



INFORMATION ONLY

Subject: Toronto Transit Expansion Projects Status Update

Date: September 28, 2015

A joint presentation by the City of Toronto, TTC and Metrolinx, entitled “Toronto Transit Expansion Projects Status Update” will be presented to the TTC Board at its meeting on September 28, 2015.

Original Signed by

**Vincent Rodo
Chief Financial &
Administration Officer**

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TORONTO TRANSIT EXPANSION PROJECTS STATUS UPDATE

TTC Board Meeting, September 28, 2015

John Livey, Deputy City Manager, City of Toronto
Mitch Stambler, Head of Service Planning, Toronto Transit Commission



Overview of Presentation

1. Transit Coordination & Project Oversight
2. Project Status Updates
 - Relief Line Project Assessment
 - Scarborough Subway Extension Assessment
 - Waterfront Transit
 - GO RER/SmartTrack
 - TTC Service Integration
3. Upcoming Key Dates
4. Questions



TRANSIT COORDINATION & PROJECT OVERSIGHT

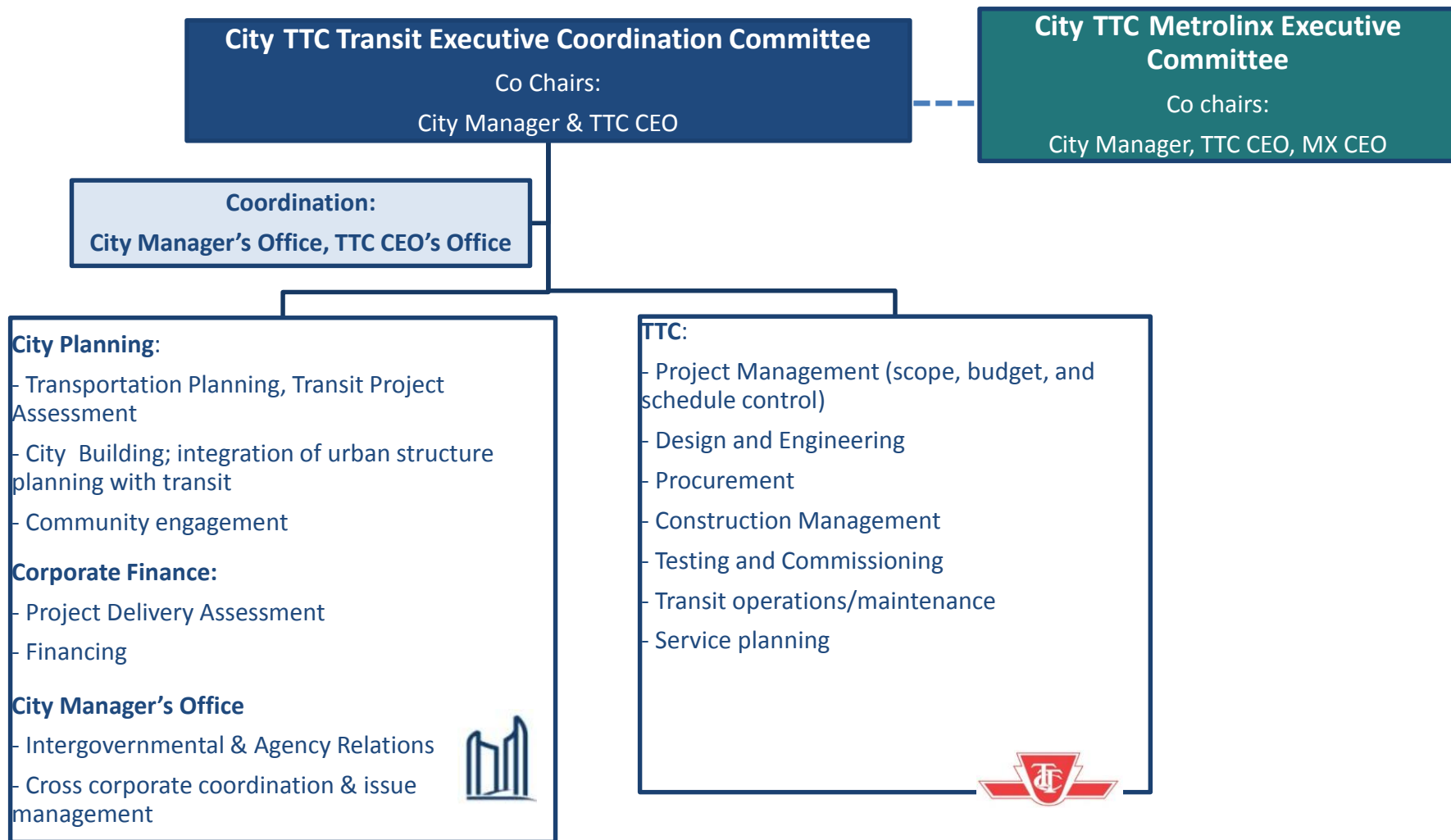


Transit Expansion: Joint Partnership with City, TTC and Metrolinx

- The City, TTC and Metrolinx work together on a number of transit expansion projects through the various stages of the project--- planning, design, project delivery assessment/procurement, construction, operation
- Metrolinx takes the lead on regional transit projects that implement The Big Move Plan and RER
- City/TTC lead on other transit projects within the City of Toronto.
- Many interfaces between all three organizations throughout the various stages of a project. Close coordination is critical.



