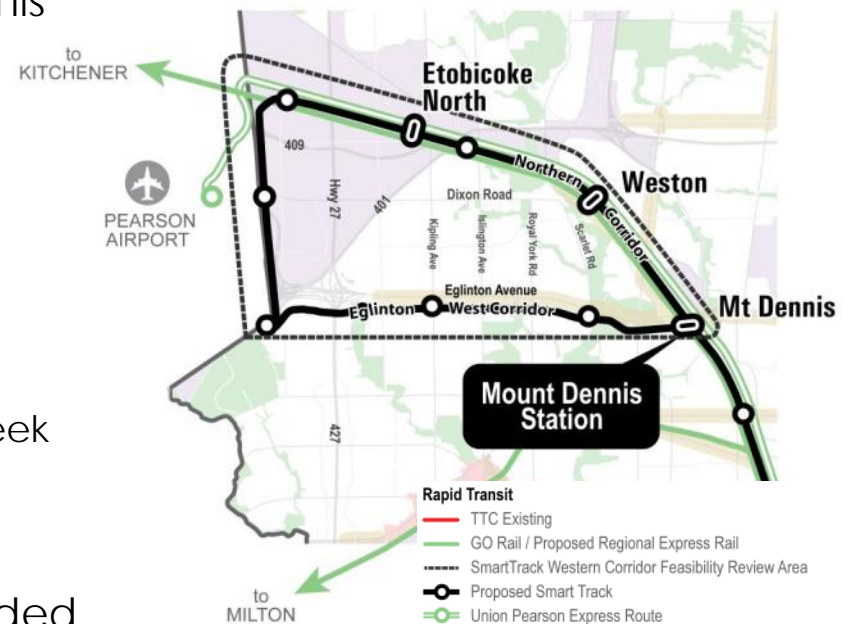
- 7 to 8 new stations
 - Locations to be finalized through GO RER new stations analysis and discussions between Metrolinx and the City
 - Stations tested include St. Clair, Liberty Village, Unilever, Gerrard-Carlaw, Ellesmere, Lawrence, and Finch
- Kitchener and Stouffville through service

- 4 to 5 new stations
 - Locations to be finalized through GO RER new stations analysis and discussions between Metrolinx and the City
 - Stations tested include St. Clair, Liberty Village, Unilever, Gerrard-Carlaw, Lawrence
- Kitchener and Stouffville through service

SmartTrack Western Corridor Feasibility

Study Findings

- Study considered feasibility of SmartTrack corridor options connecting Mount Dennis Station and the Mississauga Airport Corporate Centre
- Heavy rail would need to be grade-separated from other traffic and pedestrians (tunneled or elevated)
- Heavy rail on Eglinton would have significant community impacts
 - Disruptions to Eglinton Flats and Black Creek
 - Extensive property takings
 - Impacts to municipal roads and bridges
- New infrastructure/tracks would be needed along Eglinton and Kitchener GO Corridor



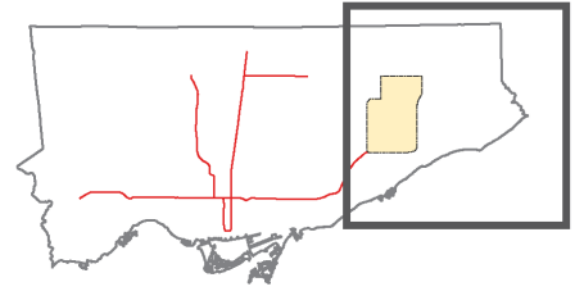
Costs:

Heavy Rail - Northern Corridor	\$2.7 - \$4.8 Billion
Heavy Rail - Eglinton Corridor	\$3.7 - \$7.7 Billion
Light Rail - Eglinton Crosstown Extension	\$1.3 - \$1.4 Billion

SmartTrack Western Corridor Feasibility

Recommended Direction

- Further due diligence on heavy rail option for the SmartTrack Western Corridor is not advised:
 - Significant community impact
 - Higher cost
 - Lower projected ridership compared to the LRT
- Extending Crosstown LRT along Eglinton to Mississauga Airport Corporate Center and Pearson Airport would provide excellent rapid transit service for this part of the City.
- City staff are recommending the LRT option (Crosstown West)
 - Requesting further direction from Council to collaborate with Metrolinx on an optimized LRT extension (to be referred to as Crosstown West).



