Coordinated Transit Planning in Toronto

SmartTrack/GO RER | **Eglinton West LRT** | Eglinton East LRT
Scarborough Subway Extension | Relief Line | Waterfront Transit

Public Information Session
June 4, 2016

Transportation Planning Section | City Planning Division
Toronto Transit Commission

TORONTO

PLANNING A GREAT CITY TOGETHER

Today's Agenda

1. Overview of our coordinated approach
2. Overview: Update of transit initiatives underway
3. Update: SmartTrack/GO RER
4. Update: Eglinton West LRT
5. Next Steps
6. Questions

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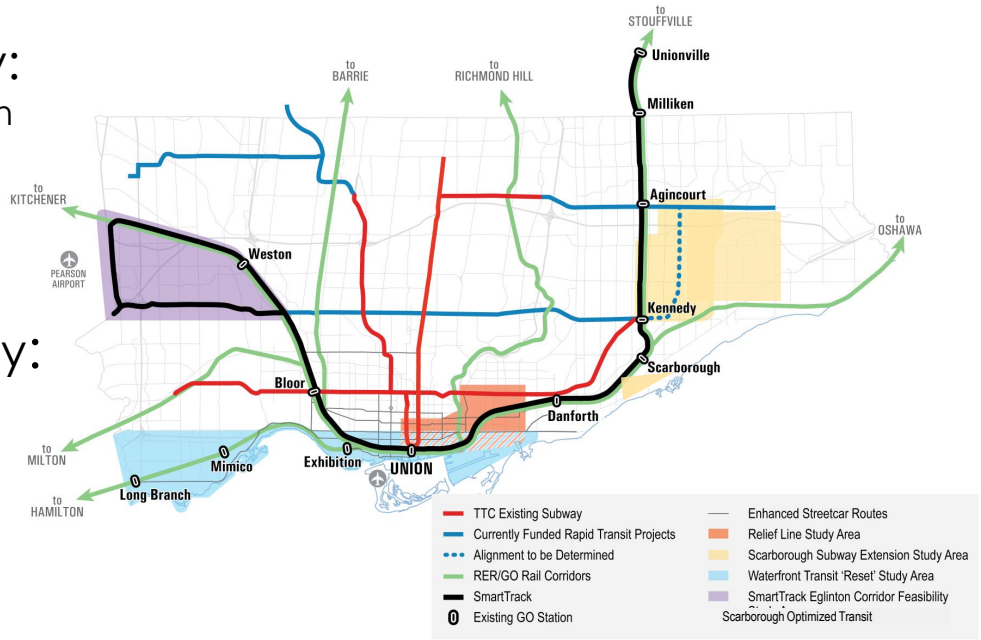
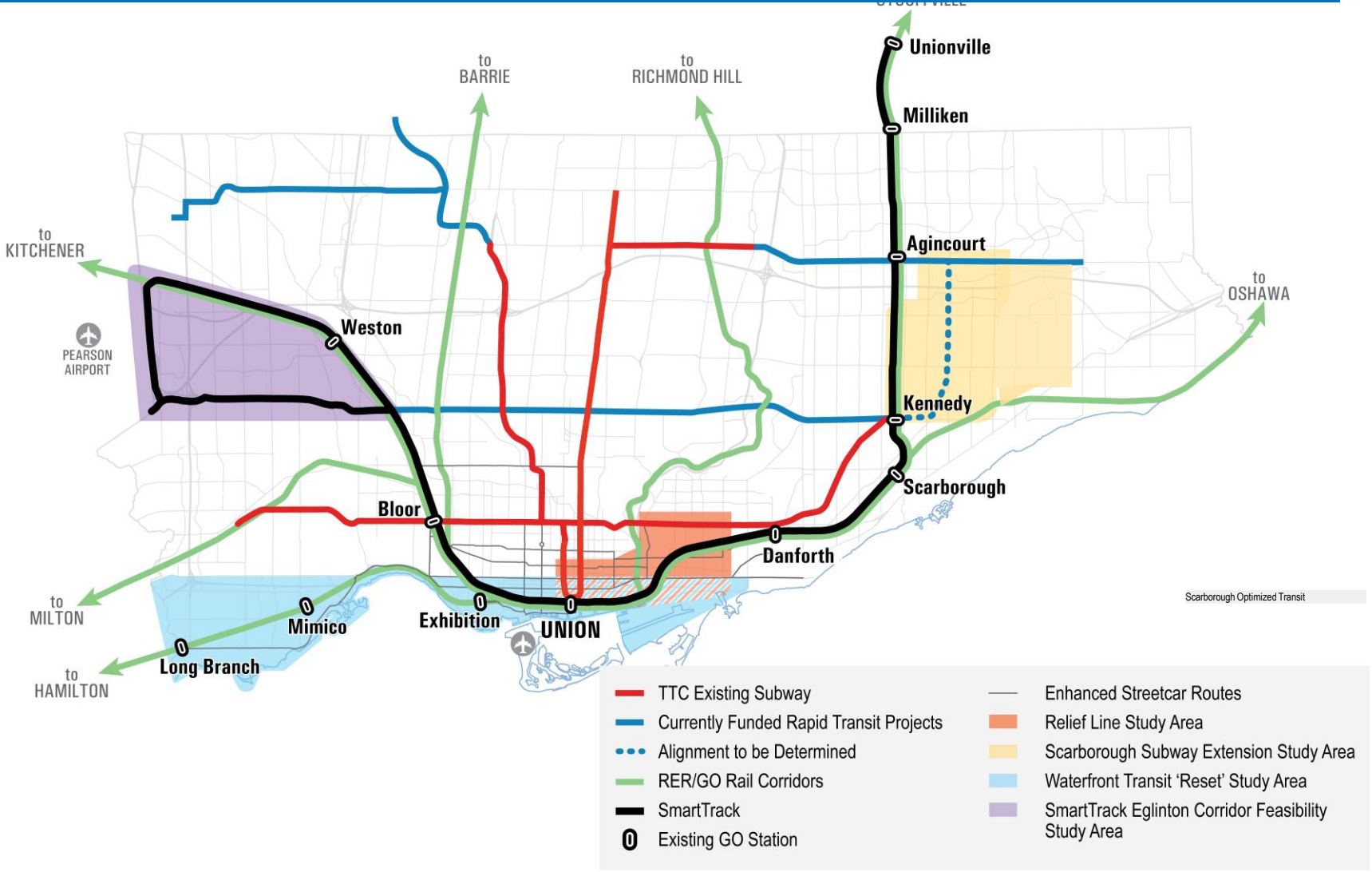
Our Coordinated Approach