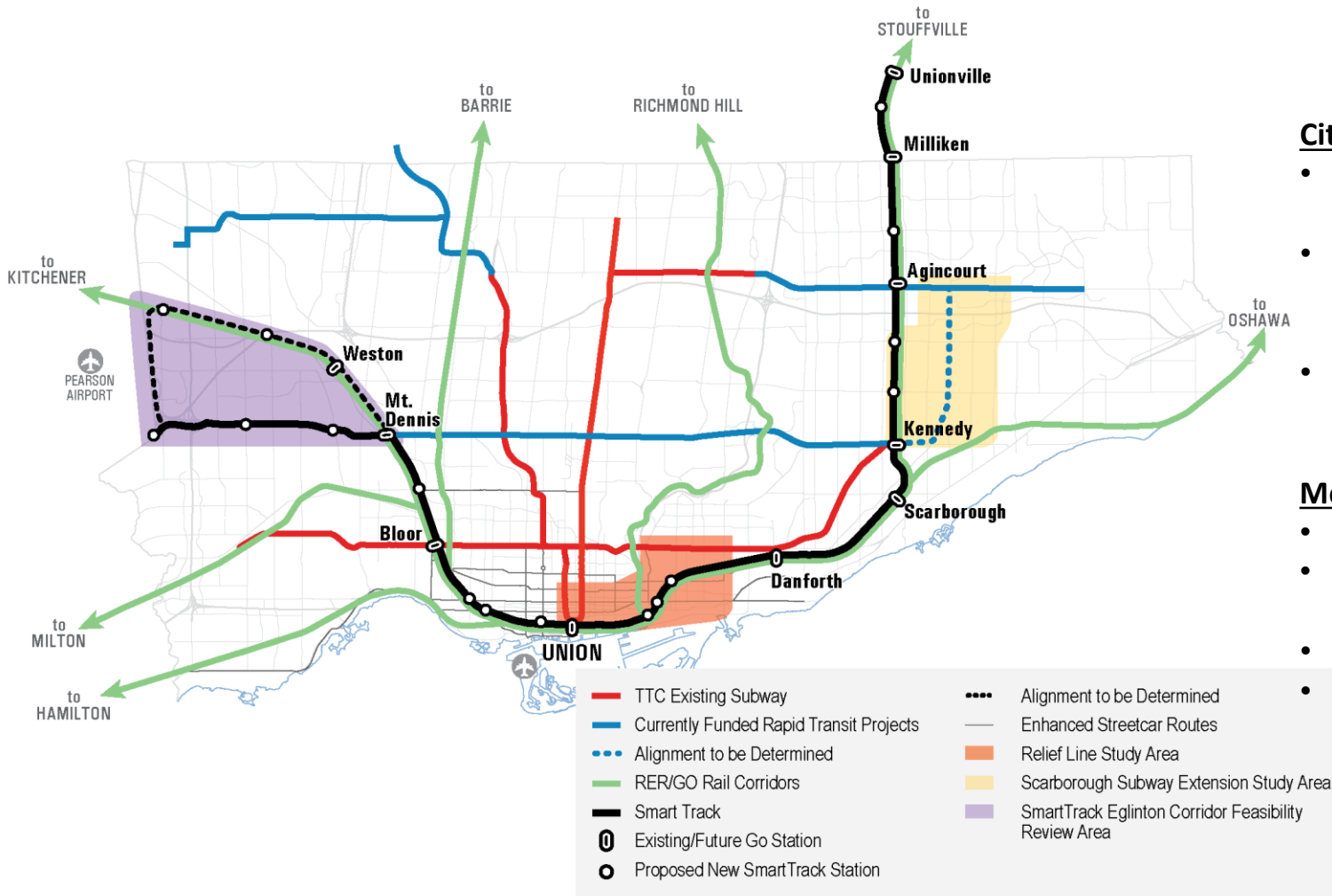
Transit Coordination Roles and Responsibilities



See July 29, 2015 Presentation from the Chief Planner for more details on Transit Network Planning



Toronto Transit Expansion Projects Currently in the Planning Stage:



City/TTC Projects:

- SmartTrack (Joint with Metrolinx)
- Scarborough Subway Extension Project Assessment/EA
- Relief Line Project Assessment/EA

Metrolinx Projects:

- Regional Express Rail
- SmartTrack (Joint with City/TTC)
- Finch LRT
- Sheppard LRT

City of Toronto's Updated Transportation Model

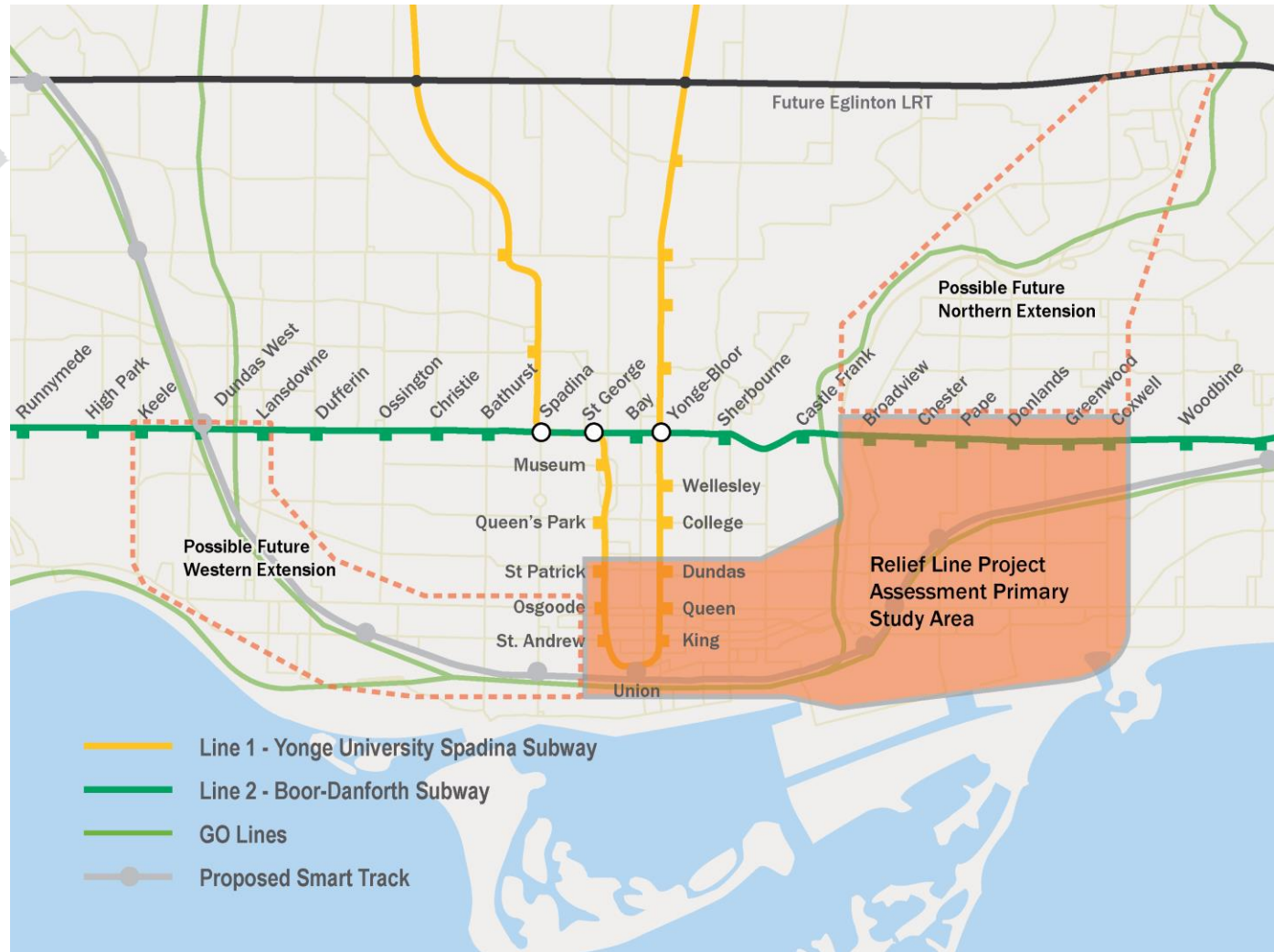
- University of Toronto is working with the City Planning division to develop GTAModel V4.0
- Key features of the GTAModel V4.0 model system include:
 - Covers the entire GTHA
 - 12 million trips made by 6.5 million people over 2000 travel zones
 - The model explicitly represents 100% of individuals and households
 - The model considers how a person's trips fit together instead of considering each trip individually
 - Trips are modelled for entire 24-hour week-day time period (using five time periods)
 - Trip volumes are validated using 2011 TTS for the 2011 base year
 - Use of transit is sensitive to transit crowding
 - Can be used to test different fare assumptions
- New model is being used for all transit planning studies being led by City Planning division- SmartTrack, SSE, Relief Line.
- Planned timelines for modelling work:
 - Sept 2015: Calibrating and validating model
 - Oct 2015: Draft results of transportation modelling
 - Q1 2016: Report on transportation modelling results reported to Council and TTC Board



