

WATERFRONTToronto



Gardiner East

**Gardiner Expressway
& Lake Shore Boulevard Reconfiguration
Environmental Assessment
& Urban Design Study**

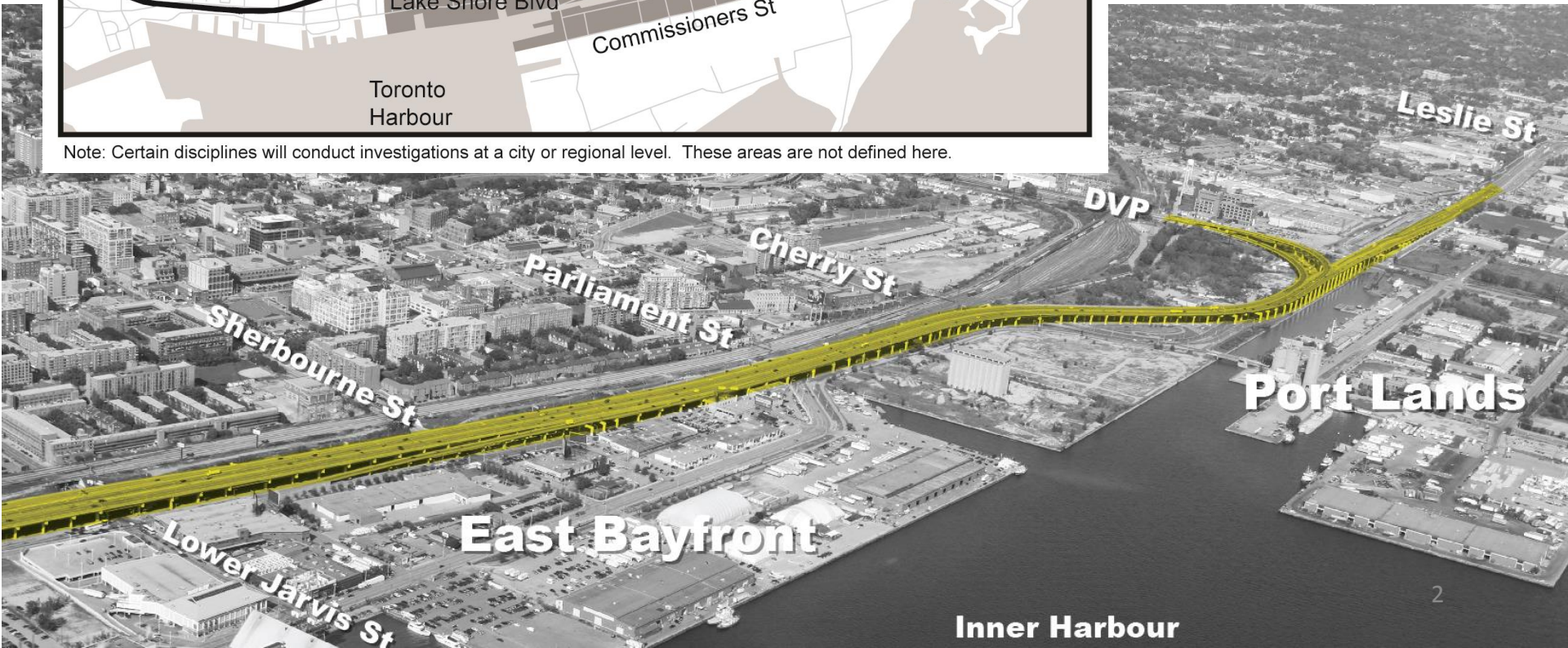


Press Conference— February 5, 2014

What area are we studying?

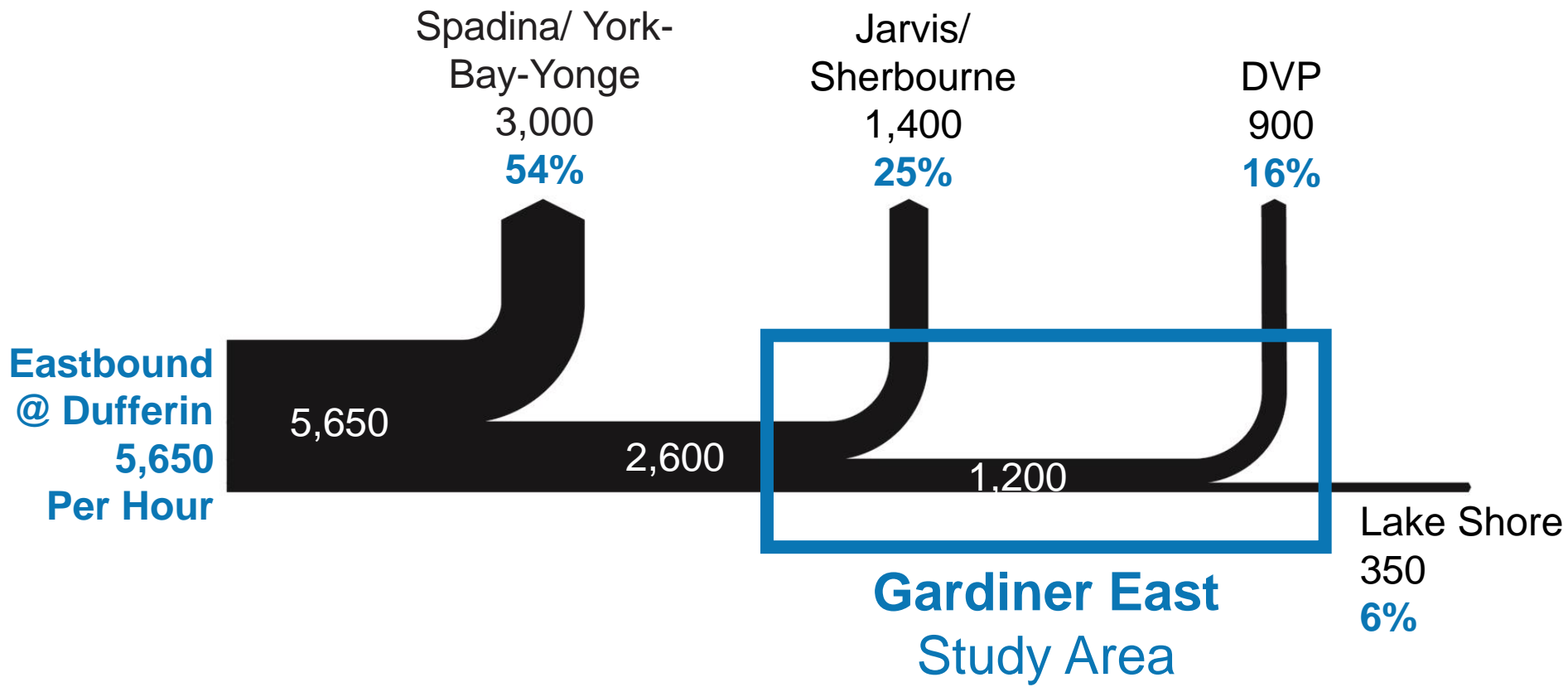


Note: Certain disciplines will conduct investigations at a city or regional level. These areas are not defined here.