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

- Rapid transit projects underway:
  - Toronto-York Spadina Subway Extension (TYSSE)
  - Eglinton Crosstown LRT
  - Finch West LRT
  - Sheppard East LRT
- Rapid transit planning underway:
  - SmartTrack / GO RER integration
  - Eglinton West LRT
  - Scarborough Subway Extension
  - Eglinton East LRT
  - Relief Line
  - Waterfront Transit "Reset"
- The next round of rapid transit priorities will be identified through completion of the *Feeling Congested?* initiative and will result in transit policies and long term network plan in the Official Plan.



Our Coordinated Approach



What guides the analysis of transit projects?

The evaluation criteria being used for each transit project are based on principles and criteria developed during the Official Plan Review process *"Feeling Congested?"*

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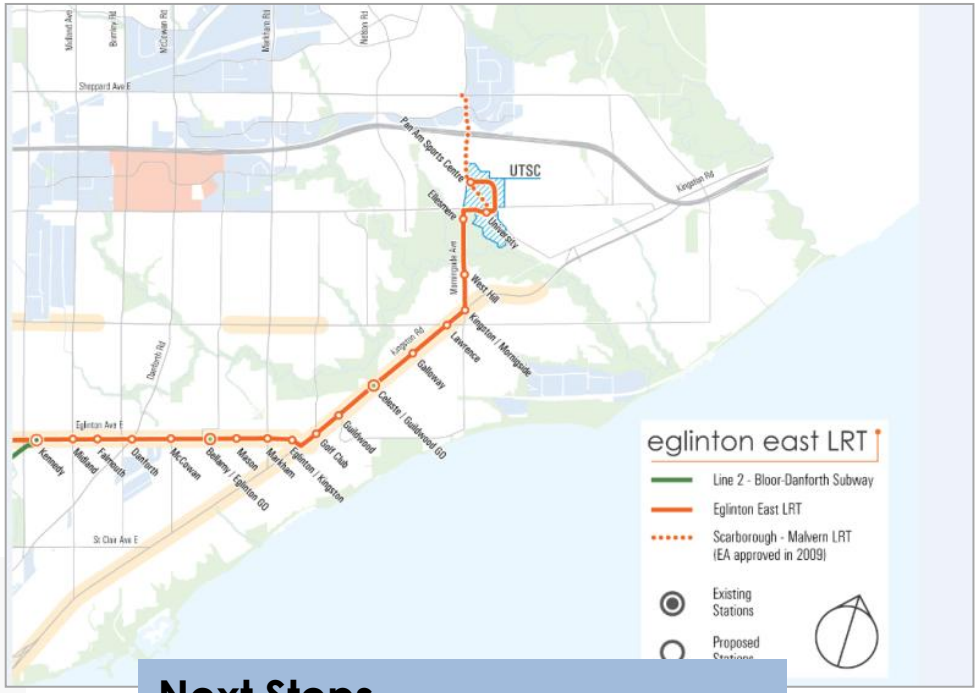
Eglinton East LRT

The Eglinton East LRT would extend the Crosstown east along Eglinton Avenue East, Kingston Road and Morningside Avenue to the University of Toronto, Scarborough Campus, to improve transportation access along the Avenues and in Neighbourhood Improvement Areas.

- Up to 18 stops over 11km line
- Improved reliability
- 2 connections to GO RER (Eglinton & Guildwood)



Sept 2009	City Council approved the recommendations of the Scarborough-Malvern LRT Transit Project Assessment
Jan 2016	Executive Committee endorsed refined transit priorities reintroducing the Eglinton East LRT, a modification of the Scarborough-Malvern LRT.
March 2016	City Council endorsed further study of the Eglinton East LRT

Next Steps

July 2016: Report to Council, Seek authority to proceed with amendment to Environmental Assessment

Summer 2016: Technical analysis to amend Environmental Assessment

Scarborough Subway Extension

The Scarborough Subway Extension would extend Line 2 from Kennedy Station to Scarborough Centre, replacing the SRT. The subway extension would encourage the growth and development of Scarborough Centre as a vibrant urban node.

Jan. 2016	Executive Committee directed staff to continue technical work on refined Scarborough transit priorities, focusing the subway extension on serving Scarborough Centre
March 2016	City Council endorsed the narrowing of alignment options for the subway extension, and report back to Executive Committee and Council in June/July 2016 with the recommended corridor and alignment

McCowan alignment has emerged due to:

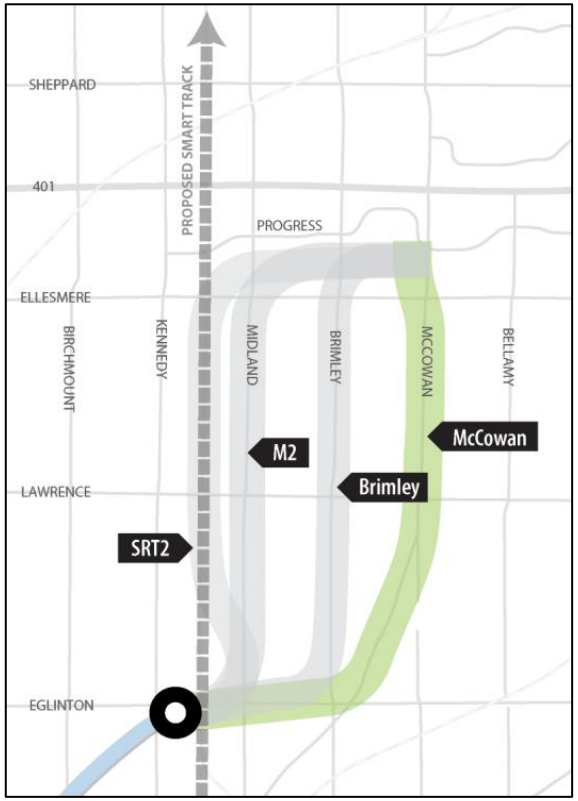
- Ability to maintain SRT service throughout construction
- Connection across both sides of Scarborough Centre with one station

Next Steps

July 2016: Report to Council, Seek authority to launch TPAP (EA)

Summer 2016: Initiate TPAP

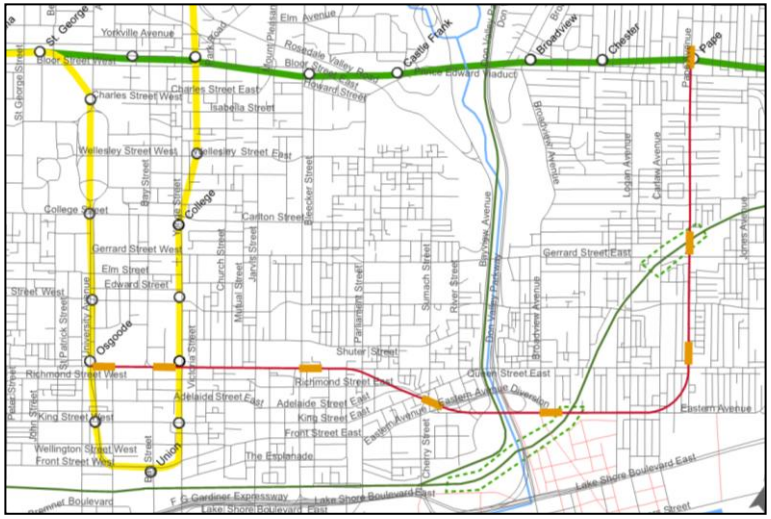
Recommended Express Subway Corridor



Relief Line

The Relief Line would be a new subway connecting downtown to Line 2 east of the Don River. It would assist in relieving crowding on the Yonge Subway line and the Bloor-Yonge interchange station as well as provide riders with more travel options.

Fall 2015 – Winter 2016	Pape to Queen corridor emerges as preferred corridor due to engineering feasibility and ease, connection to key destinations and ability to meet largest number of city-building objectives (i.e. *Feeling Congested?* Evaluation Criteria)
March 2016	**City Council approves preferred corridor for Relief Line:** Pape to Downtown via Queen/Richmond.
March - May 2016	Analysis of alignment options.



Emerging preferred alignment '**Pape to Downtown via Eastern**'

- Allows direct connection to Yonge-University Line
- Supports development
- Better supports *Feeling Congested?* criteria

Next Steps

July 2016: Report to Council, Seek authority to launch TPAP (EA)

Summer 2016: Initiate TPAP

Waterfront Transit "Reset"

The Waterfront Reset will:

Provide high quality transit that will integrate waterfront communities, jobs, and destinations and link the waterfront to the broader City and regional transportation network

Phase 1 will identify reasonable alternative concepts for a waterfront transit solution.

Findings will be reported to Council in July, including:

- Development and analysis of 'Concept Families'
- Preliminary evaluation of solutions to create a complete transit network solution for the Waterfront

Phase 2, subject to City Council approval, would consider:

- ✓ Advancing feasibility studies (including but not limited to demand forecasting, operational assessment(s), further developed cost estimates);
- ✓ Potential Environmental Assessment(s) or amendments to existing Environmental Assessment(s);
- ✓ Pursuing the implementation of short term strategic improvements that minimize long term throwaway costs; and
- ✓ Advancing a Business Case and pursuing funding opportunities.

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SmartTrack / GO RER

Background

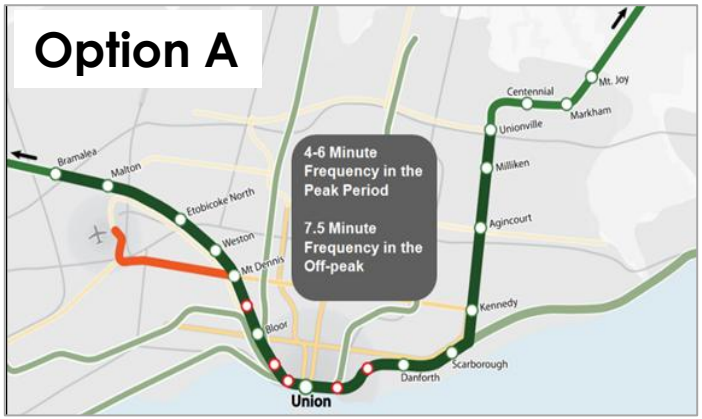
- SmartTrack builds upon Metrolinx's GO Regional Express Rail program. GO RER will provide significant increases in off-peak service on five of the existing GO corridors.
- SmartTrack proposes more stations and integrated fares on the Stouffville, Lakeshore East and Kitchener corridors.
- SmartTrack consists of two components:
  - 41km of track along 3 existing GO corridors between the planned Mount Dennis Station and Unionville Station in York Region by way of Union Station in Toronto, and
  - The Eglinton West LRT , an 11km westerly extension of the Eglinton Crosstown LRT from Mount Dennis to the Mississauga Airport Corporate Centre and beyond to Toronto Pearson.
- GO RER and SmartTrack will help relieve many of the transit network's capacity limitations, which currently affect many parts of the City, including the subways serving Downtown, the SRT in Scarborough, streetcar routes east and west of the downtown and individual bus routes throughout the City.