PROJECT STATUS UPDATE: RELIEF LINE



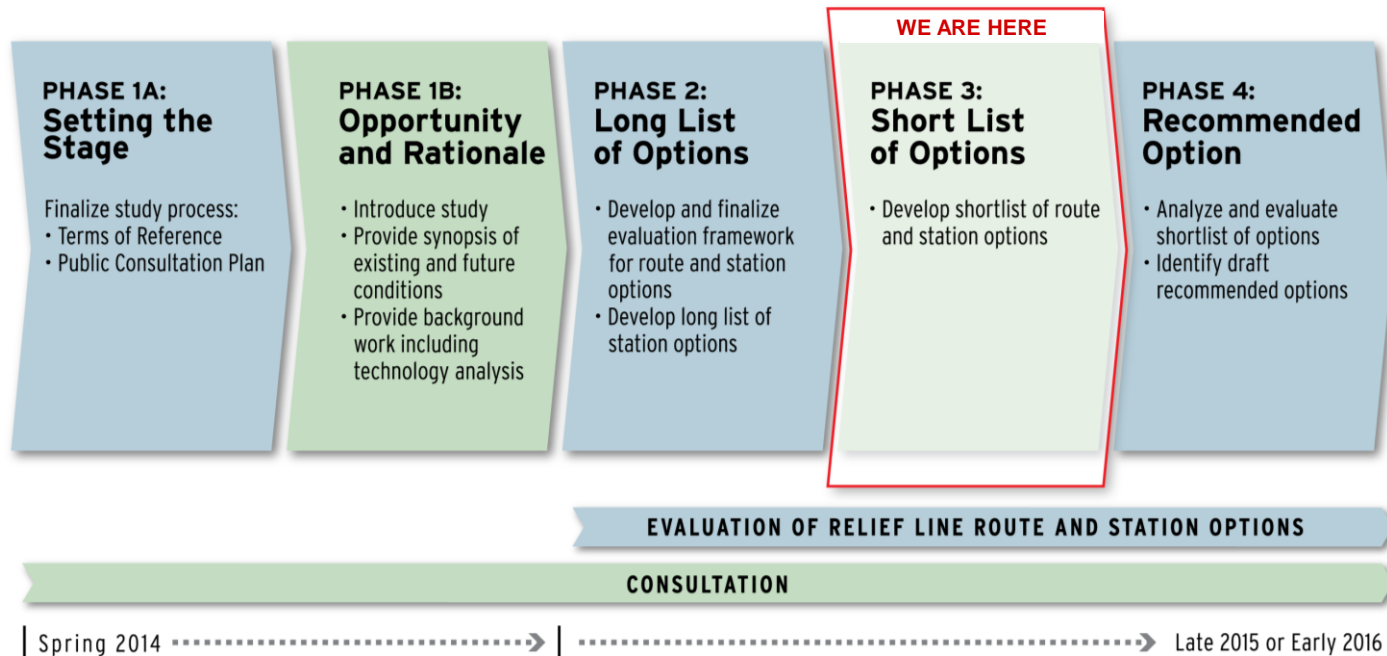
Relief Line Project Assessment: Study Area



Note - All station location and alignment options being considered are located within the study area. Residents from across the entire City of Toronto will benefit from transit and transportation network improvements created by the Relief Line.

