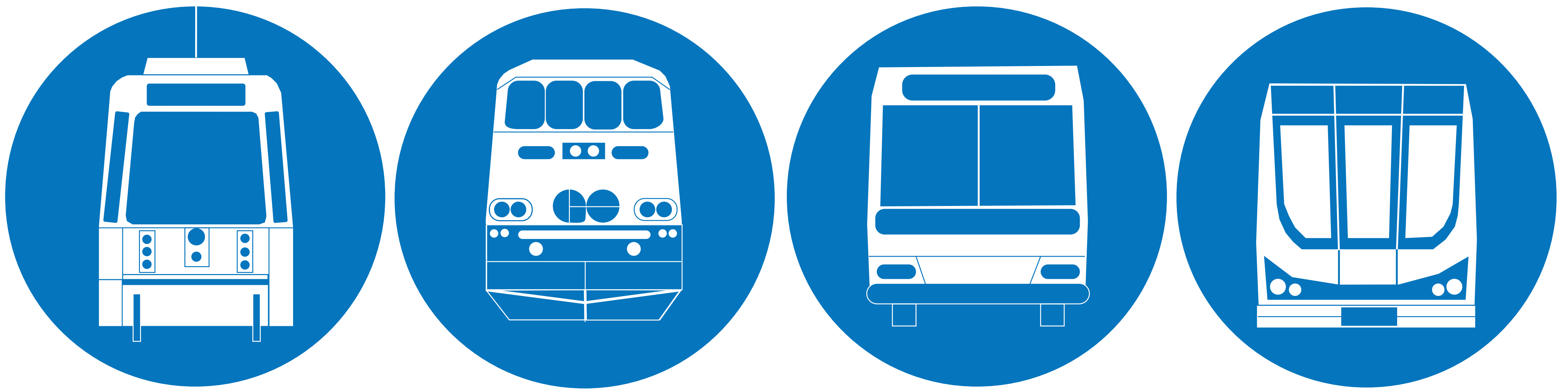




Waterfront Transit “Reset”

Phase 1 Study



Coordinated Transit Consultation Program

May 2016

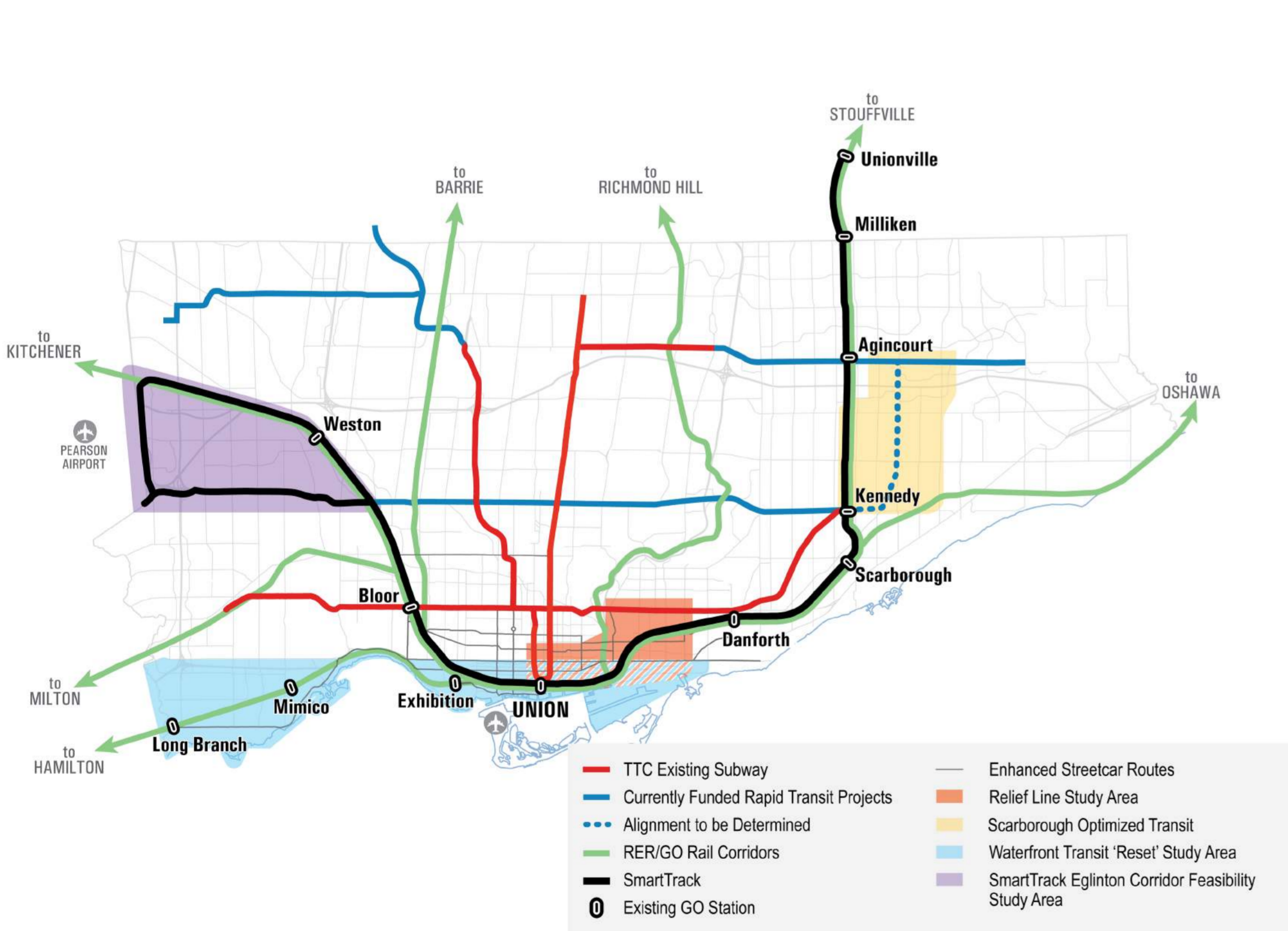
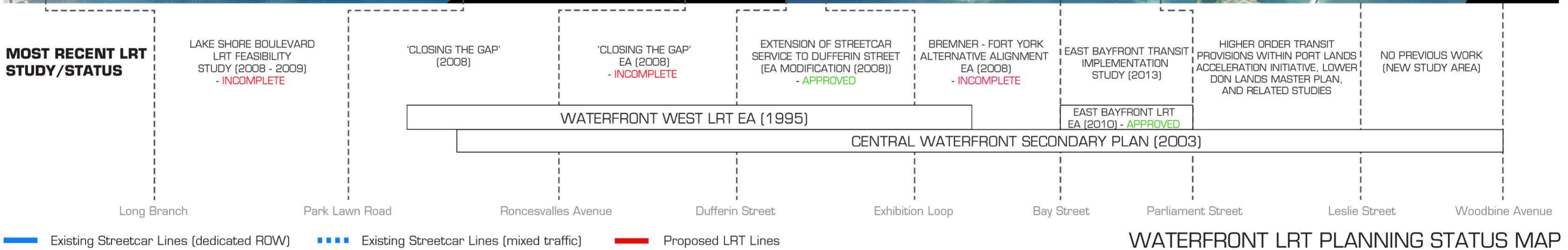
Transportation Planning Section | City Planning Division
Toronto Transit Commission
Waterfront Toronto

For more information and to provide further comment, please contact us at:
Waterfront Toronto
Email: info@waterfronttoronto.ca
City of Toronto
Email: waterfronttransit@toronto.ca

Why Are We Here Today?

The City, in partnership with the TTC and Waterfront Toronto, has initiated a “Reset” of waterfront transit planning.

In the past, transit planning along the waterfront was incremental. This has left a series of transit plans in various stages of approval.



2013

City Planning's “Feeling Congested?” Official Plan Review preliminary transit network analysis identifies both the Waterfront West LRT and Waterfront East Light Rail Transit as within the “Top 5 Performing But Unfunded Transit Projects”.

Current

Coordinating with the emerging City-wide priority rapid transit network plan, Phase 1 of this Study will establish a **clear vision** and identify reasonable alternative **concepts** for a Waterfront Transit Solution. **Phase 2**, subject to City Council approval, would continue to refine and advance a Waterfront Transit Solution.

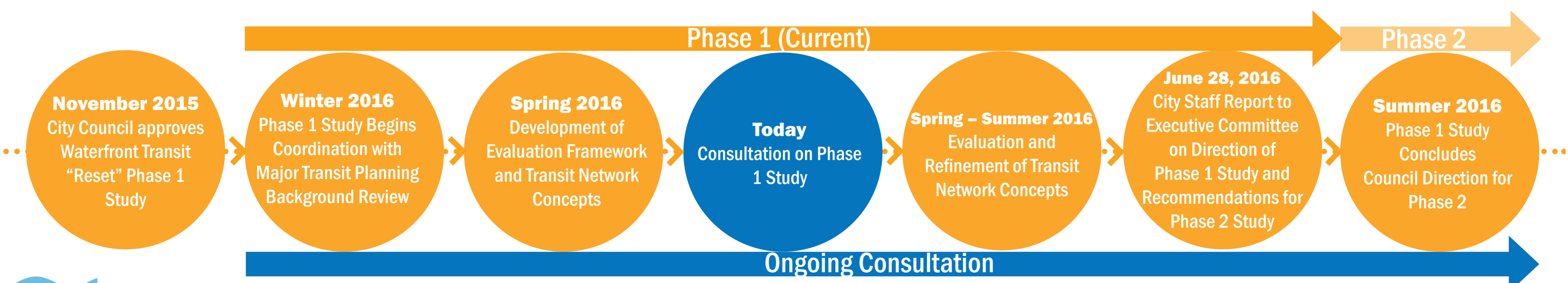
2014 - Current

The City, Metrolinx and the TTC begin integrated major transit network planning. Since then, planning work on the Relief Line, SmartTrack/ Regional Express Rail (RER) and Scarborough Transit Planning has advanced considerably.

2017

The Chief Planner & Executive Director, City Planning will report to City Council on an updated transit network plan (including a Waterfront Transit Solution) as part of the proposed package of transportation policy updates to the Official Plan.

Study Timeline





Draft Vision and Objectives

Draft Vision

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

Draft Objectives



1. Connect waterfront communities locally and to downtown with reliable and convenient transit service:
 - Promote and support residential and employment growth
 - Provide more travel choices



2. Enhance accessibility (improved reliability and convenience) of transit service linking key destinations (employment, housing, institutional, education, cultural, recreational, commercial):
 - Better connect people to everyday places
 - Improve connectivity in neighbourhood improvement areas
 - Make transit an attractive option for more trips
 - Attract new transit riders
 - Improve quality of life



3. Promote broader City and regional transportation network connections



4. Develop implementable and affordable solutions to address current needs and the flexibility to respond to future conditions

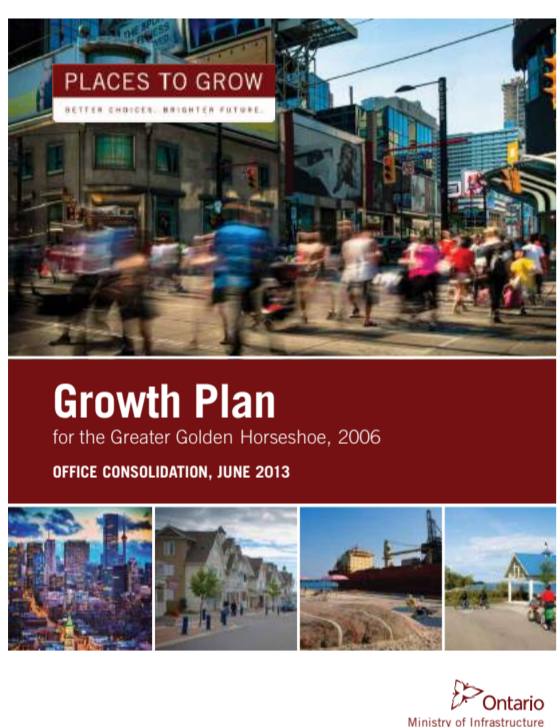


What is the Purpose of this Meeting?

- To introduce the public to the study
- To provide background information on past transit initiatives along the waterfront and this study
- To present preliminary concepts
- To understand your needs and gather input on the opportunities and challenges of a Waterfront Transit solution
- To gather feedback on the initial screening of these concepts

Relevant Guiding Policies

Provincial and Regional Policies



Places to Grow (Growth Plan for the Greater Golden Horseshoe)

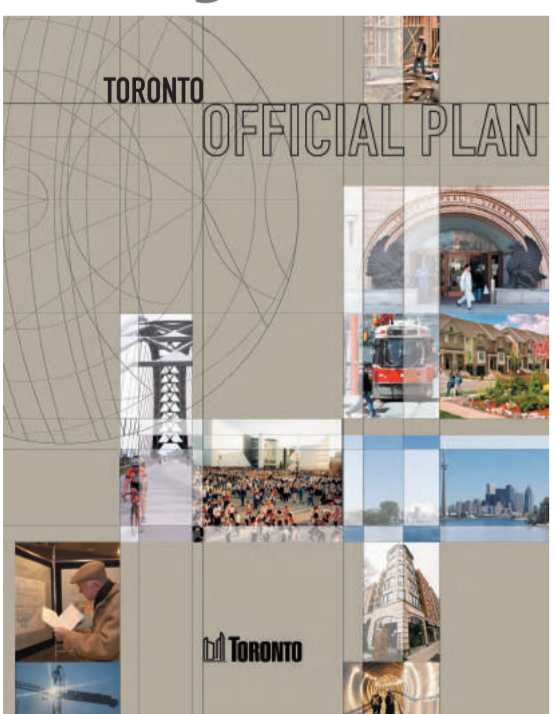
- Policies for fostering compact and complete communities
- Emphasize the need to optimize the use of infrastructure, such as planned transit
- Downtown Toronto identified as a primary area for intensification and anchor for transit connections



The Big Move (Regional Transportation Plan)

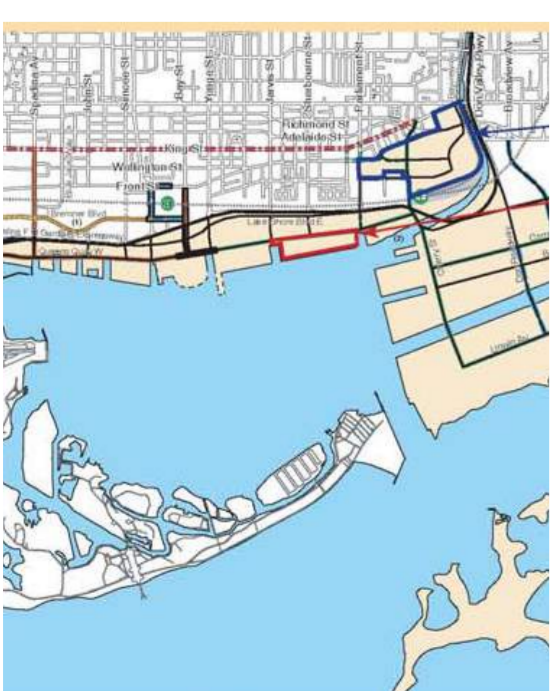
- Plan to build a comprehensive regional rapid transit network
- Policies for supporting the integration of transportation investment and land use

City Policies



City of Toronto Official Plan

- Identifies 'Avenues' along Lakeshore Blvd in Etobicoke, sections of The Queensway and King St, and Queen St
- 'Avenues' characterized as major streets where reurbanization, city building, and the creation of vibrant streetscapes are encouraged



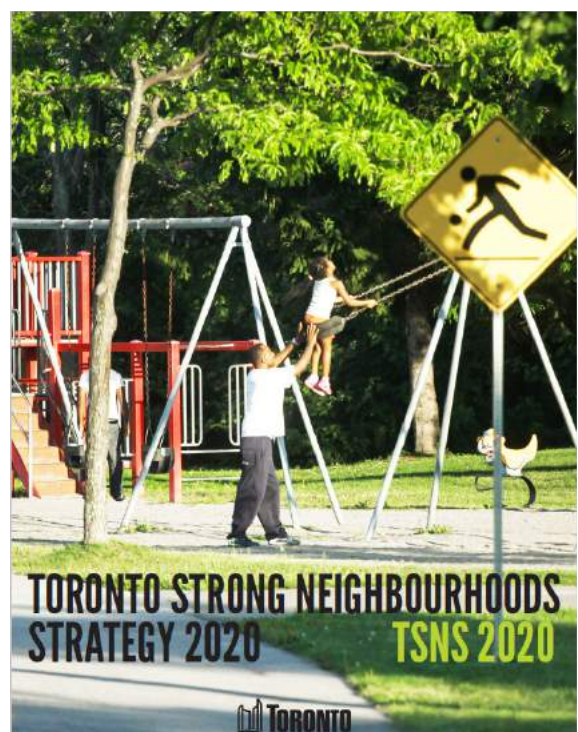
Central Waterfront Secondary Plan

Framework for the renewal the central waterfront by:

- Improving connections including developing a Waterfront transit network
- Supporting the development of complete communities
- Guiding on-going precinct planning (i.e. East Bayfront, Port Lands precinct plans)

Relevant Guiding Policies

City Policies



Strong Neighbourhoods Strategy 2020

Strategy support equity and vitality in all areas of the City

- Directs investments in priority neighbourhoods (Neighbourhood Improvement Areas)
- Identifies one NIA in the study area: South Parkdale



Feeling Congested?

Comprehensive consultation process to develop draft transportation policies for updating the City's Official Plan in 2017

Includes a comprehensive evaluation of the City's rapid transit projects

EVALUATION CRITERIA	PROJECTS IN THE BIG MOVE REGIONAL TRANSPORTATION PLAN														PROJECTS NOT IN THE BIG MOVE									
	Next Wave				Others										OP Map 4		Others							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Relief Line (Downtown to Danforth)																								
Yonge North Subway Extension																								
Durham-Scarborough BRT																								
Dundas Street BRT																								
Don Mills LRT																								
Eglinton LRT West Extension																								
Finch West LRT West Extension																								
Finch West LRT East Extension																								
Highway 427 Airport BRT South																								
Highway 427 Airport BRT North																								
Jane LRT																								
McCowan Road BRT																								
Scarborough RT/LRT Extension																								
Scarborough Malvern LRT																								
Sheppard East LRT Extension																								
Steeles LRT/BRT West																								
Steeles LRT/BRT East																								
Waterfront West LRT																								
Block Danforth Subway West Extension																								
Kingston Road BRT																								
Sheppard West Corridor																								
Waterfront East LRT																								
Relief Line Extension (Danforth to Eglinton)																								
St. Clair Streetcar/LRT Extension																								

Legend: ○ Very Low Score, ○ Low Score, ○ Moderate Score, ○ High score, ○ Very high score

Ongoing Major Studies

T0core: Secondary Plan for Downtown

Developing a renewed strategic vision for the Downtown:

- Prioritizes walking, cycling, surface transit
- Guides complementary studies including King Street Visioning Study, surface transit operational improvements

Port Lands and South of Eastern Transportation and Servicing Master Plan

- Study to develop an integrated transportation and servicing plan to inform the revitalization needs of the Port Lands area
- Plan to include confirming transit corridors, major streets, and servicing needs to support development

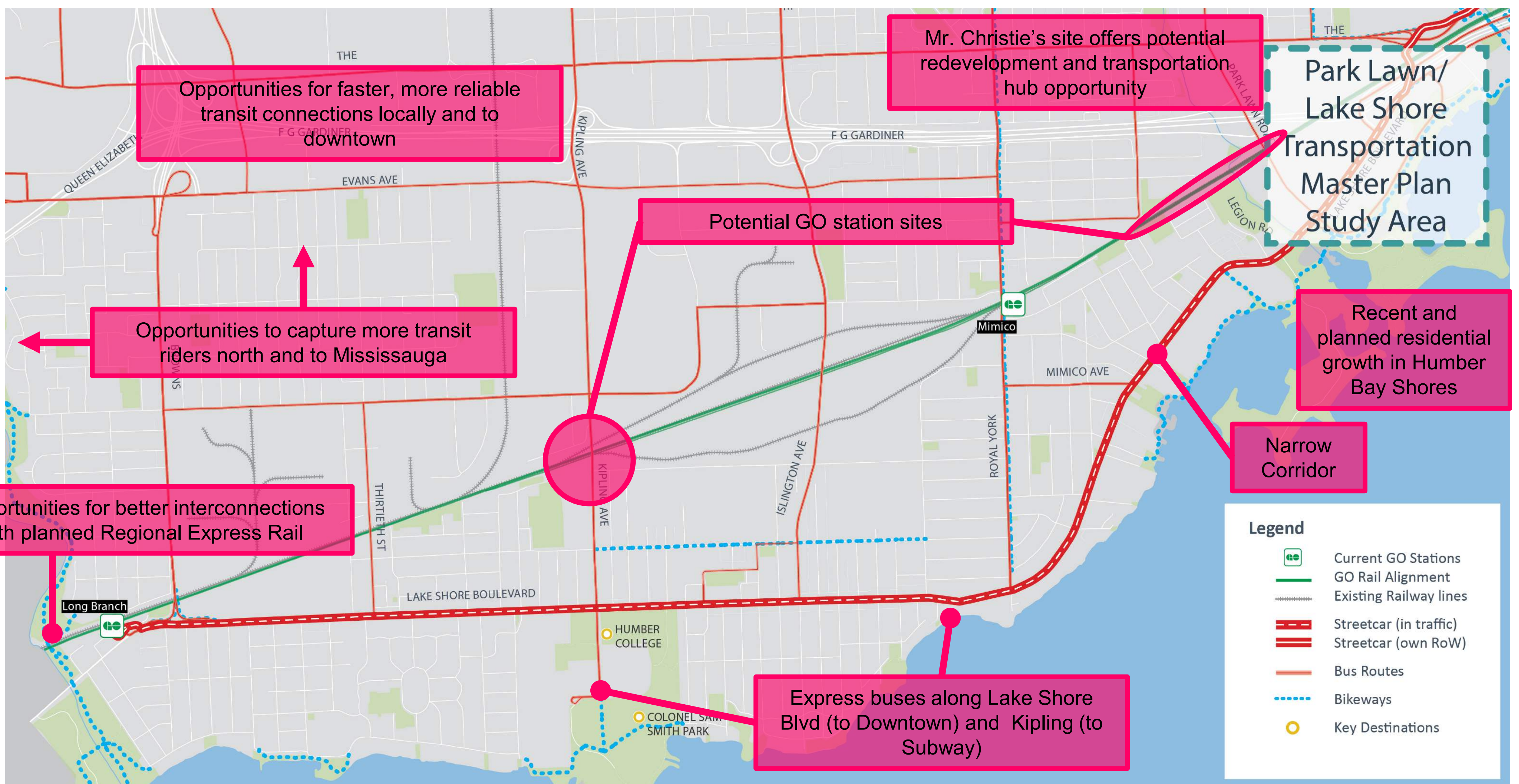
Park Lawn/Lake Shore Area Transportation Master Plan

- Study to develop an integrated multi-modal transportation plan that brings together previously planned and approved infrastructure projects, development plans, infrastructure opportunities, and community needs

