

Developing Toronto's Transit Network Plan: Phase 1

SmartTrack | GO RER | Scarborough | Relief Line | Waterfront Transit

Executive Committee

March 9, 2016

John Livey

Deputy City Manager, Cluster B

Jennifer Keesmaat

Chief Planner and Executive Director, City Planning Division

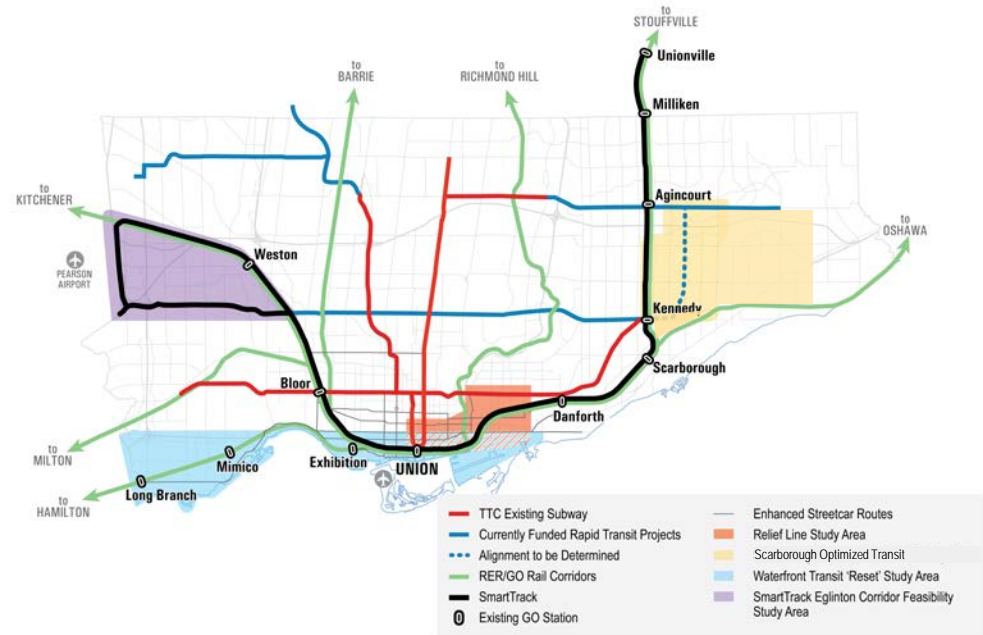
Outline

1. Developing Toronto's Transit Network Plan
2. SmartTrack
 - a) Western Corridor
 - b) Integration with GO Regional Express Rail
3. Scarborough Transit Expansion
4. Relief Line
5. Waterfront Transit 'Reset'

Projects Currently Underway

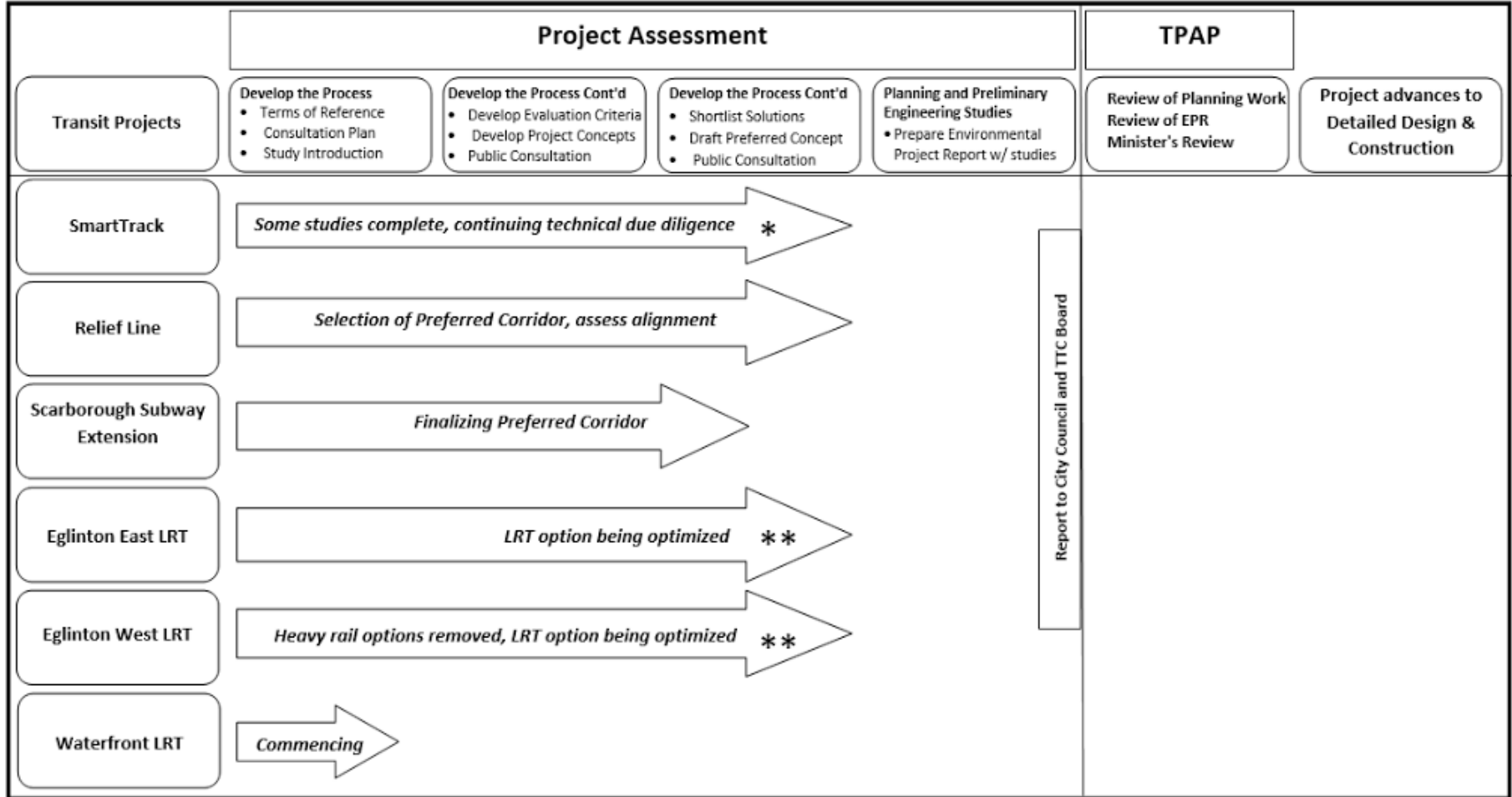
The City, Metrolinx and the TTC are working together on integrated transit planning within Toronto.