Relief Line Project Assessment: Study Status

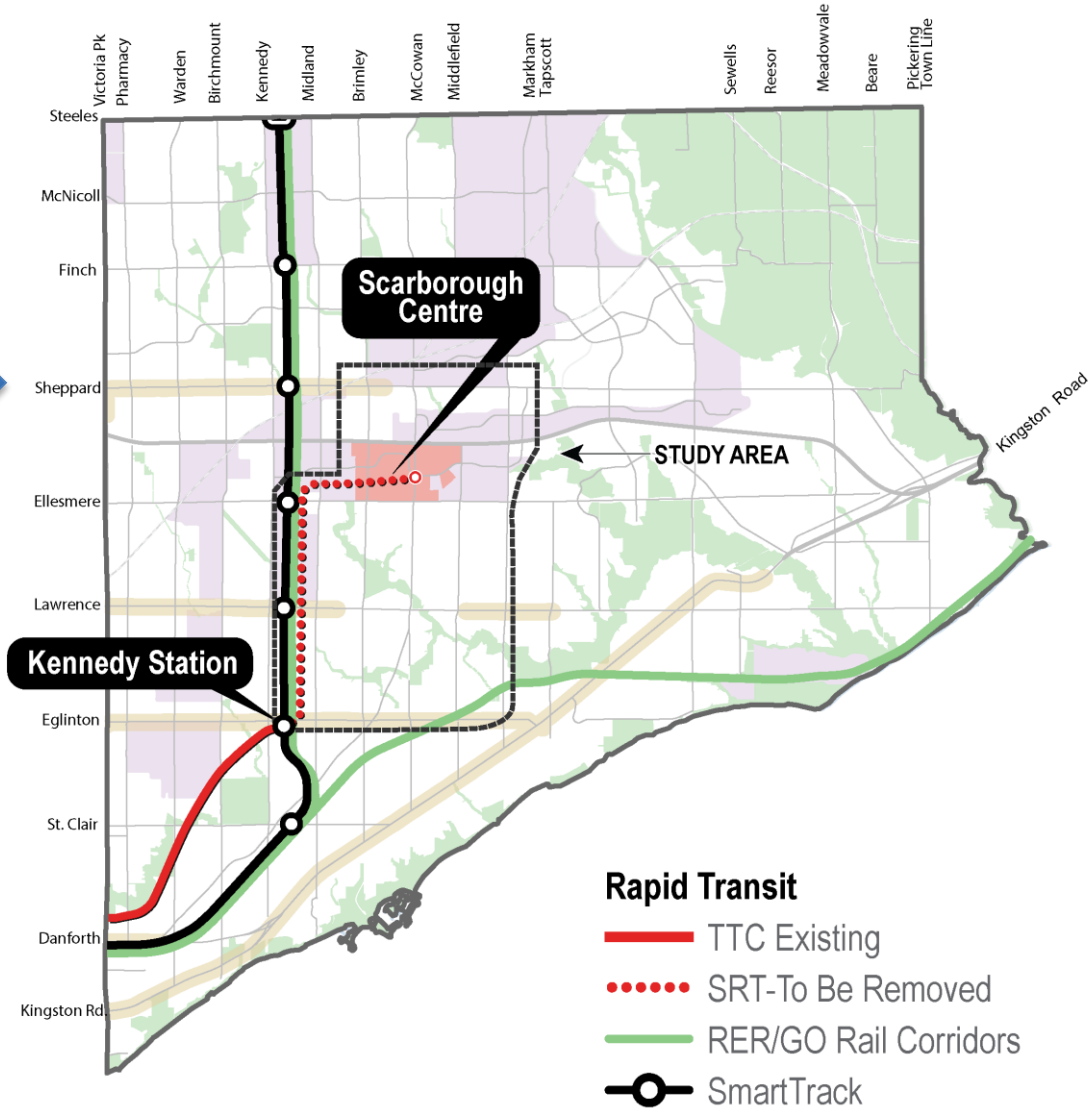
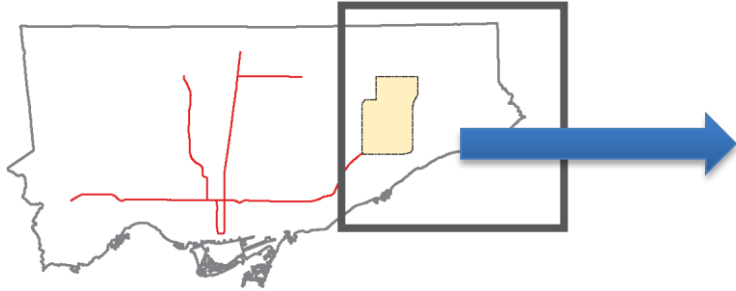
- In 2014, Relief Line Project Assessment launched to determine preferred alignment and station locations
- In March 2015, public and stakeholder consultation was held to review the long list of potential station options and draft evaluation criteria
- Now we are seeking feedback on 1) evaluation results of station location options and 2) potential corridors