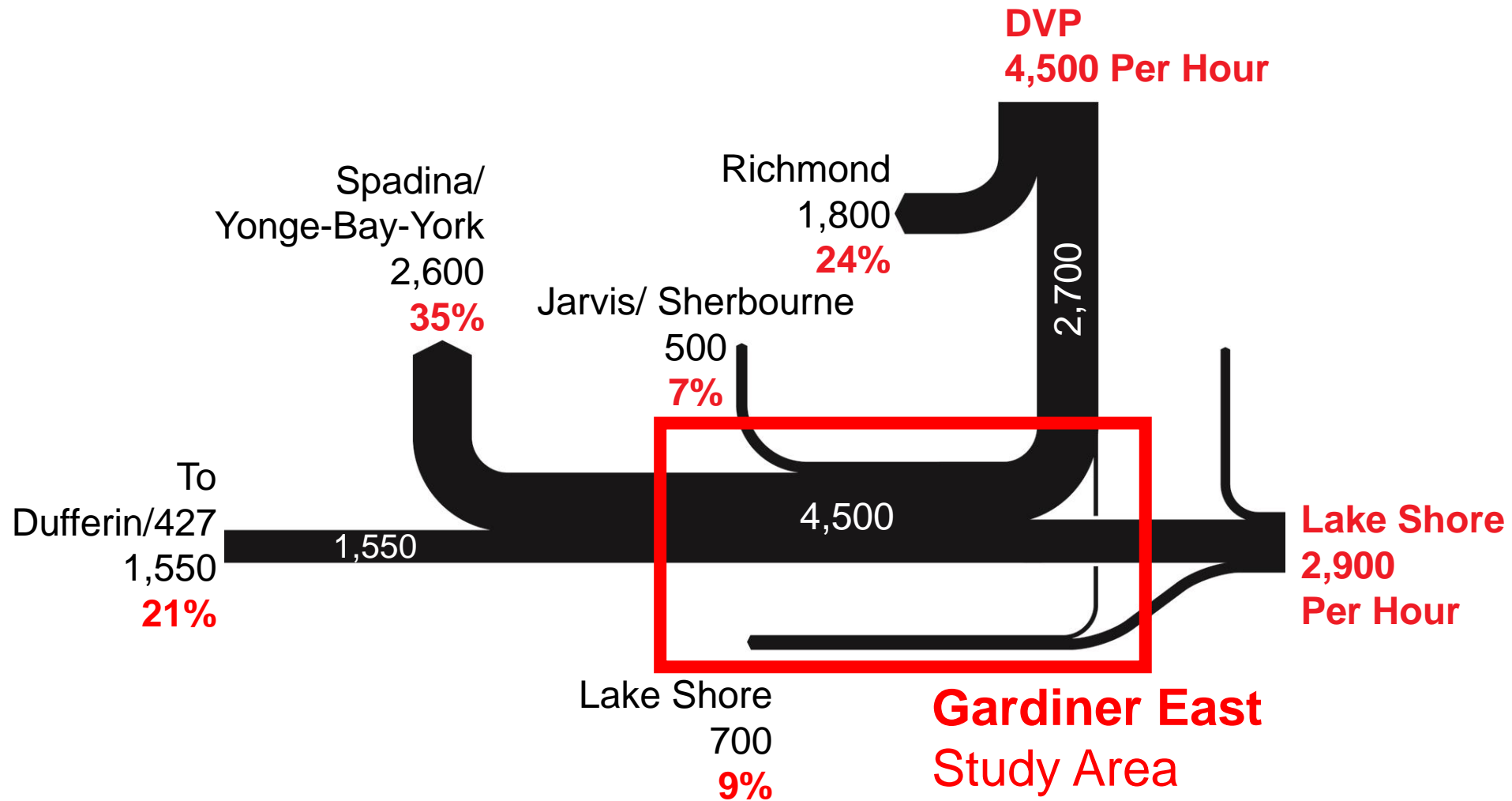


Gardiner East in Context

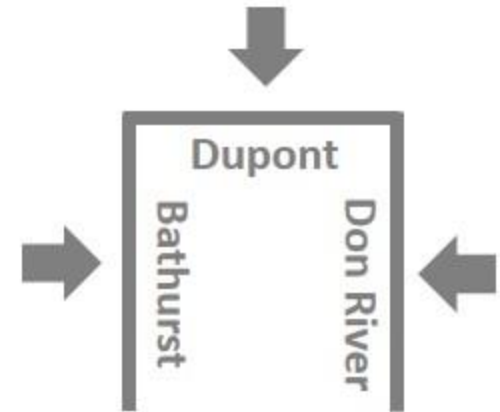
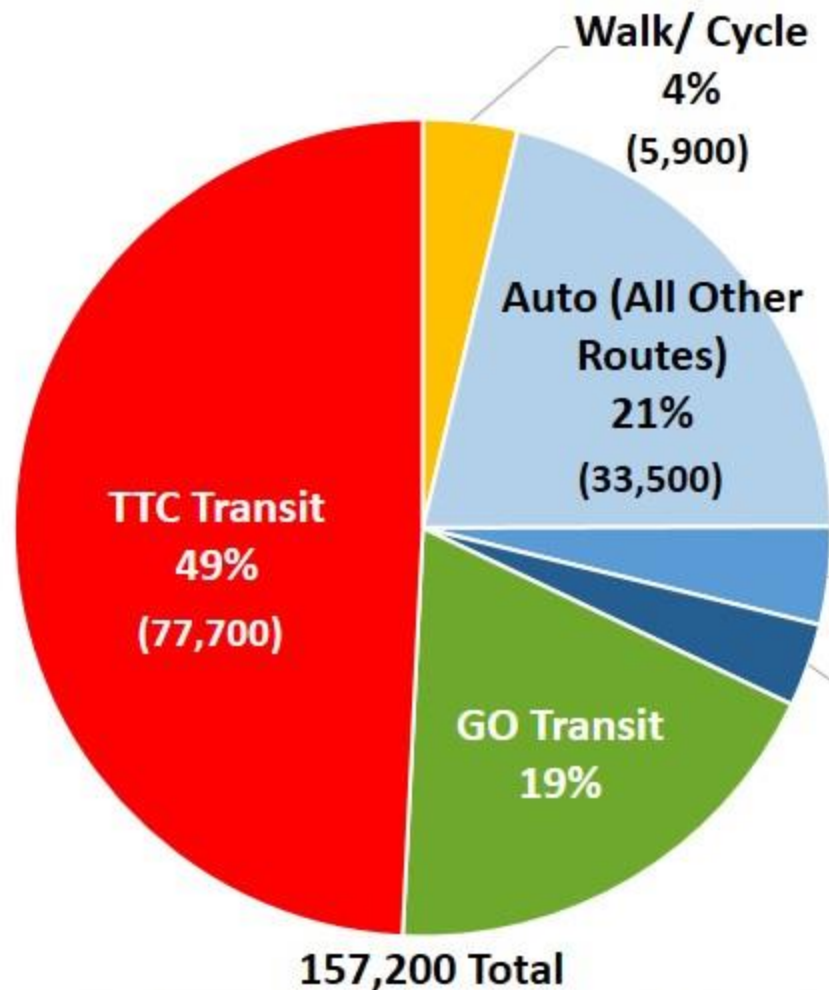
Downtown vs Through Trips (AM Peak Hour Eastbound)



Downtown vs Through Trips (AM Peak Hour Westbound)



How Commuters get Downtown (AM Peak Hour 2011)