The benefits of SmartTrack have been evaluated using the City's "Feeling Congested?" framework

SmartTrack Options

Background

- The City has been working with Metrolinx on the integration of SmartTrack and GO RER
- Four options for SmartTrack/GO RER integration were developed and analysed.



SmartTrack / GO RER

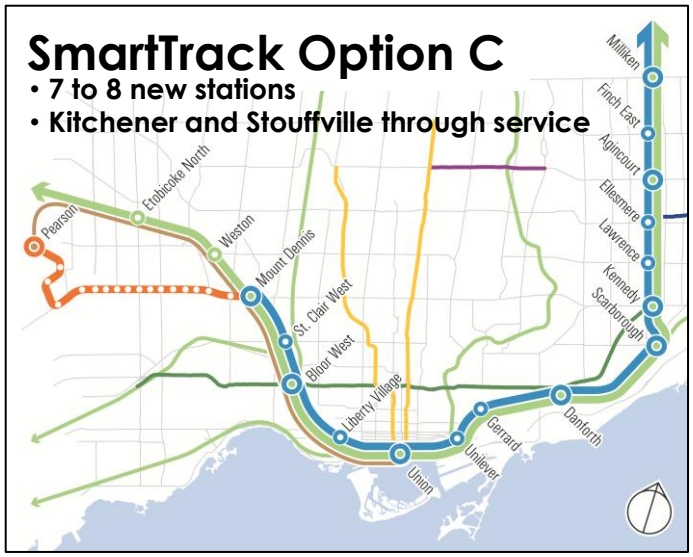
Background

- These four options were presented to the public in February 2016.
- Based on technical and planning analysis, City staff recommended that Options A and B not be carried forward for further analysis. These options would have required **significant** incremental infrastructure that would lead to increased costs and community impacts.
- In March 2016, Council directed staff to continue working with Metrolinx on Options C and D to determine the best SmartTrack arrangement

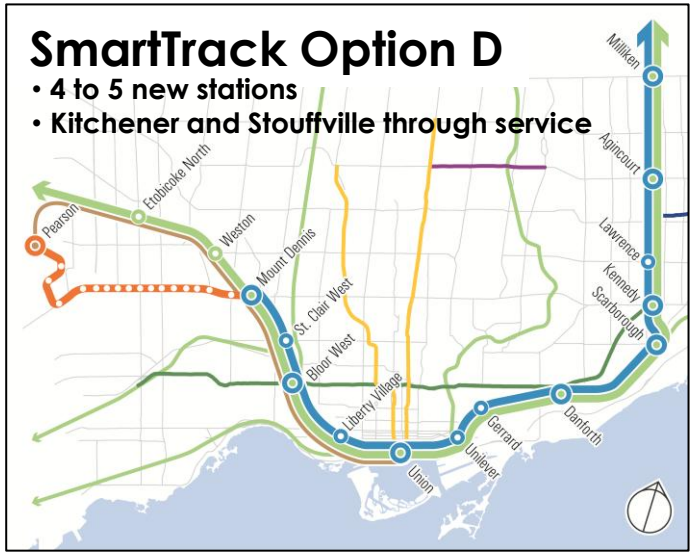
SmartTrack / GO RER

Background

- Integration of SmartTrack/GO RER may require additional infrastructure such as additional stations and platforms



- 27,600 more daily net-new riders than GO RER
- Serves 24,100 people and 19,000 jobs
- 9,900 disadvantaged residents served
- Reduced ridership on Yonge South of Bloor by 3,900 and WB to SB transfers by 2,800 in AM peak hour relative to GO RER



- 29,200 more daily net-new riders than GO RER
- Serves 20,100 people and 12,400 jobs
- 8,000 disadvantaged residents served
- Reduced ridership on Yonge South of Bloor by 3,800 and WB to SB transfers by 2,600 in AM peak hour relative to GO RER

NOTE: Numbers assume TTC fares and the "Low Population/Medium Employment with SmartTrack Influence" land use. Changing either assumption would change ridership figures.

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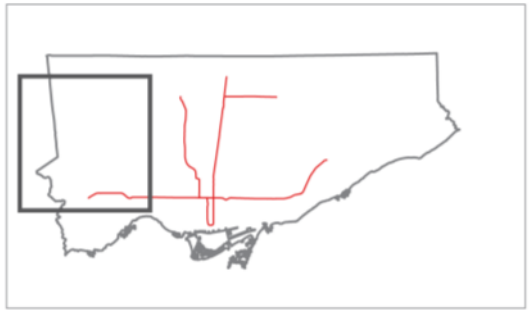
SmartTrack – Eglinton West LRT