PROJECT STATUS UPDATE: SCARBOROUGH SUBWAY EXTENSION

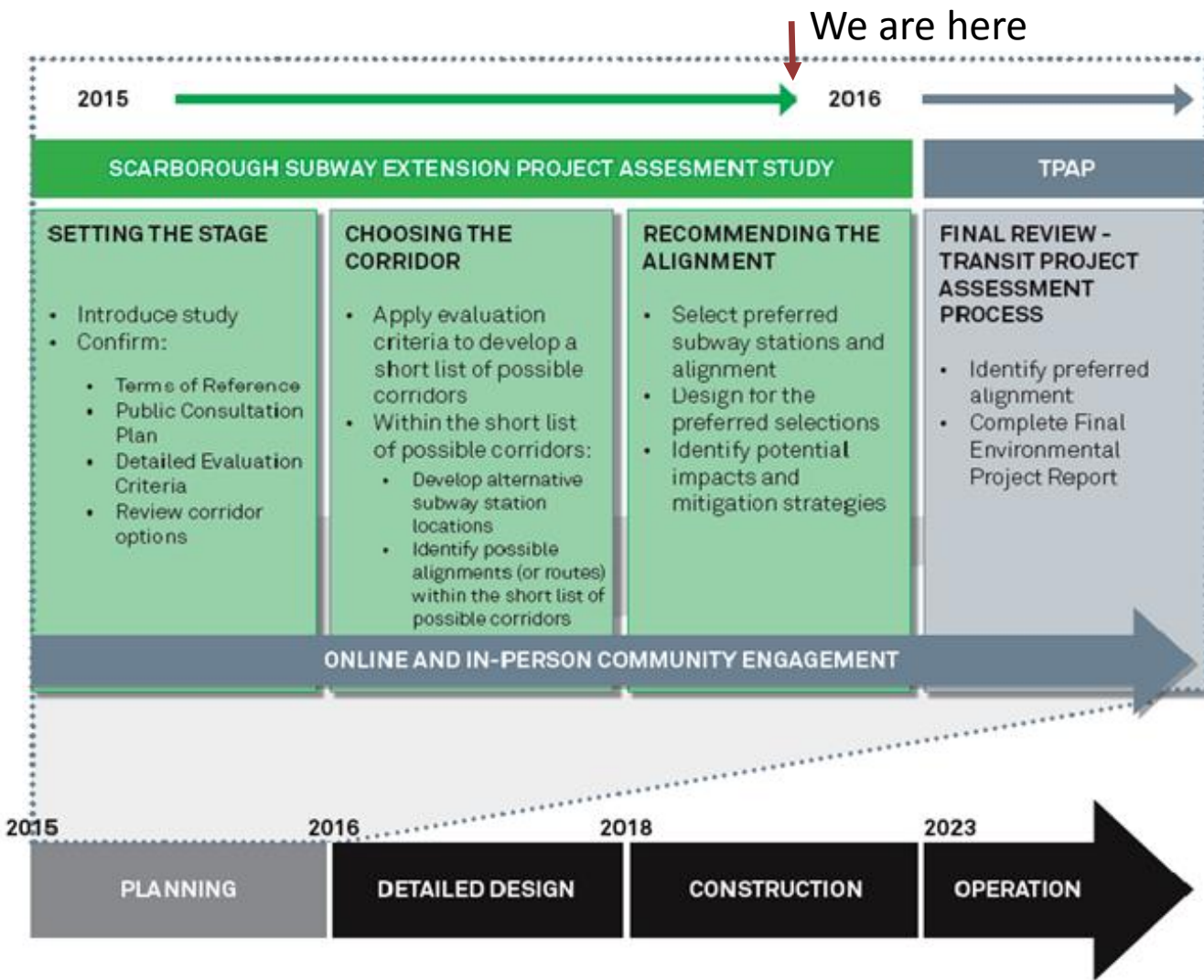


Scarborough Subway Extension: Study Area



Note - All station location and alignment options being considered are located within the study area. Residents across Scarborough and the entire City of Toronto will benefit from transit and transportation network improvements created by the Scarborough Subway Extension

Scarborough Subway Extension Study Process



PROJECT STATUS UPDATE: WATERFRONT TRANSIT PLANNING



Waterfront Transit since 2010

- Transportation and Servicing Master Plan (EA) underway for Port Lands and South of Eastern
- Various EAs started but never completed for the Western Waterfront
- Both Waterfront West LRT and Waterfront East LRT projects evaluated as part of “Feeling Congested?” update of the Official Plan



East Bayfront LRT 2010 EA study

- East Bayfront LRT is 1.6km from Bay Street to Parliament. It forms a section of a longer Waterfront East LRT corridor
- Environmental Assessment approved by Province in 2010
- Estimated \$520M capital cost (2016\$) included:
 - \$270M for tunnelling and underground station
 - \$100M for surface tracks, infrastructure and rolling stock
 - \$150M to reconstruct Queens Quay
- At the June 2015 City Council debate on Gardiner East EA, there was a request for a staff report on the acceleration of the East Bayfront LRT
- Staff to report to October Executive Committee on need for:
 - A “reset” on waterfront transit planning
 - An acceleration and phasing strategy for East Bayfront LRT

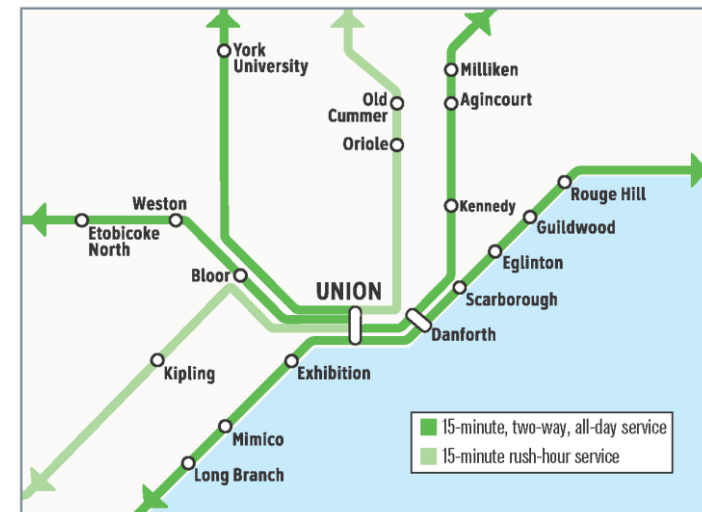


PROJECT STATUS UPDATE: SMARTTRACK & GO REGIONAL EXPRESS RAIL



Metrolinx GO Improvements- Regional Express Rail (RER)

- The Province has committed \$13.5 Billion to improve the GO Transit network over the next ten years.
- Metrolinx will implement RER which includes 15-minute, two-way, all-day transit service on most of the seven GO lines (and service improvements on the other lines).
- Across the system, this will mean:
 - Electrification of 5 corridors
 - Four times the number of train trips outside of rush hour and on weekends
 - Twice the number of trips during rush hour
 - Benefits for users of all 19 existing GO stations in Toronto; consideration of new stations currently undergoing analysis and consultation.
 - Infrastructure requirements of 150 kilometres of new, dedicated GO track and dozens of new tunnels and bridges
 - Opportunities for improved integration between local transit and GO transit services.