- Rapid transit projects design/construction already underway:
 - Toronto-York Spadina Subway Extension (TYSSE)
 - Eglinton Crosstown LRT
 - Finch West LRT
 - Sheppard East RT
- Rapid transit planning underway by City and Metrolinx:
 - GO RER and SmartTrack
- Rapid transit planning underway by City and TTC:
 - Scarborough Subway
 - Relief Line
 - Waterfront Transit Reset



These projects form the basis of Toronto's future transit network and are the focus of this report

Status of Projects



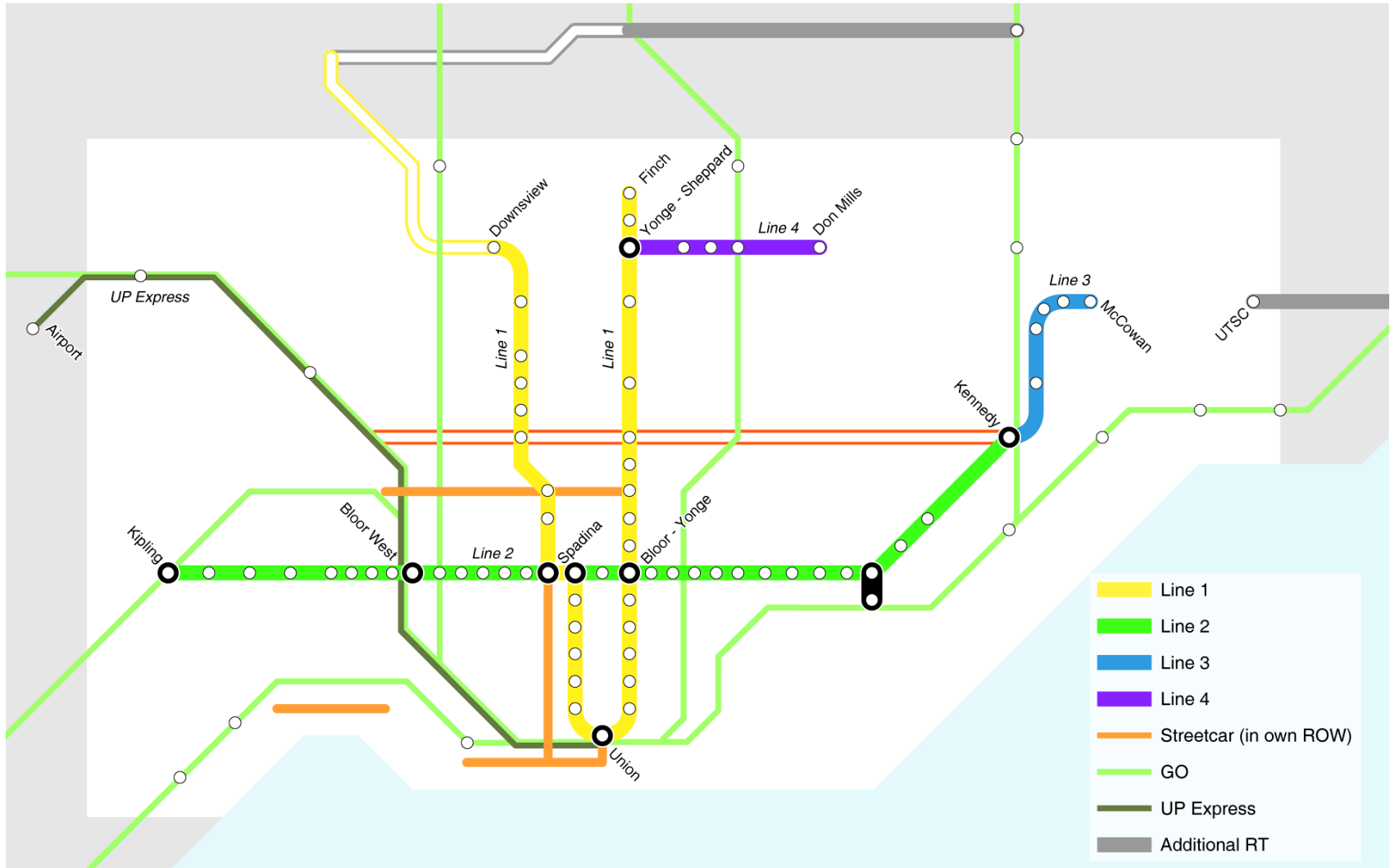
* Will be integrated into the EA/TPAP process as part of the Metrolinx RER Program

** Re-evaluation of previously approved Environmental Assessments, which may lead to amendments (i.e. new TPAP)

Developing Toronto's Transit Network Plan

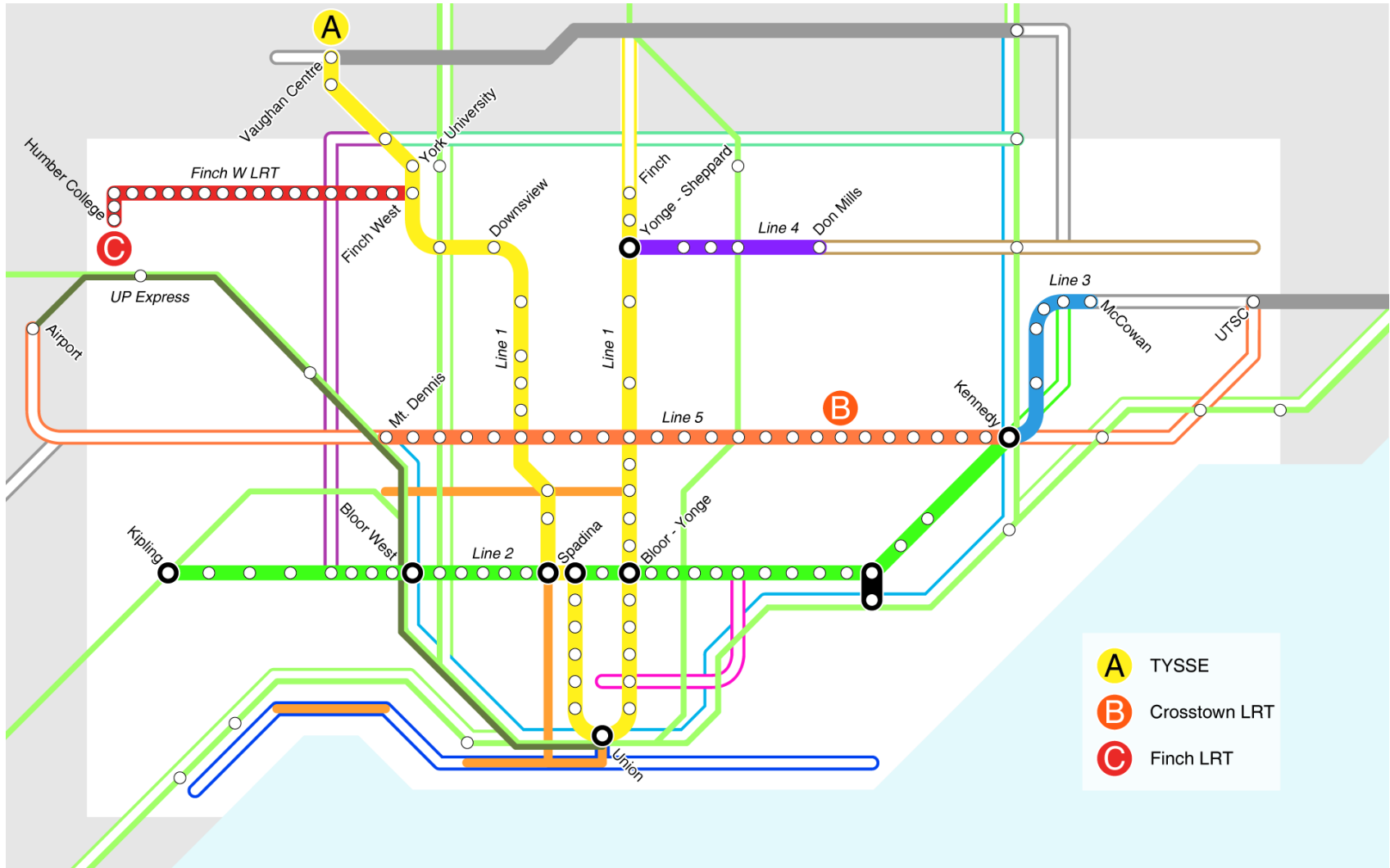
- March** Update and recommendations on projects currently being studied
- June / July** Recommendations on projects currently being studied
- Seeking authority to proceed to Final Review (TPAPs)
 - Report on Phase 1 of the Waterfront Transit 'Reset'
- Fall 2016** Re-evaluation of all candidate projects using *Feeling Congested?* criteria
- Early 2017** Recommended transit network for inclusion in Toronto's Official Plan