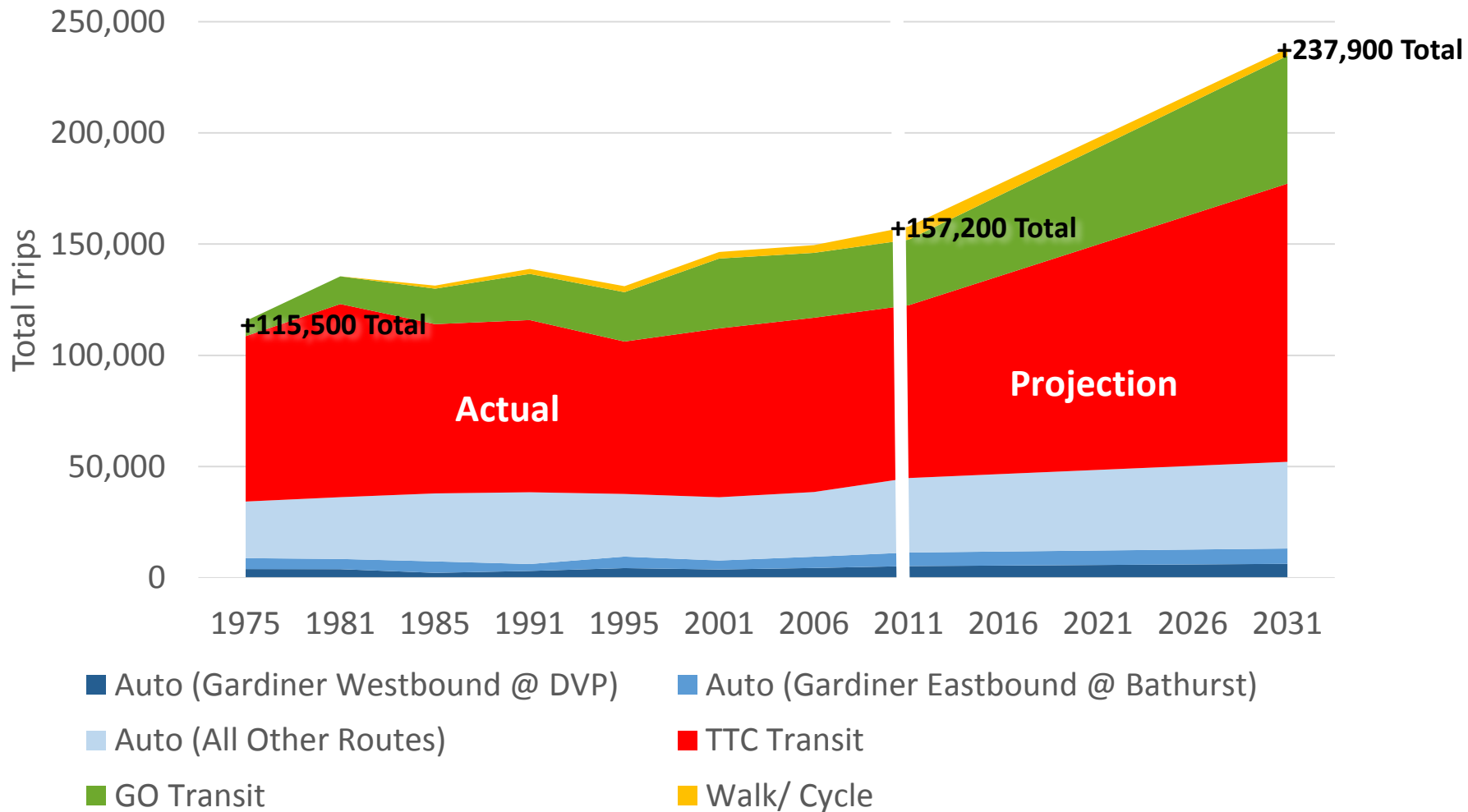


Auto (Gardiner Eastbound @ Bathurst)
4%
(6,100)

Auto (Gardiner Westbound @ DVP)
3%
(5,200)

Transportation Demand Growth

AM Peak Hour Inbound to Downtown



Source: AM Peak Hour Inbound to Downtown: 1) Transportation City Cordon Count (1975-2011); 2) Transportation Model EMME2 Forecast (2011-2031); 3) 2006 Transportation Tomorrow Survey (TTS) for Walk/Cycle Mode and Other Data;

Downtown: Defined as Bathurst to Don River and Waterfront to the rail corridor north of Bloor

Gardiner East Passes Through Five Emerging Neighborhoods

2.4km - Gardiner Expressway East Elevated Structure

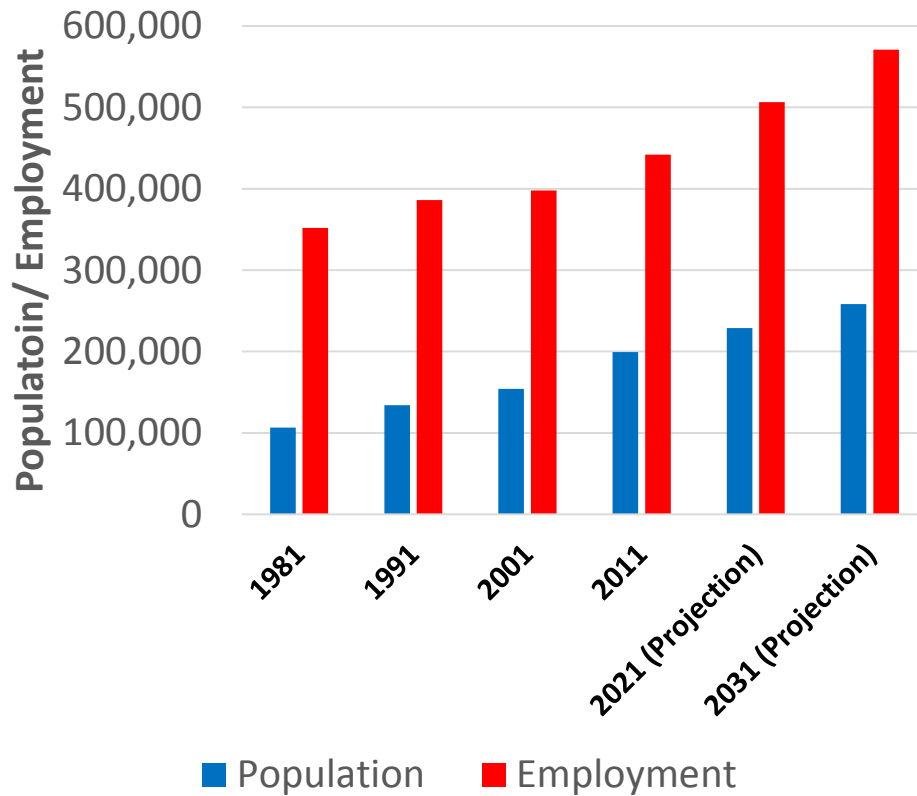
e.g. King to Bloor

4.2km – Lake Shore Blvd E (Yonge to Leslie)

e.g. Ossington to Jarvis



Downtown Population & Employment Growth



Source: Downtown Employment/ Population: 1) Census Canada (1981-2011); and 2) Employment/ Population City's Flash Forward Report (2011-2031).

Downtown: Defined as Bathurst to Don River and Waterfront to the rail corridor north of Bloor

EA Process

Refinement of the
Four Alternatives

Public Consultation

Round 1

Ideas (May/June 2013)

1,000+ participants

- ✓ Stakeholder Advisory Committee meeting
- ✓ Public meeting – 300+ participants
- ✓ Online engagement – webcast of public meeting; online tool (367 completed)



Round 2

Alternatives/Evaluation Criteria (Oct 2013)

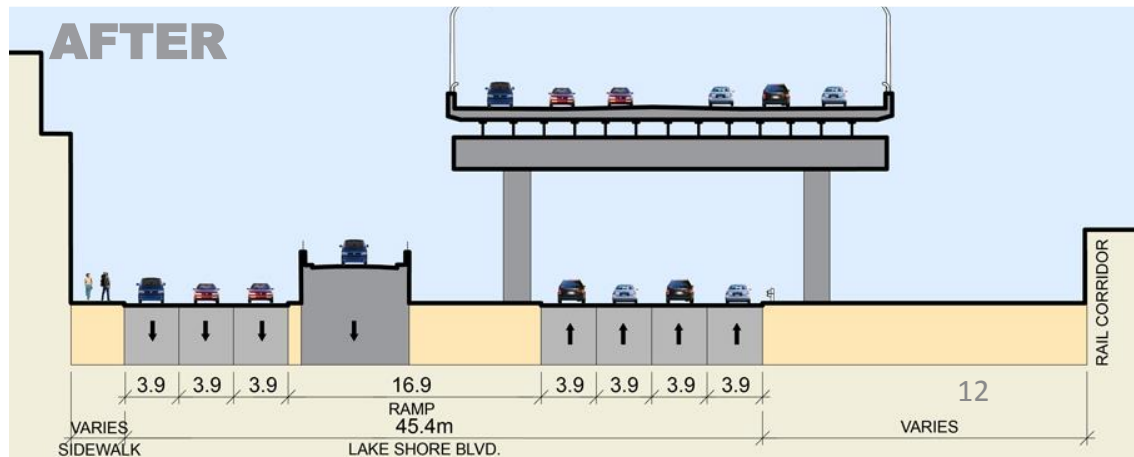
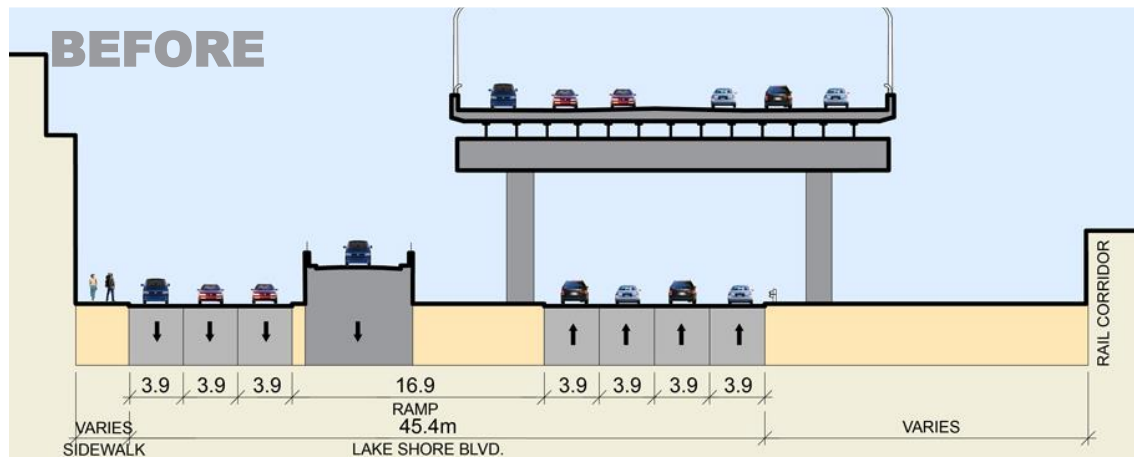
1,500+ participants