SmartTrack

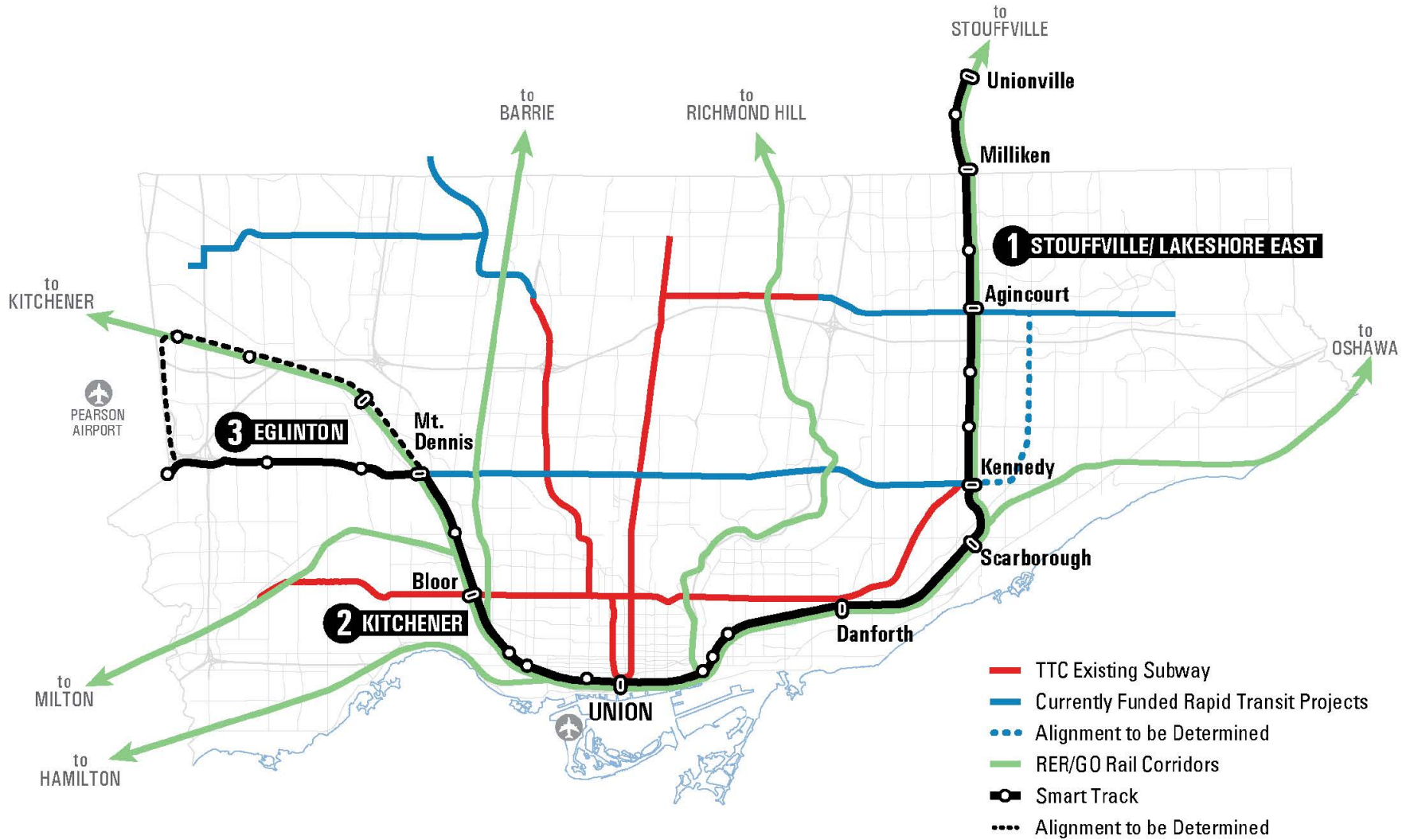
- The SmartTrack concept currently assumes:
 - The need for SmartTrack to co-exist with RER in the Stouffville/Lakeshore East and Kitchener GO Corridors.
 - Proposes a new heavy rail corridor connecting Mount Dennis to the Mississauga Airport Corporate Centre
 - Proposes better than 15 minute service frequency
 - All stop service in both directions
 - TTC fare included in fare options under study
 - Additional stations along the three existing GO corridors
 - Electrified heavy rail trains
- In February 2015, City Council directed staff to further evaluate the SmartTrack concept and report back. Analysis is currently underway.

See EX2.2 SmartTrack Work Plan (2015-2016):

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX2.2>



SmartTrack Alignment



SmartTrack and RER

Regional Express Rail (RER)

SmartTrack

General

- Service frequency of 15 minutes or better
- Fare policy to be determined.
- Union Station key destination

- Service frequency of 15 minutes or better
- All stop service in both directions
- TTC fare option included in study
- Union Station, Mississauga Airport Corporate Centre/Pearson are key destinations

Corridor #1- Stouffville/Lakeshore East GO (*Unionville to Union Station*)

- 6 existing GO stations
- Consideration of new stations undergoing analysis and consultation

- 6 existing GO stations (1 in Markham)
- 7 new stations (1 in Markham)

Corridor #2- Kitchener GO (*Mt. Dennis to Union Station*)

- 1 existing GO station (Bloor)
- 1 future GO station (Mt. Dennis)
- Consideration of new stations undergoing analysis and consultation

- 1 existing GO station (Bloor)
- 1 future GO station (Mt. Dennis)
- 4 new stations

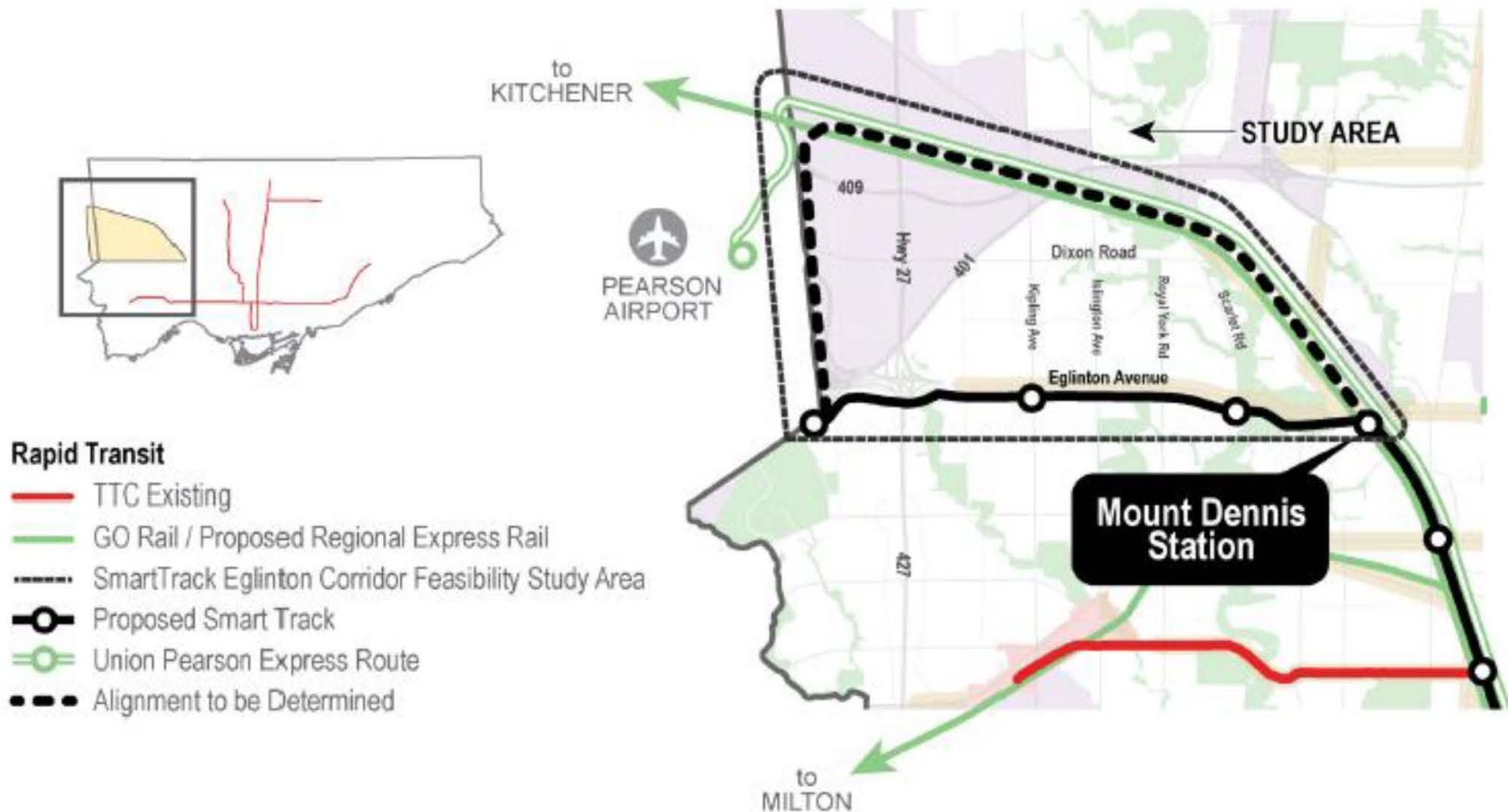
Corridor #3- Eglinton West (*Mt. Dennis to Airport Corporate Centre*)

