

## Integrating GO RER and SmartTrack

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#### Purpose and Scope

To present update on development of options for integrating SmartTrack and GO RER based on the following objectives:

- Successfully integrate GO RER and SmartTrack
- Offer more residents more short-distance transit options, while continuing to increase service to long-distance travellers
- Identify a range of rapid transit options for evaluation that connect people and jobs through Eglinton West
- Integrate the analysis emerging from the RER New Stations Analysis
- Maintain the Provincial commitment to deliver GO RER within 10 years
- Seek to leverage the potential for additional capital investment



### What's new since Sept 2015?

- Since September 2015, Metrolinx and the City of Toronto together have identified the range of options for an integrated GO Regional Express Rail (RER)/SmartTrack service to advance for deeper analysis including:
  - Options for integrating SmartTrack new stations and service with RER
  - Options for enhanced Eglinton West LRT
- City of Toronto staff have been reporting to Executive Committee on updates to their planning analysis, including additional network considerations; key decisions are planned for Toronto Council and Executive Committee reports in Q1 and Q2 2016.
- Metrolinx has been working closely with City to provide input and to ensure coordination



## GO Regional Express Rail

#### GO RER will reduce travel times and give people more ways to get where they want to go with:





#### GO RER is a \$13.5B Capital Program



#### New Track

150 kilometres of new dedicated GO track will allow for more uninterrupted service.



#### New Trains

New electric trains will travel faster for longer and reduce travel times.



#### New Bridges and Tunnels

Bridges and tunnels that eliminate intersections with rail and road traffic will provide more reliable GO train service.



#### New Renovations

New and improved stations will make your journey more comfortable, from start to finish.



#### GO RER and SmartTrack Common Objectives

GO RER and SmartTrack share a number of common objectives:

- Improving access to rapid transit
- Increasing transit ridership
- Reducing congestion on existing transit and roads
- Better integration of GO rail service with municipal transit
- Better integrated GTHA fare structure
- Making best possible use of rail corridors
- Providing all-day, fast and frequent service (15 minutes or better)
- Encouraging transit-oriented development around transit stations
- Creating connections between employment centres





#### Method for Integrating GO RER and SmartTrack

- Analysis is proceeding using the Metrolinx business case framework
- A range of integrated options were developed, working with the City of Toronto
- Understanding the infrastructure requirements, costs, and impacts to communities are next steps:
  - GO RER utilizes majority of capacity on the rail corridors. Impacts could include property, community, cost and timing considerations
  - Options will be screened based on better understanding of infrastructure requirements and impacts



#### Developing the Options – Two Parts





Options are being developed in two parts: 1) rail service on the Kitchener and Stouffville corridors and 2) rapid transit on Eglinton West

# **GO RAIL CORRIDOR OPTIONS**



# GO RER in the City of Toronto

- There are 7 GO corridors and 19 stations serving the City of Toronto
- GO RER will bring 15-min 2-way service to five of these corridors, bringing more options for residents and jobs within the City and to the broader region
- SmartTrack provides an opportunity to build on these benefits, primarily through Scarborough, downtown, and in the west end
- Metrolinx and the City are working to identify integrated options that:
  - Leverage planned RER investments to deliver new riders and added benefits (e.g. mode shift, time savings)
  - Are deliverable within available funding



GO Rail in the City of Toronto (7 corridors and 19 stations)



### GO Rail Corridor Options

- Four options for considerations have been jointly developed between Metrolinx and the City of Toronto for further analysis and public feedback:
  - A. Increased frequencies, 5 new stations
  - B. Express and local service, 8 new stations
  - C. Committed RER frequencies, 7-8 new stations
  - D. Committed RER frequencies, 4-5 new stations
- Additional station analysis to be completed, including integration with broader RER station analysis
- All options include an LRT on the Eglinton West corridor, with the number of stations to be determined
- All options include the 11 existing stations in the City of Toronto and Markham on the Kitchener and Stouffville corridors