- ✓ 2 Stakeholder Advisory Committee meetings
- ✓ Public Meeting – 350+ participants
- ✓ Online engagement – webcast of public meeting; online tool (436 completed)



Maintain the elevated expressway

- Move ahead with the Gardiner East rehabilitation program
- Reconstruct deck of expressway
- Realign Lake Shore Blvd through the Keating Precinct (east of Cherry St., south of the rail corridor)



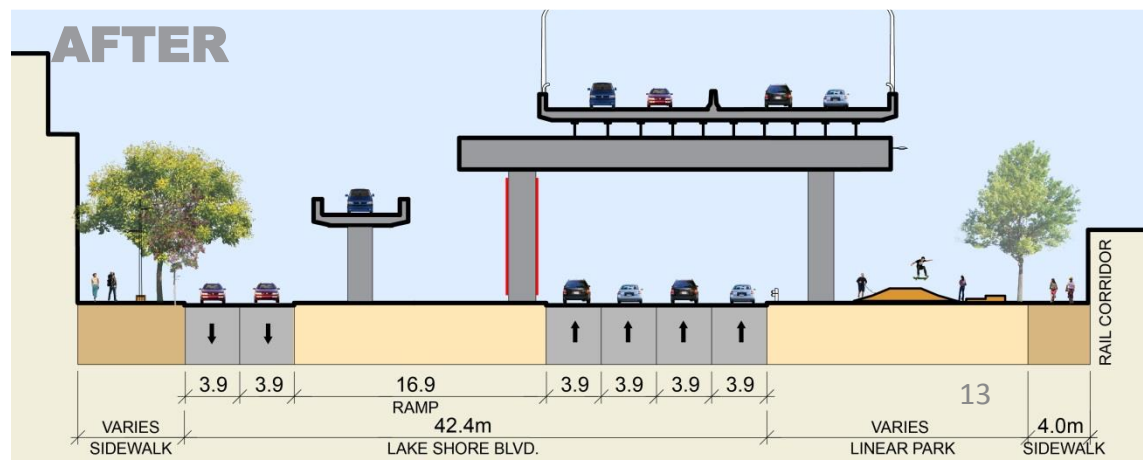
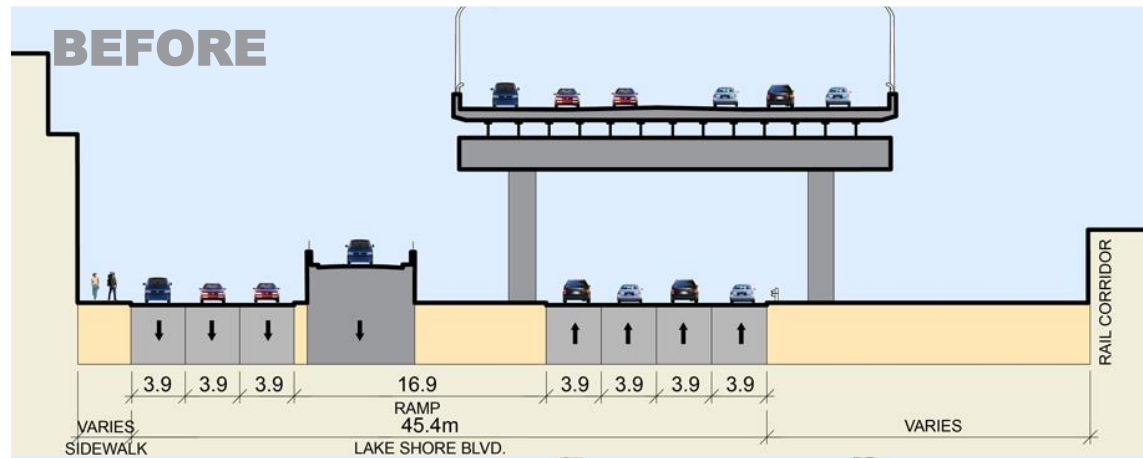
Improve the urban fabric while maintaining the existing expressway

Previous Plan

- Relocate and rebuild Lake Shore Blvd under the Gardiner
- Rebuild Gardiner deck with 4 lanes; open in the middle

Revised Plan

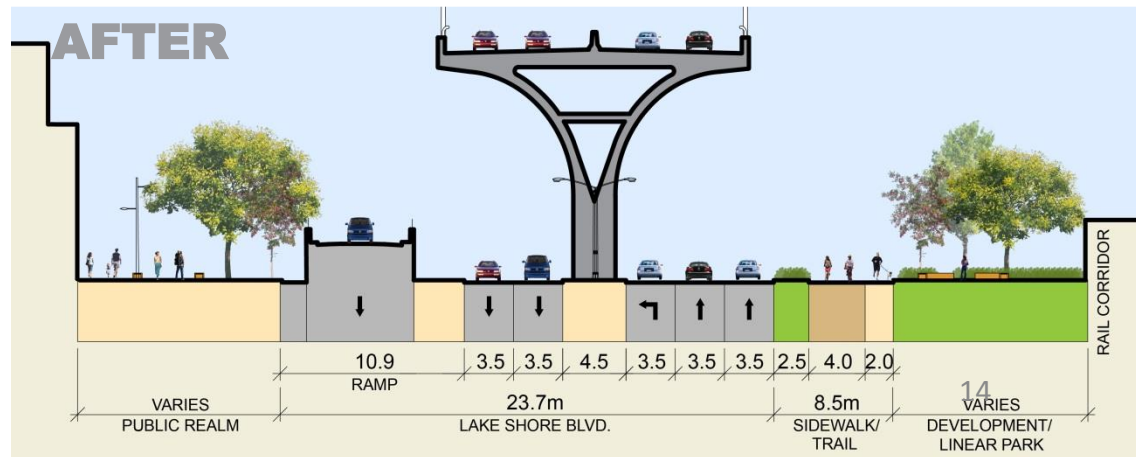
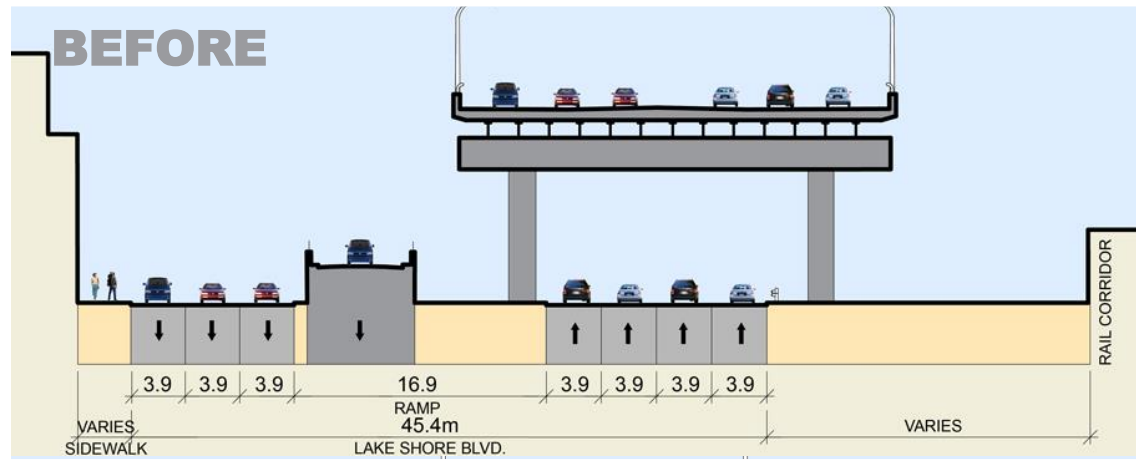
- Rebuild Gardiner deck with 4 lanes; open to the south side
- Lake Shore largely stays as is with:
 - Intersection improvements
 - Removal of southern eastbound lane east of Jarvis St
- New east-west walking and cycling trail