- Not in RER plan.
- Extension of Eglinton Crosstown LRT to Pearson Airport is an unfunded project in The Big Move Plan.

- New heavy rail corridor to Mississauga Airport Corporate Centre
- 3 new stations (1 in Mississauga)



Eglinton West Feasibility Study Area



Eglinton West Feasibility Study Overview

- The study assesses the feasibility of corridor options from several perspectives:
 - Regulatory and legislative
 - Technical
 - Service concept
 - Land Use
 - Financial
- Work to date has focused largely on engineering analysis to determine corridor options that are technically feasible.
- Land use planning analysis and costing are under way and close to completion.
- Ridership modelling results will also be fed into this analysis.
- All of these aspects will be considered in assessing the corridor options against the base case LRT.

SMARTTRACK: TTC SERVICE INTEGRATION

Mitch Stambler, Head of TTC Service Planning, Toronto Transit Commission



SmartTrack: TTC Service Integration Objectives

- Treat SmartTrack as integral part of TTC network
- Contribute to realistic assessment of SmartTrack
- Maximize travel choices and options
- Identify best-possible transfer opportunities
- Integrate into existing and planned, future TTC services



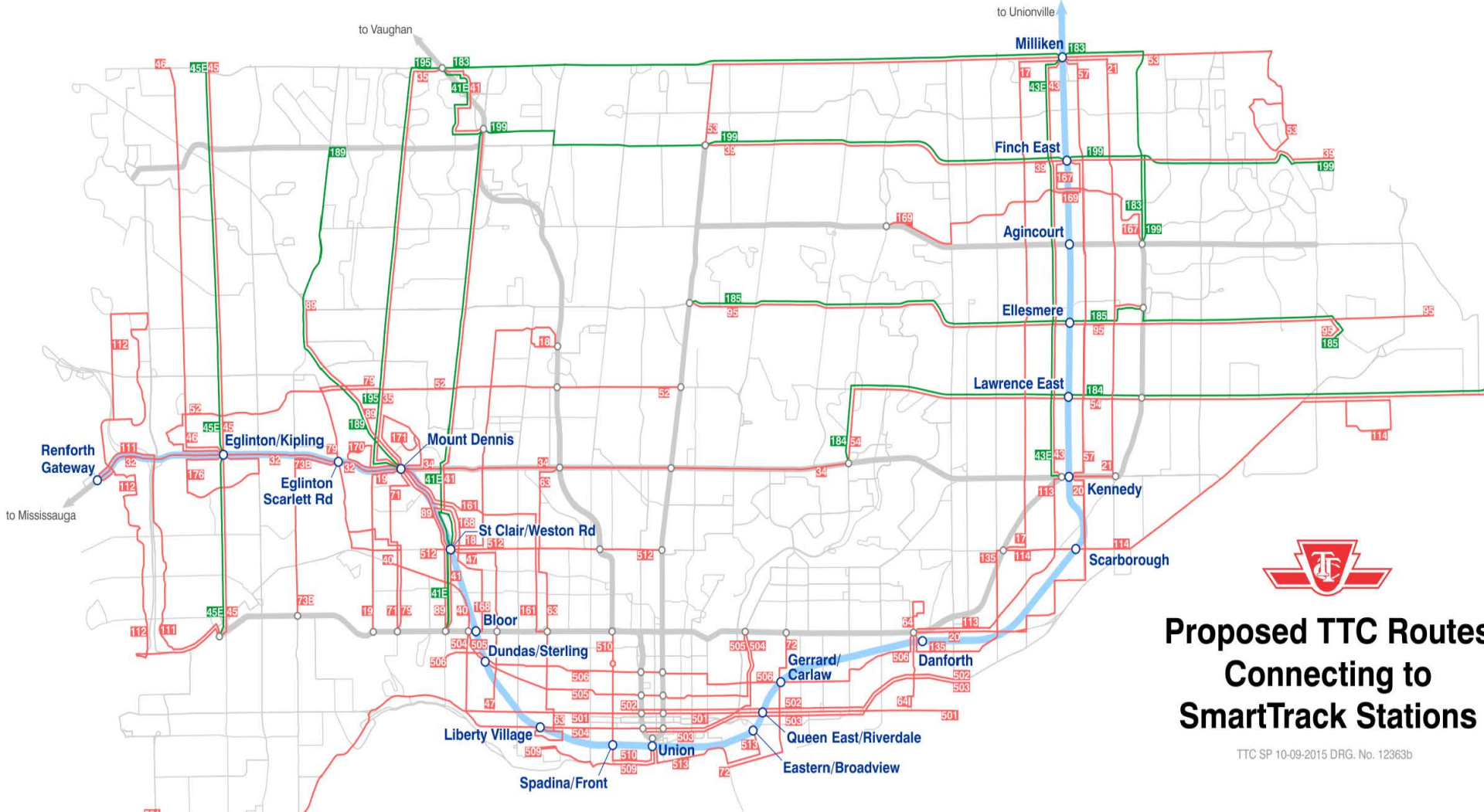
Identification of Candidate Connecting Routes