#### SmartTrack and GO Rail Options Working Assumptions

- **Base case** is the 2015 GO RER Service and Infrastructure Plan
- **New station locations** were assumed as part of the operational feasibility and ridership forecasting work; further detailed analysis as RER New Stations Analysis progresses
- **Operational feasibility and infrastructure requirements** for each option will be tested using prototype scheduling in order to complete initial validation
- A range of fares will be assumed, including scenarios emerging from GTHA Fare Integration Strategy
- Implications of the options on **Union Station** capacity and train flows will be validated through further rail simulation



### **Option A for Consideration**

- Increased frequencies, above the committed RER program in the peak and off-peak
  - 4-6 minute frequency in the peak
  - 7.5 minute frequency in the off-peak
- 5 new stations
  - Locations to be finalized through RER new stations analysis and discussions with the City
  - Stations tested include Gerrard, Unilever, Bathurst-Spadina, Liberty Village, St. Clair West
- Kitchener and Stouffville through service





### **Option B for Consideration**

- 20 minute frequency for each of express service and local service (10 min combined service); Unionville – Union Station – Bramalea
  - Express service stopping at existing stations only
  - Local service stopping at existing + new stations
- 8 new stations
  - Locations to be finalized through RER new stations analysis and discussions with the City
  - Stations tested include St. Clair, Liberty Village, Bathurst-Spadina, Unilever, Gerrard- Carlaw, Ellesmere, Lawrence, and Finch
- Kitchener and Stouffville through service



New stations shown are conceptual; recommendations for any new stations will come from through RER new stations analysis and discussions with the City Eqlinton West LRT shown in red

### **Option C for Consideration**

- Funded and committed GO RER frequencies in the peak and off-peak
  - 5 to 10 minute peak service
  - 15 minute off-peak service
- 7 to 8 new stations
  - Locations to be finalized through RER new stations analysis and discussions with the City
  - Stations tested include St. Clair, Liberty Village, Unilever, Gerrard- Carlaw, Ellesmere, Lawrence, and Finch
- Kitchener and Stouffville through service



Eglinton West LRT shown in red

## **Option D for Consideration**

- Funded and committed GO RER frequencies in the peak and off-peak
  - 5 to 10 minute peak service
  - 15 minute off-peak service
- 4 to 5 new stations
  - Locations to be finalized through RER new stations analysis and discussions with the City
  - Stations tested include St. Clair, Liberty Village, Unilever, Gerrard- Carlaw
- Kitchener and Stouffville through service



## **Preliminary Analysis**

- All options provide significant new opportunities to access rail services within the City of Toronto
- Ridership levels will be driven by many factors including level of service, fare policy, and integration with local service
- Options A and B require significant incremental infrastructure that leads to increased cost and community impacts; capacity challenges at Union Station are also a factor
- Option C provides more access within the City of Toronto, slows travel for some long distance trips and speeds travel for other trips
- Option D provides some increased access within the City of Toronto, but has less impact to travel times than Option C
- Additional analysis be undertaken in collaboration with the City of Toronto



## GO Rail Options Next Steps

- Ongoing consultation with municipalities
- Public engagement and input
- Business case analysis, including:
  - Feasibility analysis and screening
    - Infrastructure requirements for each option
    - Operational analysis
    - Community impact analysis
  - Strategic analysis assessing options against objectives and understanding impacts to broader GO RER program
  - Ridership modelling
  - Capital cost and operating cost estimates
  - Economic analysis



# **EGLINTON WEST OPTIONS**



#### Identifying Viable Options for Eglinton West

- City of Toronto study prepared by HDR, entitled "SmartTrack Western Corridor Feasibility Review" looked at extending a heavy rail corridor between Mt. Dennis and the Mississauga Airport Corporate Centre along two potential corridors – Eglinton Ave. and a northern corridor option.
- Study findings show:
  - A new heavy rail corridor would need to be grade separated and tunneled
  - Extensive technical challenges with infrastructure, service levels and traveller convenience with large community impacts
  - Costs range from \$3.6B to \$7.7B (excluding any additional infrastructure required in the Kitchener corridor)
  - LRT ridership (EA approved alignment) is 3 times higher than heavy rail
- Based on these findings, City staff will recommend moving forward towards an optimized LRT extension
- Metrolinx is leading an alternatives analysis to identify a preferred rapid transit option for Eglinton W in collaboration with the City of Toronto