Replace with a new expressway

No Changes Since last Presented

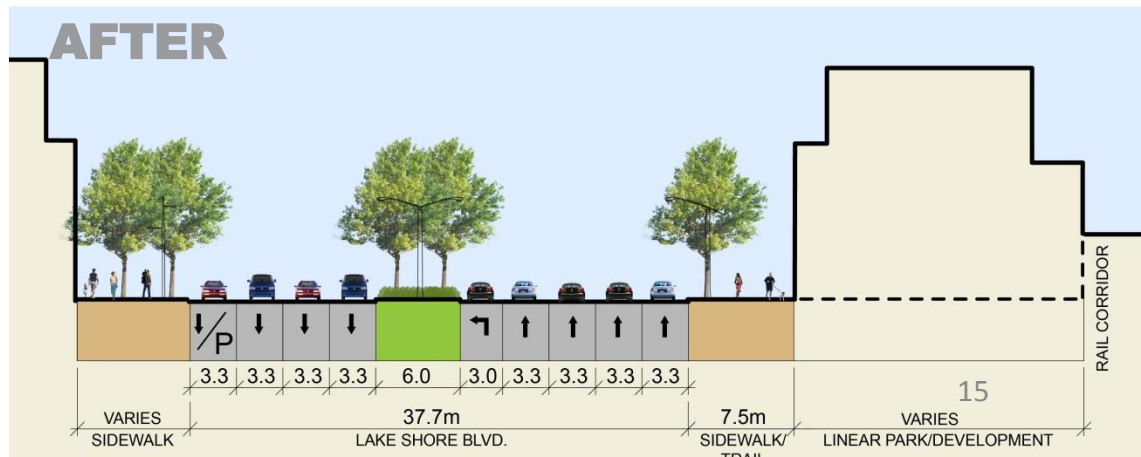
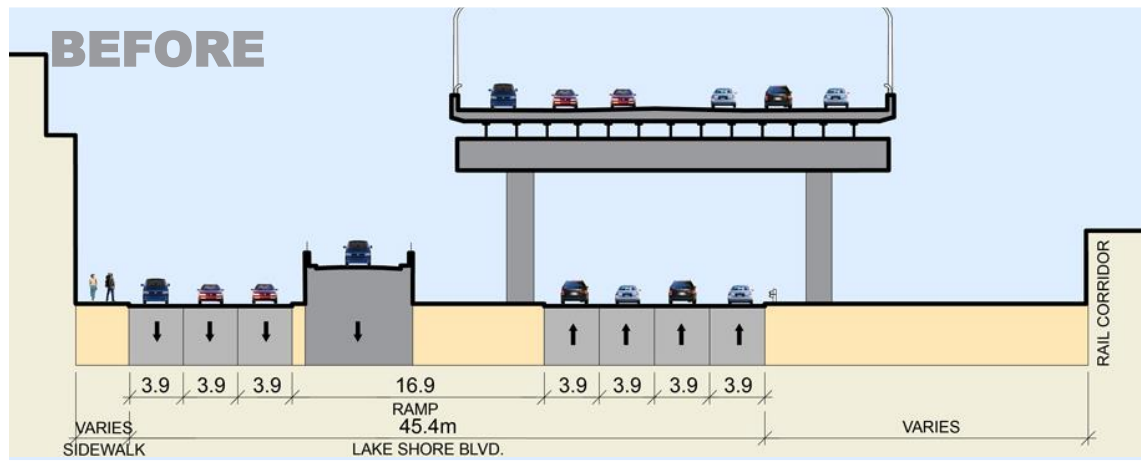
- New elevated 4-lane expressway, ending at Don River
- Single column design, 5m higher
- 4-lane Lake Shore Boulevard
- Opens up land for public realm, parks, green space and increased development
- Opens up more light and air at street level



Remove the elevated expressway and build a new boulevard

Revised Plan with a Two Sided Street

- Improved cross section to allow for an 8 lane boulevard with potential development along 85% of the north and south side of the street
- North side development provides a buffer from rail corridor
- Opens up entire ground level to light and air
- Extensively treed boulevard



EA Process

Evaluating Alternatives

Transportation Model Assumptions – 2031 and beyond

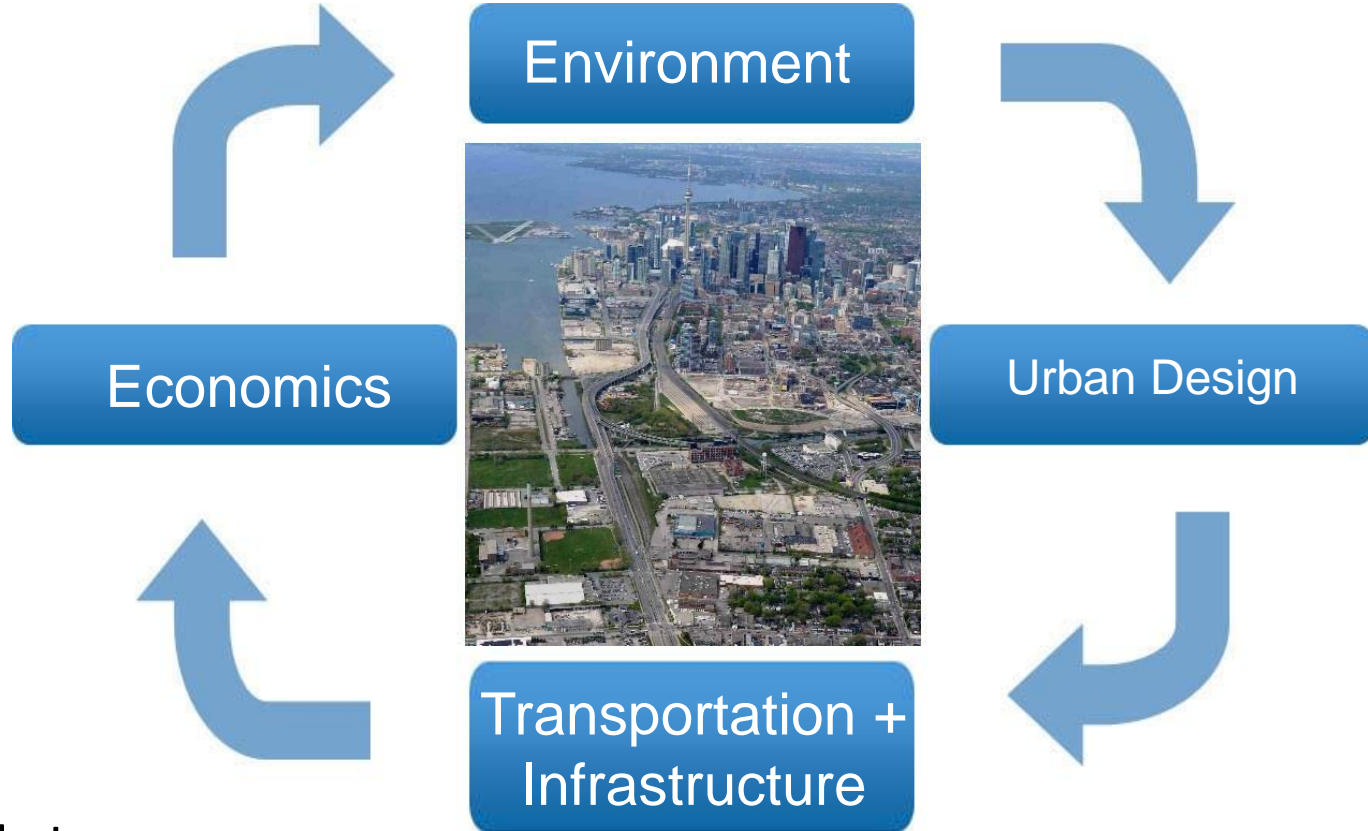


- Auto and transit modeling based on a 2031 scenario, including estimated growth assumptions:
 - Full build out of the waterfront, including the Port Lands, over the next 40-50 years
 - City population growth of 30%
 - City employment growth of 30%
 - Increase of downtown trips of 50%
- Projected split between autos, transit, cycling and walking

Transit Assumptions

- Planned transit lines included in the transportation model include:
 - Relief Line
 - East Bayfront LRT/ Broadview Streetcar Extension
 - GO Service improvements
- Modeling results show that under every alternative (Maintain, Improve, Replace, Remove) new transit lines are required to meet projected travel demands

Evaluation Approach



- 4 Study Lenses
 - 16 Criteria Groups
 - 60 Measures
- Comparison of Relative Advantages & Disadvantages for each Criteria group

Evaluation: Transportation & Infrastructure

Auto Travel Times

Safety

Pedestrian Crossing

Construction

Cycling

Transportation Capacity

Auto Travel Times

Actual & Projected Inbound Travel Times AM Peak Hour Average

	2001	2012	2031 Maintain	2031 Improve	2031 Replace	2031 Remove
A to D	40 min	45 min	50 min	55 min	55 min	60 min
B to D	20 min	25 min	30 min	35 min	35 min	40 min
C to D	20 min	20 min	25 min	25 min	30 min	30 min
E to D	25 min	25 min	25 min	30 min	30 min	30 min



Kipling/Lake Shore

Maintain	Improve	Replace	Remove
Preferred	Moderately Preferred	Moderately Preferred	Less Preferred

Road Segments (along Lake Shore) Collisions 2007-2011

Yonge to Jarvis	86
Jarvis to Sherbourne	128
Don Rd to Carlaw	82

Intersections (along Lake Shore) Collisions 2007-2011

Jarvis	278
Sherbourne	92
Don Rd	149
Carlaw	161

- The intersections of LSB/ Jarvis; LSB/ Sherbourne and LSB/Don Roadway are among the top 20% in the city of intersections on major urban arterial roads in terms of number of collisions between 2007 and 2011.