01 SEGMENT

Long Branch to Humber River

Existing Transportation



Sources: TTC, Metrolinx, City of Toronto, and Gov't of Ontario

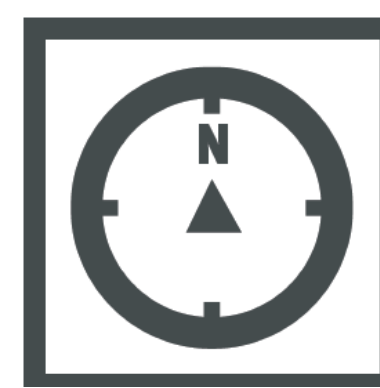
Current Travel Patterns



Internal Travel



To/from Downtown core



To/from central Etobicoke



To/from Mississauga



To/from all other areas

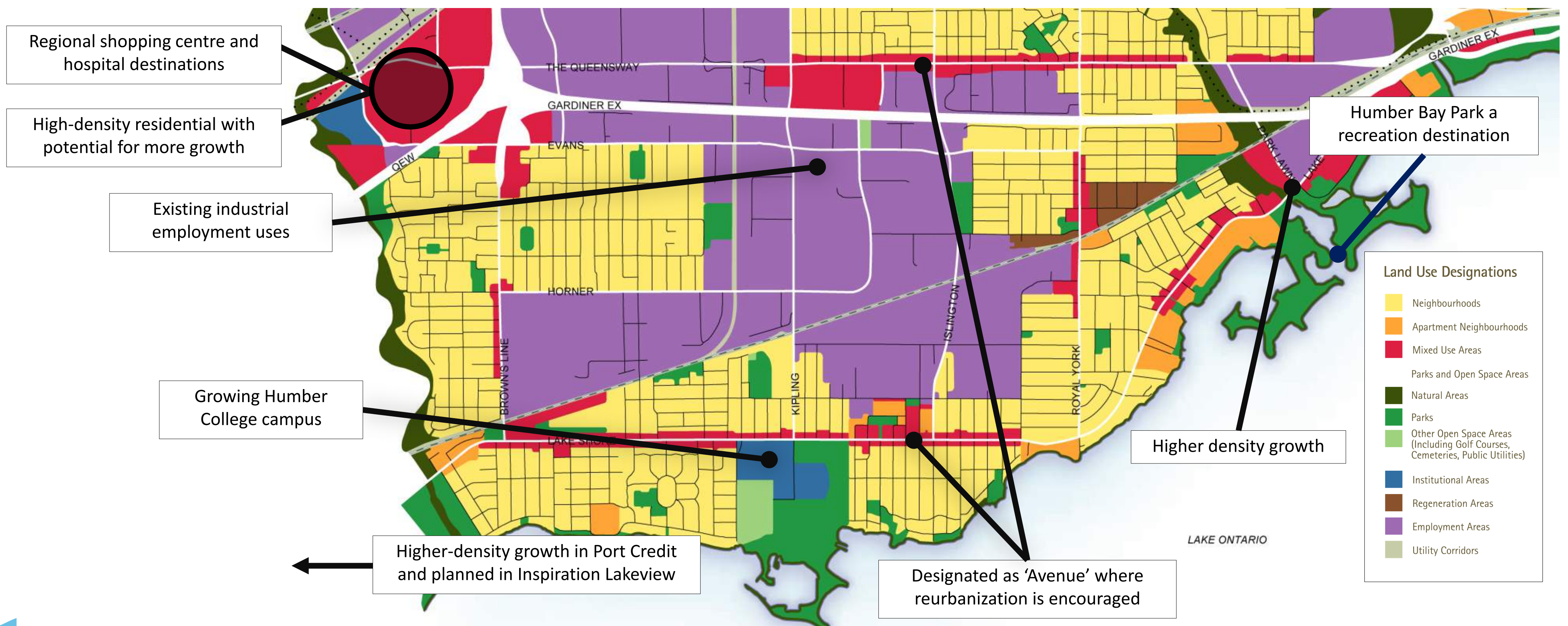
Percentage of total trips within AM Peak Period	15%	12%	14%	16%	43%
Percentage of transit trips in AM Peak Period	12%	56%	13%	9%	28%

Source: 2011 Transportation Tomorrow Survey

Opportunity to support existing demand

Opportunity to foster growth in transit ridership

Land Use

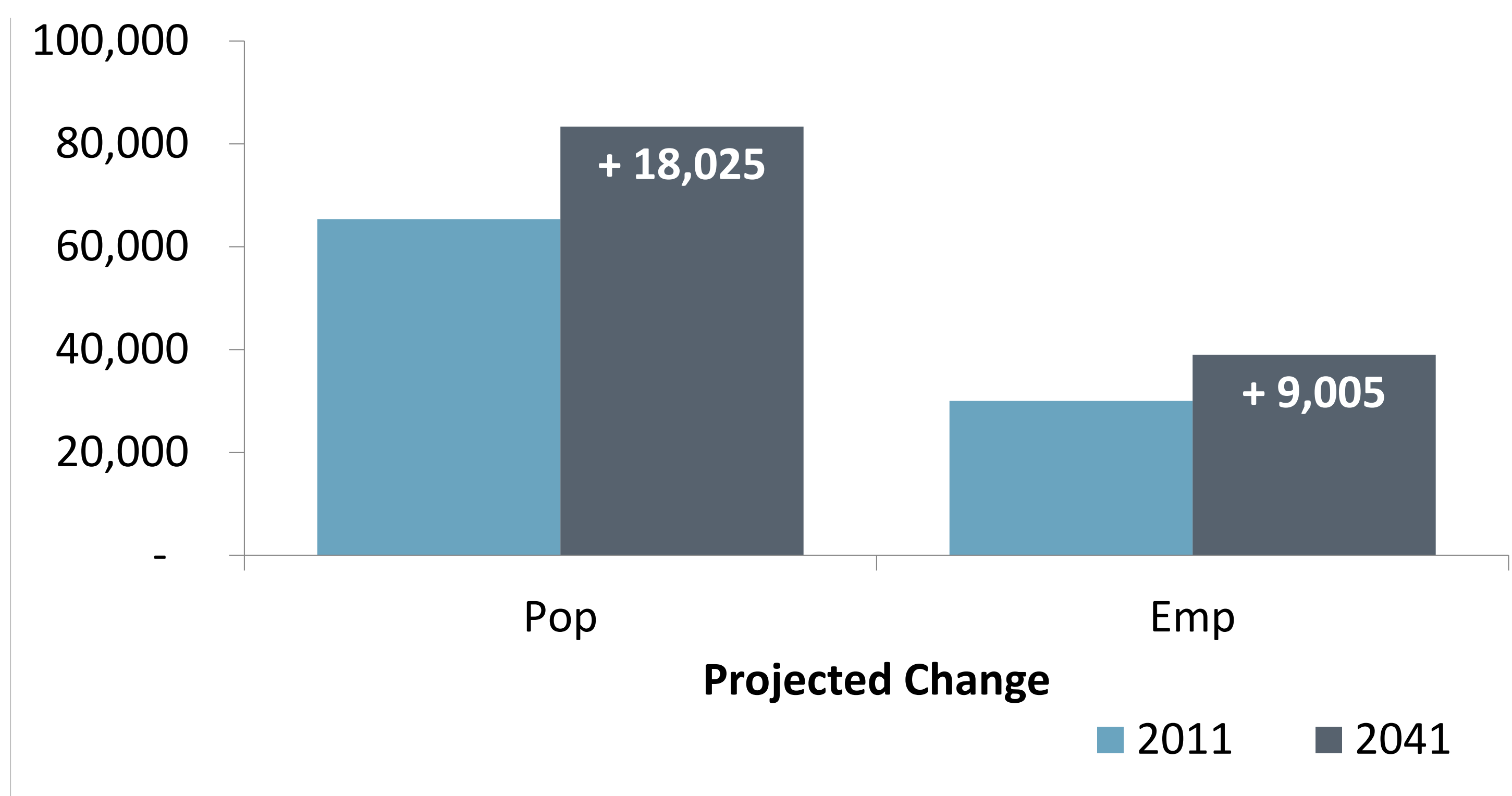
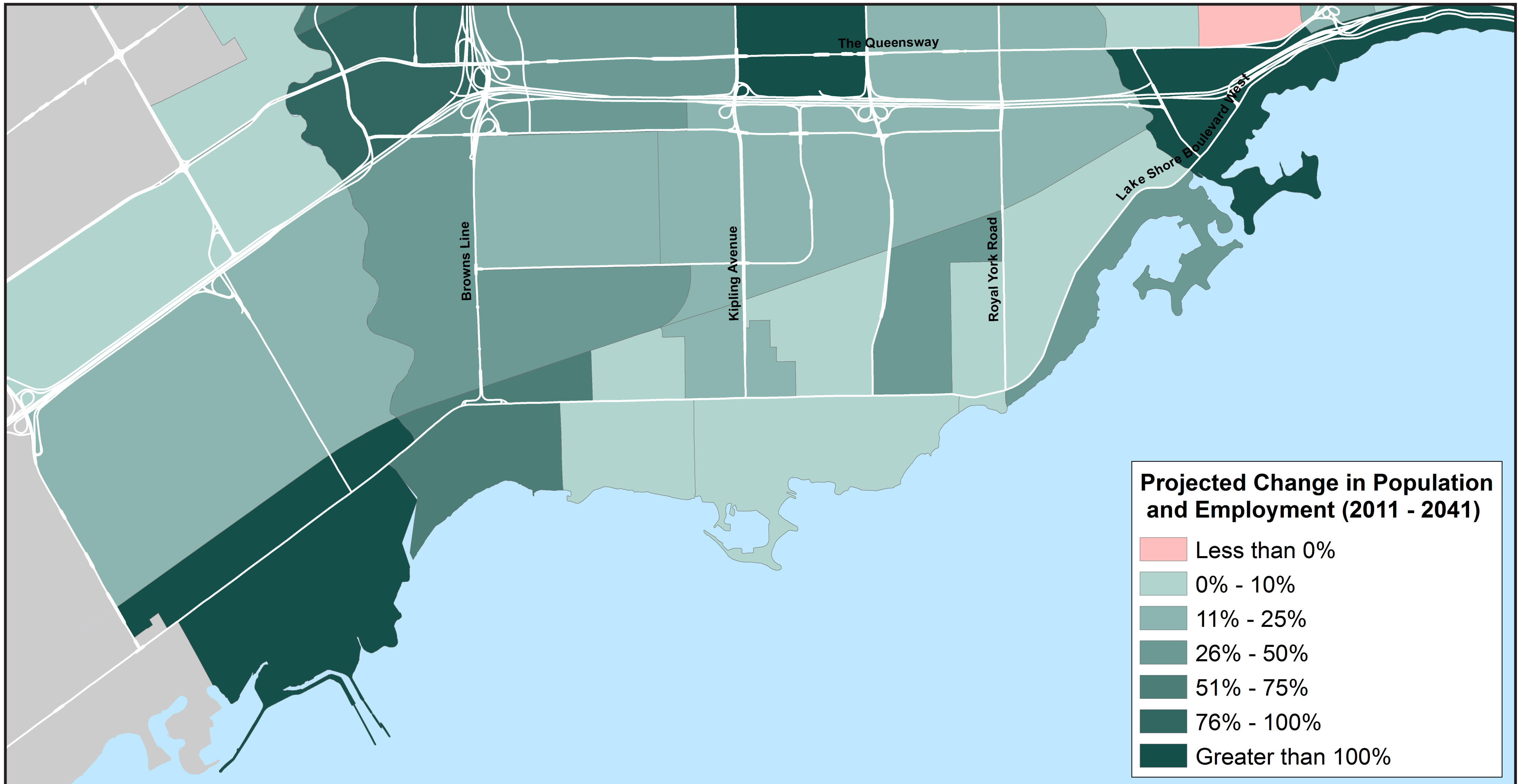


Source: Toronto Official Plan, Land Use Plan, 2015

01 SEGMENT

Long Branch to Humber River

Population and Employment Growth



Source: City of Toronto

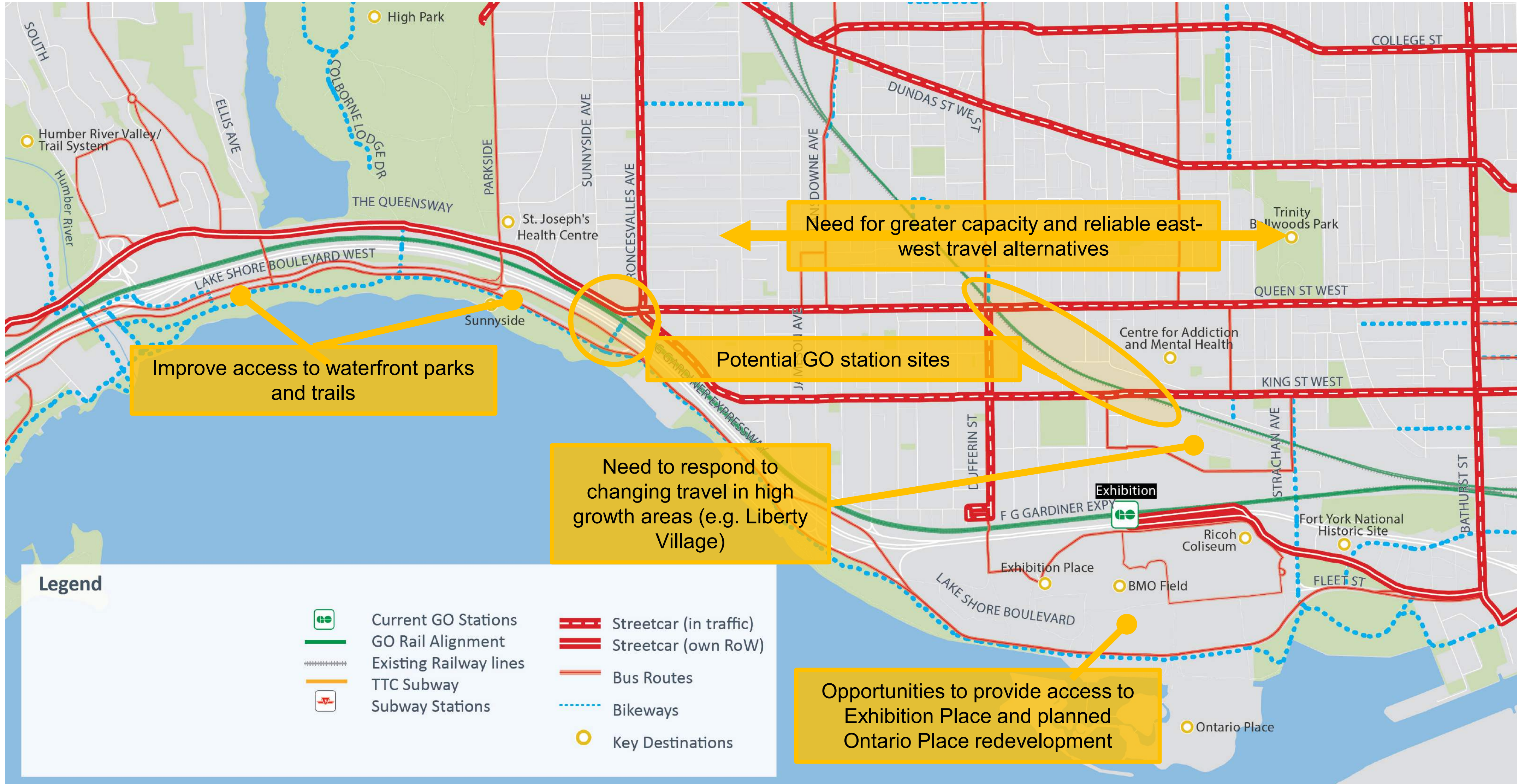
Opportunities and Constraints

- Population growth in Mimico and Humber Bay Shores has led to a significant increase in travel demand
- Streetcar service operating along Lake Shore Blvd in mixed traffic, leads to less reliable service and longer trip times
- Potential to capture new transit riders with improved service to north Etobicoke and to Mississauga
- Opportunities for faster and more reliable transit connections to and from the Downtown core
- Opportunities for improved interconnections with planned Regional Express Rail services along the GO Lakeshore West corridor
- Redevelopment of the Mr. Christie's site presents a potential transportation hub opportunity, including a new GO station
- Queensway corridor redevelopment presents a potential transit market

02 SEGMENT

Humber River to Strachan Ave

Existing Transportation



Sources: TTC, Metrolinx, City of Toronto, and Gov't of Ontario

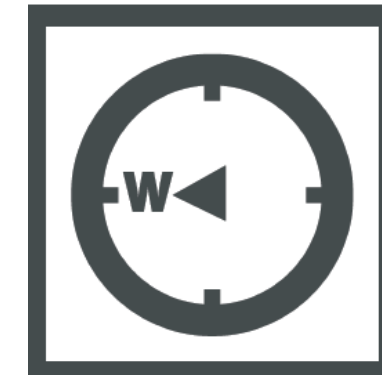
Current Travel Patterns



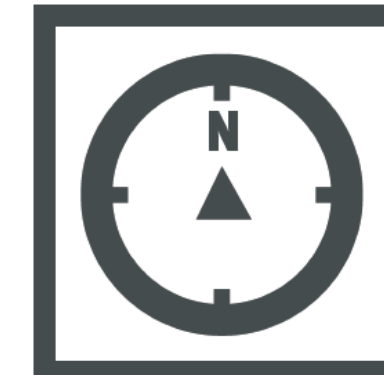
Internal Travel



To/from Downtown core



To/from south Etobicoke



To/from areas north



To/from all other areas

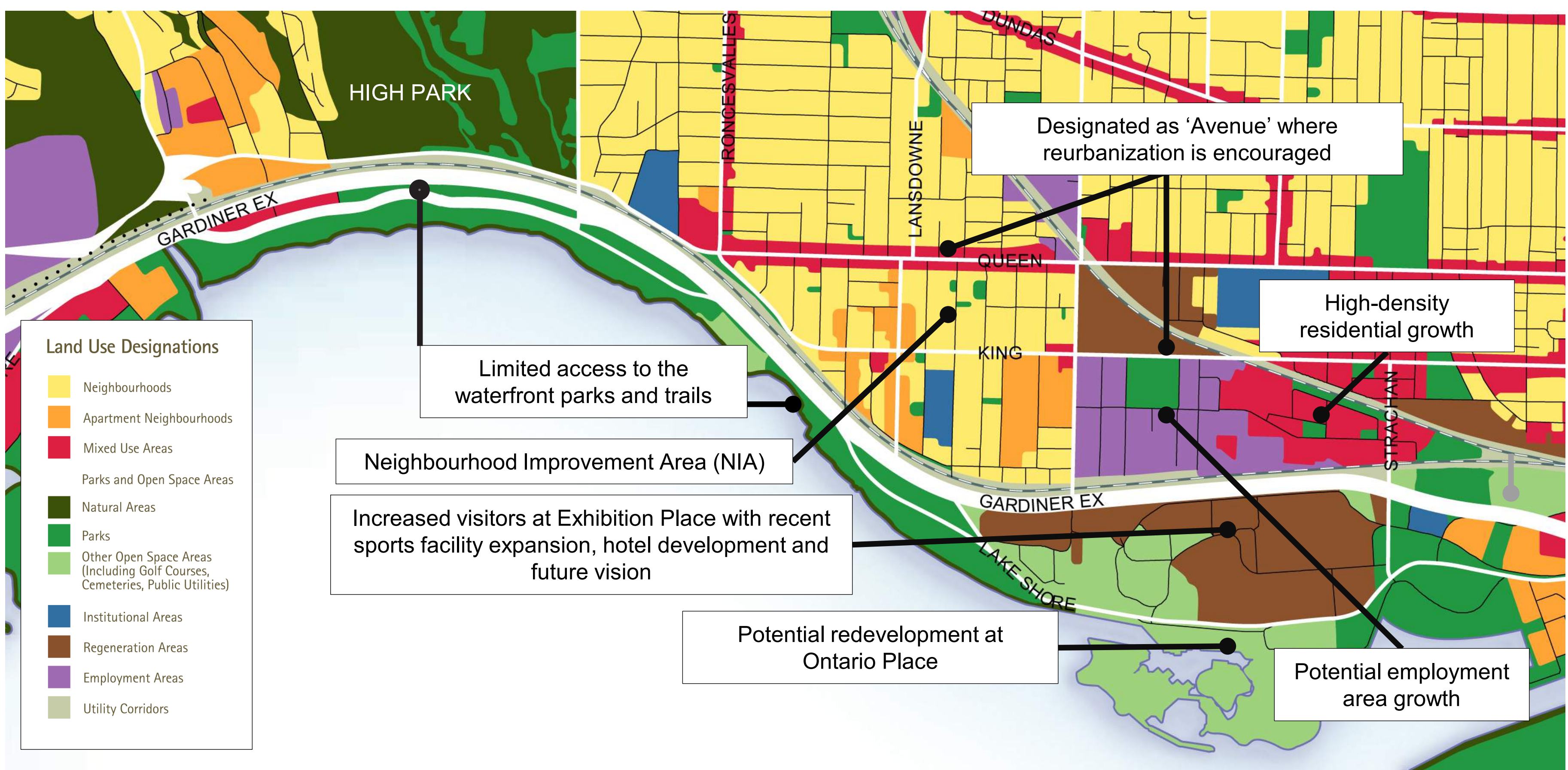
	Internal Travel	To/from Downtown core	To/from south Etobicoke	To/from areas north	To/from all other areas
Percentage of total trips within AM Peak Period	6%	30%	3%	14%	47%
Percentage of transit trips in AM Peak Period	14%	49%	36%	31%	36%