Our Rapid Transit Network Today



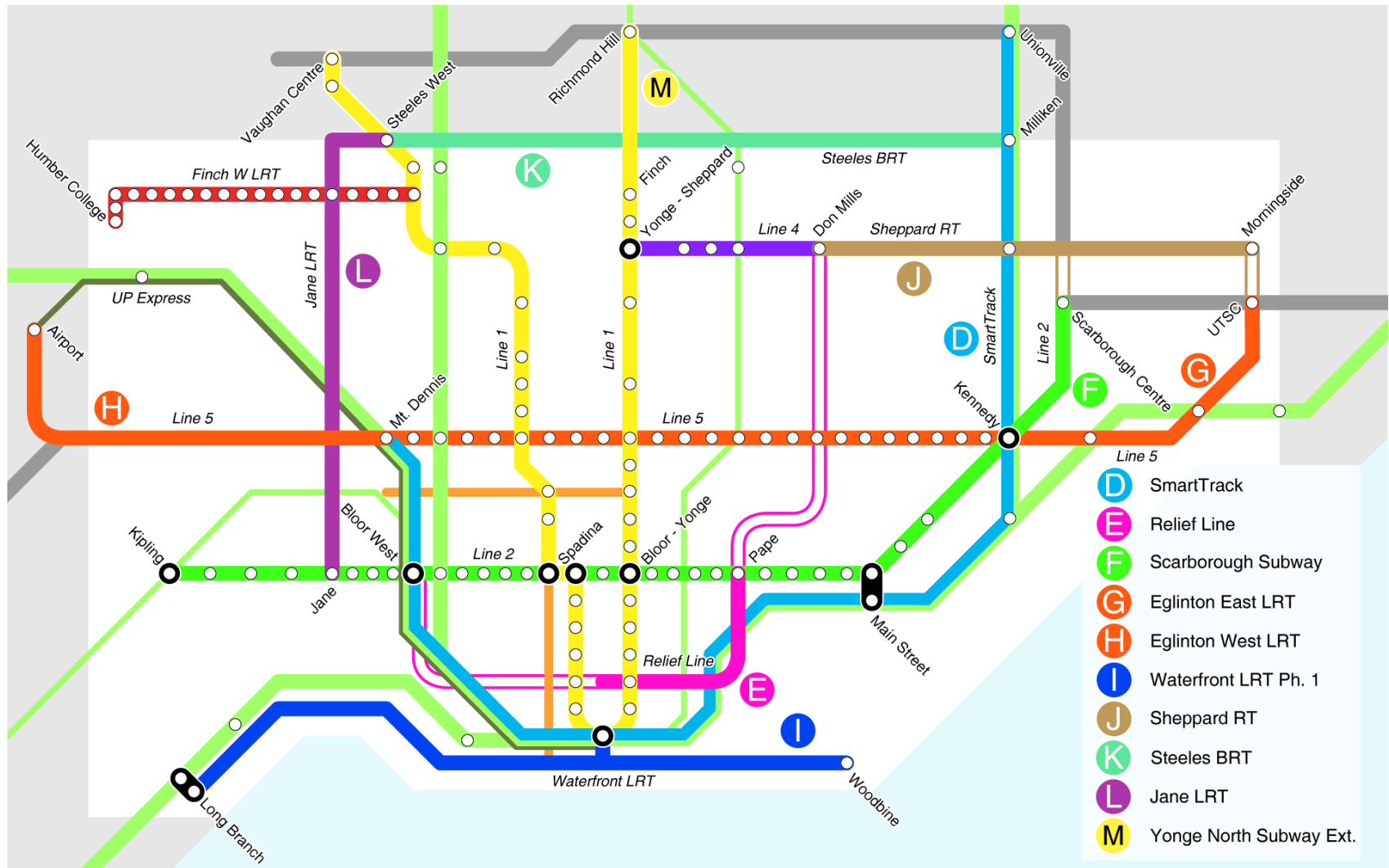
Our Rapid Transit Network

Being Built Within the Next 6 Years



Our Rapid Transit Network

Recommended To Be Built from 6 to 15 Years in the Future



Recommendations

Summary

SmartTrack

- Remove heavy rail options on the western corridor from further consideration
- Complete the analysis for SmartTrack/GO RER integration options C and D, and remove from consideration the Separate and Parallel SmartTrack option, option A and option B

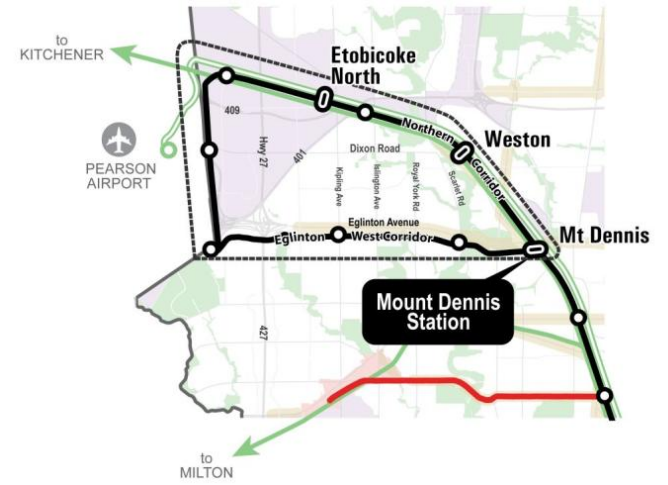
Scarborough Transit Expansion

- Remove the Bellamy corridor and Scarborough Express Rail (SmartSpur) from further consideration
- Identify further planning work required for Eglinton East LRT corridor

Relief Line

- Approve Pape to Downtown via Queen/Richmond as the preferred corridor for the Relief Line project

Report to Executive Committee on all projects in June, 2016



SmartTrack Western Corridor Feasibility

SmartTrack Western Corridor Feasibility

Study Findings

- 8 potential heavy rail alignments were developed and evaluated
- All alignments 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 LRT Extension	\$1.3 - \$1.4 Billion

SmartTrack Western Corridor Feasibility

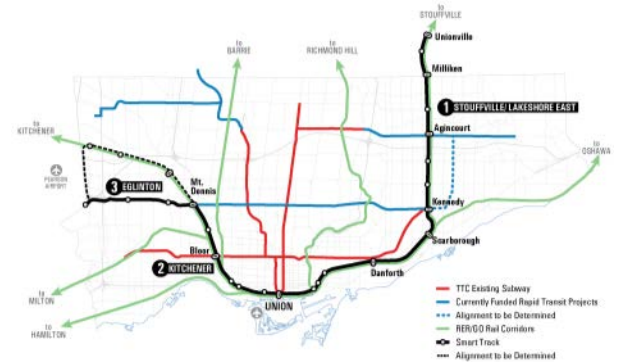
Recommendations

Remove heavy rail options on the western corridor from further consideration

- All eight potential alignments had:
 - High cost
 - Significant community impact
 - 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

Metrolinx is reviewing five options as part of an LRT optimization study of the Eglinton LRT West

- City staff are working closely with Metrolinx
- It is anticipated that an update will be presented to the Metrolinx Board in June, 2016