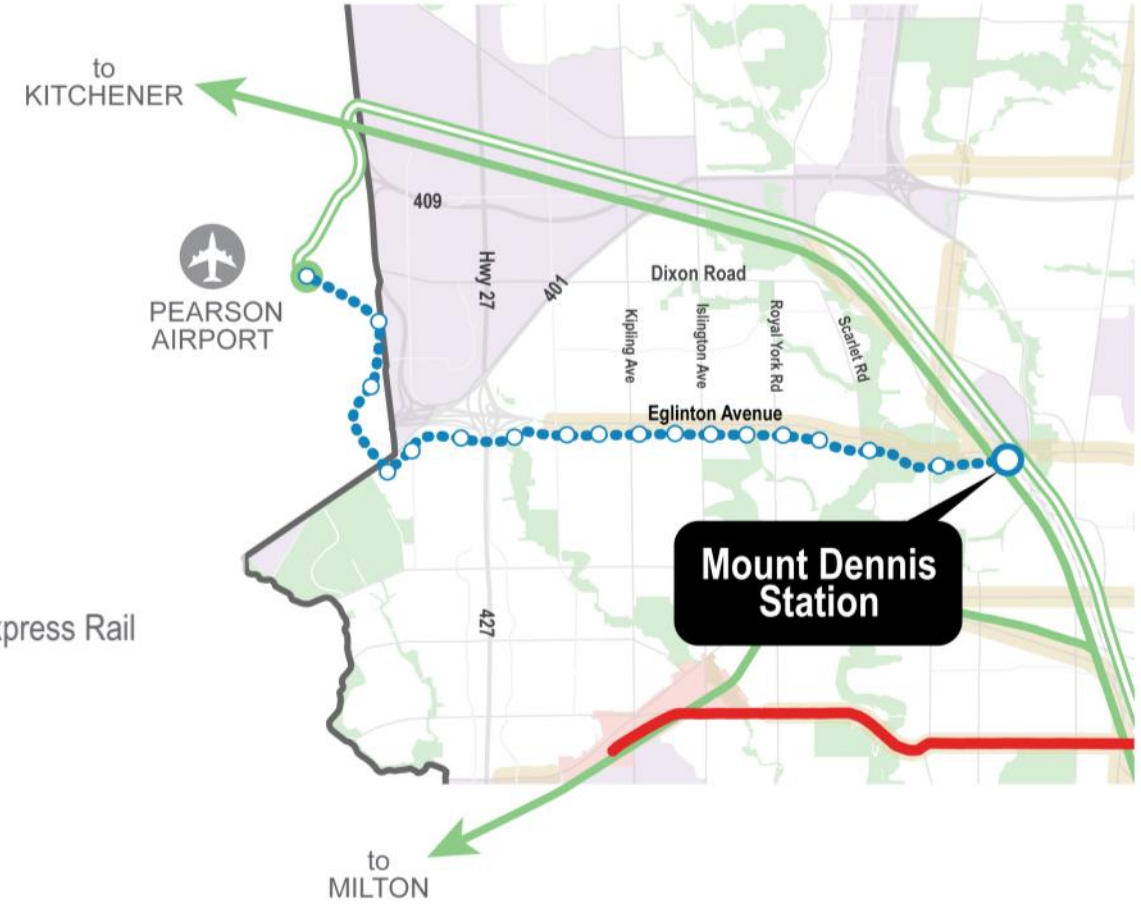
Background

- In February 2015, City Council directed staff to assess the feasibility of SmartTrack corridor options connecting Mount Dennis Station to the Mississauga Airport Corporate Centre (MACC)
- On January 19, 2016 this review was published. It concluded that a heavy rail corridor was not the preferred option:
  - Results in **significant** community impacts including extensive property takings in several areas, and impacts to municipal roads and bridges
  - Requires new infrastructure – such as additional tracks –beyond the immediate corridor
  - Costs for heavy rail would range from $3.7 billion to $7.7 billion for Eglinton corridor versus the approximately $1.3 billion for the approved Eglinton LRT West
- Staff recommended moving ahead with optimizing the approved LRT Extension

SmartTrack – Eglinton West LRT

Study Area





Rapid Transit

- TTC Existing
- GO Rail / Proposed Regional Express Rail
- Eglinton East LRT
- Union Pearson Express Route

SmartTrack – Eglinton West LRT

Background

- In February 2016, staff presented the report findings to the public as part of the broader public engagement at the City. At that time, several questions and concerns were raised:
  - Traffic implications including left-turns, and increased traffic congestion during construction and due to reduced lane capacity
  - Lack of right-of-way to support LRT
  - Consideration of BRT, as well as underground, above ground or alternate alignments
- On March 31, 2016, City Council directed staff to remove the heavy rail option and work with Metrolinx to optimize the approved Environmental Assessment for Eglinton West LRT
  - This includes a review of the number of stations, traffic impacts and potential grade separations

SmartTrack – Eglinton West LRT

What we heard

- Where are we in the process?
- Why is the Eglinton West rapid transit project important?
- Why LRT? Why not BRT?
- Can the LRT go underground?
- Do we have enough right-of-way for an LRT?
- What does LRT look like?
- How will it impact traffic? Will it produce more congestion?
- What kind of noise/pollution will it produce?

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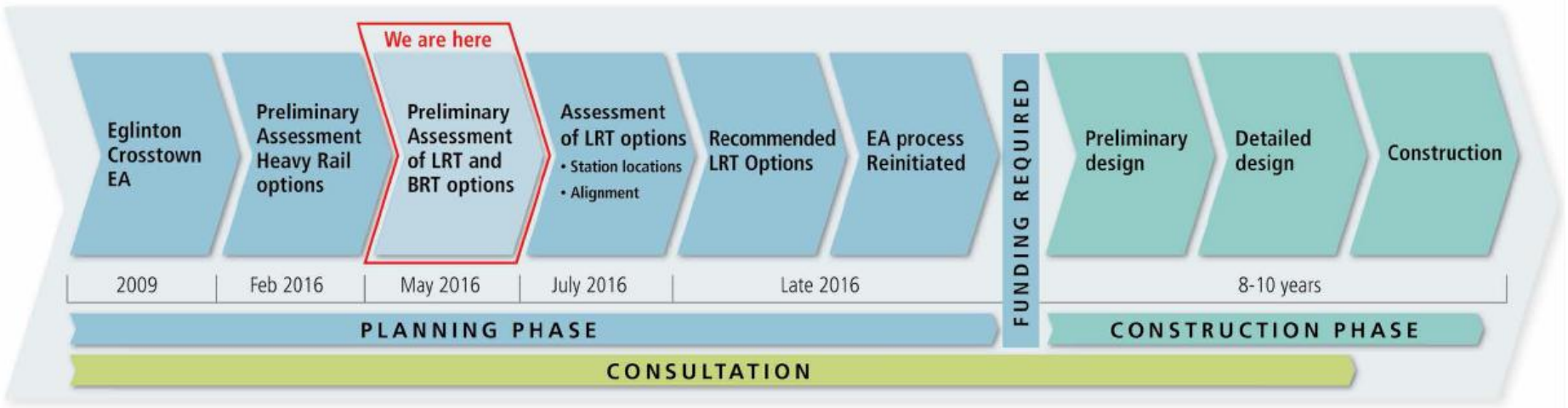
SmartTrack – Eglinton West LRT

Where are we in the process?