Maintain	Improve	Replace	Remove
Less Preferred	Moderately Preferred	Preferred	Preferred

Pedestrian Crossings

Crossing Distances

Maintain	Improve	Replace	Remove
35-45.4m	35-42.4m	22.5	38m



- Existing crossing are interrupted by free-turn lanes
- Improve eliminates most free-turn lanes and regularizes intersections
- Remove has a shorter crosswalk walking distance than University Ave (46m)
- Crossing distances vary widely amongst all the options, while the majority of pedestrians can cross the corridor in one stage in all four alternatives

Maintain	Improve	Replace	Remove
Less Preferred	Moderately Preferred	Preferred	Preferred 23

Maintain (6 years)

- Close 2 Gardiner travel lanes **(6yrs)**
- Demolish and rebuild deck in segments
- Closure of Lake Shore travel lanes at times

Improve (6 years)

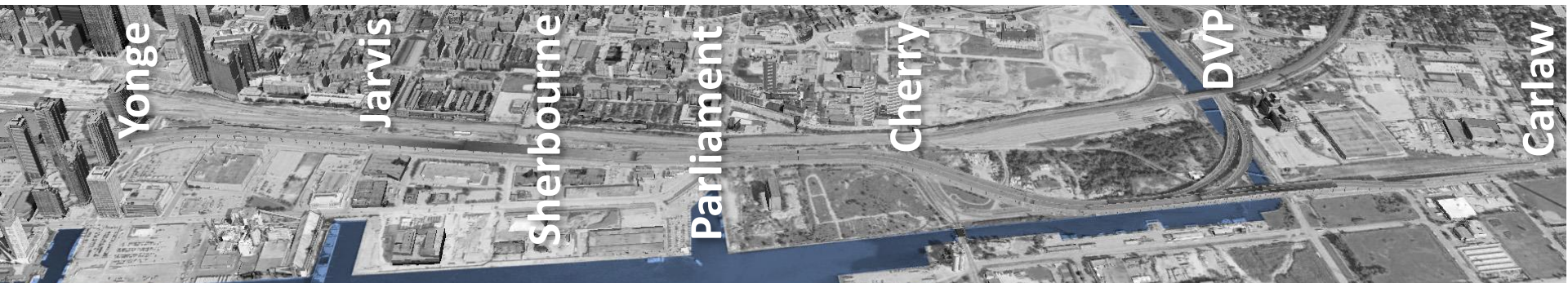
- Close 2 Gardiner travel lanes **(6yrs)**
- Demolish and rebuild deck in segments
- Closure of Lake Shore travel lanes at times

Replace (8 years)

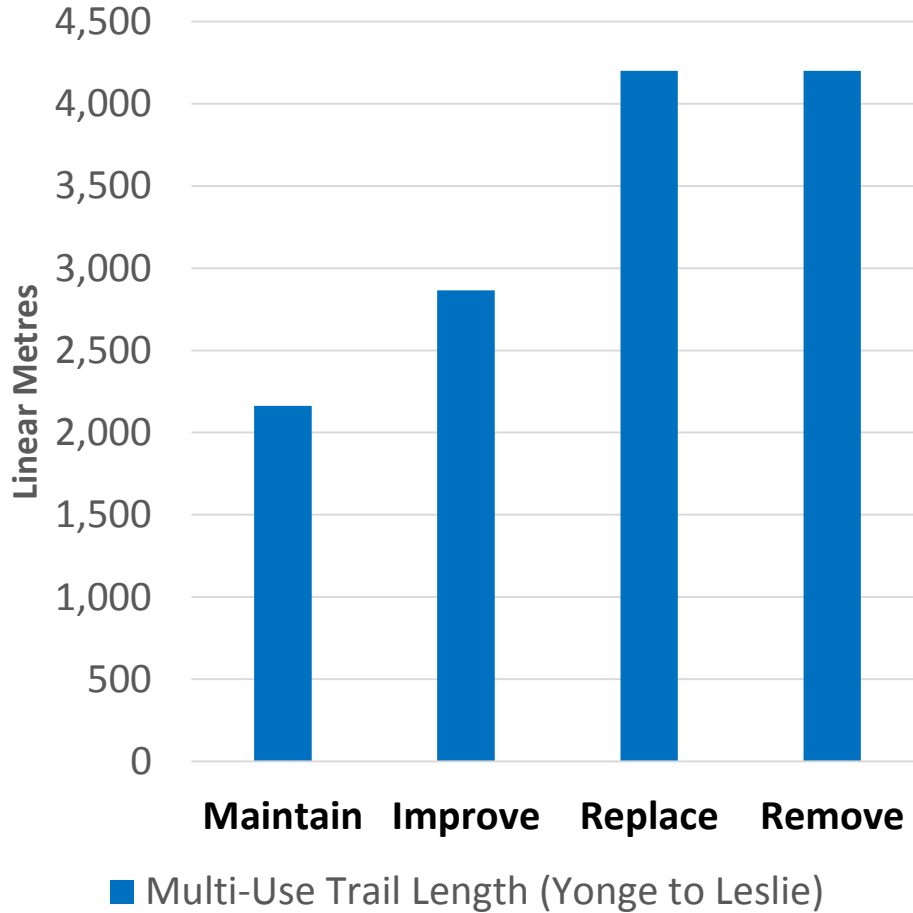
- Close Gardiner/ Lake Shore corridor for majority of construction **(8yrs)**
- Construct new structure

Remove (6 years)

- Pre-build on/off ramps and re-align Lake Shore (Cherry and DVP)
- Close 3 Gardiner travel lanes in two stages and demolish **(3yrs)**
- Complete Lake Shore between Jarvis and Cherry