Source: 2011 Transportation Tomorrow Survey

Opportunity to support existing demand

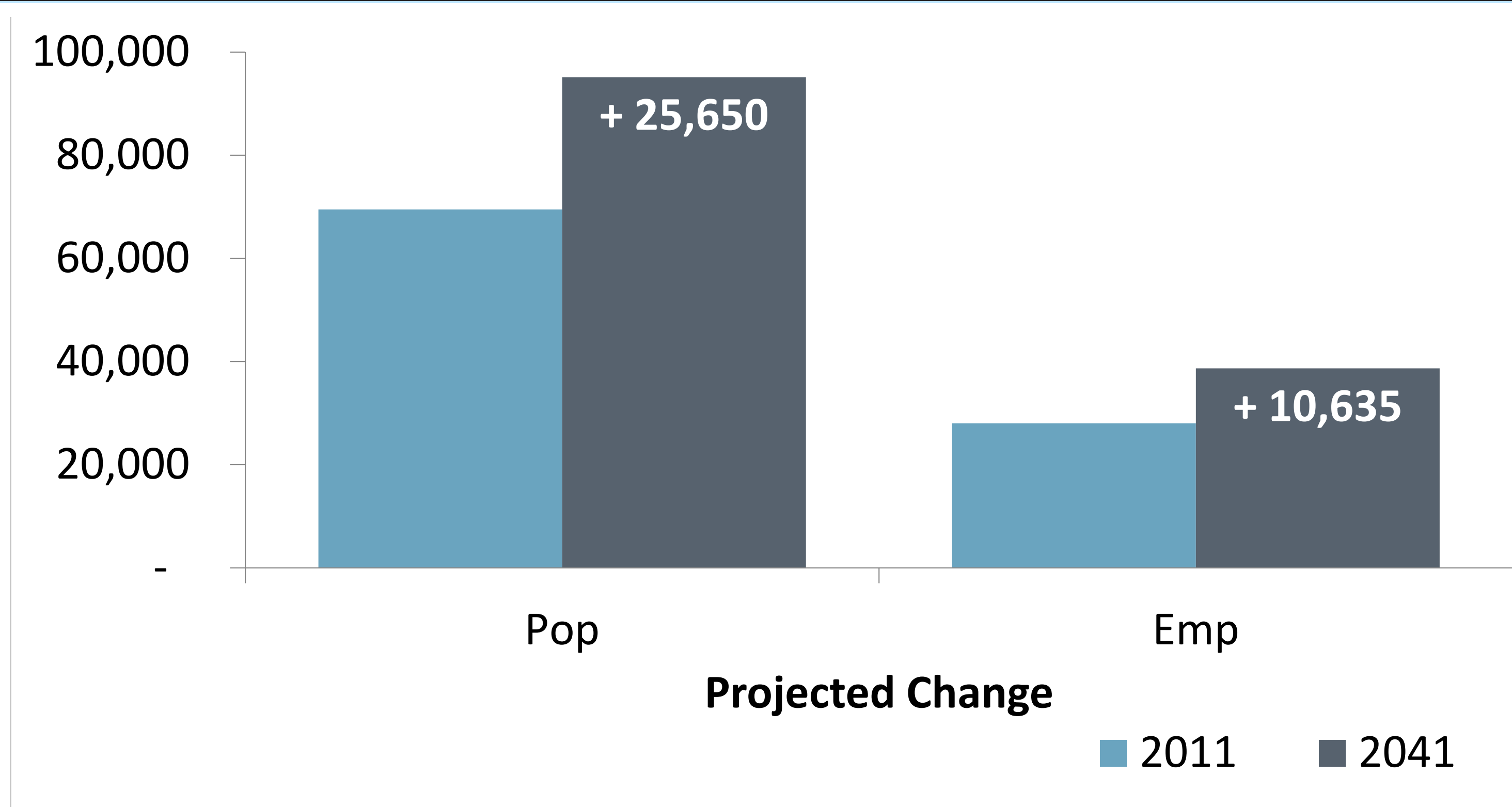
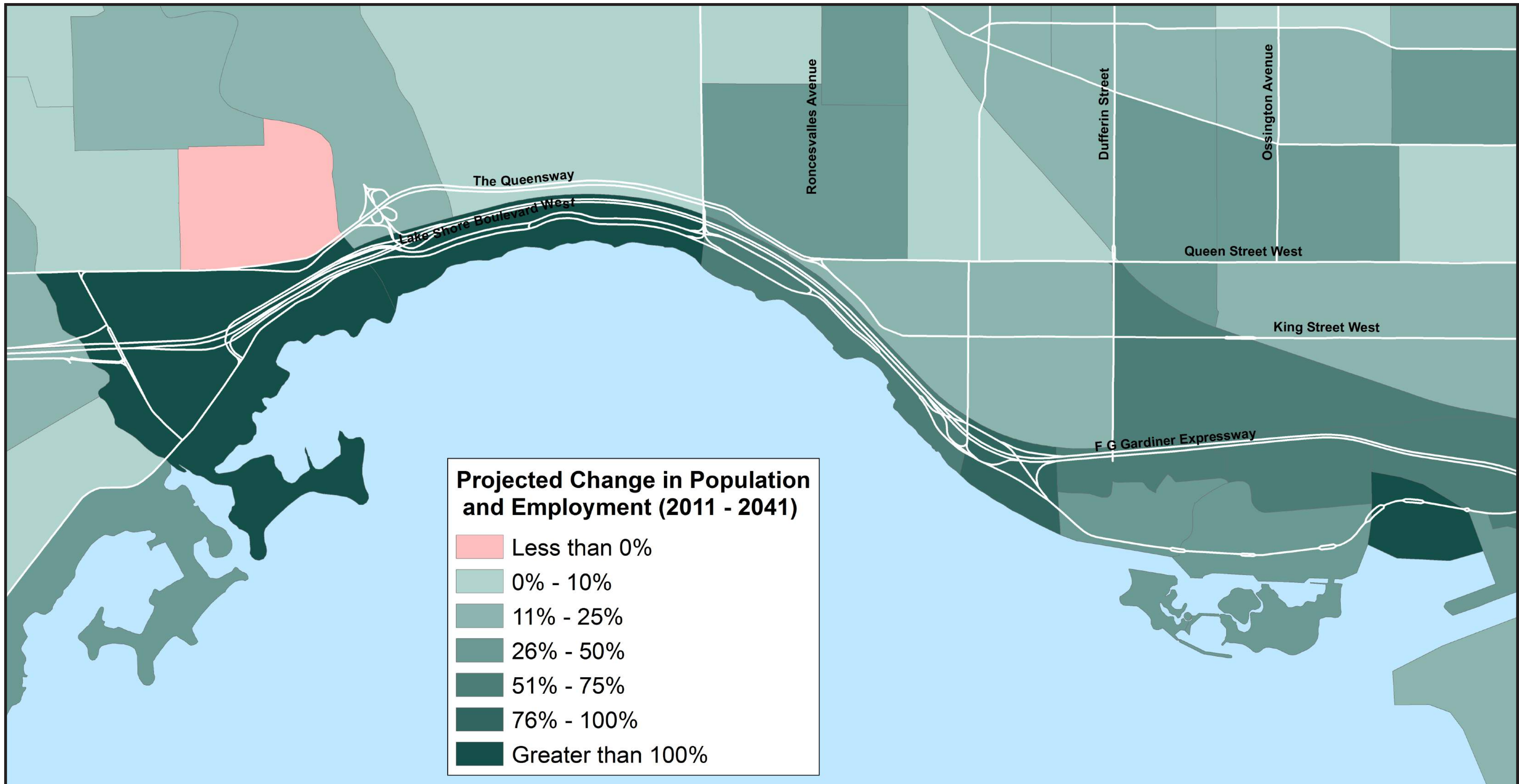
Opportunity to foster growth in transit ridership

Land Use



Source: Toronto Official Plan, Land Use Plan, 2015

Changes in Population and Employment by 2041



Source: City of Toronto

Opportunities and Constraints

- Need for greater capacity and reliable east-west transit alternatives from Roncesvalles Village, South Parkdale, and King-Liberty to Downtown core
- Opportunities to provide greater transit options in Liberty Village, which has experienced notable residential and employment growth
- Ontario Place potential revitalization may require high quality transit service
- Opportunities to provide better connections to Exhibition Place with more events
- Crowds flowing through Exhibition Place to attend sports and seasonal events (CNE) may limit alignments centrally through the Exhibition Place site
- Opportunities for greater access to waterfront parks and trails
- Rail corridor, Gardiner Expressway, and significant grade changes are barriers to access waterfront parks and trails

03 SEGMENT

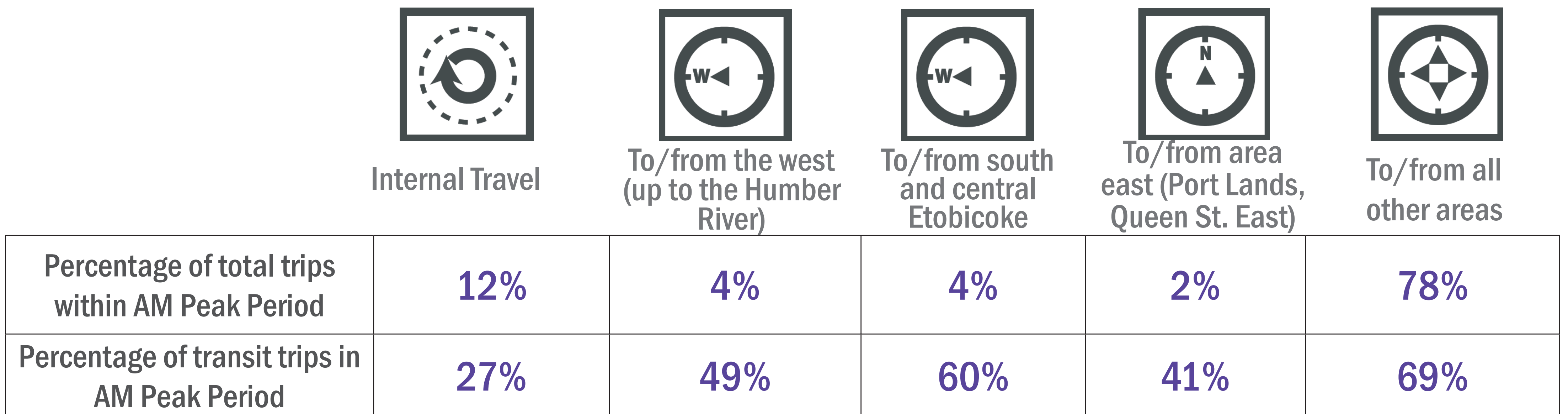
Strachan Ave to Parliament St

Existing Transportation



Sources: TTC, Metrolinx, City of Toronto, and Gov't of Ontario

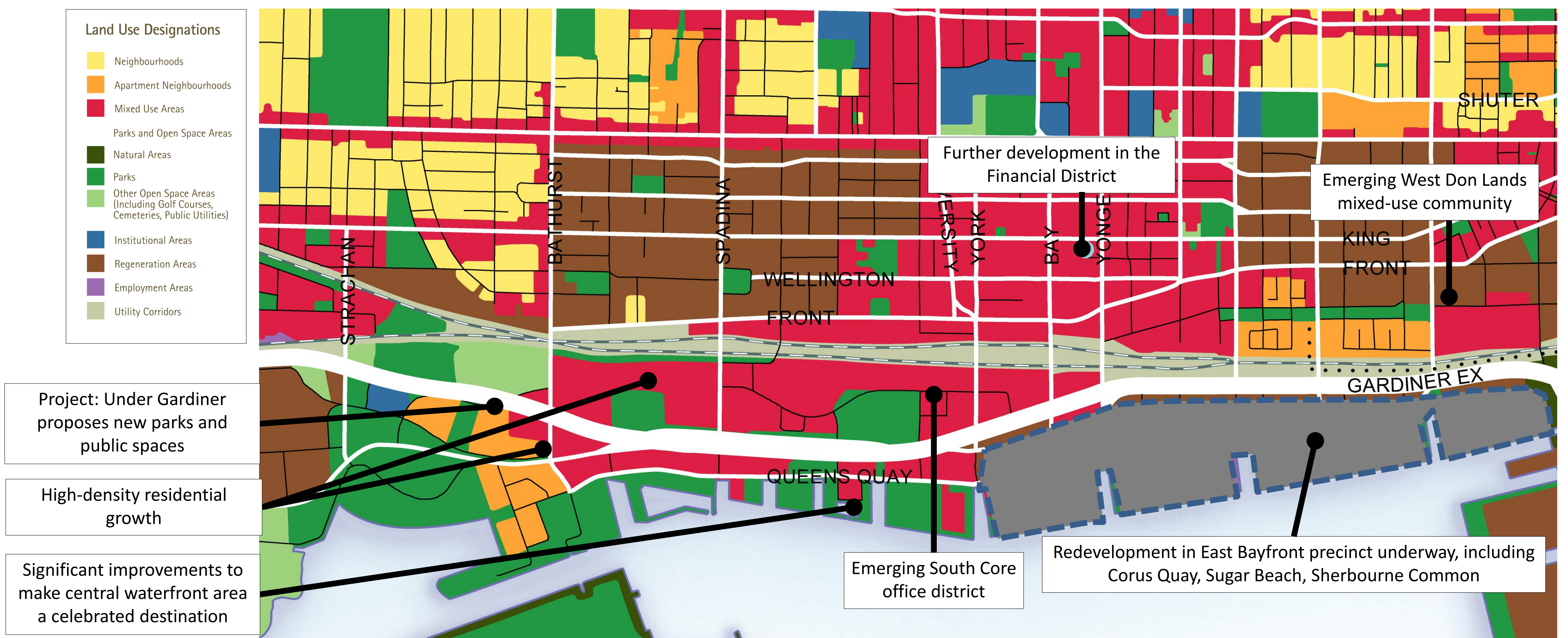
Current Travel Patterns



Source: 2011 Transportation Tomorrow Survey

Number of trips expected to grow with planned development

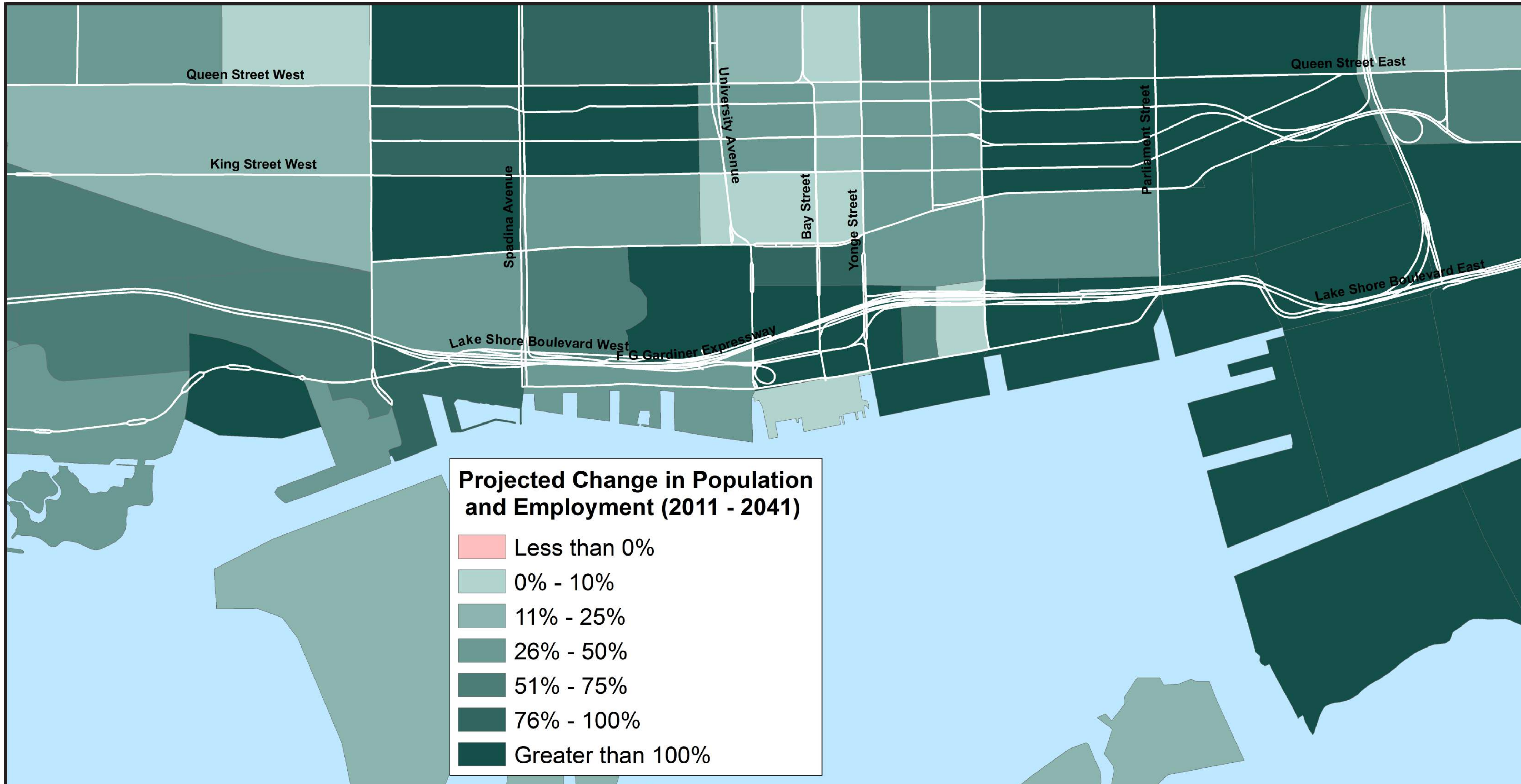
Land Use



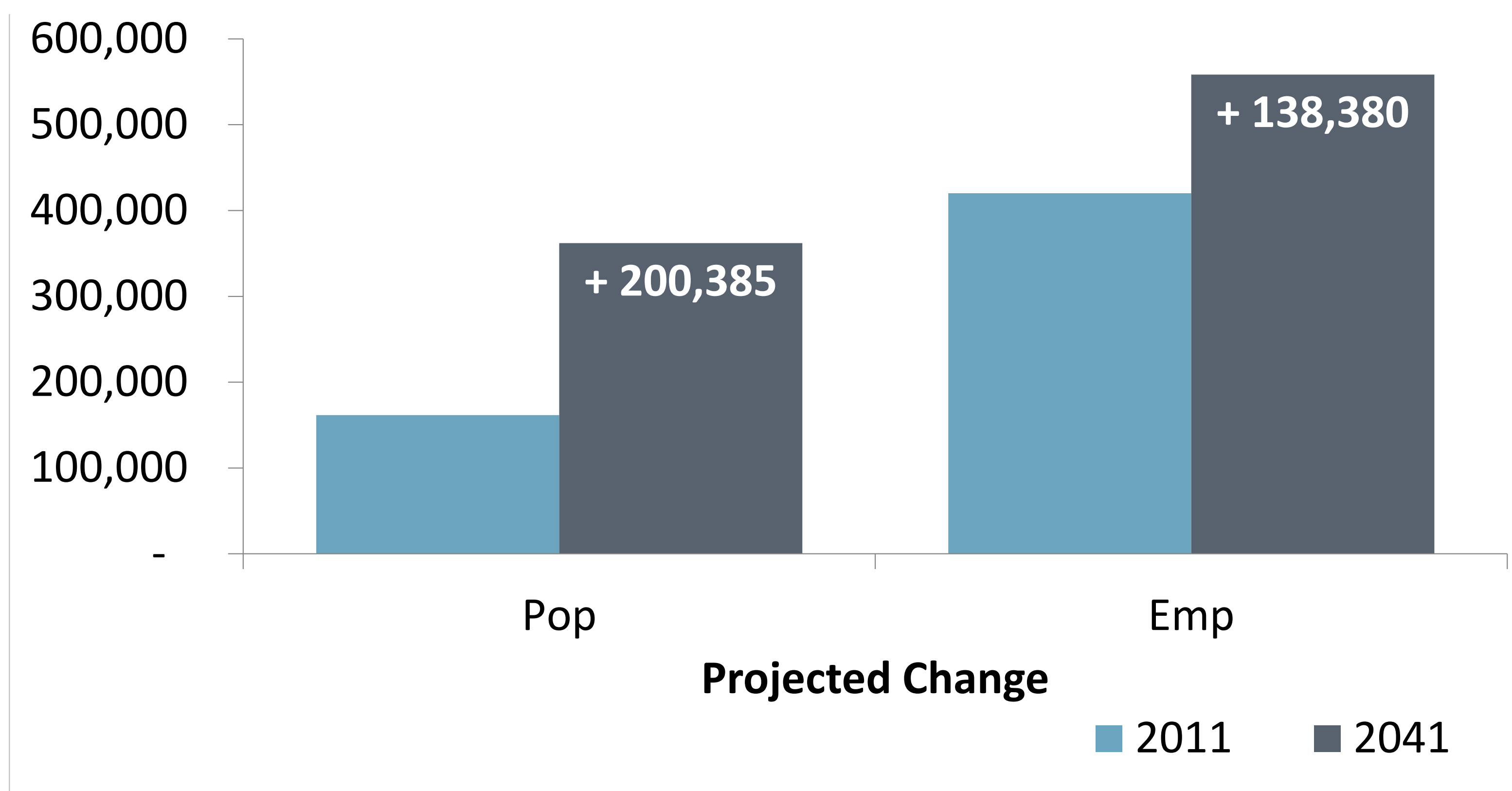
Source: Toronto Official Plan, Land Use Plan, 2015

Strachan Ave to Parliament St

Changes in Population and Employment by 2041



Source: City of Toronto



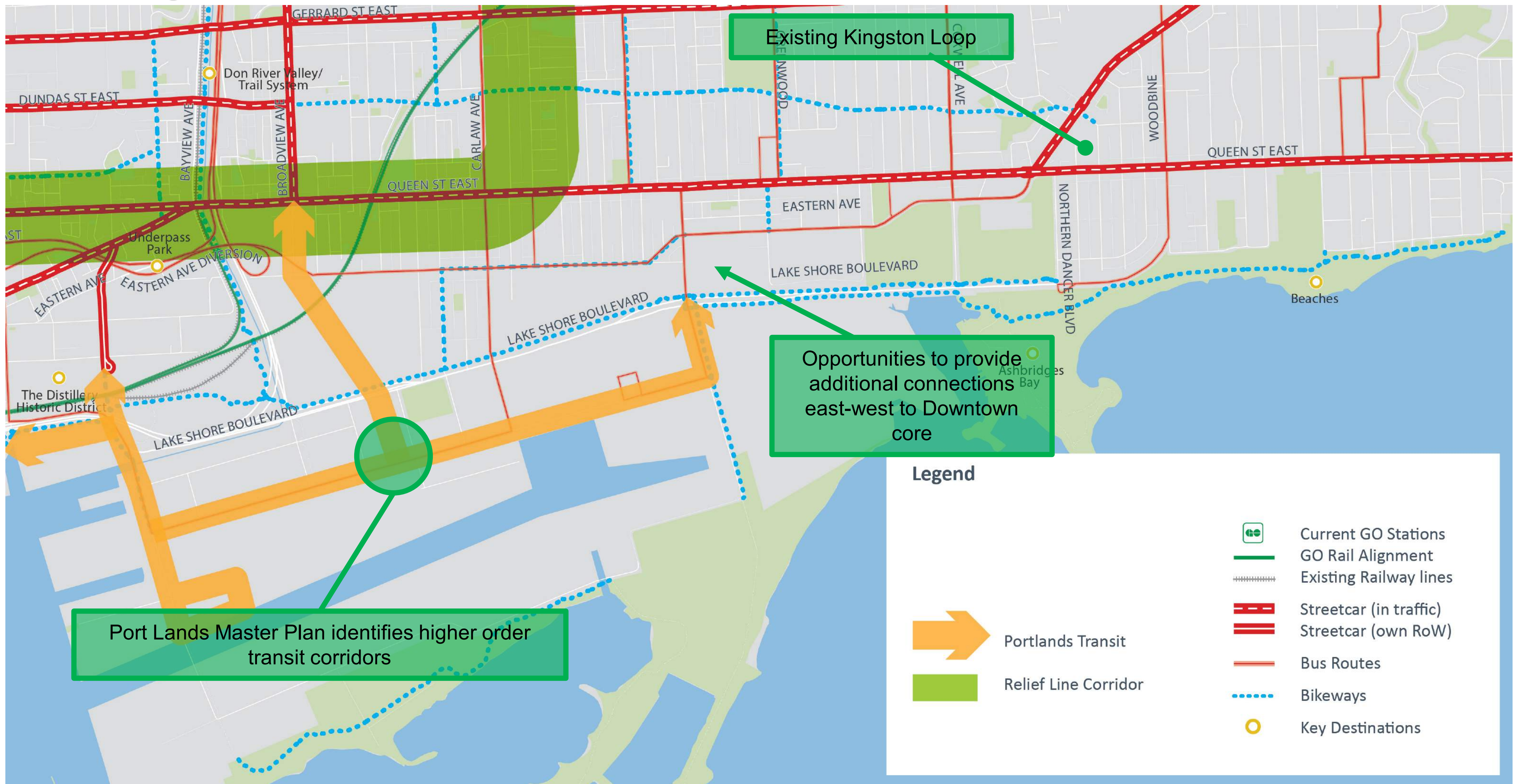
Opportunities and Constraints

- Need for greater transit connections to serve the significant levels of redevelopment already occurred and planned, including near Fort York, Cityplace, Entertainment District, South Core and East Bayfront
- Limited streetcar capacity at the current Union Station loop
- New streetcar connections to the Union Station loop will require significant infrastructure costs and construction disruptions
- Various concepts in the Downtown Core are presented:
 - “Status quo”: modify existing loop to accommodate future transit demand
 - “Transit-first” network: rethink approach with an extended transit surface network, linking the city to the waterfront