- The review of the plan for the LRT extension is underway. Further technical work and public consultations are required before we can amend the approved Environmental Assessment.

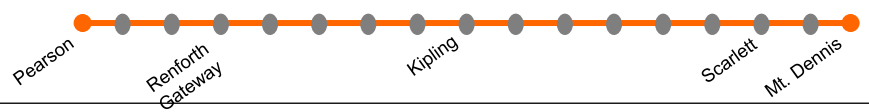
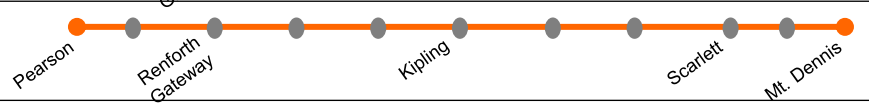
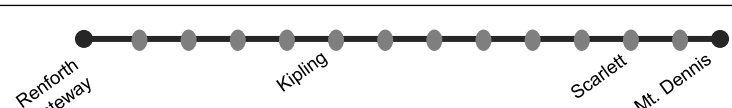


SmartTrack – Eglinton West LRT

Where are we in the Process?

In conducting a preliminary assessment of the LRT and BRT, six options were assessed.

Work underway to review the approved EA including consideration of between 8 and 14 stations and grade separations at select locations.

Option	Number of Stops	Suggested Stop Locations	Degree of Grade Separation
1. EA Approved - Designed for Local Access	14 + 3 at Airport		At grade
2. Speed and Access Balance	8 +3 at Airport		At grade
3. Maximize Speed	3 + 3 at Airport		At grade
4. Grade Separated at Intersections	3 + 3 at Airport		Grade separated at major arterials
5. Reduced Stops + Highest Speed	3 + 3 at Airport		Elevated or underground
6. BRT	14 stops		Dedicated Lane

SmartTrack – Eglinton West LRT

Q2 –

Why LRT? Why not BRT?

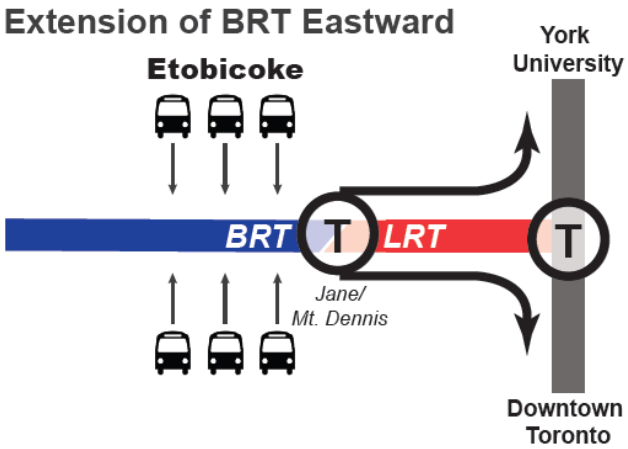
Bus Rapid Transit (BRT)

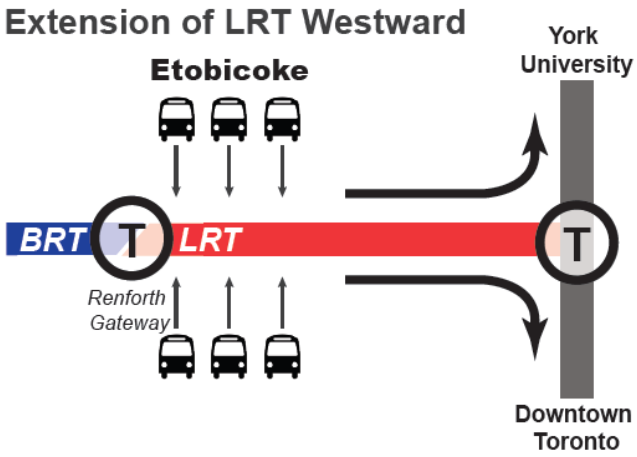
- Unfavourable transfer location
- Nominal ridership attraction
- Key considerations were:
  - How Eglinton West transit would connect to the Mississauga BRT
  - Where the transfer between LRT and BRT should occur to best serve the population

VS

Light Rapid Transit (LRT)?

- Premium service offering significantly better passenger experience
- Lower cost than subway and heavy rail
- Reliable
- Ability to attract growth
- Higher capacity ridership than BRT
- Favourable transfer location