Scarborough Transit Expansion

Scarborough Transit Expansion

Background

- In October 2013 City Council confirmed support for the extension of the Bloor-Danforth Subway (Line 2) to Scarborough
- Since then, City Planning and TTC have been conducting a detailed assessment to determine a preferred alignment
- Contextual changes have occurred:
 - Development of GO RER
 - Introduction of SmartTrack
 - Pause on the Sheppard East LRT
- Therefore we needed to re-examine how best to address the rapid transit needs of Scarborough
- Two key transit priorities:
 - Regional connectivity
 - Local access

Scarborough Transit Expansion

Refined Transit Priorities

Priority 1: Regional Connectivity

Support development of Scarborough Centre as a vibrant urban area

- Use transit to better connect Scarborough Centre
 - Encourage employment and residential growth in the centre
 - Link Scarborough Centre with key destinations across the city

Priority 2: Local Access

Support development of complete communities along the 'Avenues' and improve local accessibility in Scarborough

- Use transit to improve accessibility of local destinations
 - Connect people to the places they need to go every day
 - Improve the quality of life for Scarborough residents

Scarborough Transit Expansion

Optimized Transit Network



- █ SmartTrack
- █ GO / Regional Express Rail
- █ Line 2 - Bloor-Danforth Subway
- █ Line 5 - Crosstown LRT
- █ Sheppard Rapid Transit
- █ DRT Pulse (Durham Hwy 2 BRT)
- █ Enhanced Bus Routes
- Existing Stations
- Proposed Stations

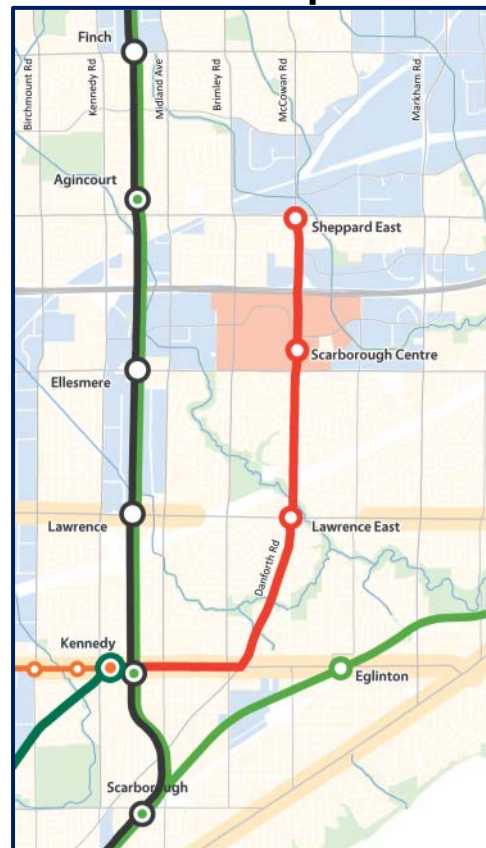
Scarborough Transit Expansion

Optimized Transit Network – Subway

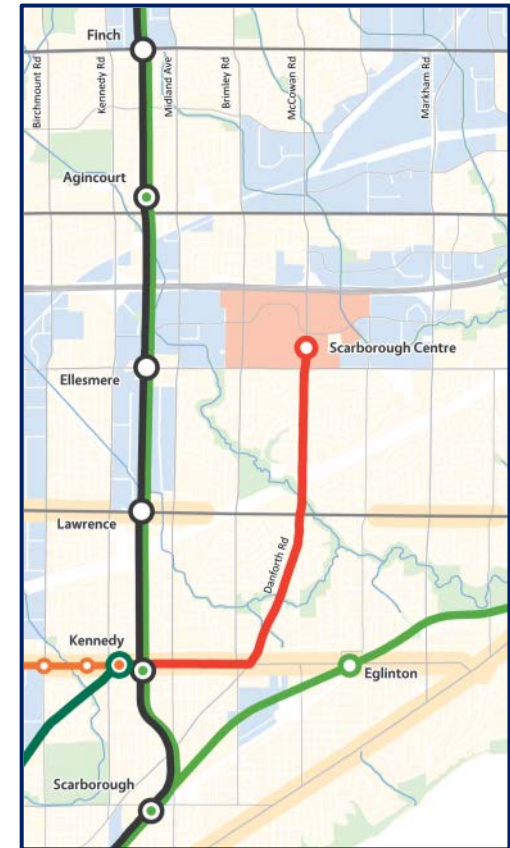
Alignment to be confirmed

- McCowan Road is emerging as the preferred alignment based on the previously proposed concept
- An optimized plan requires express subway to Scarborough Centre
- Alignment of an optimized subway extension will be confirmed through further study