04 SEGMENT

Parliament St to Woodbine Ave

Existing Transportation



Sources: TTC, Metrolinx, City of Toronto, and Gov't of Ontario

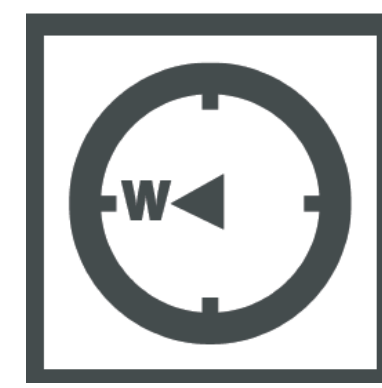
Current Travel Patterns



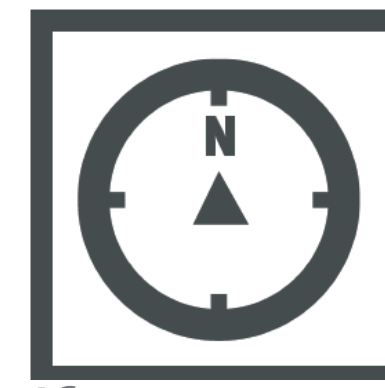
Internal Travel



To/from Downtown core



To/from areas north (up to Don Valley)



To/from areas in farther west (south Etobicoke, High Park, King-Liberty)



To/from all other areas

Percentage of total trips within AM Peak Period	8%	23%	19%	3%	46%
Percentage of transit trips in AM Peak Period	1%	41%	14%	39%	20%

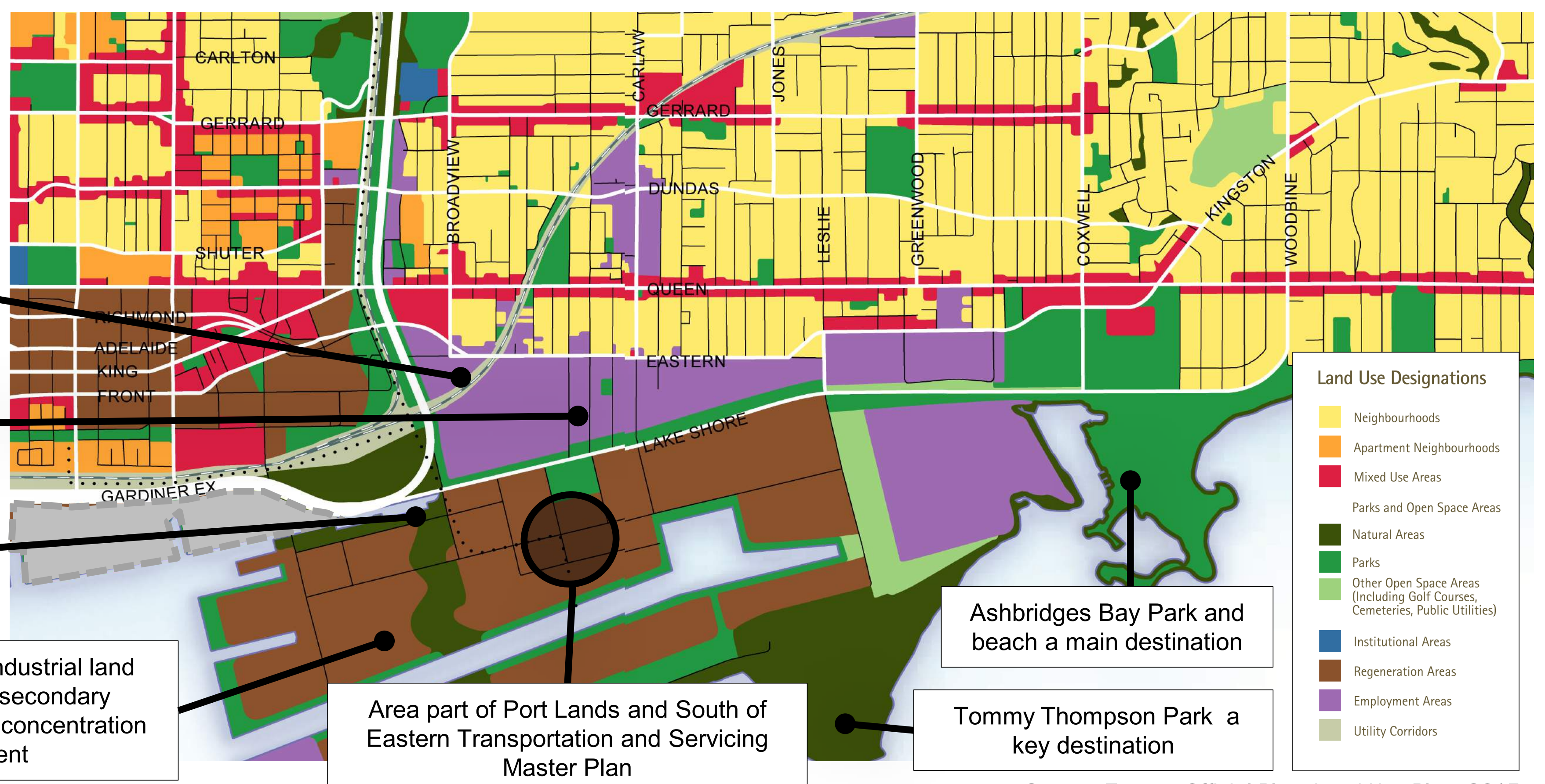
Source: 2011 Transportation Tomorrow Survey

Opportunity to grow ridership with increased development

Opportunity to support existing demand

Opportunity to foster growth in transit ridership

Land Use

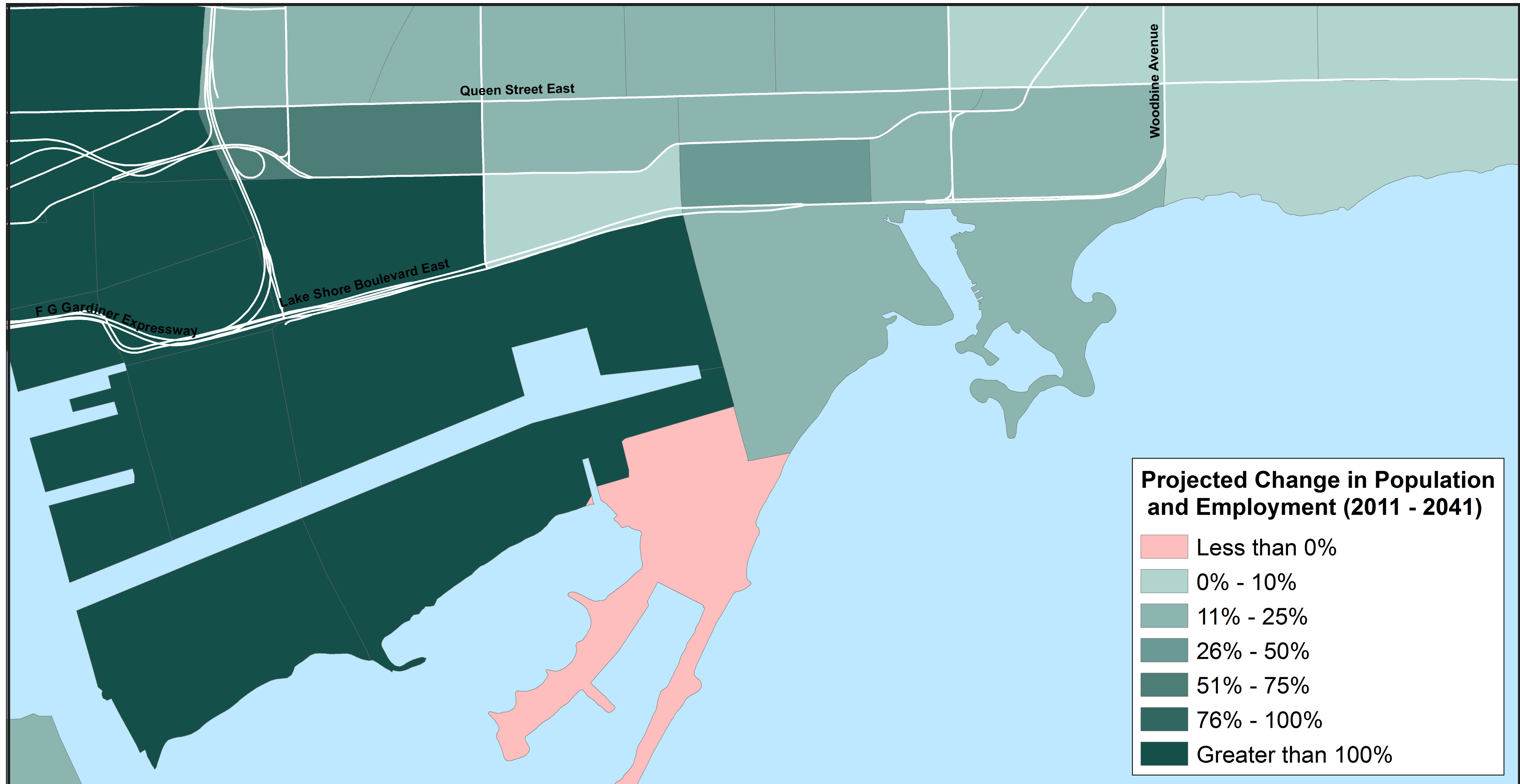


Source: Toronto Official Plan, Land Use Plan, 2015

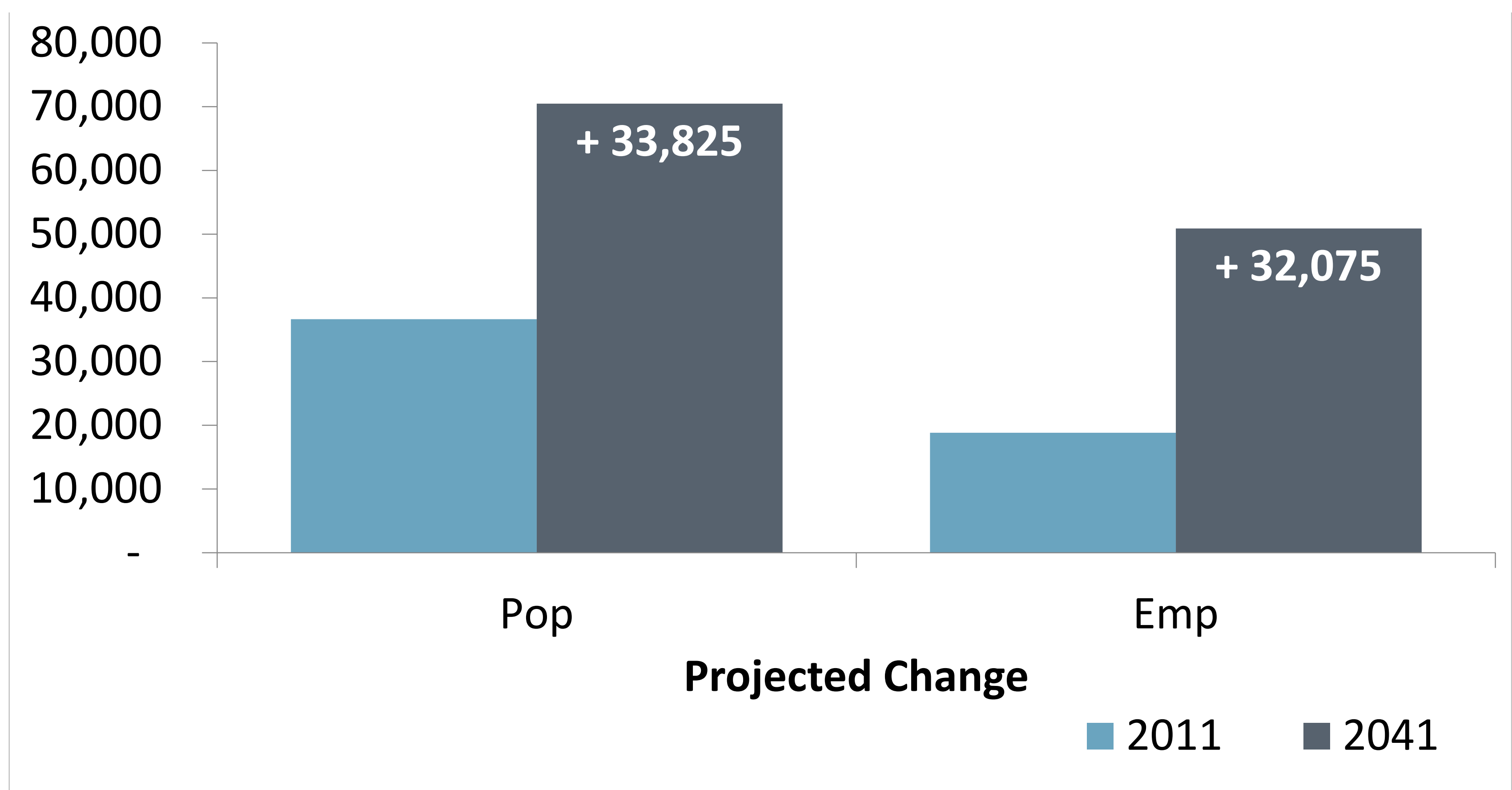
04 SEGMENT

Parliament St to Woodbine Ave

Changes in Population and Employment by 2041



Source: City of Toronto



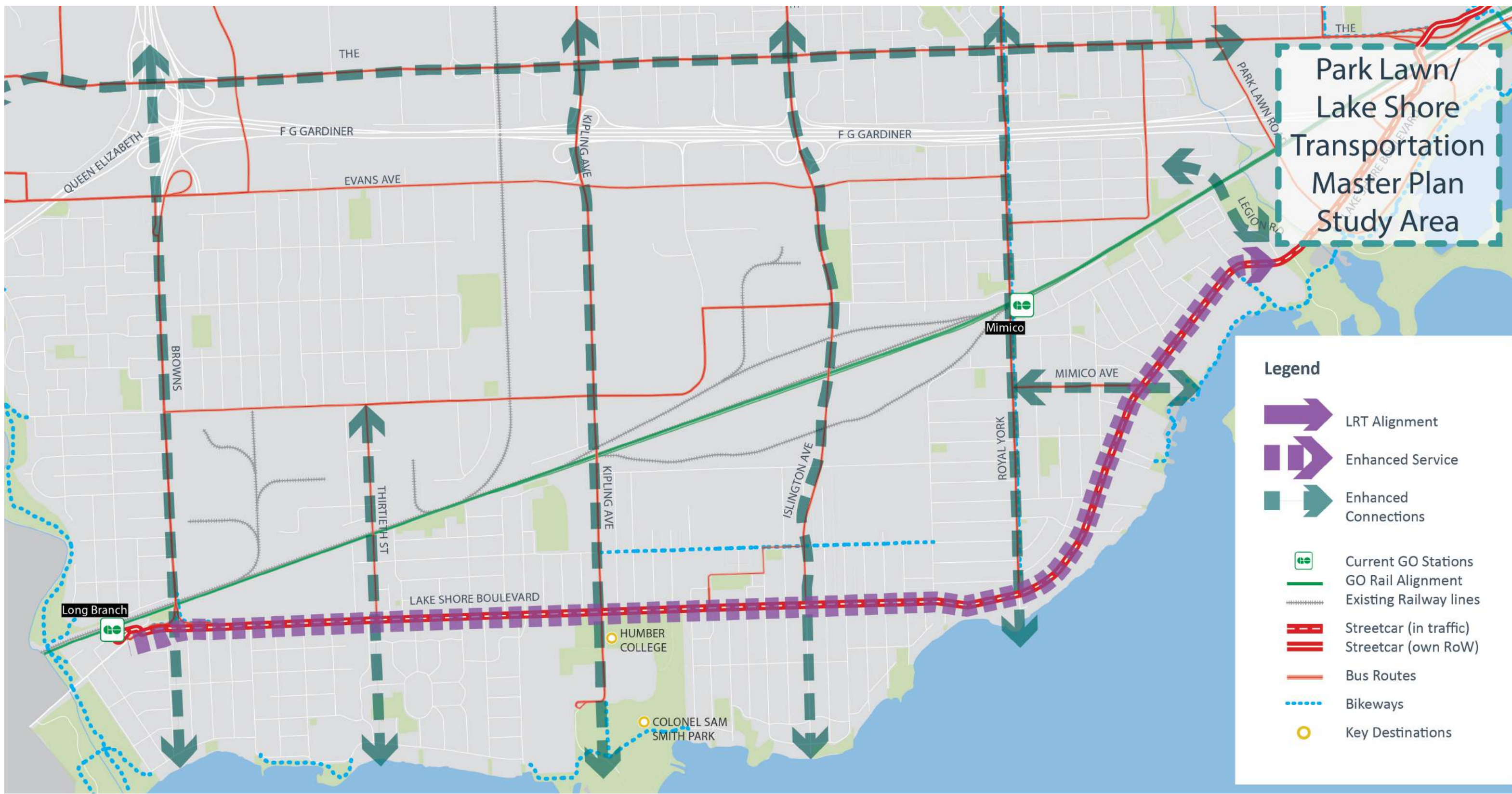
Opportunities and Constraints

- Opportunities to increase transit connections east of Leslie Street to the Downtown core
- Current form of the Gardiner Expressway, Lake Shore Blvd, and water features are barriers to connect city to Port Lands
- Building on the Port Lands Master Plan already in progress, higher-order transit will support the development of a new walkable mixed-use community