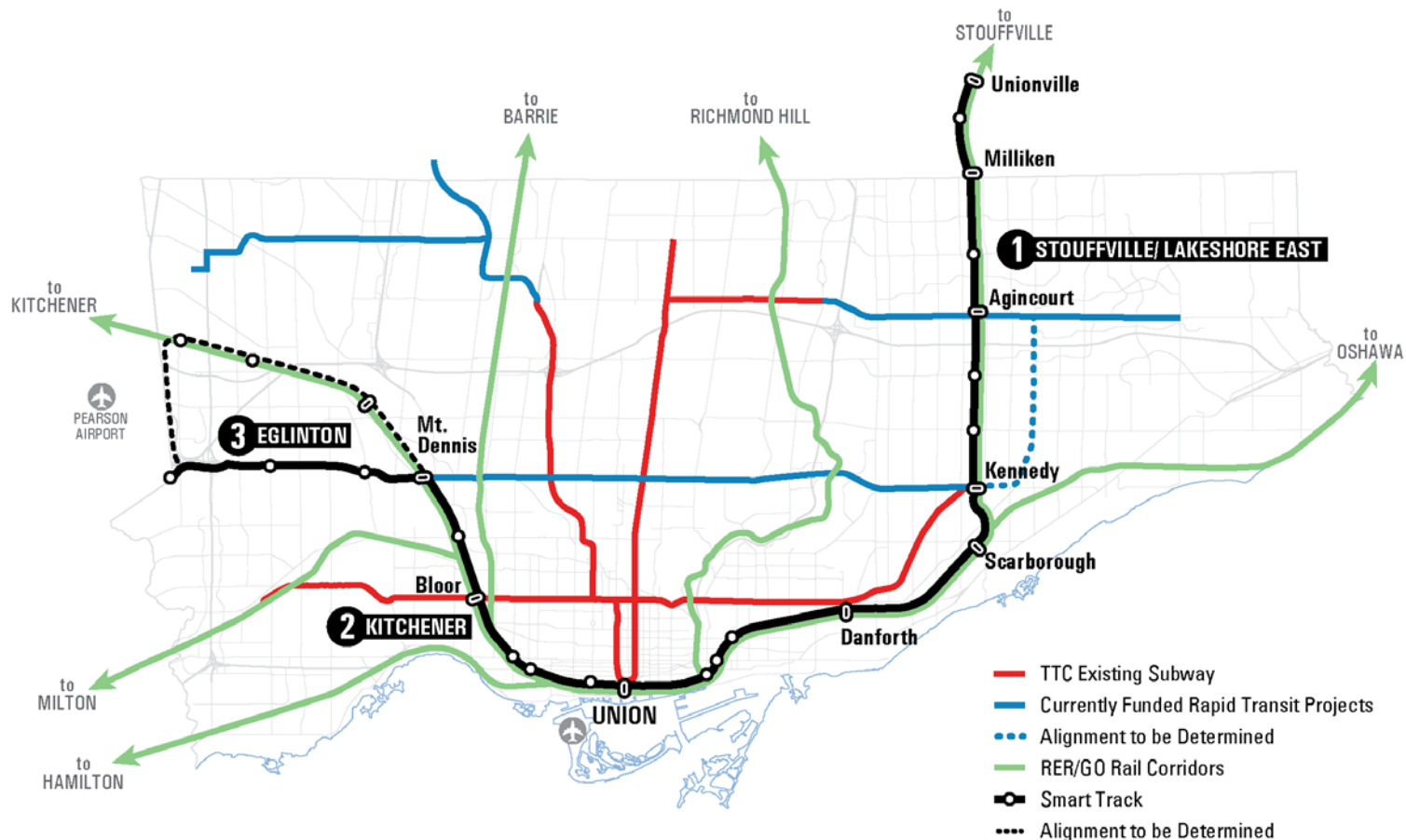


SmartTrack/GO RER Integration Options

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

Options Being Reviewed

Separate and Parallel



- 9 existing + 13 new stations
- Heavy rail along Western Corridor
- Two new tracks and related infrastructure along the entire route
- Kitchener and Stouffville through service
- Significant costs and community impacts
- **Not recommended**

Integrated GO RER/SmartTrack

Options Being Reviewed

Option A



- 9 existing + 5 new stations
 - Potential stations: St. Clair West, Liberty Village, Bathurst-Spadina, Unilever, Gerrard-Carlaw
- 4 – 6 minute frequency in peak period
- 7.5 minute frequency in the off-peak period
- Significant costs and community impacts
- **Not recommended**

Option B

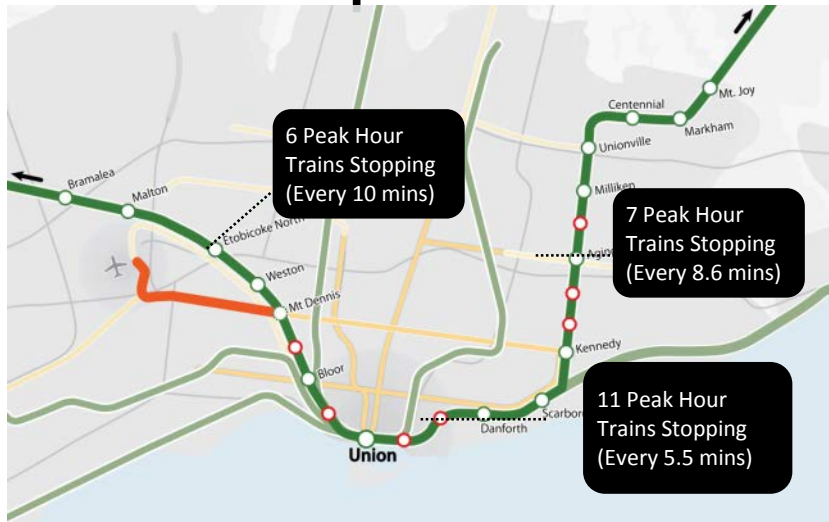


- 9 existing + 8 new stations
 - Potential stations: St. Clair, Liberty Village, Bathurst-Spadina, Unilever, Gerrard-Carlaw, Lawrence East, Ellesmere, and Finch East
- 20 minute express service at existing stations
- 20 minute all-stop service
- Lower frequency of service
- Increased costs and community impacts
- **Not recommended**

Integrated GO RER/SmartTrack

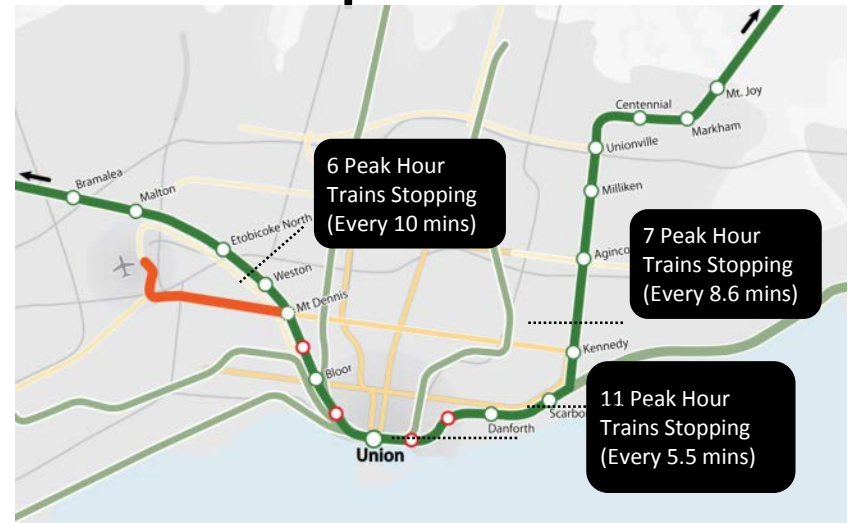
Options Being Reviewed

Option C



- 9 existing + 7 to 8 new stations
 - Potential stations: St. Clair West, Liberty Village, Unilever, Gerrard-Carlaw, Lawrence East, Ellesmere and Finch East
- 5.5 – 10 minute frequency in peak period