SmartTrack Western Corridor Feasibility Review





#### Eglinton West LRT Options for Consideration





## Eglinton West LRT Next Steps

- Public and stakeholder consultations
- Business case analysis, including:
  - Strategic analysis advancing understanding of the effects of stop spacing and grade separation on traveller behaviour and travel patterns
  - Ridership modelling
  - Community impacts analysis
  - Capital cost and operating cost estimates
  - Economic analysis
  - Feasibility analysis



# **OTHER TORONTO INITIATIVES**



#### City of Toronto Scarborough Transit Planning Update

- Staff report to City of Toronto January 28<sup>th</sup> Executive Committee describes transit network for Scarborough in advance of March 2016 Council report on SmartTrack
- Based on 2 key priorities:
  - 1. Support the development of Scarborough Centre as a vibrant urban node
  - 2. Support the development of complete communities along the Avenues and improve local accessibility



#### City of Toronto Scarborough Transit Planning Update

Recommends that technical work and public consultation proceed for several key elements of a proposed transit network for Scarborough:

- Extension of Line 2 (Bloor-Danforth Subway) focussed on serving Scarborough Centre via a McCowan Road alignment
- Extension of Crosstown LRT east to the University of Toronto, Scarborough Campus
- New SmartTrack station on the Stouffville corridor (focus on Lawrence and also includes Ellesmere and Finch)
- Rapid transit on the Sheppard East Corridor



#### **Other Toronto Initiatives**

- Eglinton Crosstown LRT East extension:
  - 2009 Environmental Approval includes 20 stops (including Kennedy) along 13 km of LRT
  - Proposed rapid transit corridor is identified in the regional transportation plan
  - Further work required to confirm design/alignment, capital costs and timing including
    - the interchange of the Line 2 Scarborough subway extension and a Eglinton Crosstown LRT east extension at Kennedy Station
    - Maintenance and storage facility requirements
    - Design of terminus at University of Toronto Scarborough (UTSC)
  - Two potential GO RER interfaces at existing Eglinton and Guildwood GO stations
- Relief Line
  - Metrolinx will continue to work with the City and TTC to advance Relief Line project planning, consistent with the recommendations of the Yonge Relief Network Study



# **NEXT STEPS**



### Public Engagement

- Metrolinx will be engaging throughout the GTHA in February/March on:
  - Electrification
  - RER existing and new stations
  - Fare integration
  - Regional Transportation Plan Review
- Joint consultation planned, including Metrolinx, the City of Toronto, City of Mississauga and York Region:
  - SmartTrack will be presented jointly by the City of Toronto and Metrolinx
  - City of Toronto will also be consulting on other Toronto projects, including Scarborough Subway Extension and Relief Line
  - York Region will be consulting on the York Region Transportation Master Plan



#### **Other Related Issues**

A number of related studies are converging in Spring and Fall 2016, enabling a more complete sequencing:

- **New station locations** need to determine the specific station sites in partnership with municipalities and informed by the new stations analysis and public consultation
- **GTHA Fare integration strategy** ultimate success of integrating RER and SmartTrack also relies on developing an integrated fare structure for the region
- Union Station capacity All options will require further analysis in terms of Union Station capacity
- **Funding** additional capital and operating funding beyond current Provincial commitment to GO RER will shape decision-making



## Next Steps Timeline

Timing	Activity
February/ March	<ul> <li>Metrolinx will be engaging throughout the GTHA</li> <li>Joint consultation planned, including Metrolinx, the City of Toronto, City of Mississauga and York Region</li> </ul>
Early March/ Late March	<ul> <li>Toronto City Executive Committee / Toronto City Council</li> <li>SmartTrack planning and technical analysis</li> </ul>
Late May/ Early June	<ul> <li>Toronto City Executive Committee / Toronto City Council</li> <li>SmartTrack project definition and implementation considerations</li> </ul>
June 28	<ul><li>Metrolinx Board</li><li>GO RER and SmartTrack Integration, New GO RER</li></ul>