01 SEGMENT

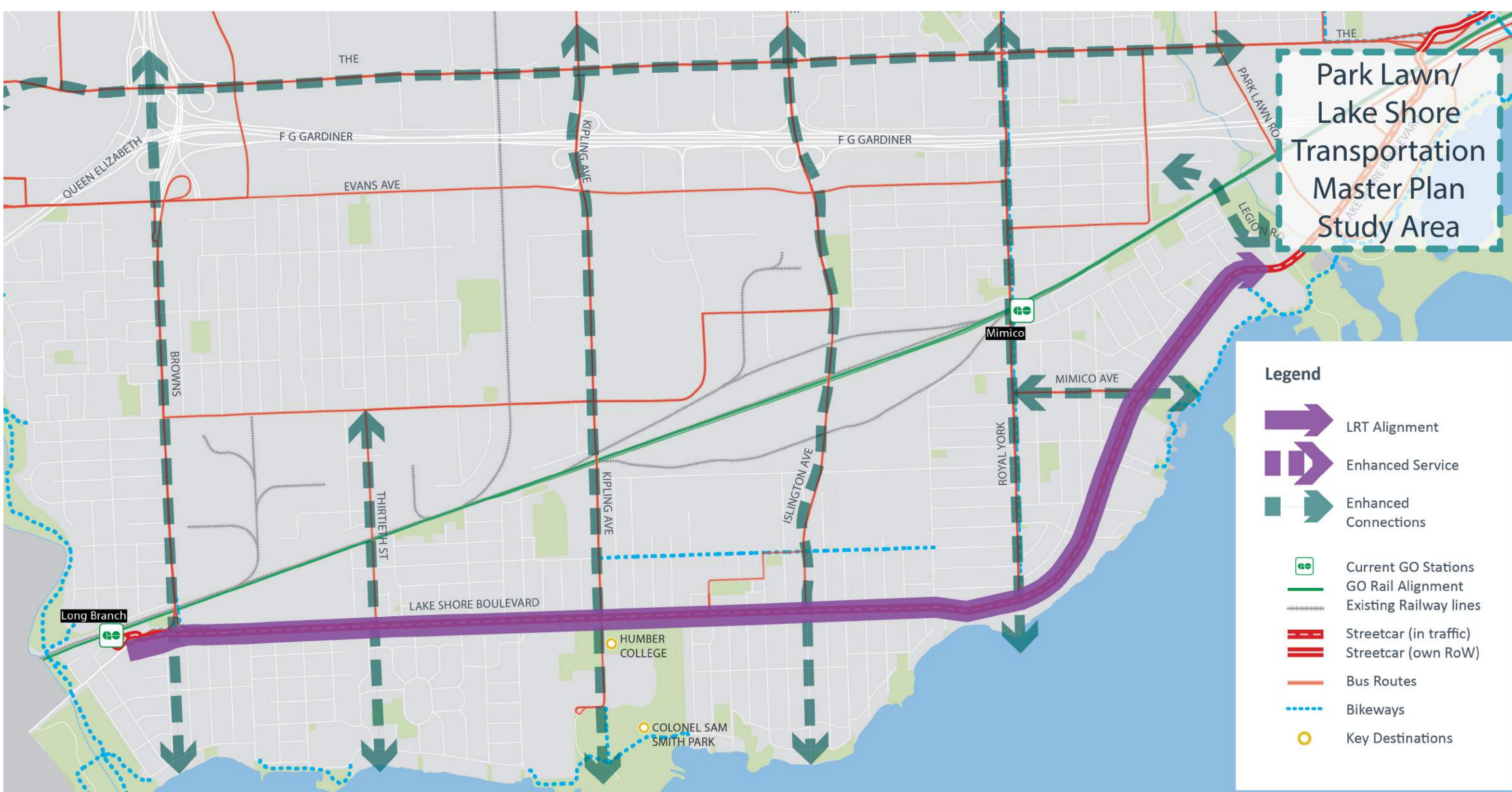
Concepts: Long Branch to Humber River

Concept 1A: Enhance Lake Shore



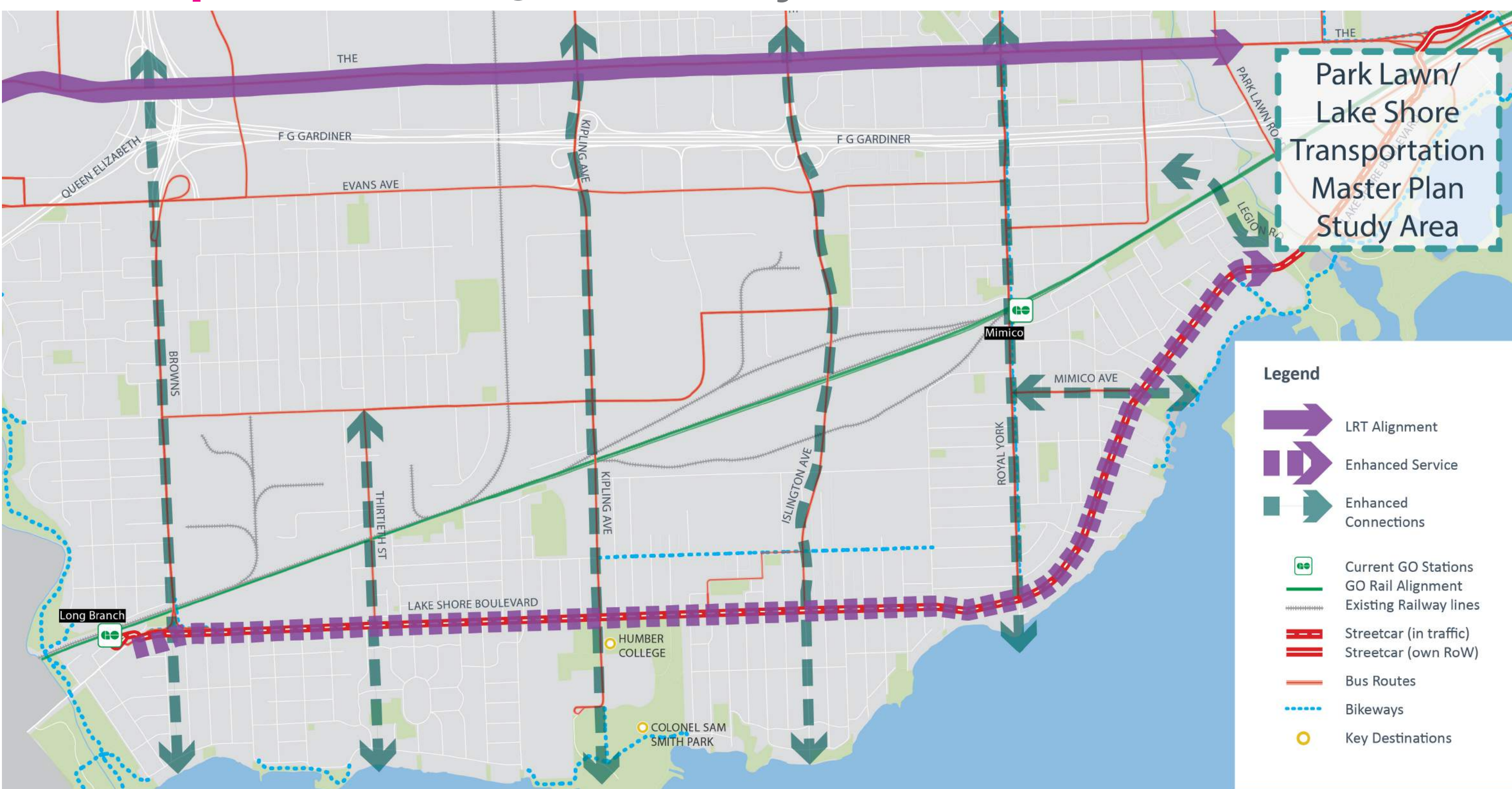
- Improve Lake Shore streetcar operations, potentially utilizing, but not limited to: Lake Shore left turn restrictions, north-south roadway turning restrictions, transit signal priority, reduced number of stops, etc
- Provide better connections to GO stations and MiWay, including more convenient direct transfers and improved cycling and pedestrian environment
- Improve the north-south bus service, as required to address future transit demands and to connect to the broader City and regional network

Concept 1B: Lake Shore Blvd. LRT



- Reconfigure existing streetcar line to LRT, that will be generally separated from traffic lanes but with fewer stops
- Provide better connections to GO stations and MiWay, including more convenient direct transfers and improved cycling and pedestrian environment
- Improve the north-south bus service, as required to address future transit demands and to connect to the broader City and regional network

Concept 1C: The Queensway LRT

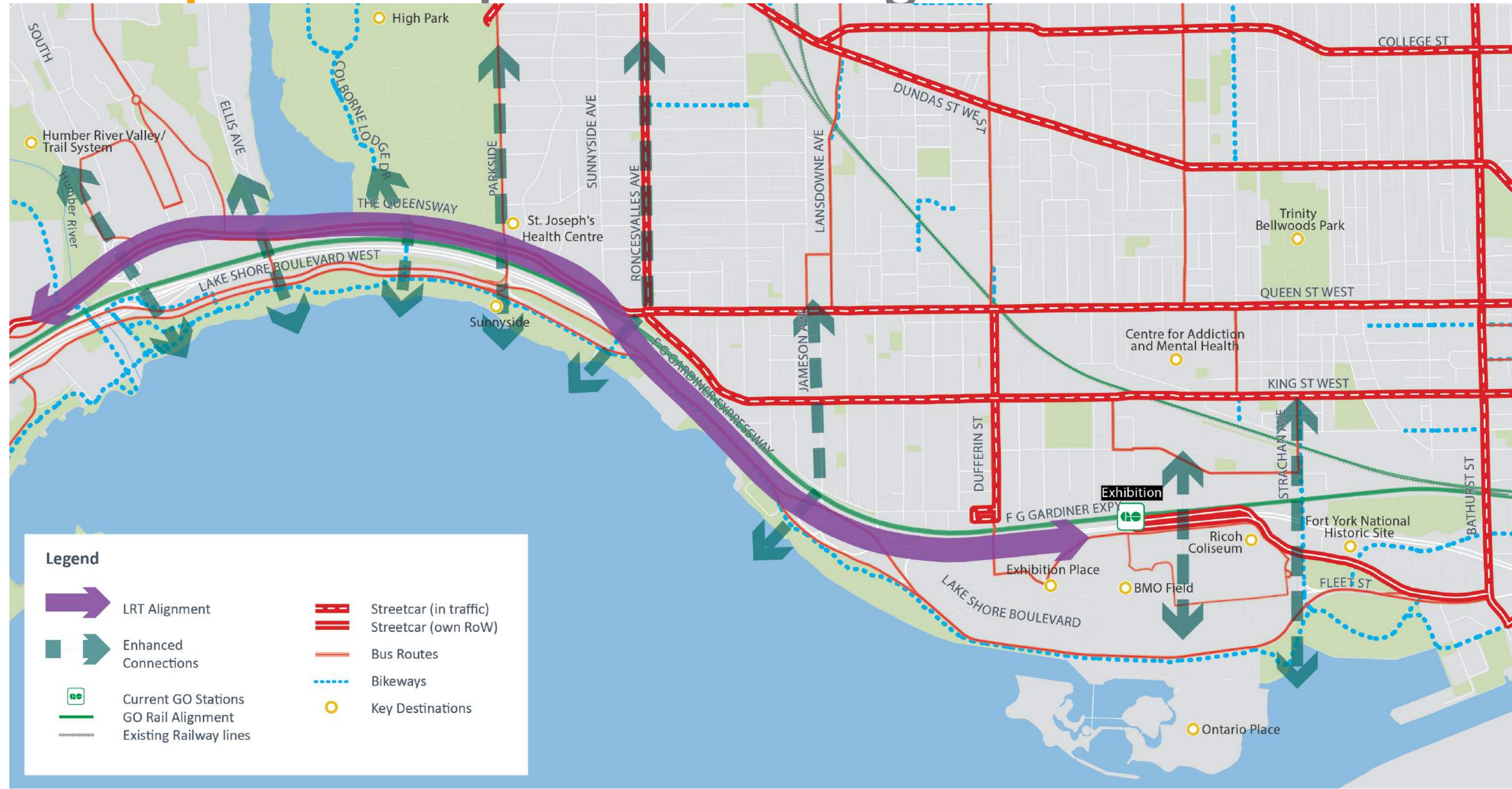


- Introduce a LRT alignment along the Queensway corridor, that will be generally separated from traffic lanes
- Like Concept 1A, enhance Lake Shore streetcar service to support access to the Queensway LRT and GO Rail.
- Better connections and improved bus service could be considered

02 SEGMENT

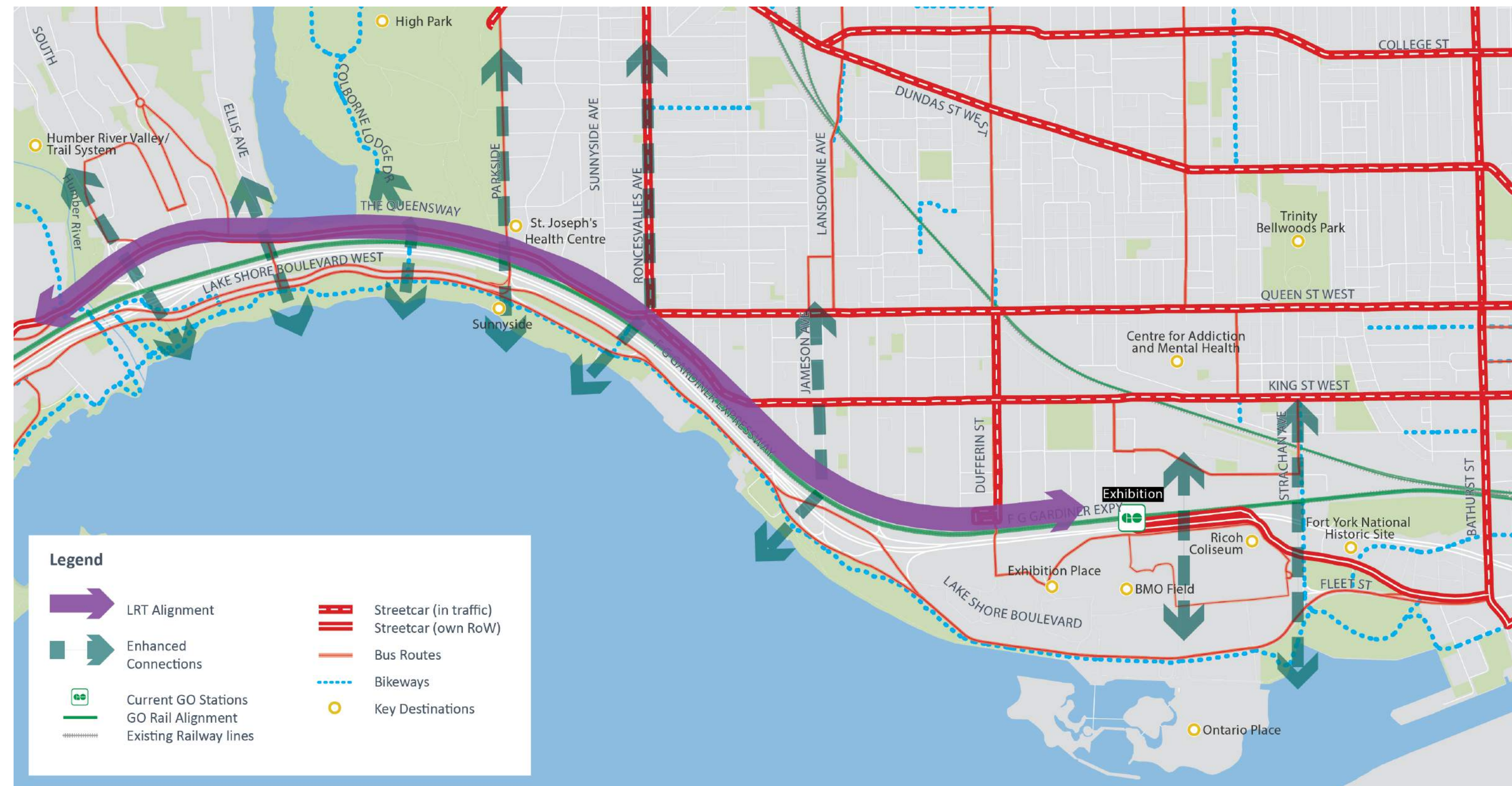
Concepts: Humber River to Strachan Ave

Concept 2A: Complete the Missing Link



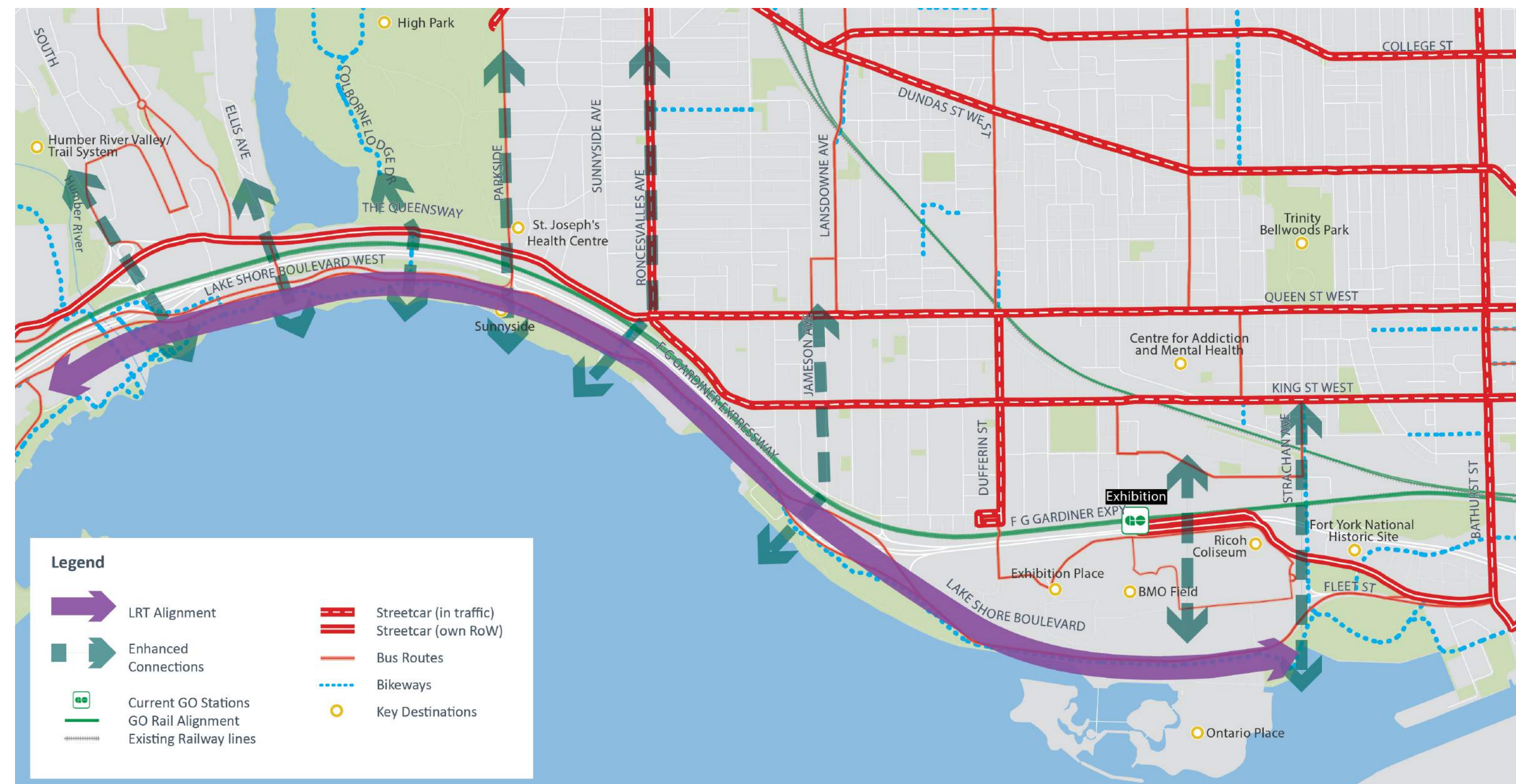
- Extend LRT from the existing Exhibition Loop westerly along the south side of the Gardiner and rail corridors
- Cross the Gardiner and rail corridors to connect with the existing Queensway LRT alignment at a signalized intersection at Sunnyside Ave
- Adjust transit routes by turning back existing 501 Queen streetcar service at the Sunnyside Loop to improve east-west capacity

Concept 2B: Former Front Street Extension



- Introduce a LRT line westerly along the north side of the rail corridor, connecting with the existing Queensway LRT alignment at a signalized intersection at Sunnyside Ave
- Adjust transit routes by turning back existing 501 Queen streetcar service at the Sunnyside Loop to improve east-west capacity

Concept 2C: Lake Shore Blvd LRT

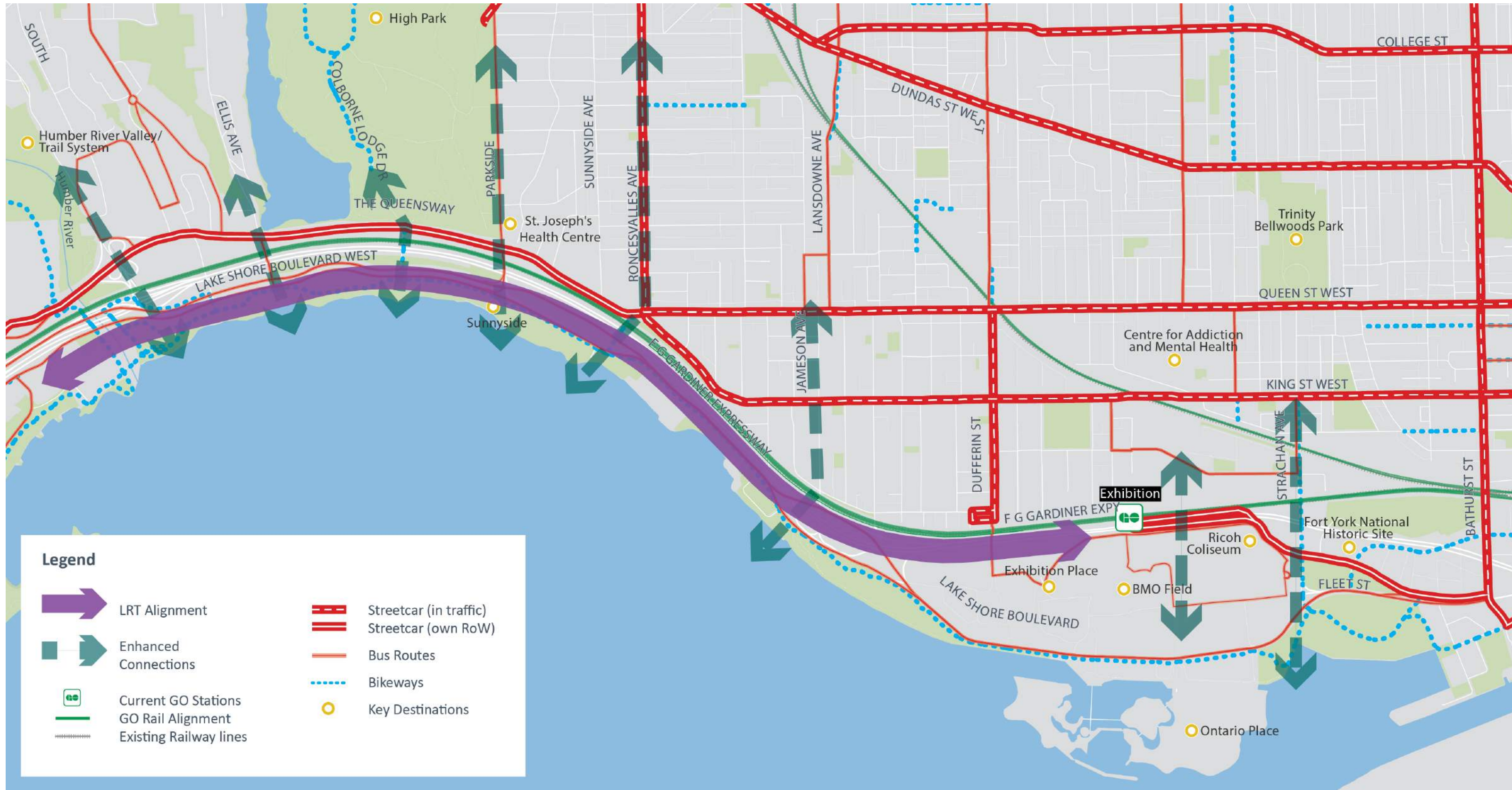


- Extend LRT from the existing Exhibition Loop westerly within the Lake Shore corridor
- Cross the Humber River adjacent to the Gardiner eastbound on-ramp, connecting to Lake Shore Blvd West

02 SEGMENT

Concepts: Humber River to Strachan Ave

Concept 2D: Lake Shore Blvd LRT to Exhibition



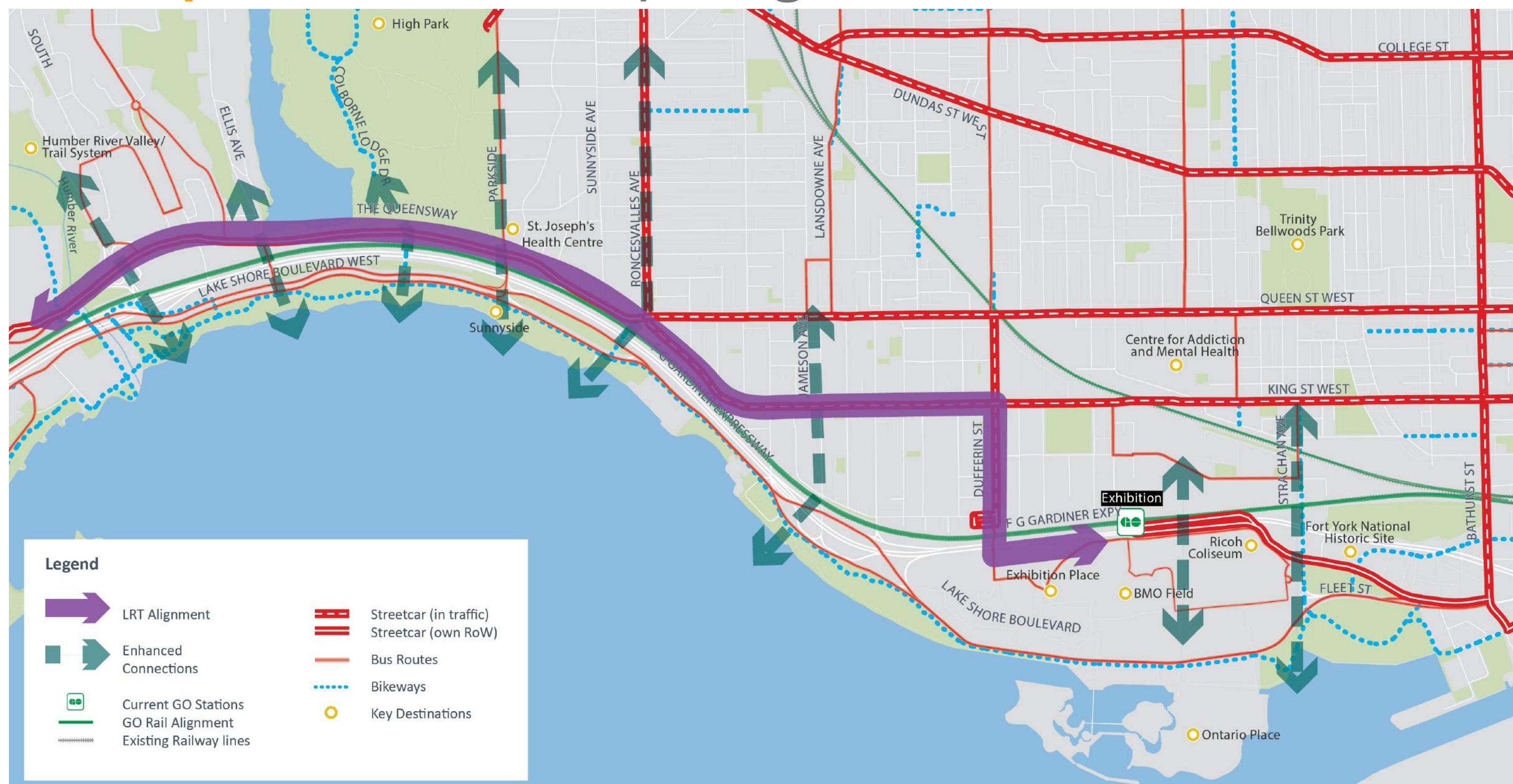
- Extend LRT from the existing Exhibition Loop westerly within the Lake Shore corridor
- Cross the Humber River adjacent to the Gardiner eastbound on-ramp, connecting to Lake Shore Blvd West