Previously Proposed Concept



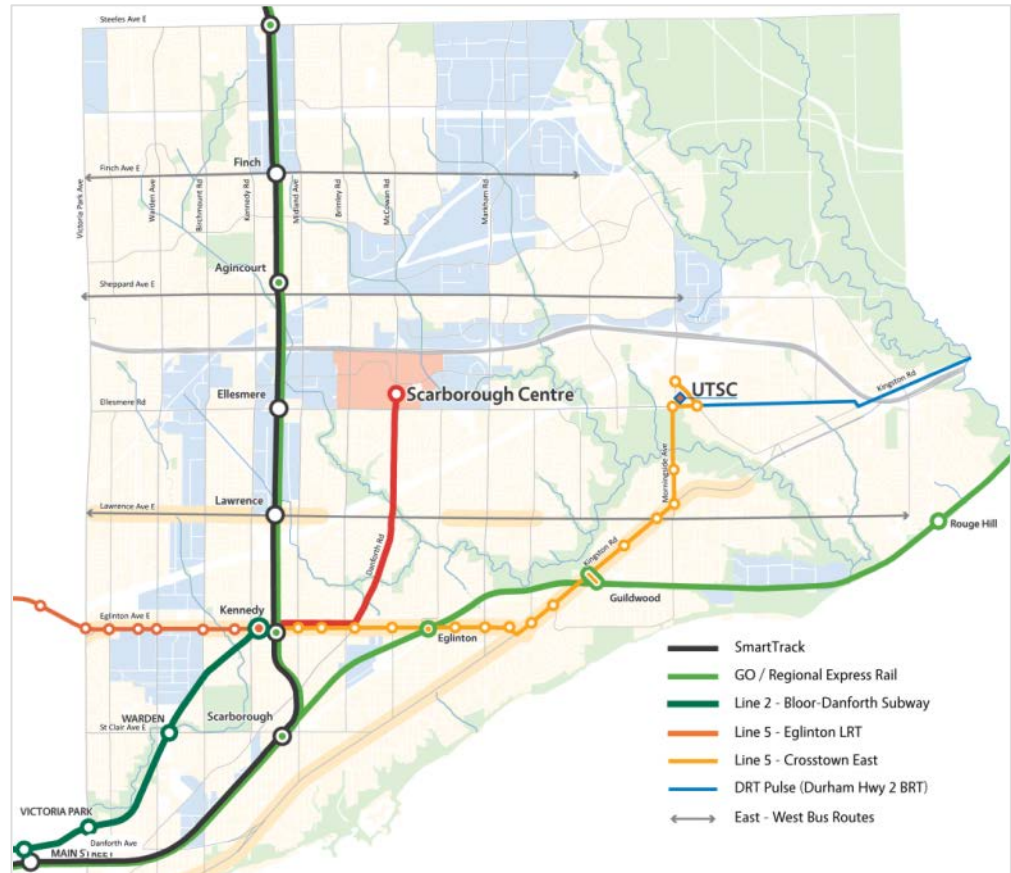
Optimized Concept

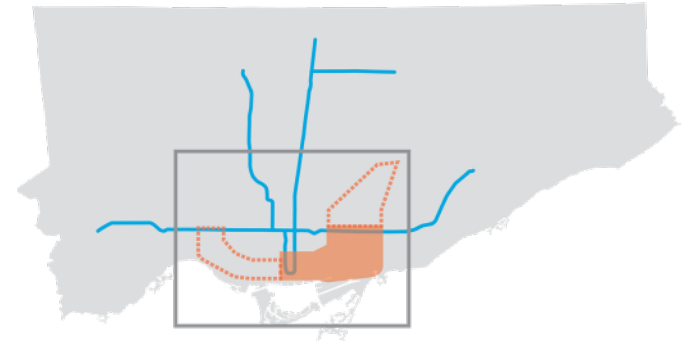


Scarborough Transit Expansion

Optimized Transit Network – Crosstown East LRT

- 2009 Environmental Assessment for 12 km/19 station LRT along Eglinton/Kingston/Morningside to Sheppard (Scarborough-Malvern LRT)
- Detailed analysis of opportunities required to optimize the project, including spacing of stations and service concept
- Optimized LRT may be possible to:
 - Reduce costs
 - Increase benefits
 - Connect with Crosstown LRT at Kennedy Station
 - Collaborate with University of Toronto master planning process