- Routes which:
 - Intersect
 - Pass by
 - Are in reasonably close proximity
- Considerations:
 - Degree of diversion (on-street; off-street; off-route)
 - Duplication of services
 - Frequency of service
 - Known/planned network changes
- All changes must be net benefit to travellers

TTC Service Integration - Preliminary Findings

- 75 transfers: TTC routes @ 21 SmartTrack stations
- 9 : off-route diversions
 - done by exception only at TTC
 - must satisfy criterion of net benefit to users
- use in ridership modelling, forecasting:
 - project customers transferring to ST
- use for ST station planning and assessment
- iterative process – overall ST planning





Proposed TTC Routes Connecting to SmartTrack Stations

TTC SP 10-09-2015 DRG. No. 12363b

Route List

17 Birchmount (Warden Stn - Milliken Stn)	54 Lawrence East (Eglinton Don Mills Stn - Starspray)	170 Emmett (Mount Dennis Stn - Jane & Emmet)
18 Caledonia (St Clair/Weston Rd Stn - Yorkdale Stn)	57 Midland (Kennedy Stn - Milliken Stn)	171 Mt Dennis (Mount Dennis Stn loop)
19 Jane South (Mount Dennis Stn - Jane Stn)	63 Ossington (Eglinton West Stn - Liberty Village)	176 Princess Margaret (Eglinton & Kipling Stn - Princess Margaret)
20 Cliffside (Kennedy Stn - Main Street Stn)	64 Main (Eastdale/Main Street Stn - Queen)	183 Steeles Rocket (Pioneer Village Stn - Sheppard East Stn)
21 Brimley (Kennedy Stn - Milliken Stn)	71 Runnymede (Runnymede Stn - Mount Dennis Stn)	184 Lawrence Rocket (Eglinton Don Mills Stn - Starspray)
32 Eglinton West (Mount Dennis Stn - Renforth Gateway Stn)	72 Pape (Pape Stn - Commissioners)	185 Ellesmere Rocket (York Mills Stn - U of T via Scarb Centre Stn)
34 Eglinton (Mount Dennis Stn - Eglinton Don Mills Stn)	73 Royal York (Royal York Stn - Eglinton/Scarlett Rd)	189 Weston Rocket (Mount Dennis Stn - Finch & Weston)
35 Jane (Mount Dennis Stn - Pioneer Village Stn)	79 Scarett Rd (Runnymede Stn - Lawrence & Jane)	195 Jane Rocket (Mount Dennis Stn - Pioneer Village Stn)
39 Finch East (Finch Stn - Neilson/Old Finch)	89 Weston (Keele Stn - Albion Rd)	199 Finch Rocket (Finch West Stn - Sheppard East Stn/Neilson)
40 Junction (Dundas West Stn - Runnymede)	95 York Mills (York Mills Stn - U of T/Kingston Rd)	501 Queen (Neville Park - Long Branch)
41 Keele (Keele Stn - Steeles West Stn)	111 East Mall (Kipling Stn - Renforth Gateway Stn)	502 Downtowner (Bingham - McCaul)
43 Kennedy (Kennedy Stn - Milliken Stn)	112 West Mall (Kipling Stn - Disco Rd)	503 Kingston Rd (Bingham - York)
45 Kipling (Kipling Stn - Steeles)	113 Danforth (Kennedy Stn - Main Street Stn)	504 King (Broadview Stn - Dundas West Stn)
46 Martin Grove (Eglinton & Kipling Stn - Steeles)	114 Kingston Rd East (Warden Station - Beechgrove)	505 Dundas (Broadview Stn - Dundas West Stn)
47 Lansdowne (Queen - St Clair/Weston Rd Stn)	135 Gerrard (Main Street Stn - Warden Stn)	506 Carlton (Main Street Stn - High Park)
52 Lawrence West (Lawrence Stn - Eglinton & Kipling Stn)	161 Rogers Rd (Ossington Stn - Mount Dennis Stn)	509 Harbourfront (Union Stn - Exhibition)
53 Steeles East (Finch Stn - Markham Rd/Staines)	166 Commander (Finch East Stn - Sheppard East Stn)	510 Spadina (Union Stn - Spadina Stn)
	168 Symington (Dundas West Stn - Mount Dennis Stn)	512 St Clair (St Clair Stn - Keele)
	169 Huntingwood (Don Mills Stn - Finch East Stn)	513 East Bayfront (Union Stn - Eastern/Broadview)

Station List

Route Number	Station at Eglinton/Scarlett Rd	Mount Dennis Stn
Express Route Number	Station at Ellesmere	5 Eglinton LRT
Agincourt Stn	Station at Finch East	19 32 34 35 71 89
6 Sheppard East LRT	Station at Gerrard/Carlaw	161 168 170 171 189 195
Bloor Stn	Station at Dundas/Sterling	Station at Queen East/Riverdale
Danforth Stn	Station at Lawrence East	Station at Renforth Gateway Stn
Station at Dundas/Sterling	Station at Liberty Village	Station at Scarborough Stn
Station at Eastern/Broadview	Milliken Stn	Station at Spadina/Front
Station at Eglinton/Kipling		Station at St Clair/Weston Rd
		Union Stn

KEY UPCOMING DATES



	SmartTrack & RER	Scarborough Subway	Relief Line	Waterfront Transit
October 2015	SmartTrack Status Update Report: Oct. 20 Executive Committee Oct. 28 TTC Board	* Status update in SmartTrack report	* Status update in SmartTrack report	Waterfront Transit Report: Oct. 20 Executive Committee Oct. 28 TTC Board
November 2015	Public Consultation (Joint City, TTC, Metrolinx)			
December 2015				
Q1 2016 (Note: 2016 meeting dates for TTC Board and Council Standing Committees have not been established)	SmartTrack Report: Executive Committee (Date TBD) TTC Board (Date TBD)	SSE Project Assessment Report: Recommended Alignment & Station Locations: Planning & Growth Management Committee (Date TBD) TTC Board (Date TBD)	Relief Line Project Assessment Report: Recommended Alignment & Station Locations: Planning & Growth Management Committee (Date TBD) TTC Board (Date TBD)	



QUESTIONS