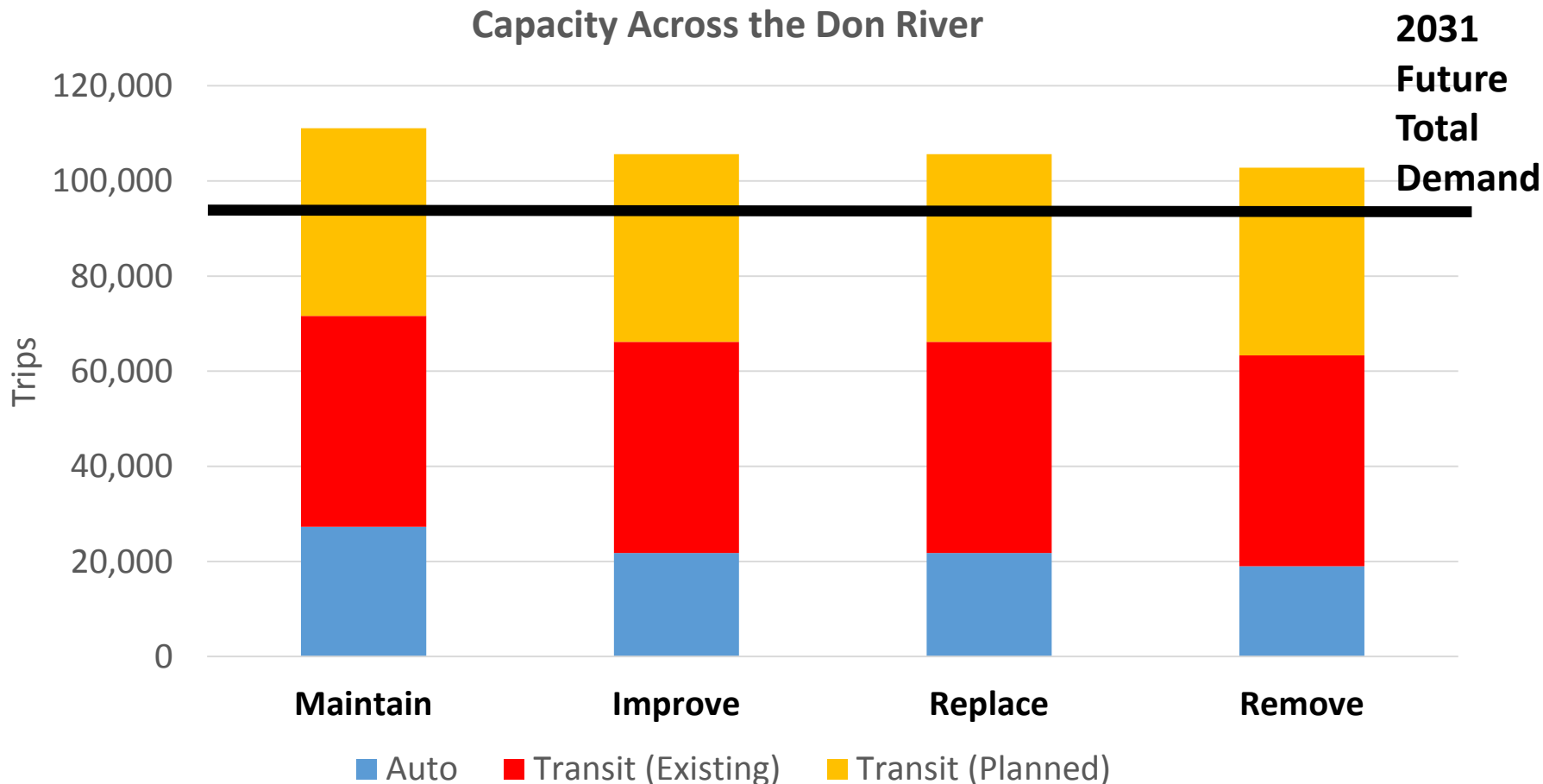


Maintain	Improve	Replace	Remove
Preferred	Preferred	Less Preferred	Moderately Preferred



Maintain	Improve	Replace	Remove
Less Preferred	Moderately Preferred	Preferred	Preferred 25

Capacity Across the Don River



Source: AM Peak Hour Westbound at Don River Transportation Cordon (Lake Shore to Bloor): 1) Transportation Model EMME2 Forecast (2011-2031); 2) 2006 Transportation Tomorrow Survey (TTS) for Walk/Cycle Mode and Other Data; and 3) Employment/Population City's Flash Forward Report (2011-2031).

Maintain	Improve	Replace	Remove
Equally Preferred			

Evaluation: Environment

Social & Health

Natural Environment

	Maintain	Improve	Replace	Remove
Noise Level (Decibels dBA)	69-78	68-78	67-77	61-70
Local Air Quality (NOx emissions t/yr)	336	335	313	300
Local AQ (PM2.5 emissions t/yr)	32.5	30	29	27.4
Regional Air Quality Burden	0.25%	0.25%	0.25%	0.24%
Regional Greenhouse Gas (GHGs)	0.28% to 0.29%			0.24%



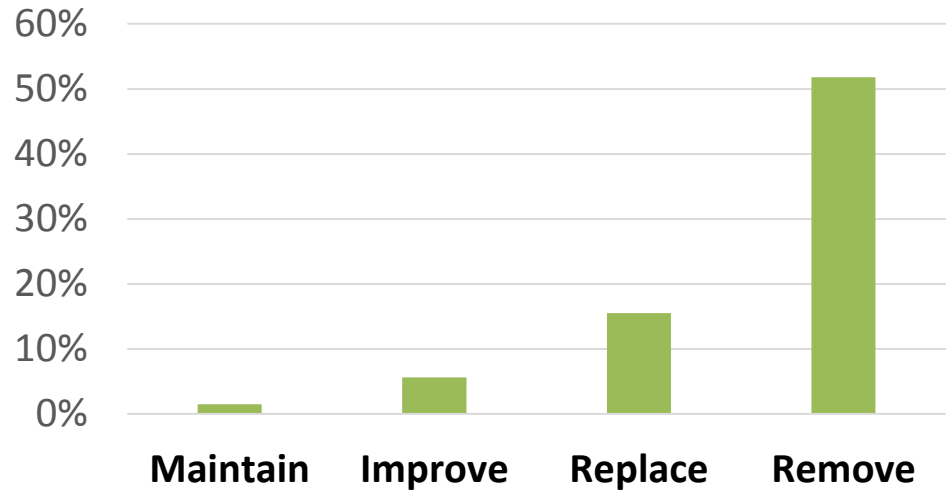
Source: Air Quality, Noise and Greenhouse Gas Modeling for Gardiner East EA Project

Maintain	Improve	Replace	Remove
Less Preferred	Moderate Preferred	Moderate Preferred	Preferred

Natural Environment

- Remove allows greatest access to sunlight, opportunities for tree planting, natural vegetation and greatest tree canopy
- Remove and Replace have least paved area which results in lowest water diversion into storm sewers
- City policy target of 33% tree coverage

Tree Coverage in Corridor



Maintain	Improve	Replace	Remove
Less Preferred	Less Preferred	Moderate Preferred	Preferred

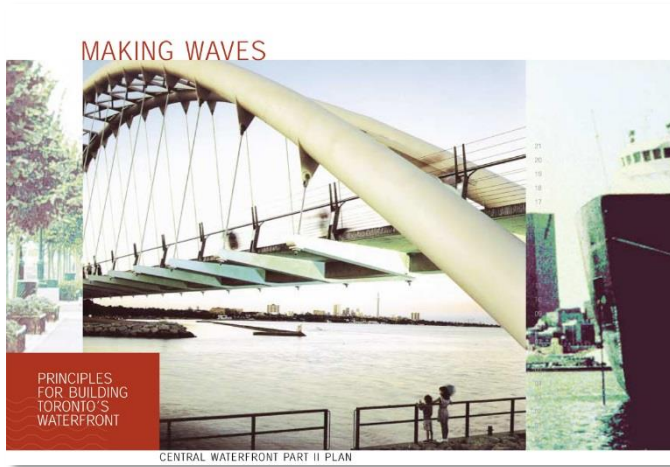
Evaluation: Urban Design

Consistency with Official Plan

View Corridors

Compatibility with Neighborhood Plans

Street Fronts



Central Waterfront Secondary Plan Principles

Maintain Improve Replace Remove

Removing Barriers

Least Least Somewhat Most

**Building a Network of Spectacular
Waterfront Parks and Public Spaces**

Least Least Somewhat Most

**Promoting a Clean and Green
Environment**

Least Least Somewhat Most

**Creating Dynamic and Diverse New
Communities**

Least Least Least Most

Maintain

Improve

Replace

Remove

Less Preferred

Less Preferred

Moderately Preferred

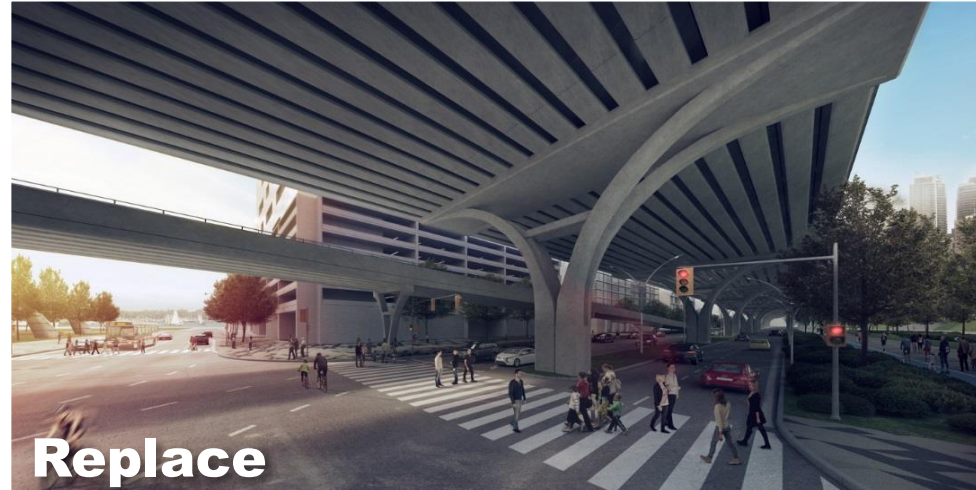
Preferred

View Corridors (East-West)