Option D



- 9 existing + 4 to 5 new stations
 - Potential stations: St. Clair West, Liberty Village, Unilever, Gerrard-Carlaw, Lawrence East
- 5.5 – 10 minute frequency in peak period

Integrated GO RER/SmartTrack

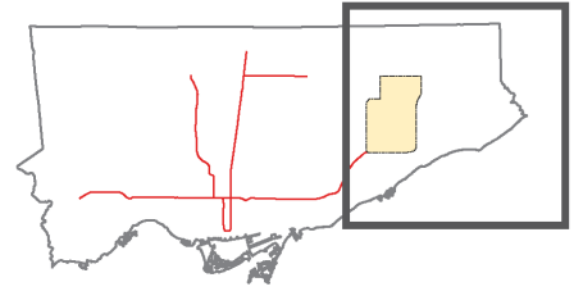
Recommendations

Complete the analysis for SmartTrack/GO RER integration options C and D, and remove from consideration the Separate and Parallel SmartTrack option, option A and option B

- Options C and D
 - allow the leveraging of planned investments in GO RER to avoid substantial widening of the GO corridors
 - would be able to deliver new riders and added benefits more quickly
 - would provide levels of service frequency consistent with SmartTrack

Further recommendations about stations and approach to integration with GO RER will be made in June, 2016

- ***Staff will recommend that Council ask Metrolinx to undertake the Final Reviews (TPAPs) for new stations and other new infrastructure related to SmartTrack***



Scarborough Transit Expansion

Scarborough Transit Expansion

Refined Transit Priorities

January 28, 2016 – Staff brought forward priorities for the Scarborough Transit Plan to Executive Committee. Staff received direction to continue technical work and report back with final recommendations.

Priority 1: Regional Connectivity

Support development of Scarborough Centre as a vibrant urban area

- 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

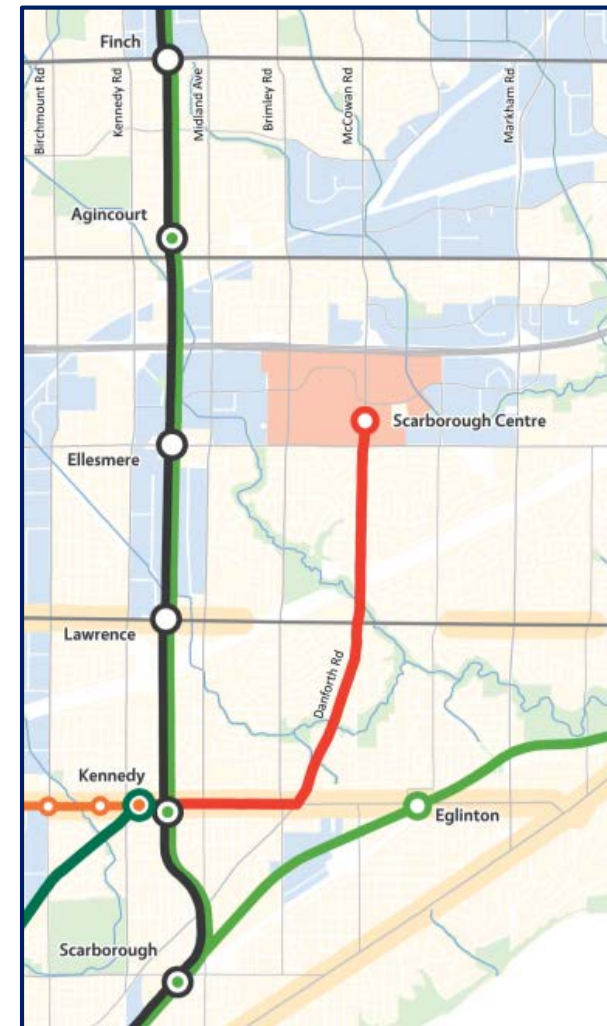
- Connect people to the places they need to go every day
- Improve the quality of life for Scarborough residents

Scarborough Transit Expansion

Optimized Transit Network – Subway

Work currently underway

- Alignment of an express subway extension will be determined through further study
- Develop station concept for Scarborough Centre including bus terminal and other elements
- Refining cost estimates
- Modelling
 - Accessibility
 - Travel demand



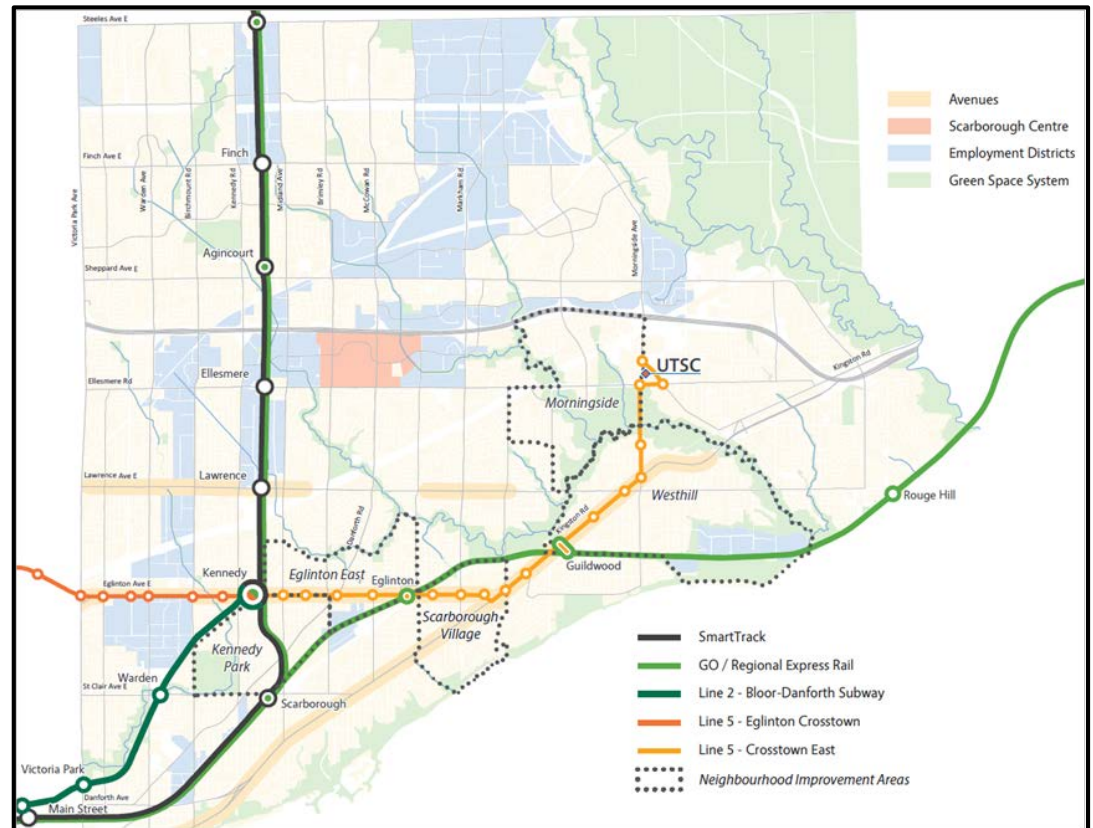
Optimized Concept

Scarborough Transit Expansion

Optimized Transit Network – Eglinton East LRT

Work currently underway

- Detailed review of approved 2009 Environmental Assessment to confirm
 - Service concept
 - Station Spacing
 - Traffic impacts
- Determine connection with Crosstown LRT at Kennedy Station
- Integration with University of Toronto master planning process
- Modelling
 - Accessibility
 - Travel demand