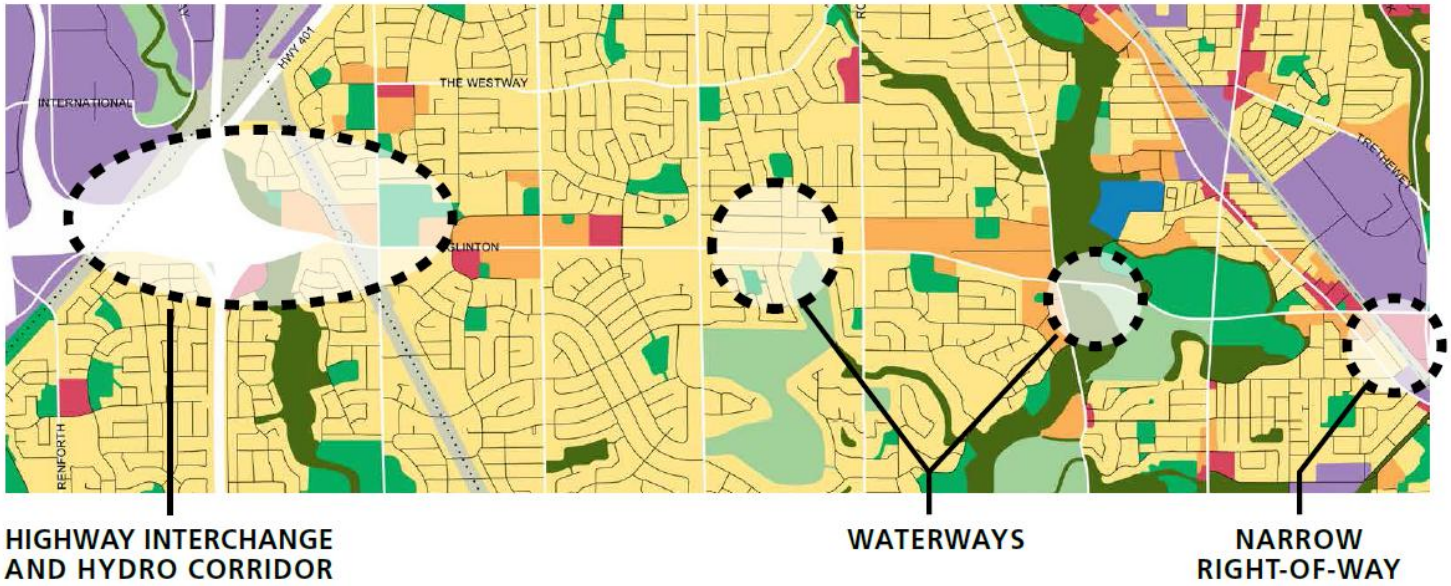
Source: Metrolinx

SmartTrack – Eglinton West LRT

Why not go underground?

- The approved EA was for at-grade LRT
- Grade separations are being examined at select locations as part of the review of the EA, including:
  - Underground
  - Elevated

Corridor Constraints – on Citywide Zoning By-law Map (2013)



SmartTrack – Eglinton West LRT

Do we have enough right-of-way for an LRT?

Eglinton West Corridor Development Activity (May 2016)

Eglinton Ave is in a suburban community, with wide rights-of-way (ROW) and no current provision for on-street parking. Additionally:

- ROW requirements have been preserved
- Sale of lands by Build Toronto does not impact current ROW requirements
- LRT creates the opportunity to improve the streetscape and public realm and raise the market profile of the corridor

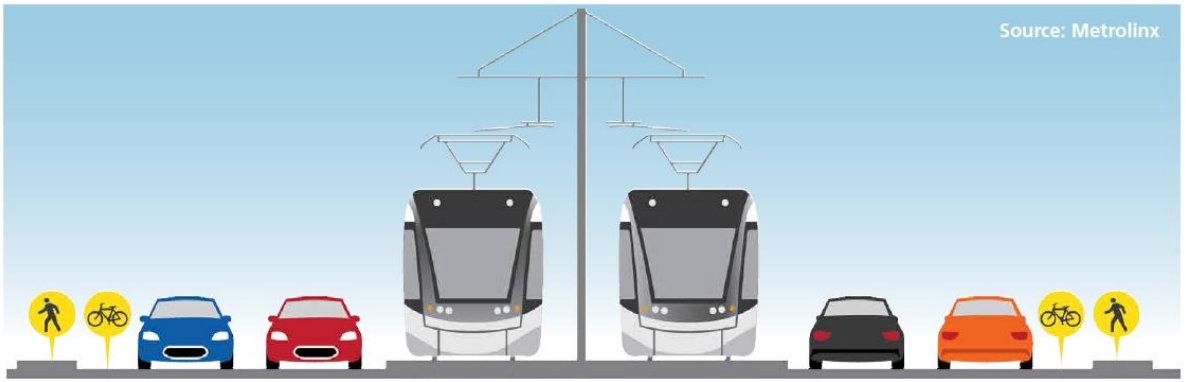
SmartTrack – Eglinton West LRT

What does LRT look like?

An LRT offers a premium passenger experience with improved comfort, reliability, and attractive design. LRT vehicles will offer a much higher capacity than streetcars and buses, will operate more quickly due to less frequent stopping and have a dedicated right-of-way with signal priority at intersections.

Emergency vehicles will be able to use the dedicated LRT ROW to bypass regular traffic in the event of an emergency, which may result in improved response times.

Compared with typical streetcar platforms, LRT platforms will:



- Be wider and longer
- Provide shelter along the entire length
- Be accessible throughout
- Be lit all night
- Include ticket vending machines
- Most intersections will have farside platforms with left turn lanes

SmartTrack – Eglinton West LRT

How will it impact traffic? Will it produce more congestion?

An LRT does not impede traffic, as it travels on a dedicated right-of-way separate from regular traffic. An LRT can have the same capacity as 16 lanes of free-flowing traffic yet it requires the space of just two lanes of road, increasing capacity to move people and improving transportation choices.