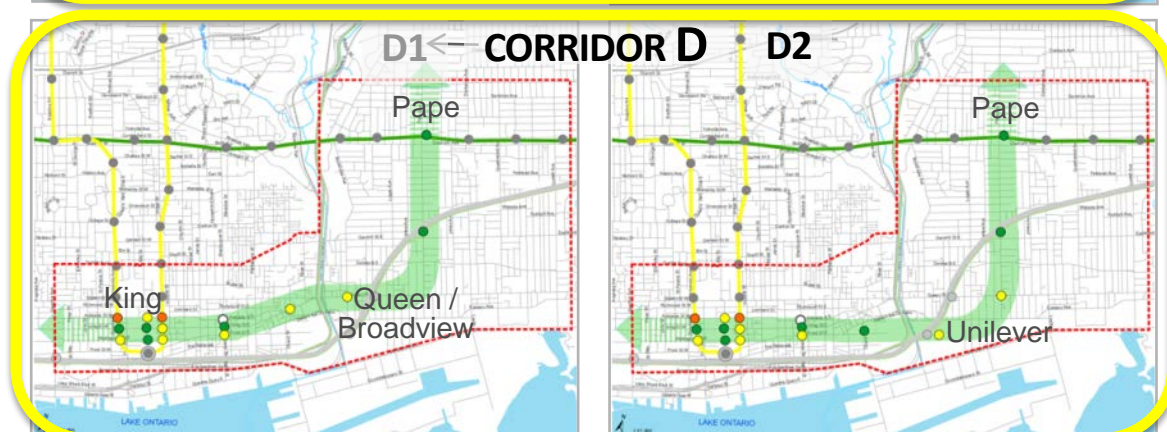
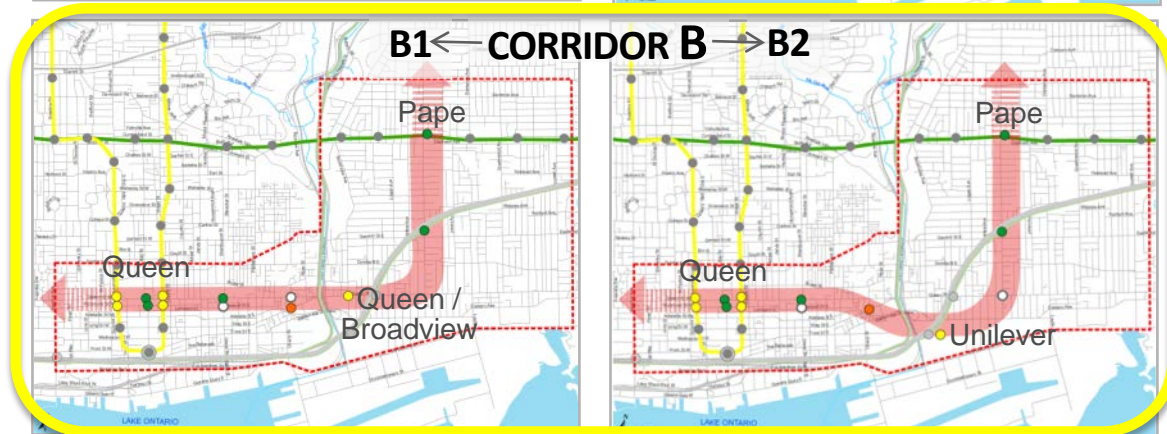
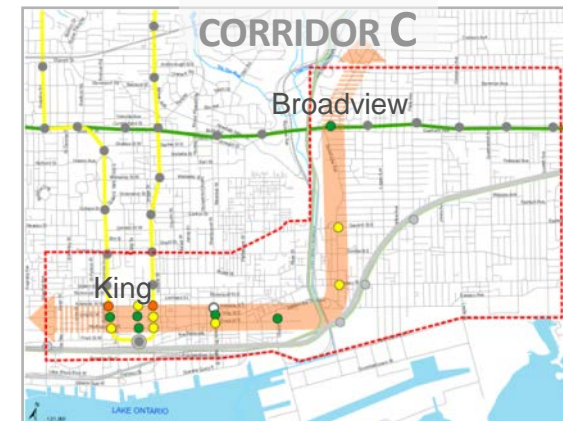
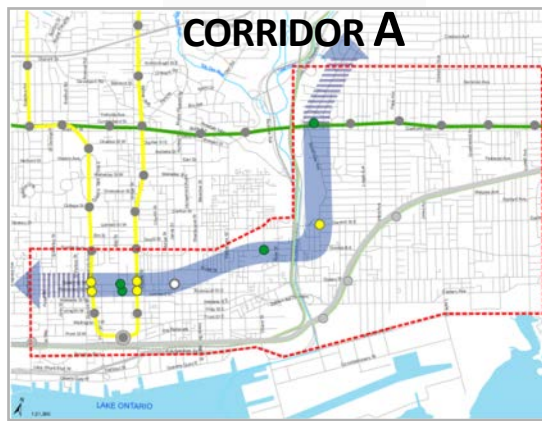