Concept 2E: Lake Shore Blvd LRT/Colborne Lodge Dr



- Extend LRT from the existing Exhibition Loop westerly within the Lake Shore corridor
- Connect with the existing Queensway LRT alignment using Colborne Lodge Drive

Concept 2F: Dufferin St / King St

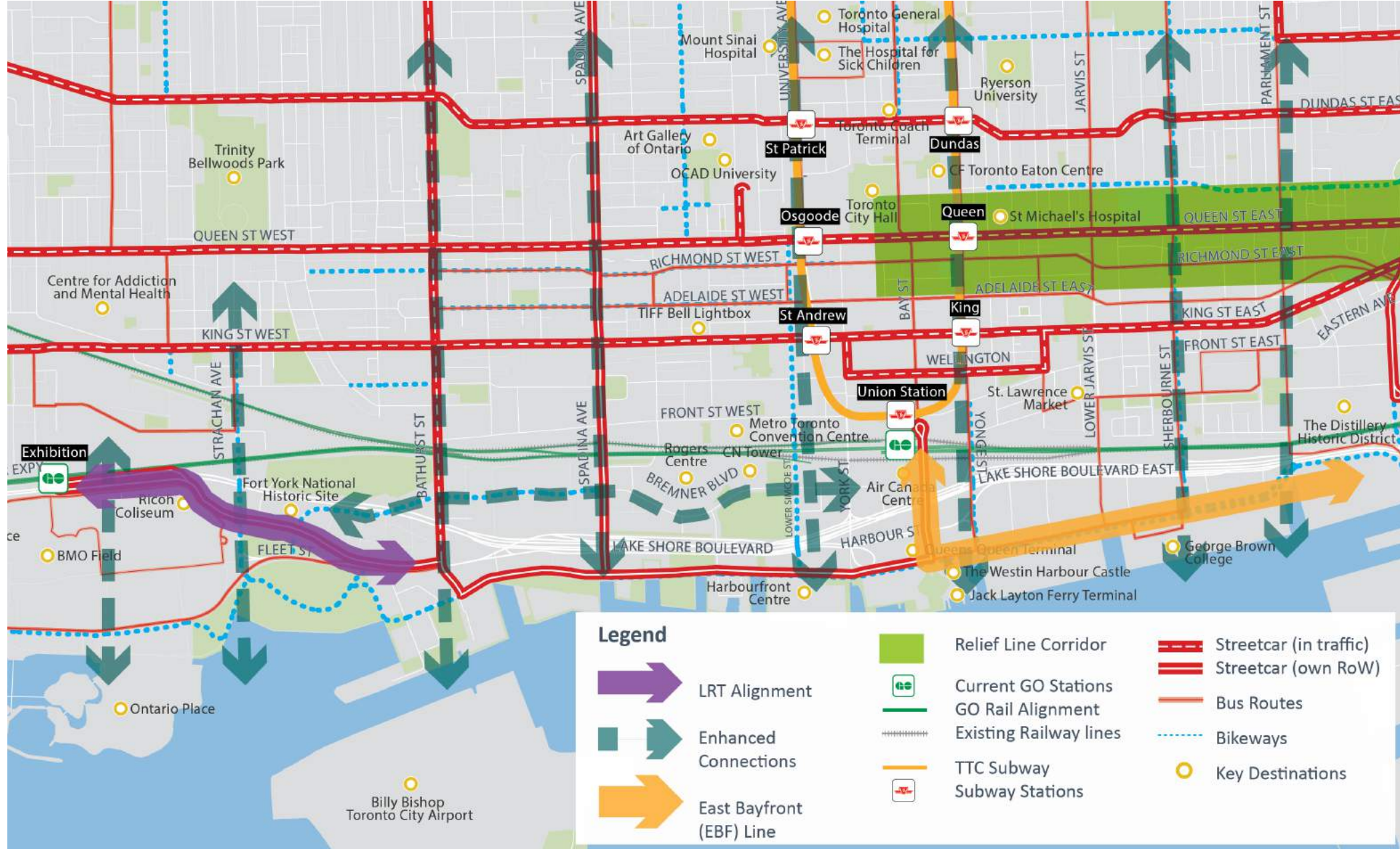


- Extend LRT from the existing Exhibition Loop westerly to Dufferin St
- Continue northerly along Dufferin St, potentially separated from traffic lanes, to King St
- Easterly along the existing King streetcar line, with potential operational enhancements (such as left turn restrictions, transit signal priority reviews, removal of stops, etc.)
- Connect with the existing Queensway LRT alignment at the King St/ Queen St/ Roncesvalles Ave/ Queensway intersection

03 SEGMENT

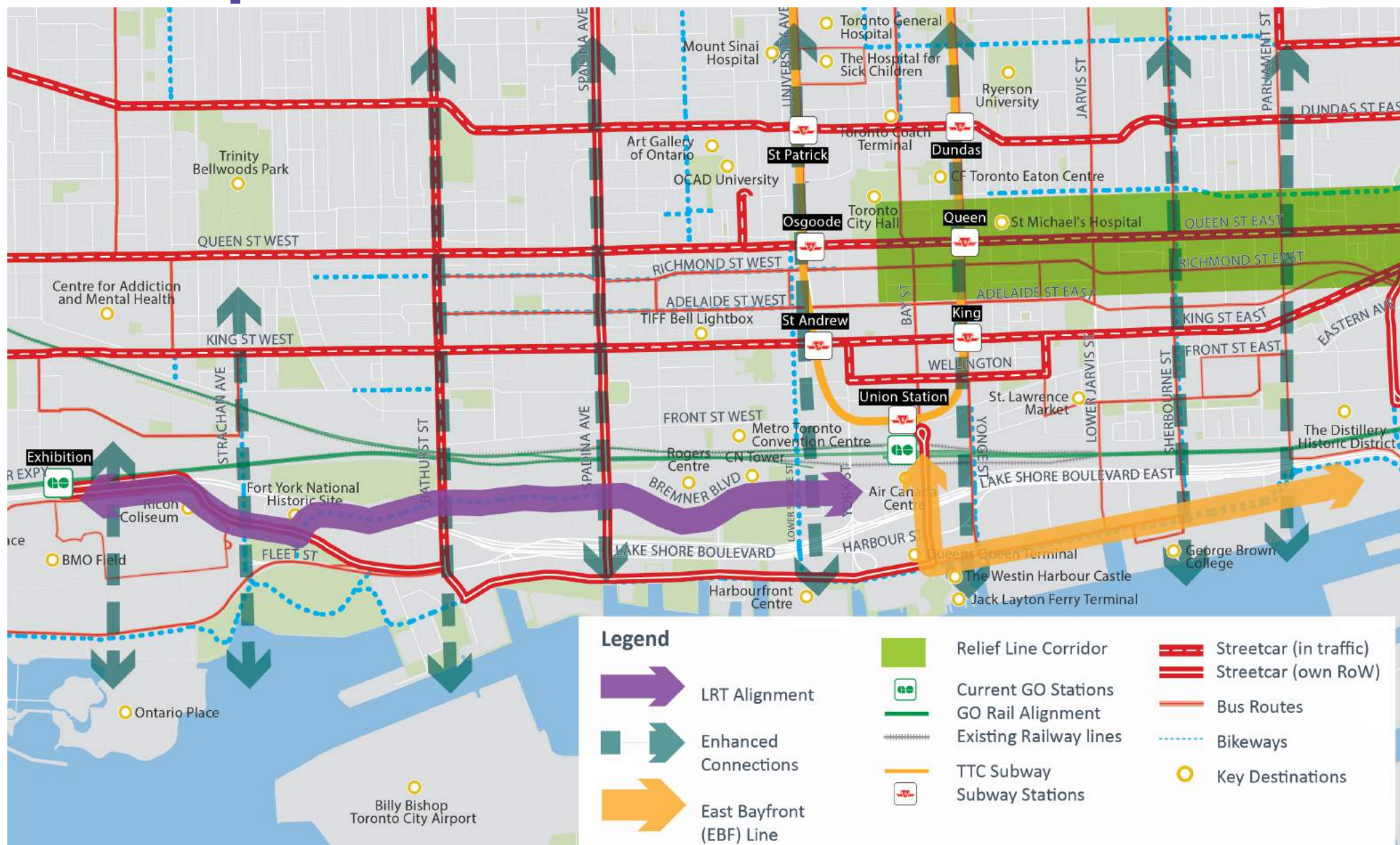
Concepts: Strachan Ave to Parliament St

Concept 3A: Existing Fleet St Alignment



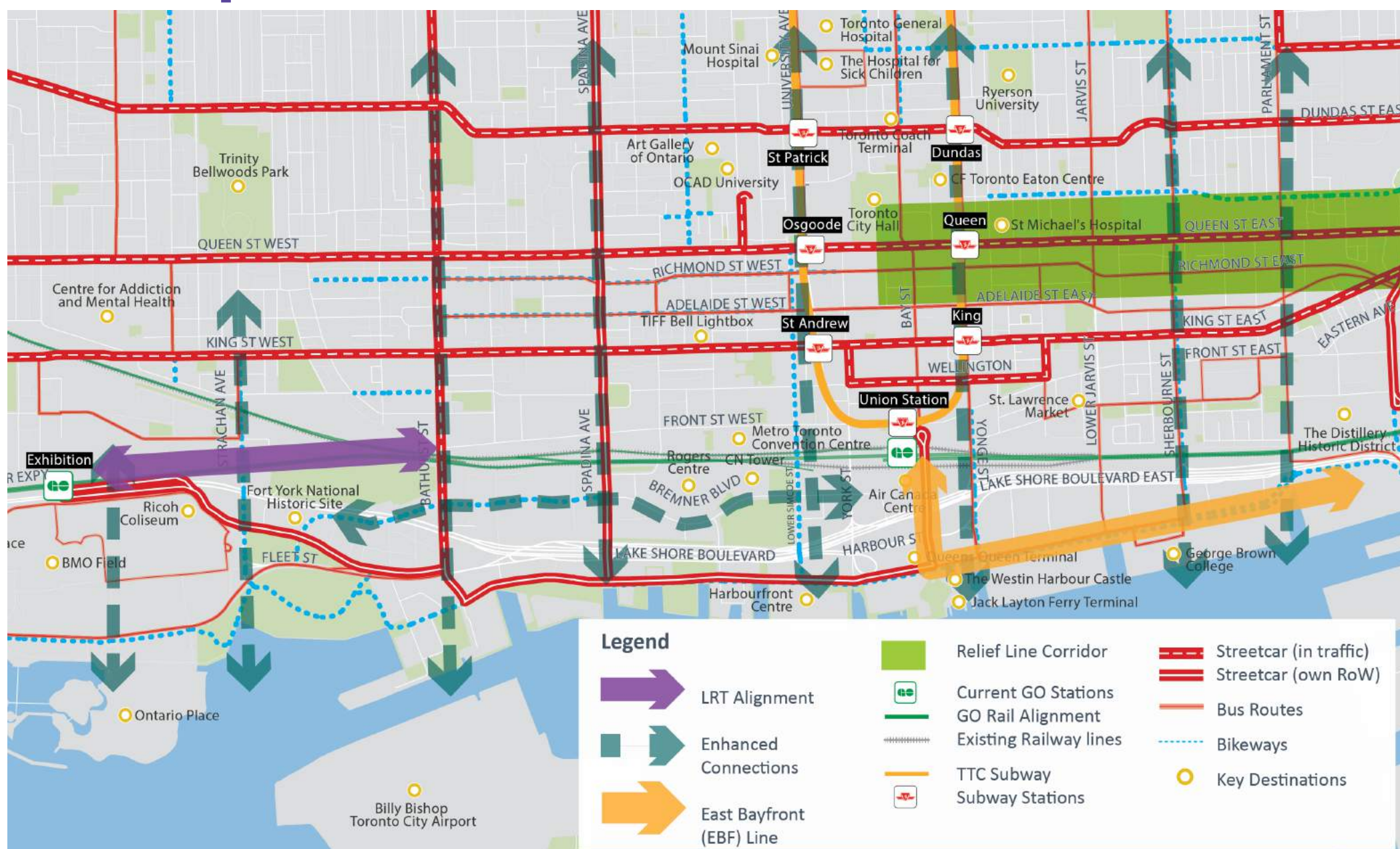
- Upgrade the existing Fleet LRT corridor from the Exhibition Loop, to address transit and traffic operational issues, particularly in the vicinity of the Fleet St/ Lake Shore Blvd/ Bathurst St intersection
- Easterly concept alternatives are presented from the Fleet St/ Lake Shore Blvd/ Bathurst St intersection – serving Downtown concepts

Concept 3B: Fort York Blvd - Bremner Blvd



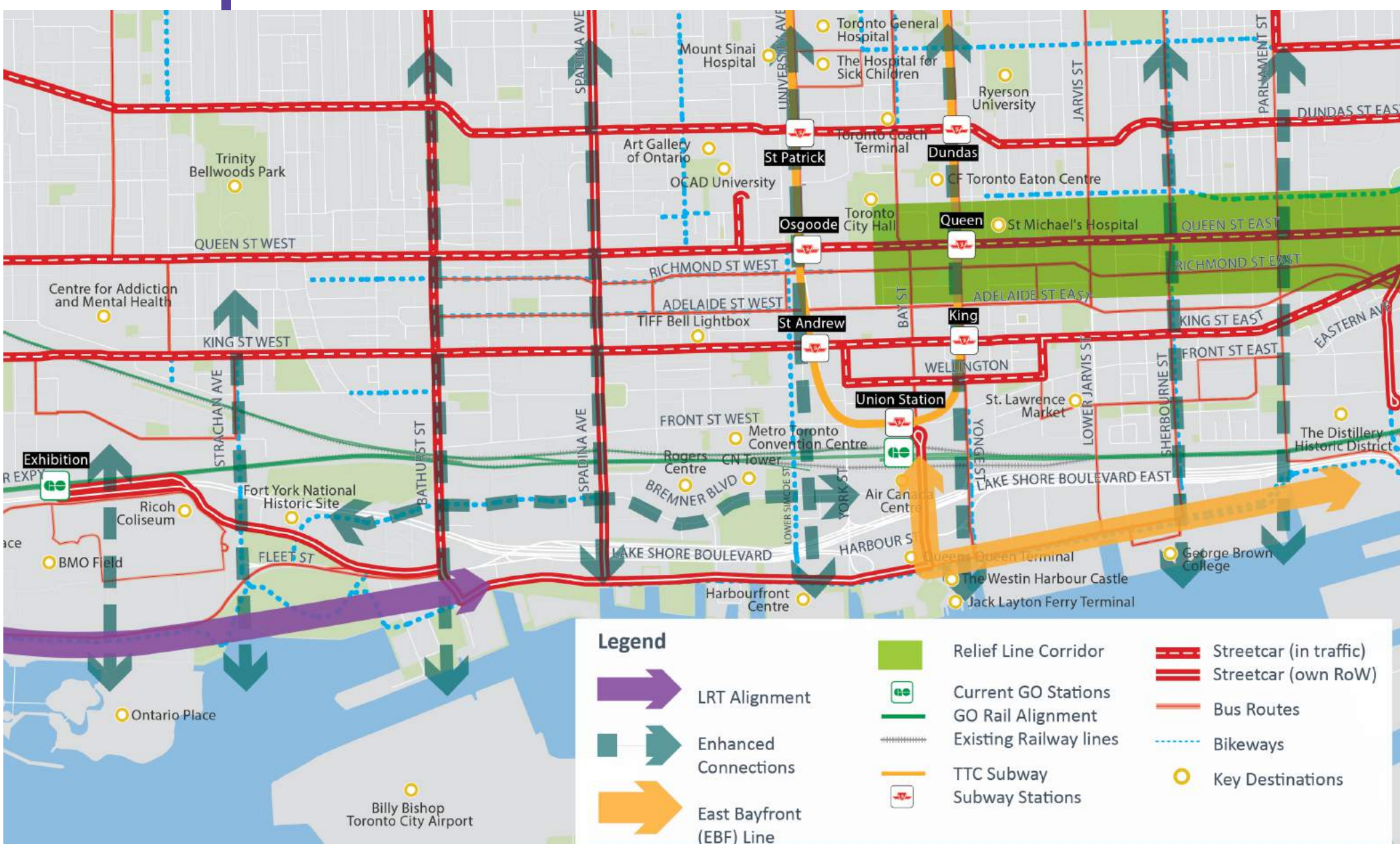
- Introduce a LRT line from the existing Fleet LRT corridor from the Exhibition Loop, northerly along Fort York Blvd to Bathurst St
- Continue easterly along the Fort York - Bremner corridor, crossing Bathurst St and Spadina Ave
- Along Bremner Blvd and east of Lower Simcoe St, enter a portal to go underground and continue easterly underground to connect with an expanded Union Loop

Concept 3C: Former Front St Extension



- Introduce a LRT line easterly along the north side of the rail corridor, crossing underground the Kitchener GO Rail corridor to connect with the Bathurst St / Front St intersection
- Easterly concept alternatives are presented from the Bathurst St / Front St intersection – refer to serving Downtown area concepts

Concept 3D: Lake Shore Blvd LRT



- Introduce a LRT line along the Lake Shore corridor easterly from south of Exhibition Place and Coronation Park
- Connect with Queens Quay west of Bathurst St, with mixed traffic operations within the Bathurst Quay Neighbourhood

03 SEGMENT

Concepts for Serving Downtown

A

Union Loop Modification

- Considerable redesign of Existing Union Loop either by:
- Expanding current Loop
- Extending alignment easterly

B

Second Loop

- Build a 2nd terminus west of Union, with connections to regional transit and to serve western demand

C

Queens Quay Through Service

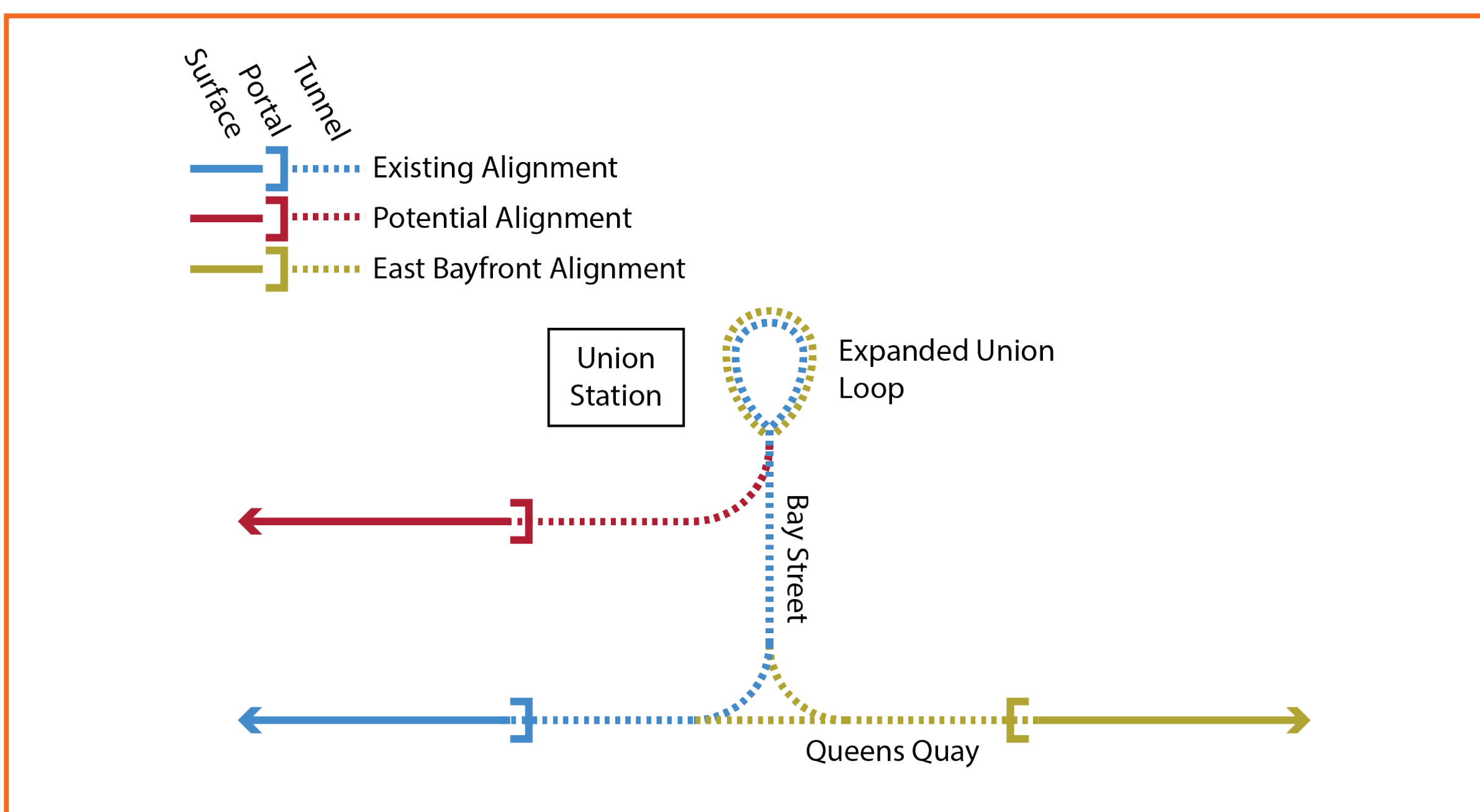
- Route service along Queens Quay with different configurations
- Requires enhanced north-south transit