Scarborough Transit Expansion

Recommendations

Remove the Bellamy corridor and Scarborough Express Rail (SmartSpur) from further consideration

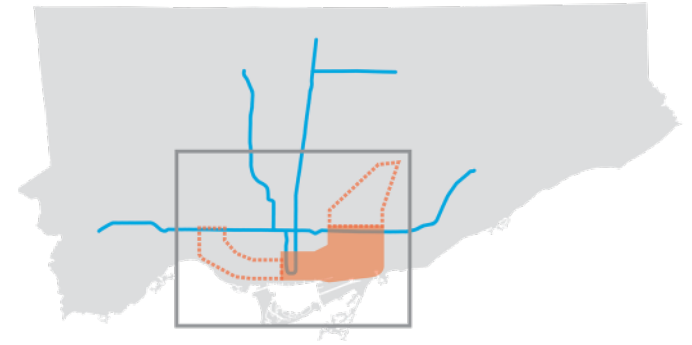
- Bellamy corridor is longer and most costly, and does not make sense for an express subway to Scarborough Centre
- SmartSpur would provide a much less frequent service and have significant property impacts

Identify further planning work required for Eglinton East LRT corridor

- Further work will encourage appropriate intensification and economic development in this corridor

Further recommendations will be made in June, 2016

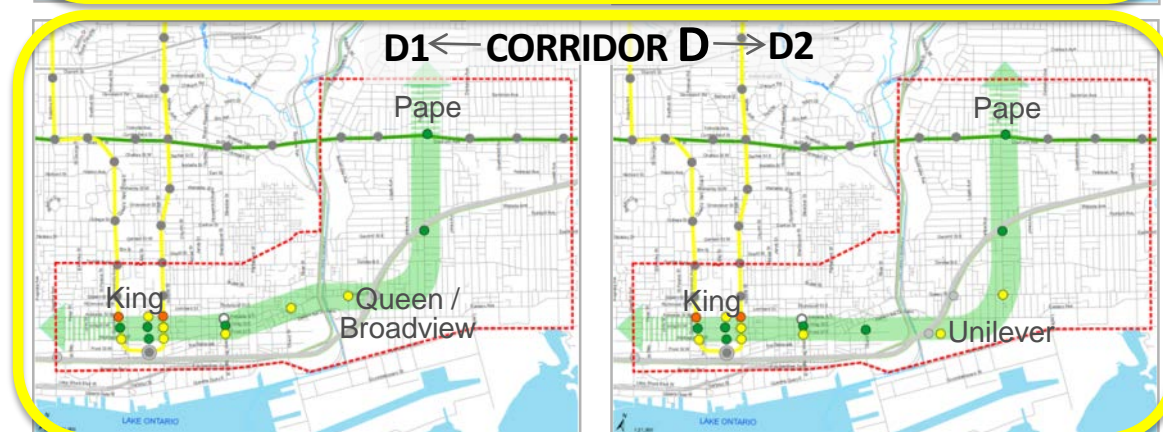
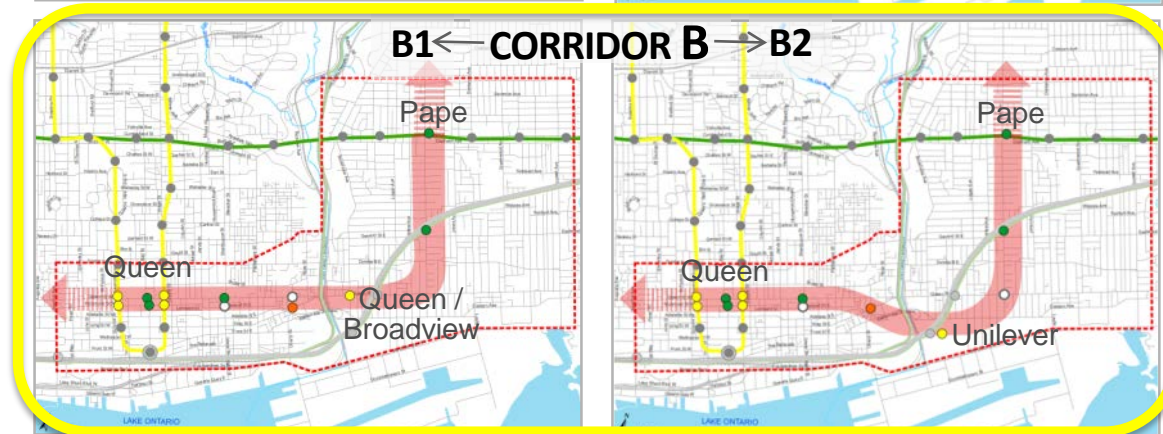
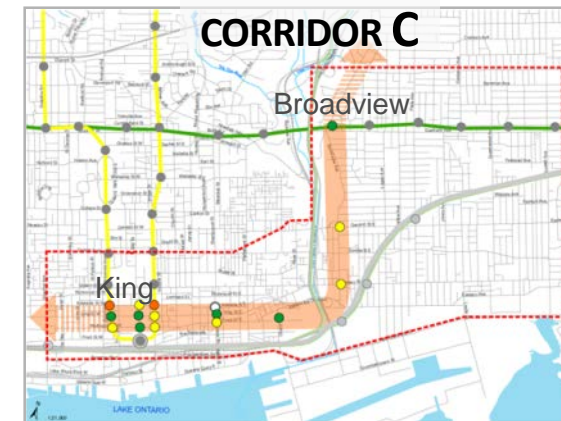
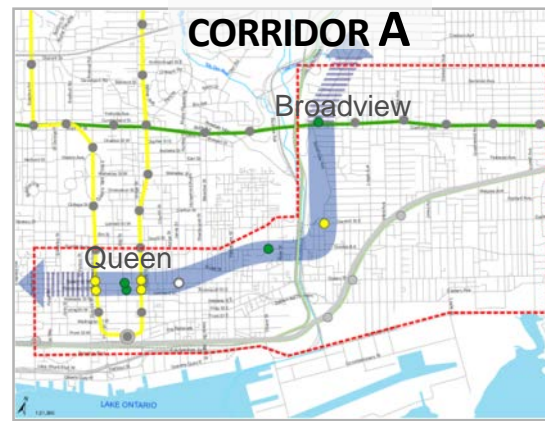
- *Staff will report on the preferred alignment for the express subway and seek authority to proceed to Final Review (TPAP),*
- *Staff will report on required amendments to the Eglinton East LRT Environmental Assessment (EA)*



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.