Relief Line

Relief Line Corridor Evaluation

- Potential corridors have been evaluated to identify which would best address project objectives and city-building criteria.
- Each corridor diverts a similar number of riders from the Yonge subway, south of Bloor.
- The corridors that connect from Pape station (B and D) perform best.

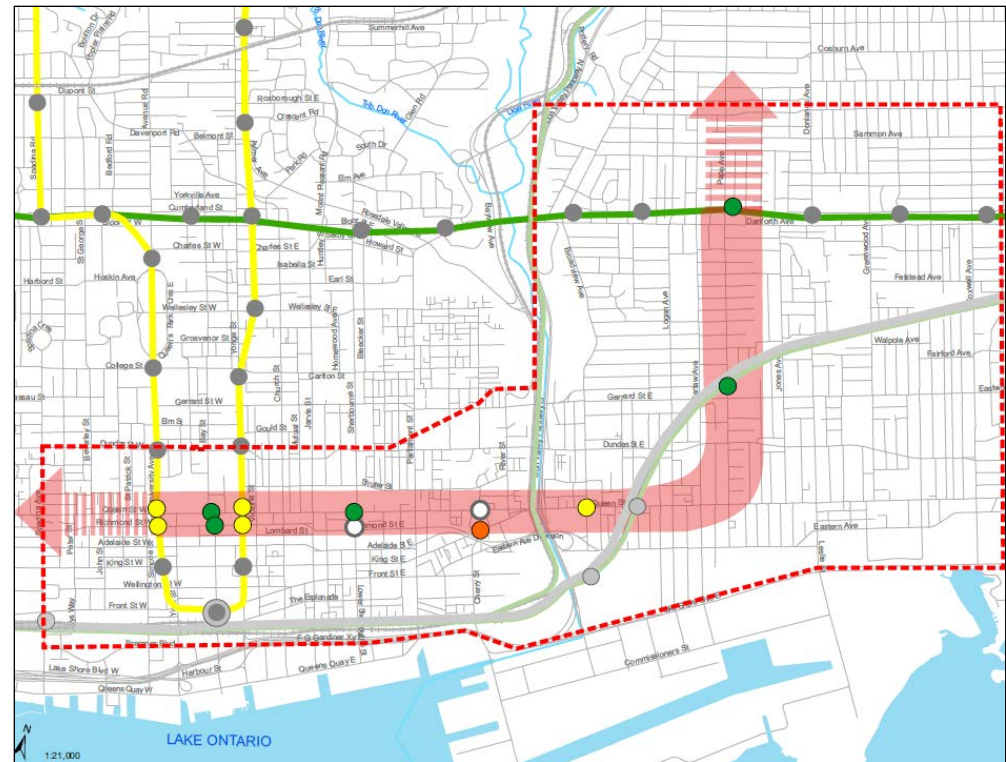


Relief Line

Preferred Corridor

- Corridor B1 (*Pape Station to Downtown via Queen/Richmond*) has emerged as the Preferred Corridor
- Next Step is to develop and evaluate refined alignment options

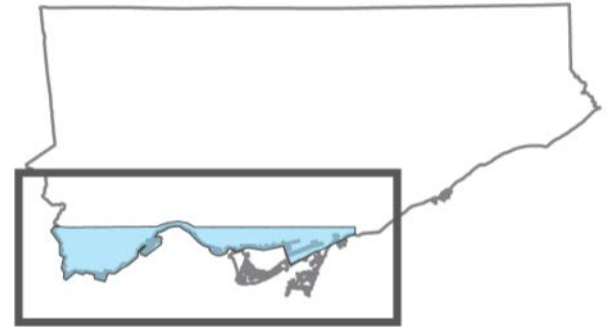
Evaluation Criteria	Potential Corridors					
	A Broadview to Queen	B1 Pape to Queen (via Queen)	B2 Pape to Queen (via Unilever)	C Broadview to King	D1 Pape to King (via King)	D2 Pape to King (via Unilever)
Choice	🟡	🟢	🟢	🟡	🟡	🟡
Experience	🟡	🟡	🟡	🟢	🟢	🟢
Social Equity	🟢	🟡	🟡	🟡	🟡	🟡
Shaping the City	🟡	🟡	🟡	🟡	🟡	🟢
Healthy Neighbourhoods	🟡	🟡	🟢	🟡	🟡	🟡
Public Health and Environment	🟡	🟢	🟡	🟡	🟡	🟡
Affordability	🟢	🟢	🟡	🟡	🟡	🟡
Supports Growth	🟡	🟡	🟡	🟡	🟡	🟢
SUMMARY	🟡	🟡	🟡	🟡	🟡	🟡
PUBLIC + STAKEHOLDER FEEDBACK IN JUNE	🟡	🟡	🟡	🟡	🟡	🟡