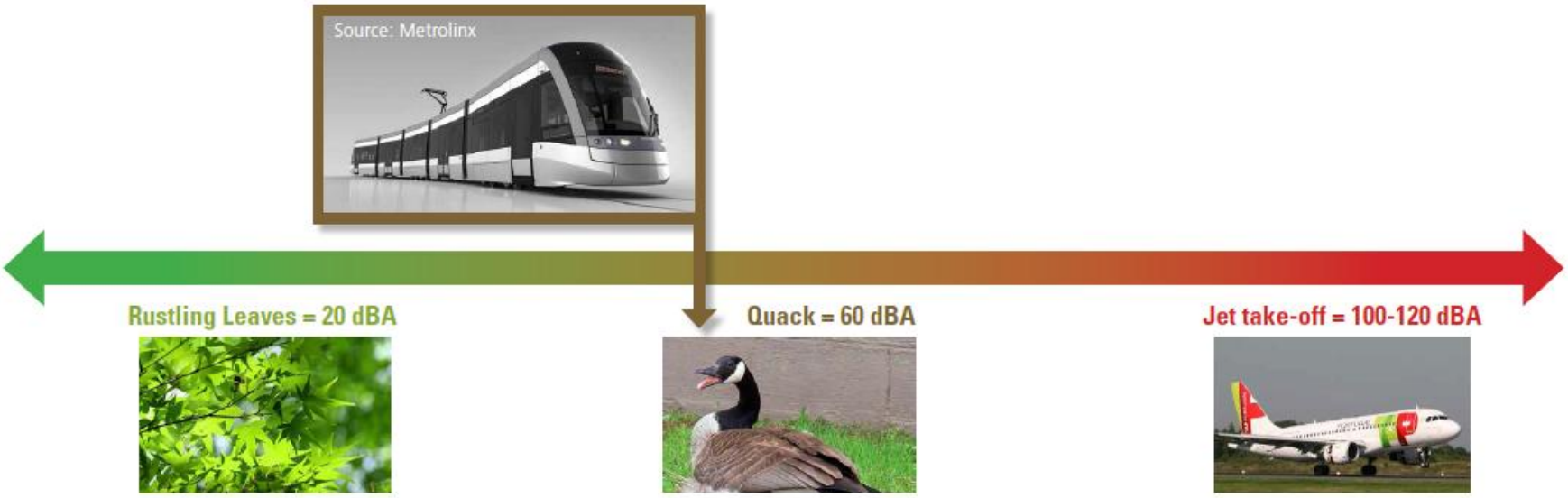
Left turns will be permitted at most signalized intersections. Options such as underground or elevated designs are being examined to address any intersections where traffic impacts cannot be managed.

SmartTrack – Eglinton West LRT

What kind of noise/pollution will it produce?

An LRT produces about the same or less noise as general suburban traffic, about 60 dBa

An LRT produces near-zero emissions meaning low impact on air quality and making it the right choice for the environment.



SmartTrack – Eglinton West LRT

Emerging Findings

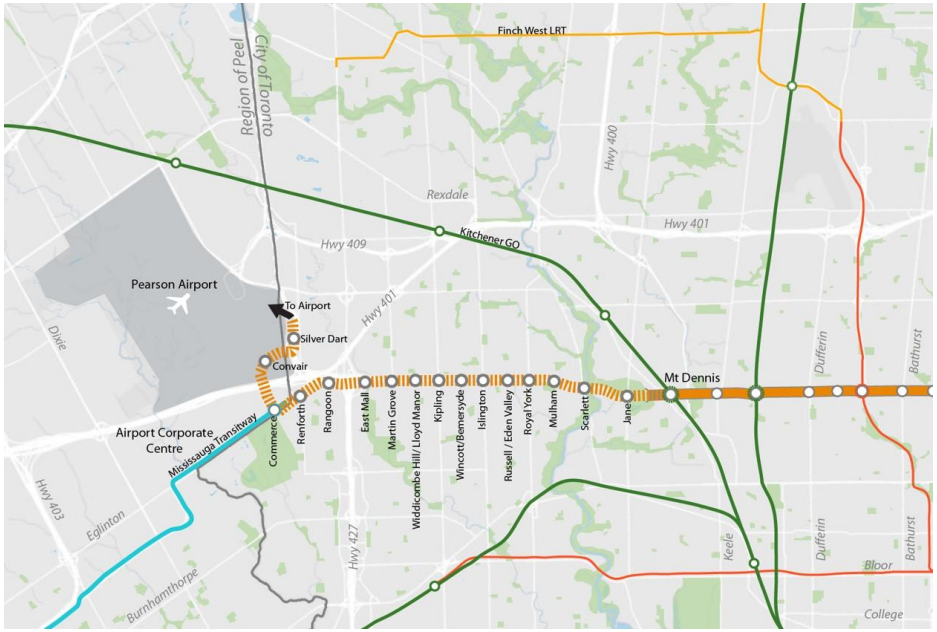
Eglinton West LRT will be an important component of the City's transit network providing a direct connection between Toronto Pearson International Airport, Mount Dennis, Kennedy and potentially University of Toronto Scarborough Campus

- The Eglinton West LRT is anticipated to carry between 60,000 and 70,000 passengers daily
- Eglinton West LRT will improve transit access:
  - Serve 23,400 people today (within walking distance of a station)
  - Serve 26,000 people in 2031 (within walking distance of a station)
  - Provide access to 25,600 jobs today (within walking distance of a station)
  - Provide access to 35,500 jobs in 2031
  - Address social inequity by providing improved access to 10,700 individuals

SmartTrack – Eglinton West LRT

Recommended Direction

- Work currently underway:
  - Identifying the preferred alignment, including any above and underground options
  - Confirming stop/station locations
  - Understanding the traffic and social impacts to the community
- City staff will update Council on the progress of work and seek direction on further refining the plan



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Next Steps

May/June 2016

- Public and stakeholder consultations
- Continue to refine technical work and business cases on current transit initiatives

June/July 2016

- Report to Executive Committee and Council
  - Report on full range of transit projects, seeking authority for next steps (including authority to commence TPAPs for Relief Line and SSE)

Summer/Fall 2016

- Further technical work

Winter 2017

- Undertake *Feeling Congested?* review for priority projects
- Report to Executive Committee and Council on transit project prioritization

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