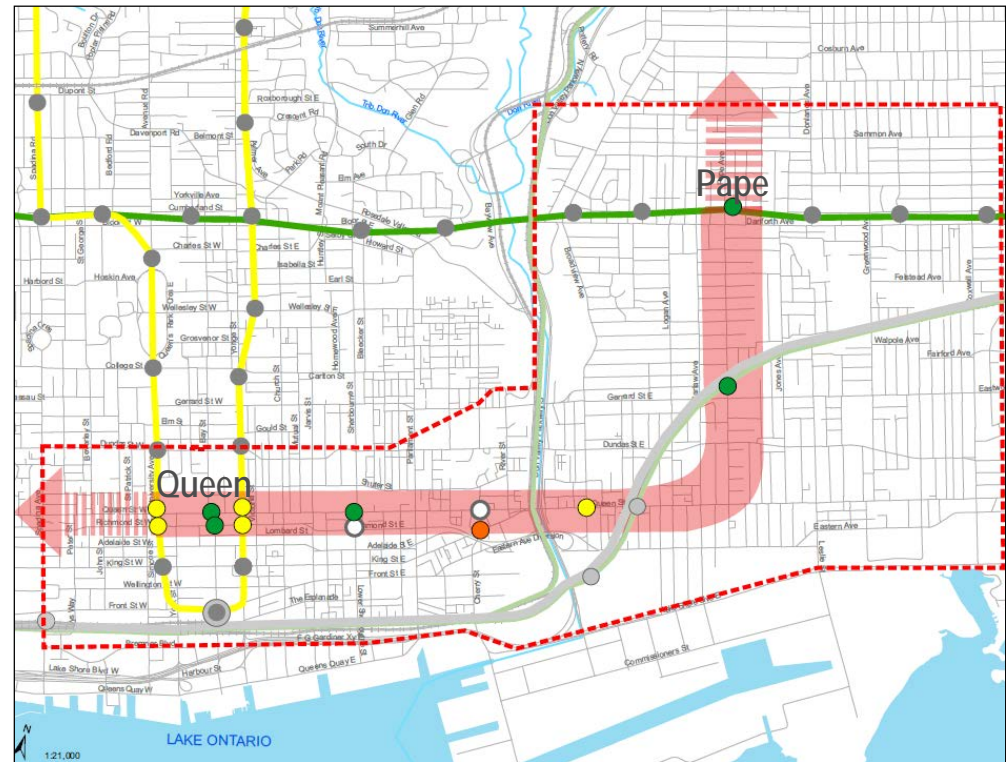


Relief Line

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	🟡	🟡	🟡	🟡	🟡	🟡



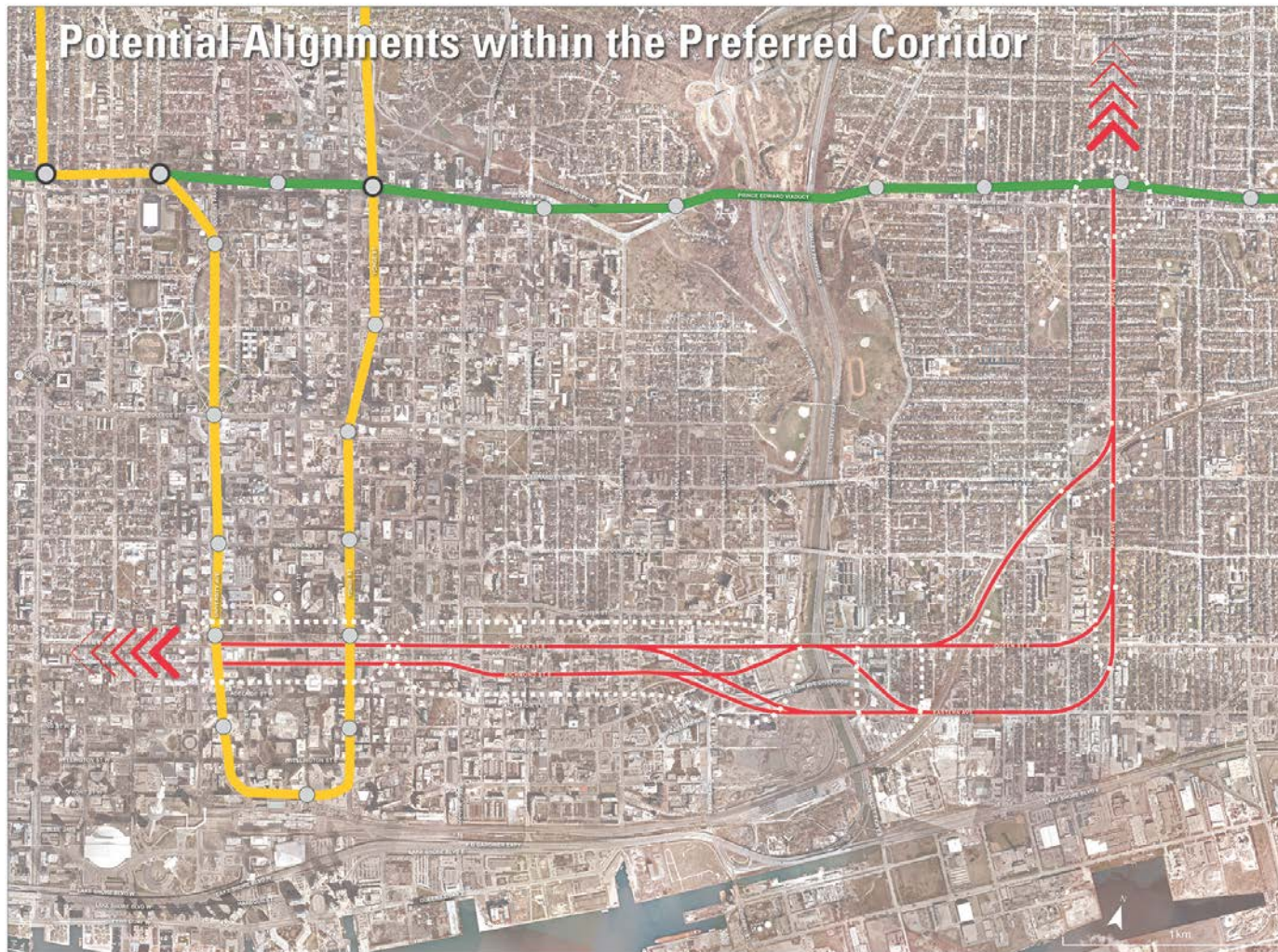
Relief Line

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

Relief Line

Potential Alignments



Relief Line

Recommendation

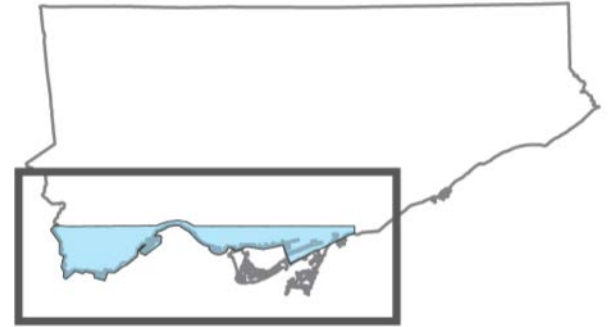
Approve Pape to Downtown via Queen/Richmond as the preferred corridor for the Relief Line project

Next steps

- Evaluate potential alignments and station locations
 - Queen v. Richmond, downtown
 - Queen v. Eastern, east of Don River
 - GO corridor to connect Pape and Queen
- Identify construction methods

Further recommendations will be made in June, 2016

- ***Staff will report on the preferred alignment and station locations for the Relief Line, and seek authority to proceed to Final Review (TPAP)***



Waterfront Transit 'Reset'