D

Network Distribution

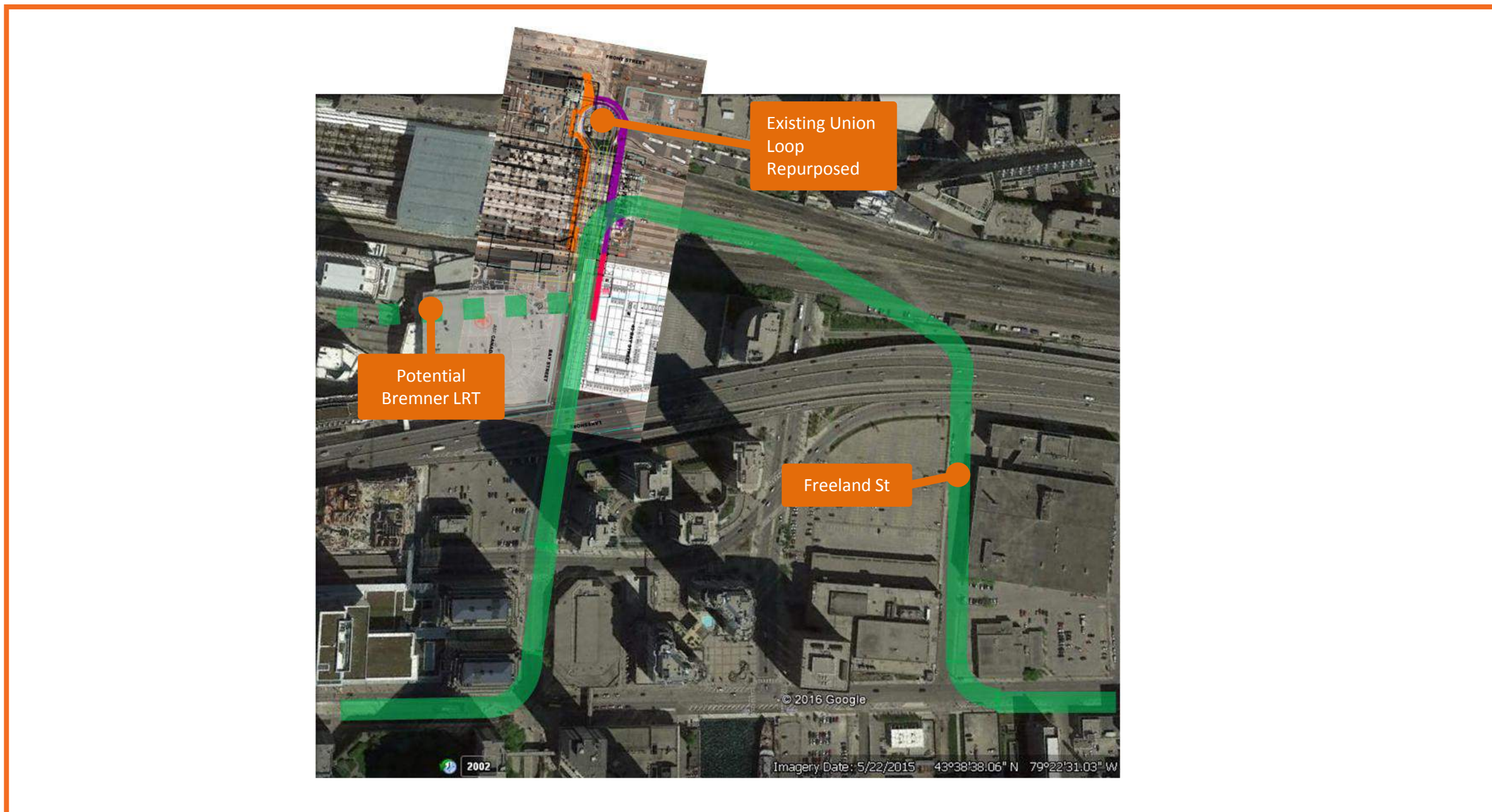
- Route service along the network using:
- Existing alignments
- New alignments

A1: Expanded Union Loop



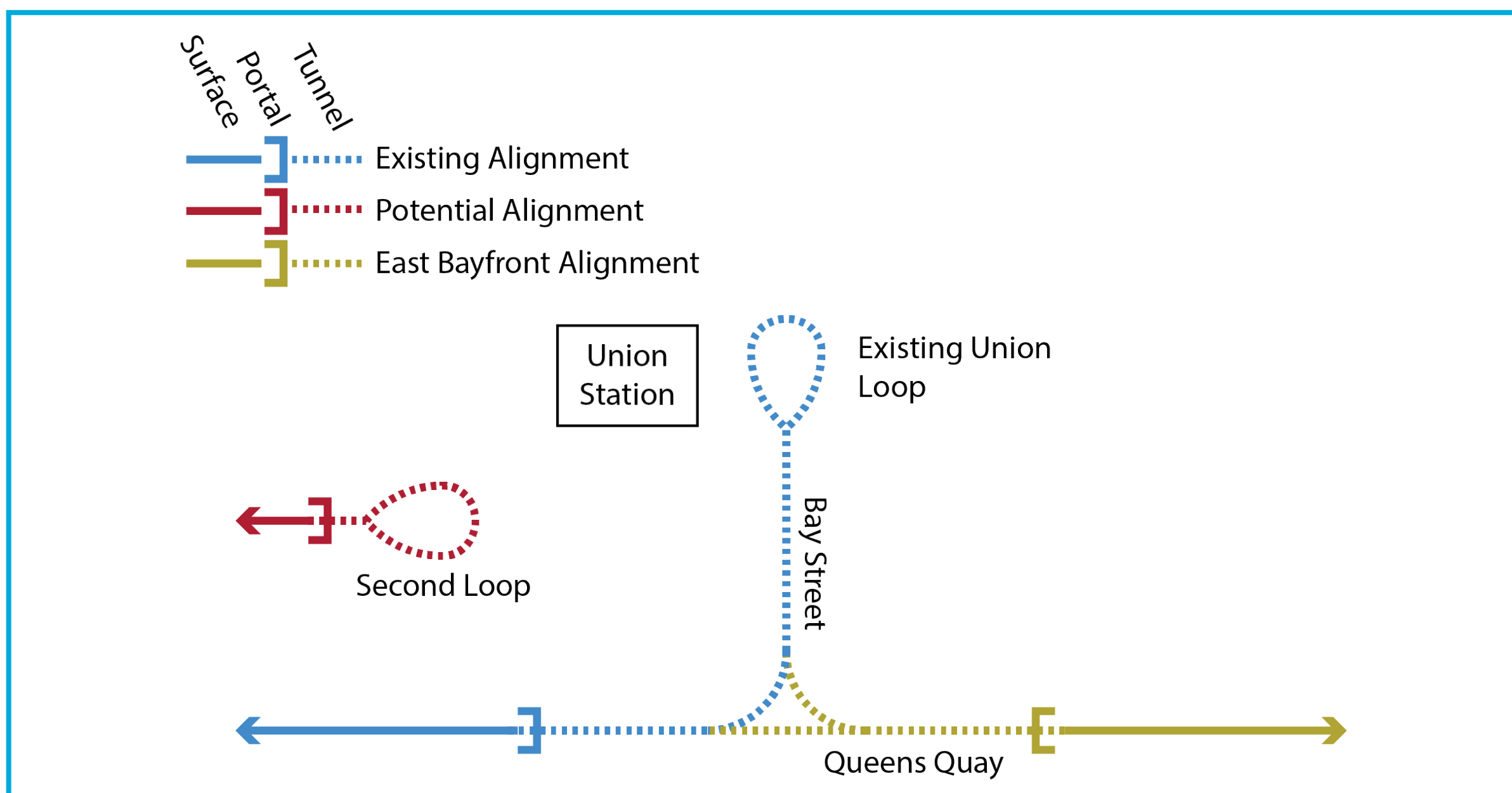
- As per approved East Bayfront Transit EA, expand existing Union Loop to increase station capacity and to improve terminus operations (i.e. new platforms, additional by-pass and crossover trackage)
- Includes the potential to implement the Bremner Blvd route as originally envisioned
- Through service along Queens Quay will be provided by a new tunnel as per the approved East Bayfront Transit EA

A2: Extend Underground Alignment Easterly



- Eliminate Union Loop by extending the existing Queens Quay LRT easterly under the rail corridor or in the adjacent development, creating an in-line station on a continuous route

B1: Second Loop

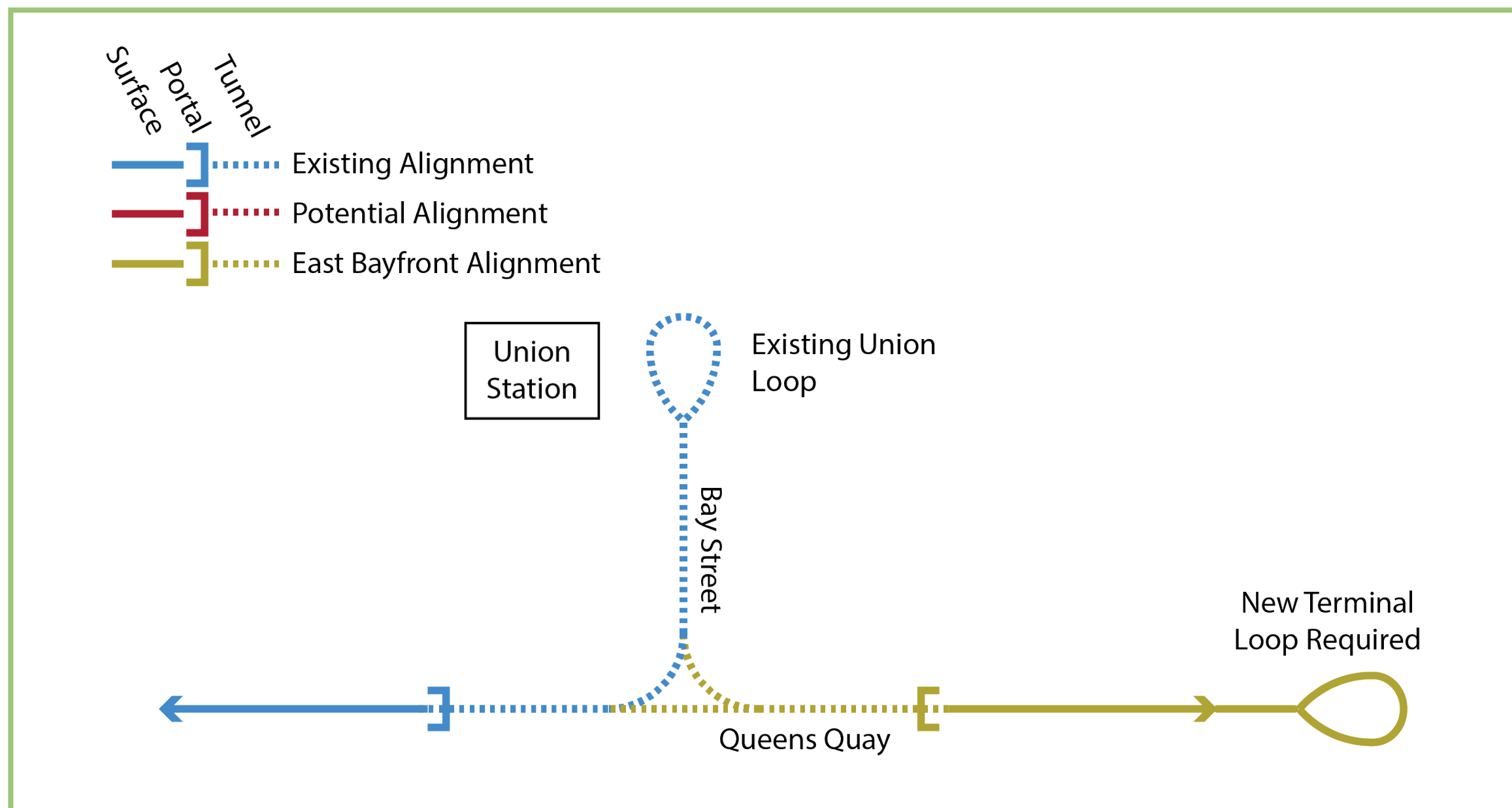


- Construct a second downtown terminus loop, likely on the west side of Union Station
- Maintain existing Union Loop, limiting operations to its existing capacity
- Includes the potential to implement the Bremner route, however likely not as originally envisioned
- Through service along Queens Quay will be provided by a new tunnel as per the approved East Bayfront Transit EA

03 SEGMENT

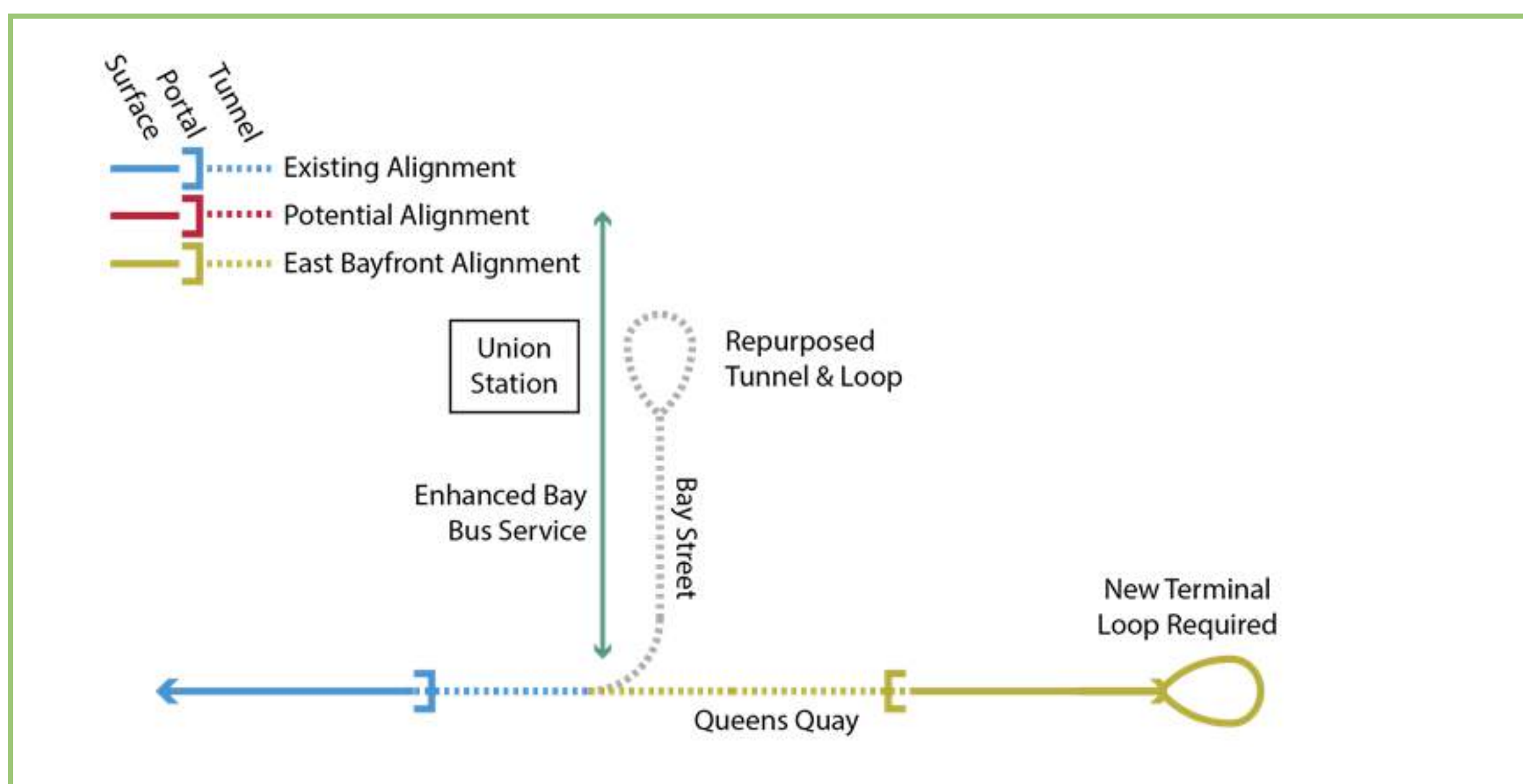
Concepts for Serving Downtown

C1: Tunnel By-Pass



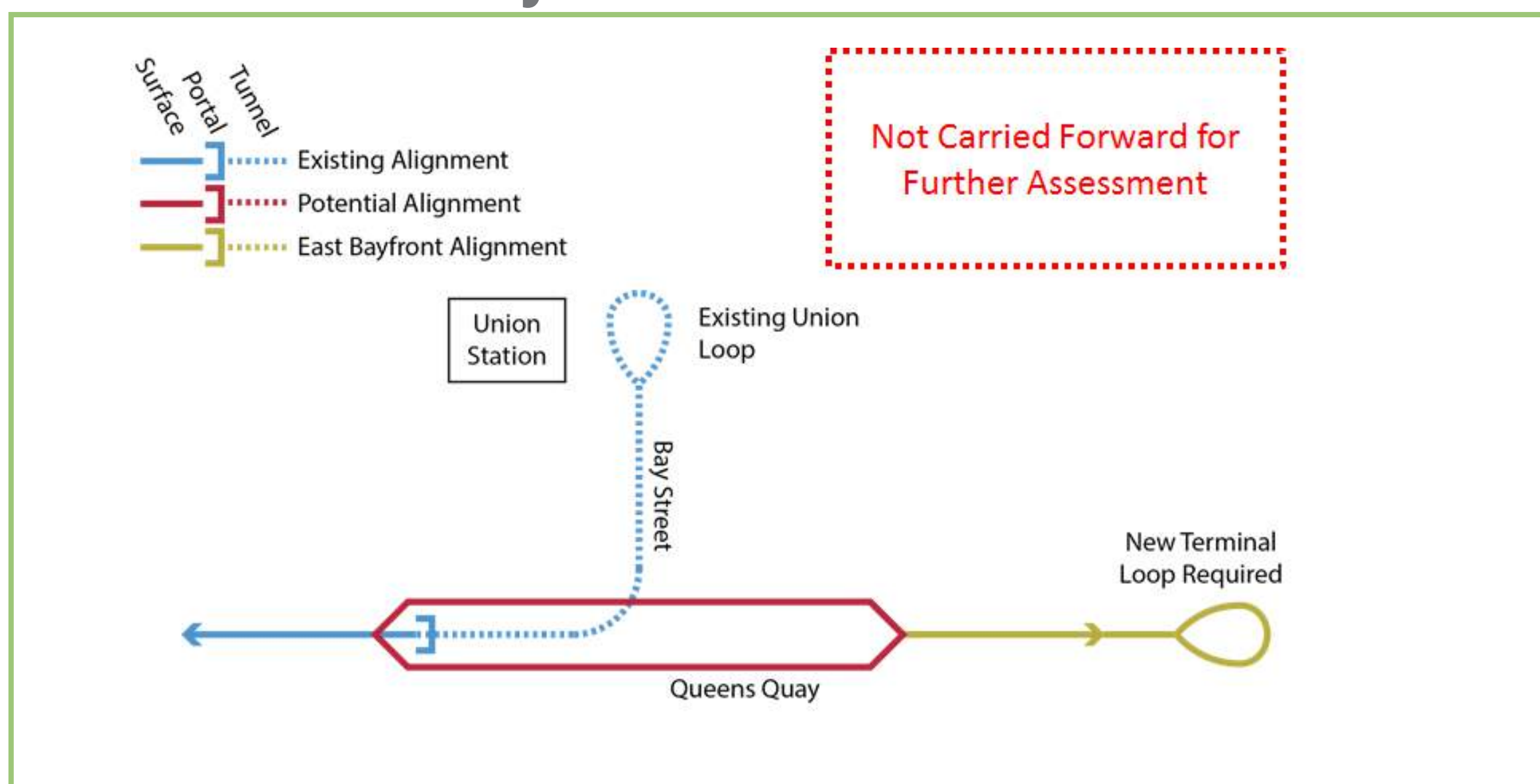
- Maintain existing Union Loop, limiting operations to its existing capacity
- Through service along Queens Quay will be provided by a new tunnel as per the approved East Bayfront Transit EA (potentially extended to provide an underground station for access to the ferry terminal - consistent with Alternative Q3 from the EA)
- New terminal loop required in the east

C2: Tunnel By-Pass, Repurpose Bay St Tunnel



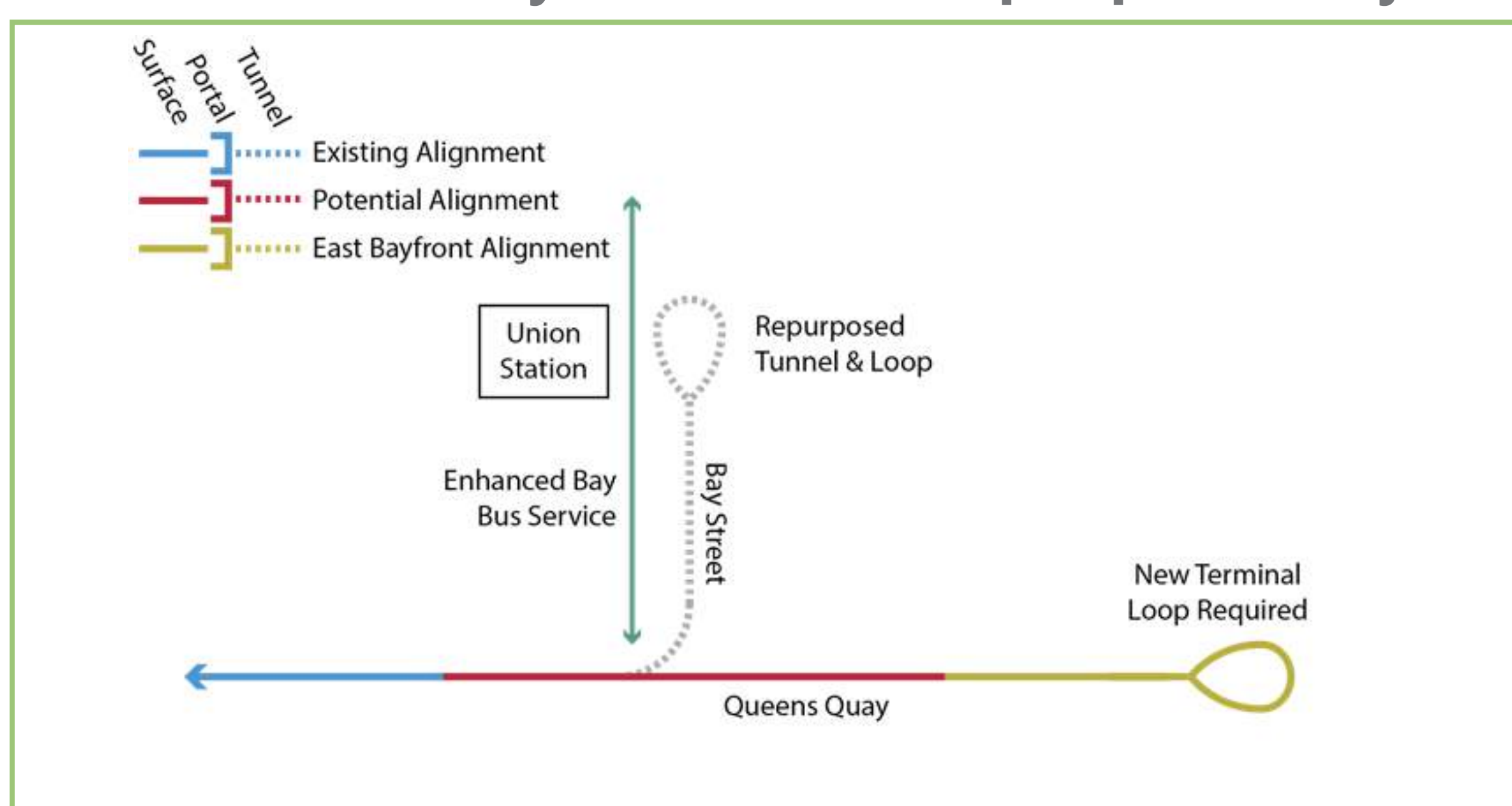
- Existing Union Loop and Bay Tunnel are repurposed for pedestrian use
- Enhanced Bay bus service provided to Queens Quay (such as reserved bus lanes)
- Through service along Queens Quay will be provided by extending the existing LRT easterly in a tunnel under Bay, emerging east of Yonge St
- New terminal loop required in the east