Relief Line

Main Advantages of Corridor B1

Creates Dynamic Multi-Modal Hub in the Core	Opportunity to create interchange station in the psychological centre of the city (Nathan Phillips Square at City Hall)
	Supported with strong pedestrian connections to Queen and Osgoode Stations on Line 1 and to the Financial District via PATH network
Fills Rapid Transit Void in the Core	Improves rapid transit connections to northerly areas of the core (between Union Station and Yonge-Bloor Station)
Recognizes That Downtown is Not Just 9-5	Provides alternative route for people to access jobs in the Financial District
	Best for full array of daily travel needs and destinations, such as universities, hospitals and public institutions
Spreads Out Pedestrians	Does not add more pedestrian congestion to Union Station area
	Supports more options for people to access jobs throughout the downtown
Performs Well with Other Transit Initiatives	Complements SmartTrack / GO RER connections into Union Station
	Complements planned transit priority corridor along King Street
	Connects to #6 Bay bus and bus lanes for onward connections north and south
	Bike Station under Nathan Phillips Square to open soon
Supports Social Equity	Closest to Regent Park Neighbourhood Improvement Area (5 minute walk)
	Closest to Moss Park at Queen & Sherbourne
Lowest Projected Cost	Avoids costly soil stabilization needs for crossing Don River south of Queen
	Requires a shorter crossing of the Don River



Waterfront Transit 'Reset'

Waterfront Transit 'Reset'

Background

- In November 2015 City Council directed staff to work with TTC and Waterfront Toronto to review waterfront transit options and report back early 2016
- Why Waterfront Transit 'Reset'?
 - A comprehensive transit network approach is needed, rather than the incremental approach of the past
 - Significant new development has been taking place along the Waterfront corridor with the promise of public transit
 - These developments have been built, but public transit has not yet materialized.
 - In the context of the Gardiner Expressway Environmental Assessment, the need for improved Waterfront transit was raised repeatedly
 - Appropriate transit services need to be developed to reflect existing and projected demand

Waterfront Transit 'Reset'

Current Work

- Phase 1 Study starting up now to develop a Vision and Strategy for integration and implementation of a waterfront transit network
- City Planning's "*Feeling Congested?*" Official Plan Review preliminary analysis has identified both the *Waterfront West* and *Waterfront East* Light Rail Transit Projects as within the "Top 5 performing but unfunded transit projects."
- Need to coordinate with directions emerging from SmartTrack/GO RER and Relief Line studies.



- Rapid Transit**
- TTC Existing Subway
 - GO Rail Corridors
 - SmartTrack
 - - - - Frequent Surface Routes
 - Enhanced Streetcar Routes
 - ⊙ Existing Go Station
 - ⊠ Waterfront Transit 'Reset' Study Area

Progress Milestones

- February 2016**
- Public and stakeholder consultation on all City and Metrolinx transit planning initiatives.
- March 2016**
- Report to City Executive Committee and Council with update on progress on developing priority transit network improvements:
 - GO RER/SmartTrack integration scenarios and SmartTrack Western Corridor Feasibility Review results and recommendations
 - Updates on Scarborough transit, Relief Line and Waterfront Transit 'Reset'
- February-April 2016**
- Further analysis on each of the projects to develop recommended solutions.
- April 2016**
- Public consultations on findings of this further analysis
- May/June 2016**
- Report to City Executive Committee and Council on recommendations regarding the priority transit network improvements
 - Metrolinx Board meeting to discuss GO RER and SmartTrack integration
- Next Steps**
- Launch environmental assessment processes as required
 - Subject to Council approval, proceed with Phase 2 of the Waterfront Transit 'Reset' Study

Questions?