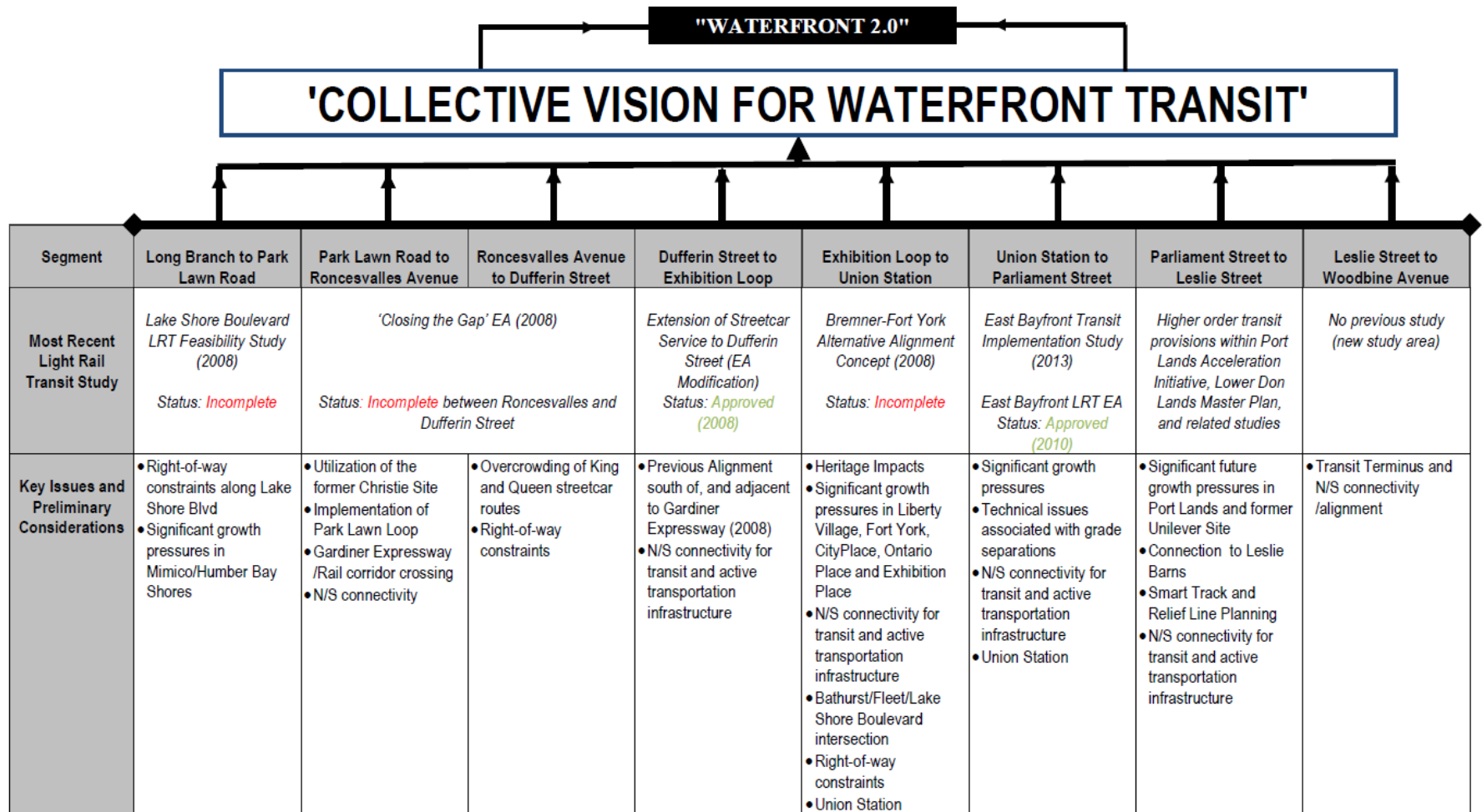
Waterfront Transit 'Reset'

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'

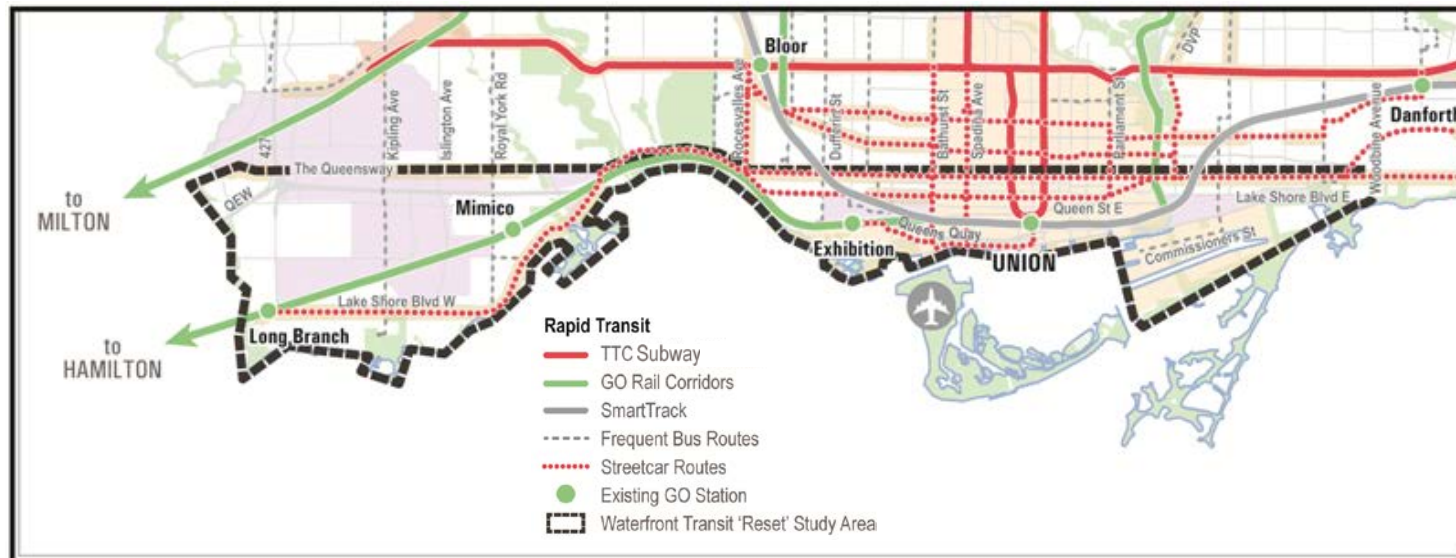
Previous Work and Key Issues to be Addressed



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.



Waterfront Transit 'Reset'

Recommendation

Update on progress will be provided in June, 2016

June/July Report

Project/Program	Scope of Work	Required Council Authorities
SmartTrack	<ul style="list-style-type: none"> • Test and refine SmartTrack / GO RER integration scenarios • Identify best performing new stations • Identify a fare integration solution • Develop Eglinton West LRT extension 	<ul style="list-style-type: none"> • Approval for the recommended SmartTrack concept • Initiate discussions on funding and financing with the Provincial and Federal governments
Regional Express Rail	<ul style="list-style-type: none"> • Engage on emerging Environmental Assessments including grade separations and new stations beyond the SmartTrack corridor 	
Relief Line	<ul style="list-style-type: none"> • Identify preferred alignment and station locations 	<ul style="list-style-type: none"> • Approval to commence the formal TPAP process
Scarborough Transit	<ul style="list-style-type: none"> • Review the corridor and alignments for the Express Subway • Update the approved plan for the Eglinton East LRT 	<ul style="list-style-type: none"> • Approval for the preferred alignment for the Scarborough Subway Extension and to commence the formal TPAP process • Recommended amendments to the environmental assessment for the Eglinton East LRT extension may be brought forward
Waterfront Transit	<ul style="list-style-type: none"> • Provide findings on the Waterfront Transit Reset Study, and report on next steps 	
Long Term Transit Plan/ Feeling Congested?	<ul style="list-style-type: none"> • Continue to advance refinements to the transit network vision for the City 	
Fare Integration	<ul style="list-style-type: none"> • Analysis of the implications of potential new fare structures proposed by Metrolinx 	

Progress Milestones

**February-April
2016**

- Further analysis on each of the projects to develop recommended solutions.

May 2016

- Public consultations on findings of this further analysis

**June / July
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

Q3 2016

- Launch environmental assessment processes as required
- Subject to Council approval, proceed with Phase 2 of the Waterfront Transit 'Reset' Study

Questions?