C3: At-Grade By-Pass



- Maintain existing Union Loop, limiting operations to its existing capacity
- Through service along Queens Quay will be provided by splitting off a separate LRT line in the vicinity of York St in order to avoid the existing portal and underground service to the Union Loop
- Mixed traffic operations within the Queens Quay roadway will result between York St and Yonge St, prior to connecting to the approved East Bayfront LRT alignment New terminal loop required in the east

C4: At-Grade By-Pass and Repurpose Bay St Tunnel

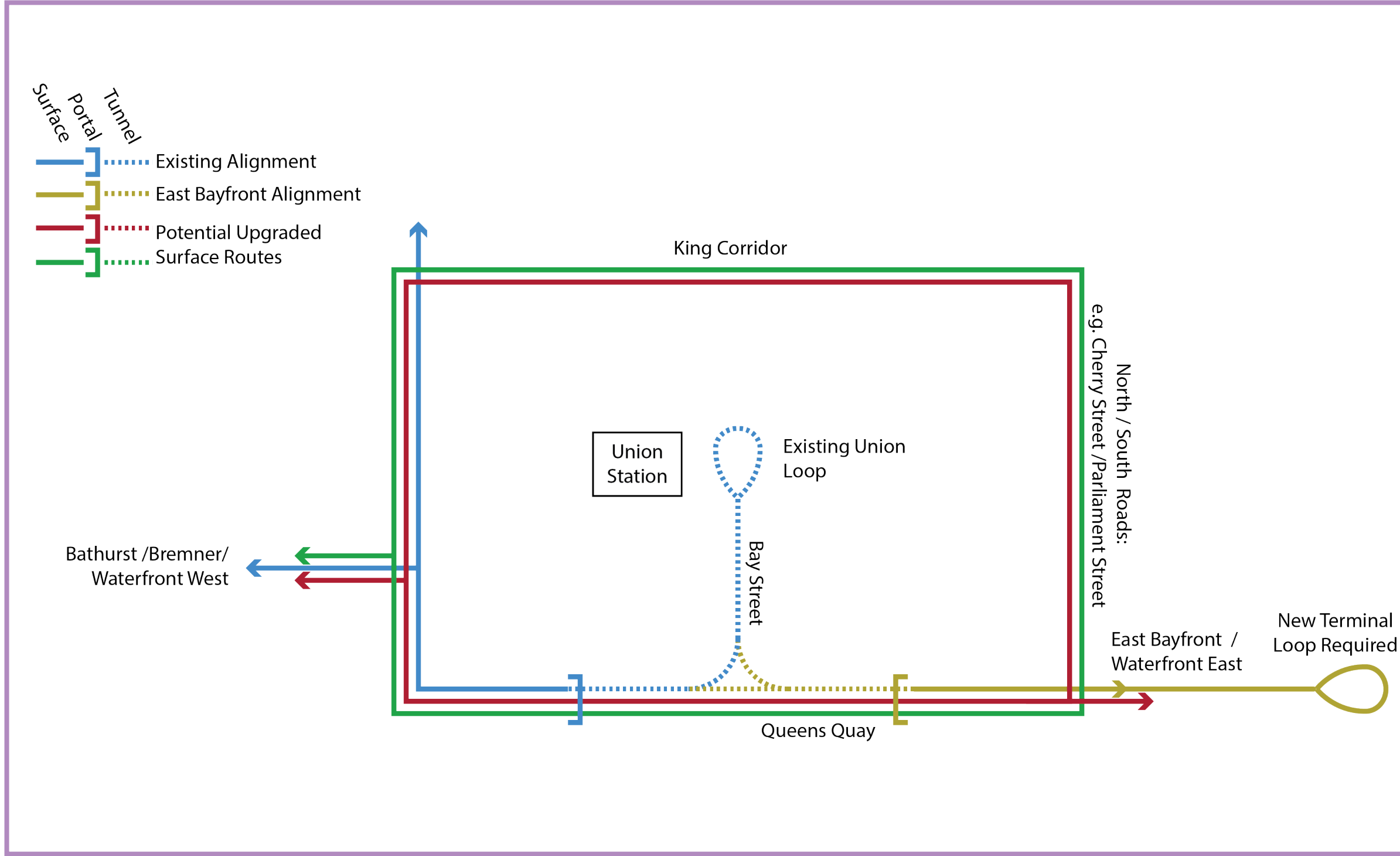


- Existing Union Loop and Bay Tunnel are repurposed for pedestrian use
- Enhanced Bay bus service provided to Queens Quay (such as reserved bus lanes)
- Through service along Queens Quay will be provided by extending the existing LRT easterly at-grade over existing Queens Quay portal
- New terminal loop required in the east

03 SEGMENT

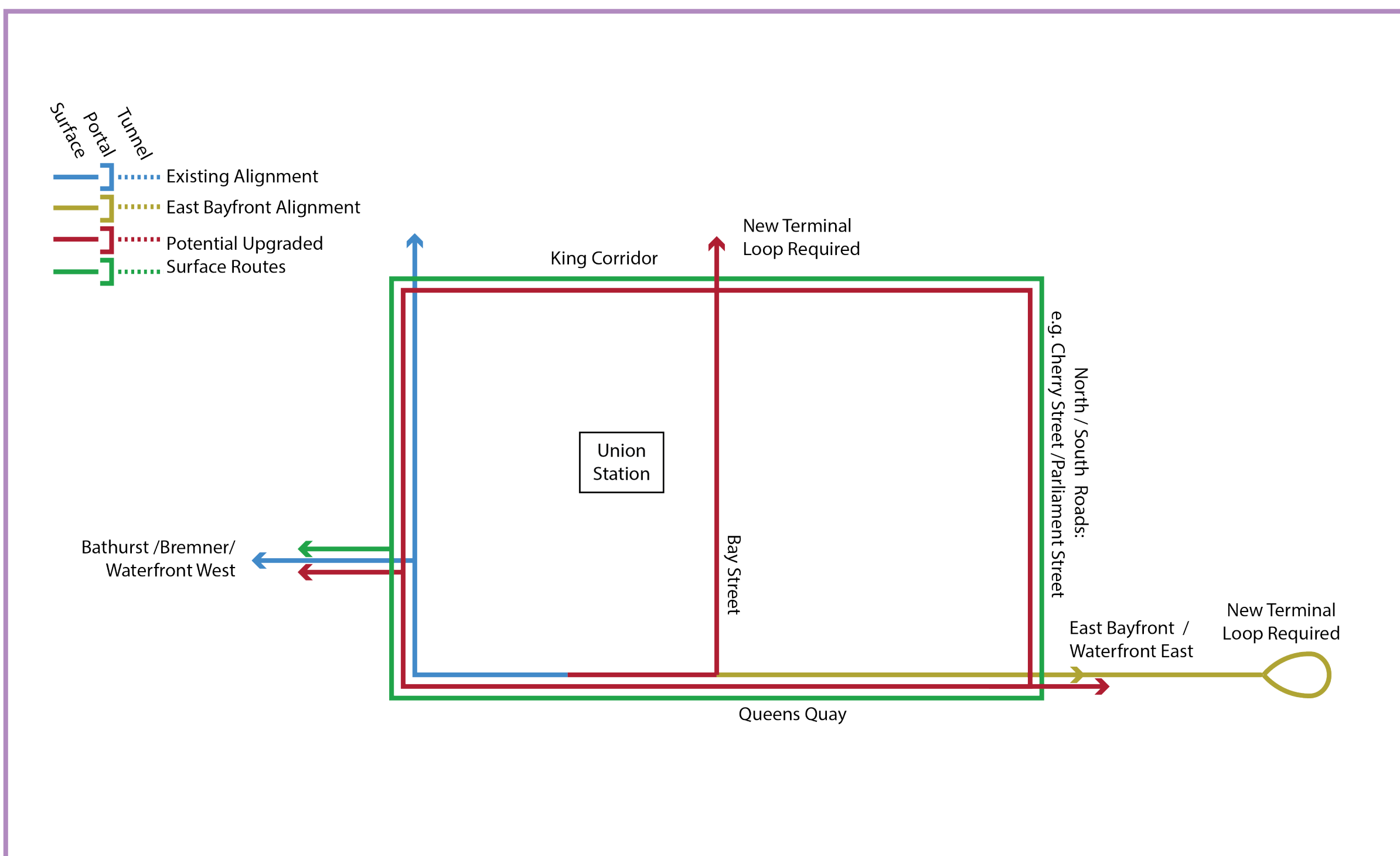
Concepts for Serving Downtown

D1: Distribute On Network & Use Existing Loop



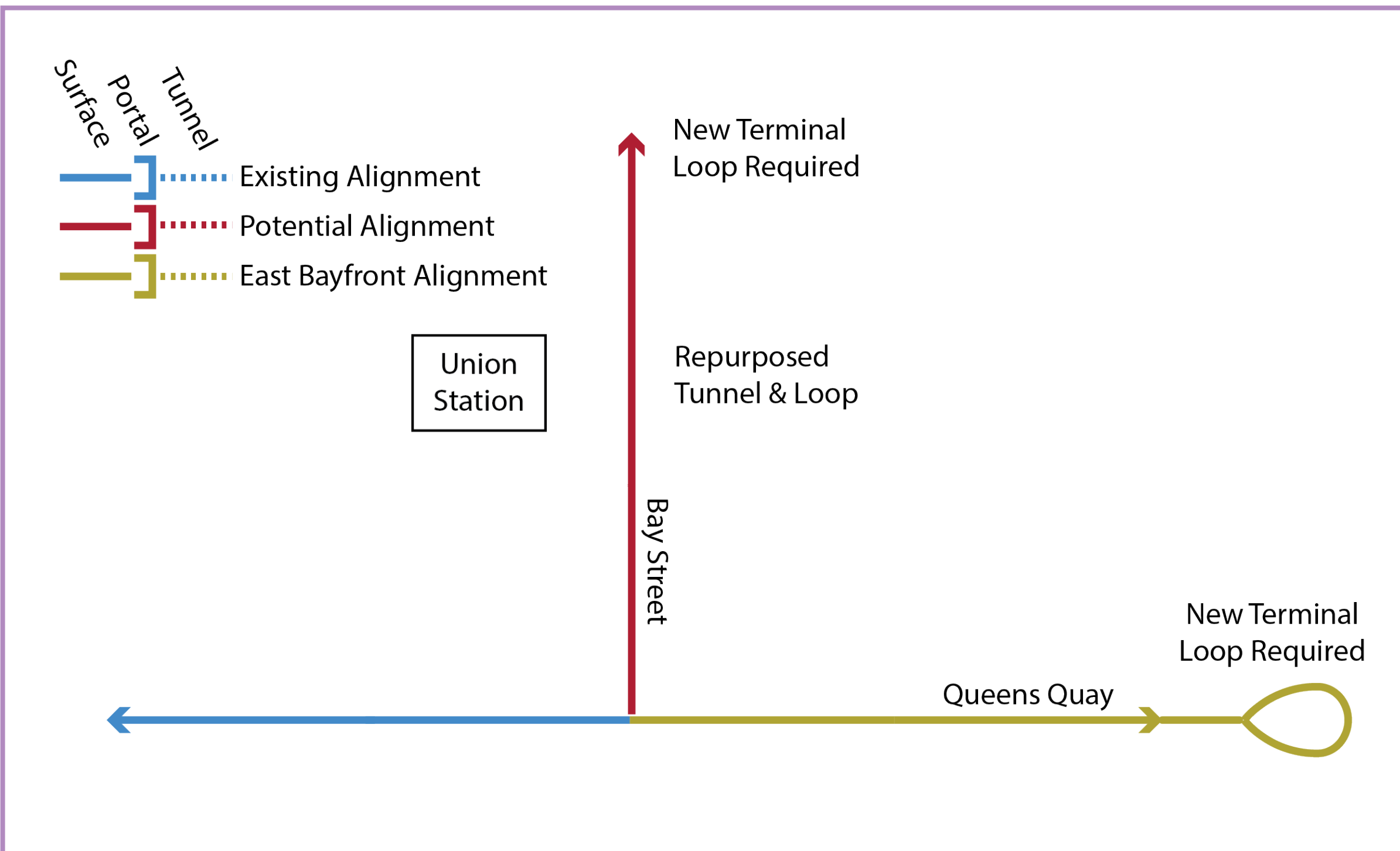
- Transit service from the east and west will be distributed and looped over upgraded LRT corridors
- Maintain existing Union Loop, limiting operations to its existing capacity
- Through service along Queens Quay will be provided by a new tunnel as per the approved East Bayfront Transit EA (potentially extended to provide an underground station for access to the ferry terminal - consistent with Alternative Q3 from the EA)
- New terminal loop required in the east

D2: Distribute On Network & Bay St LRT



- Existing Union Loop and Bay Tunnel are re-purposed for pedestrian use
- Introduce semi-exclusive transit corridor along Bay Street potentially linking with the Relief Line
- Through service on Queens Quay provided at-grade
- New terminal loop required in the east

D3: Bay St LRT



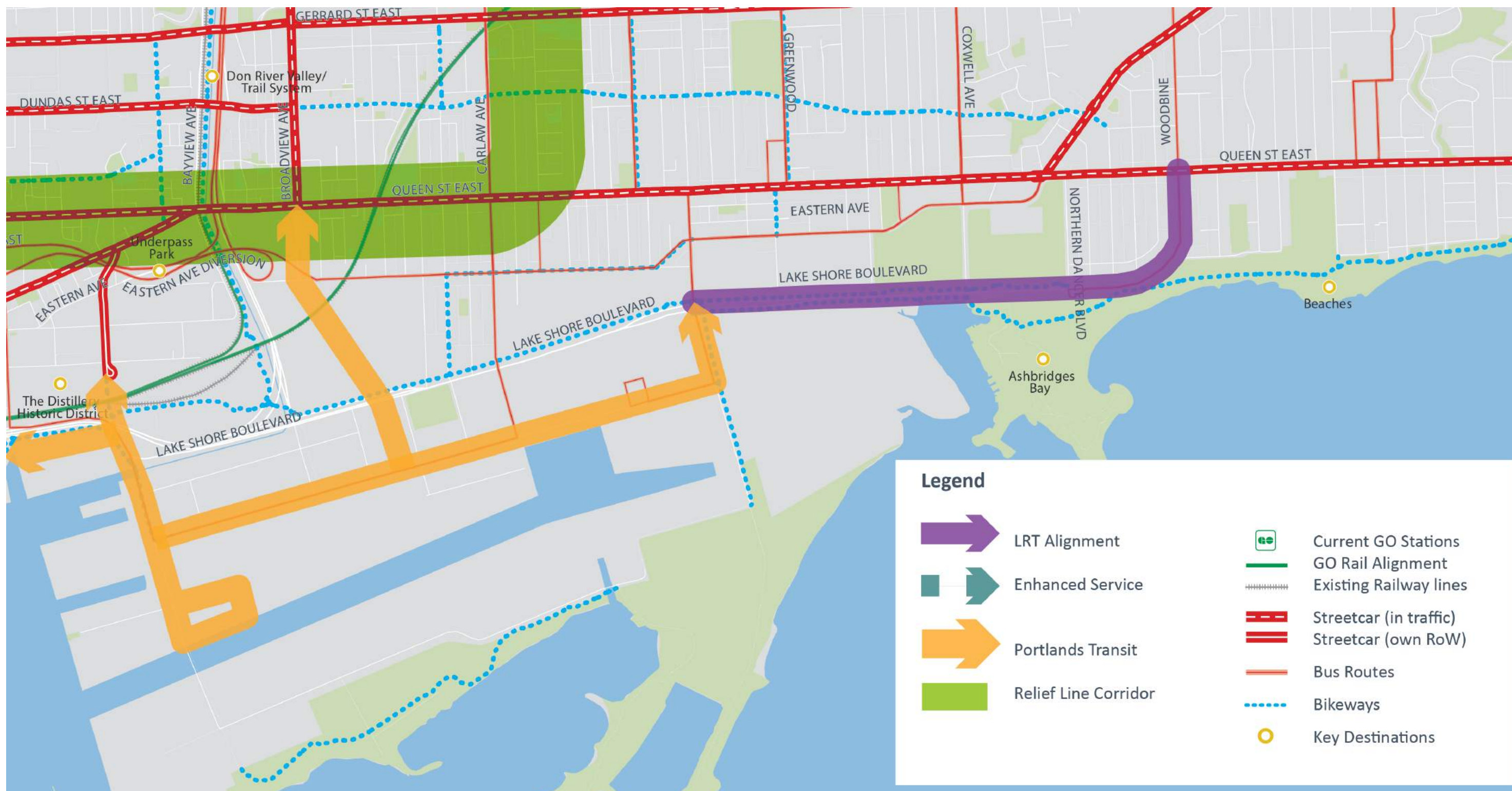
- Existing Union Loop and Bay Tunnel are re-purposed for pedestrian use
- Introduce semi-exclusive transit corridor along Bay Street potentially linking with the Relief Line
- Through service on Queens Quay provided at grade
- New terminal loop required in the east

04 SEGMENT

Concepts: Parliament St to Woodbine Ave

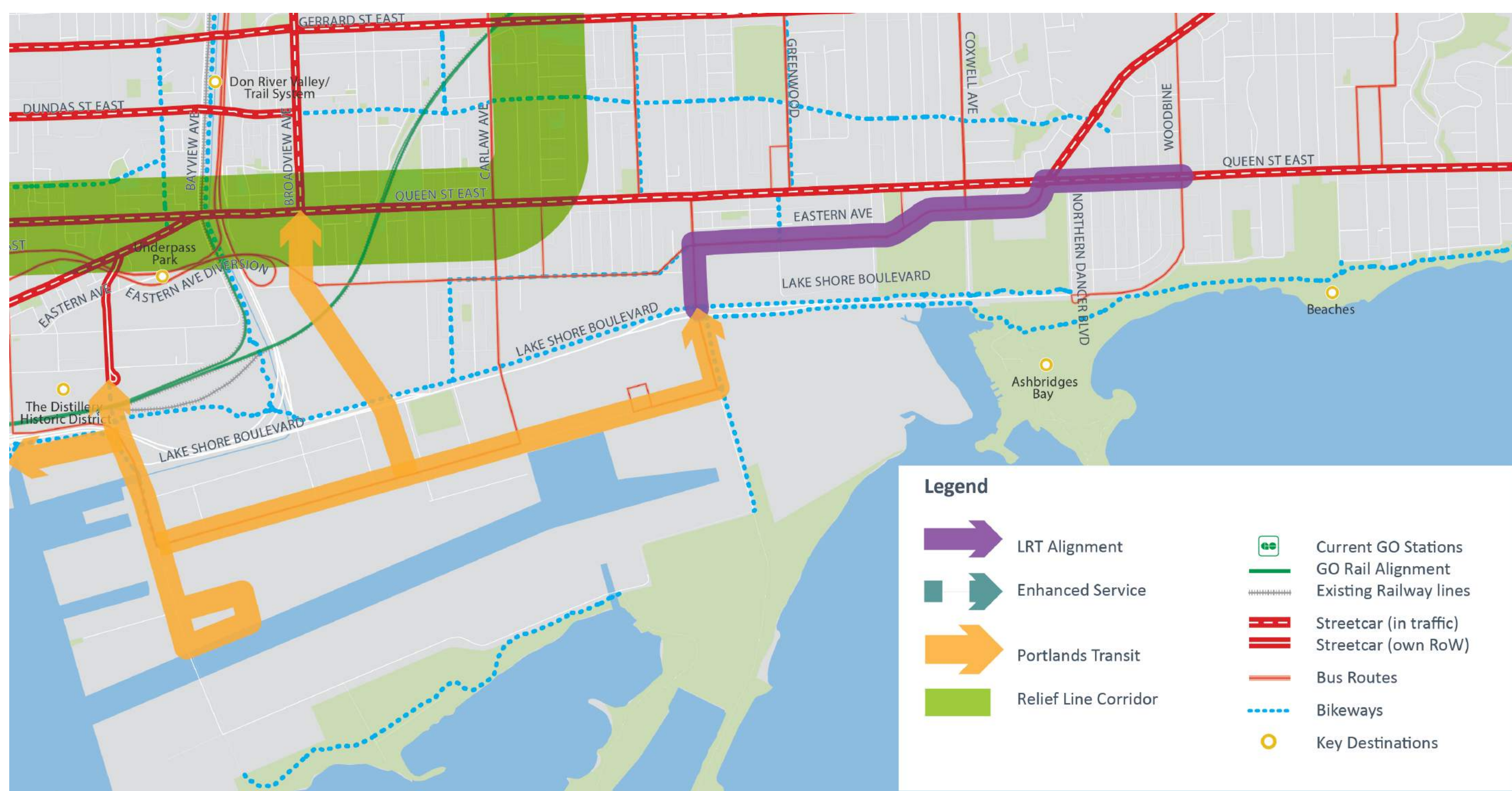
Proposed transit network between Parliament St and Leslie Ave is based on adopting the work being completed for the Port Lands Transportation and Servicing Master Plan. Conceptual options are only being considered from Leslie Ave to Woodbine Ave.

Concept 4A: Lake Shore Blvd Corridor



- Extend proposed Commissioners LRT, as being proposed from the Port Lands Transportation and Servicing Master Plan EA, from Leslie St easterly along the Lake Shore corridor to connect with the existing Queen streetcar

Concept 4B: Eastern Ave Corridor



- Extend proposed Commissioners LRT, as being proposed from the Port Lands Transportation and Servicing Master Plan EA, northerly along Leslie St to Eastern Ave, and then easterly along Eastern Ave to connect with the existing Queen streetcar