Lake Shore Blvd E @ Sherbourne St



Maintain



Replace



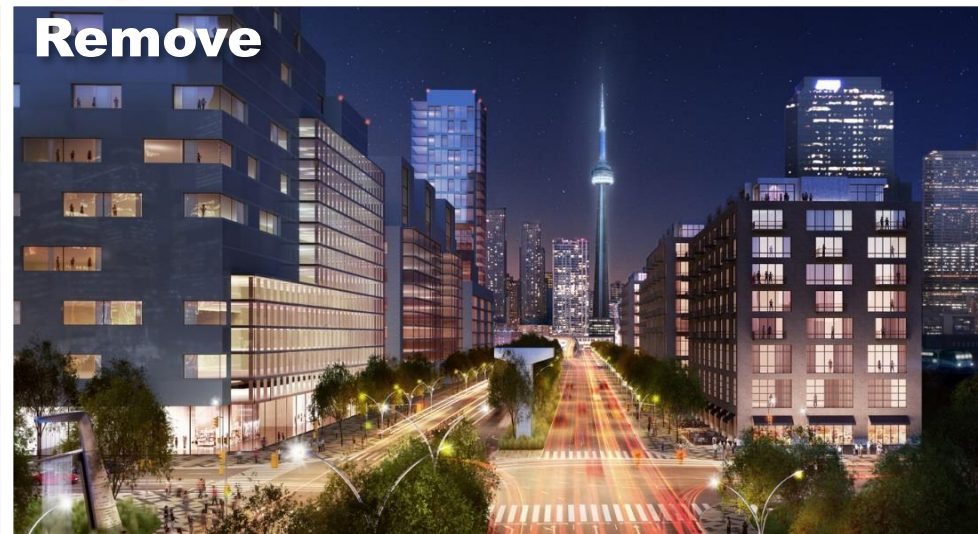
Improve



Remove

View Corridors (East-West)

Gardiner Expressway @ Sherbourne St



View Looking North Don River & Keating Channel (Don Mouth Naturalization)

Maintain & Improve



Remove



Maintain

Improve

Replace

Remove

Less Preferred

Less Preferred

Moderately Preferred

Preferred

Maintain	Improve	Replace	Remove
Less Preferred	Less Preferred	Moderately Preferred	Preferred

Street Fronts



Garage @ Simcoe St



Spadina Ave @ Richmond St W

Maintain, Improve, Replace

- 4-5 stories of garages and garage entrances, limited retail opportunities, few pedestrians

Remove

- Ground floor retail, shops, office/ residential lobbies, patios and greater pedestrian activity
- Remove creates the most opportunities for active pedestrian spaces such as outdoor patios

Maintain	Improve	Replace	Remove
Less Preferred	Less Preferred	Less Preferred	Preferred 35

Evaluation: Economics

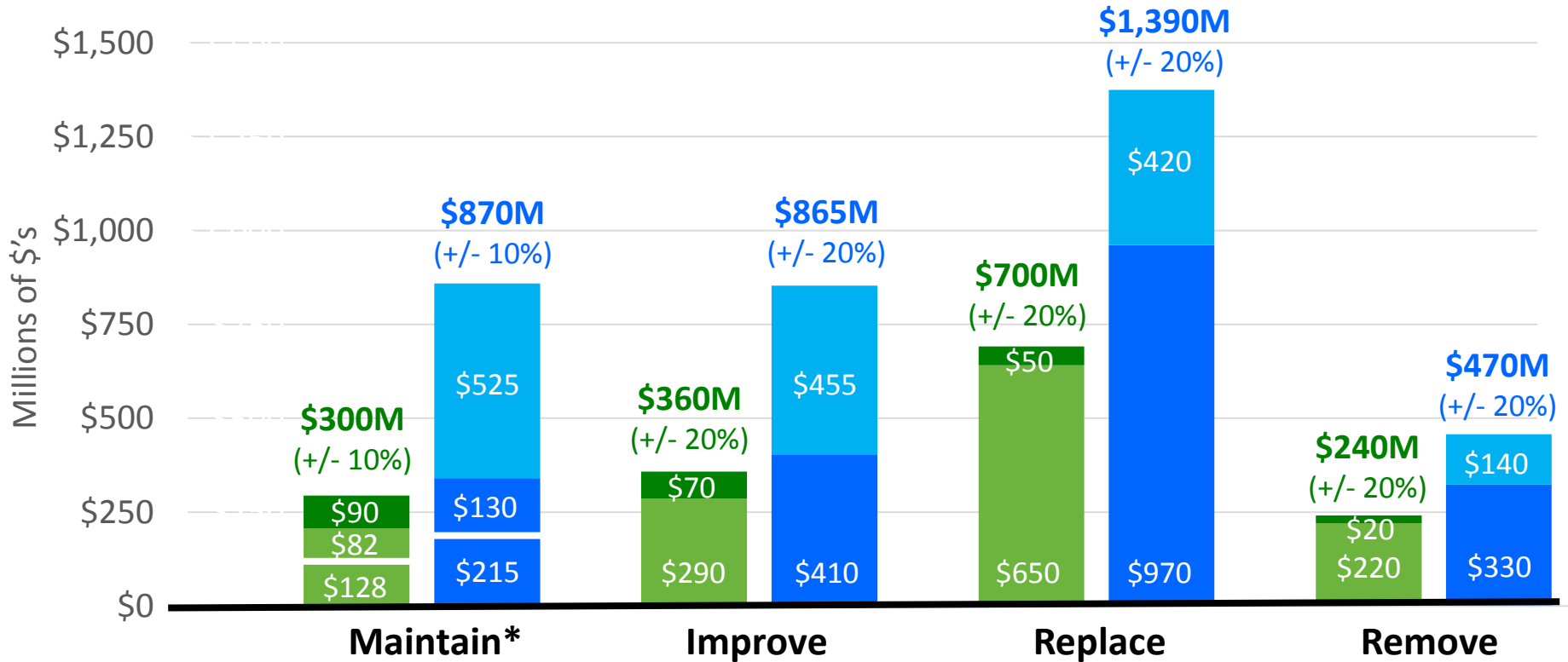
Costs (100 Year Lifecycle)

Revenues from Public Land Sales

Local Economics

Economic Competitiveness & Downtown Highways

Costs (100 Year Lifecycle)



Net Present Value
■ Capital Estimate
■ Operations & Maintenance Estimate

2013\$'s
■ Capital Estimate
■ Operations & Maintenance Estimate

*Capital cost for Maintain includes: 1) \$215M for Jarvis to DVP Ramps; 2) \$105M for Transitions (Yonge to Jarvis & DVP Ramps); 3) \$25M for Don Mouth Naturalization at Lake Shore and Don River Bridge

Maintain	Improve	Replace	Remove
Moderately Preferred	Moderately Preferred	Less Preferred	Preferred 37

Revenues from Public Land Sales



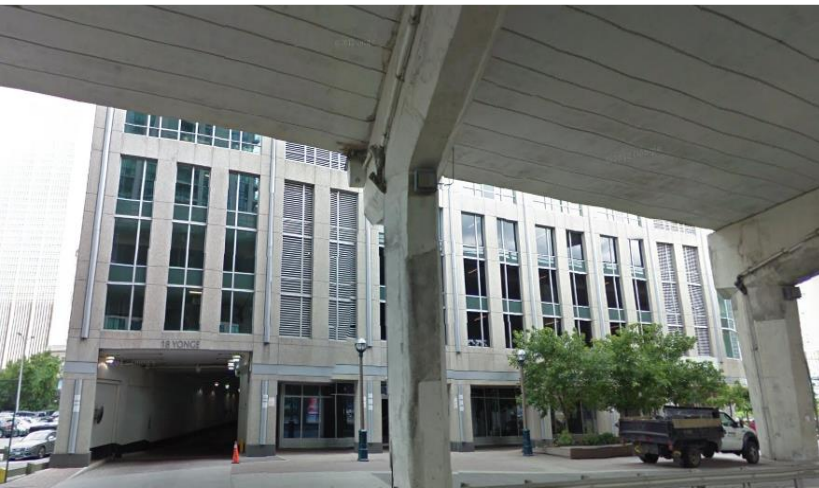
	Maintain	Improve	Replace	Remove
New Development Parcels (Acres)	0	0	5	10
New Development Area (Gross Square Feet)	0	0	1,900,000	2,800,000
New Revenue from Public Land Sales (NPV)	0	\$2M	\$65-70M	\$80-90M
New Revenue from Public Land Sales (2013\$)	0	\$3M	\$150-160M	\$220-\$240M

Maintain	Improve	Replace	Remove
Less Preferred	Less Preferred	Moderately Preferred	Preferred



Business Activity

- Limited retail and street level economic activity expected for Maintain & Improve
- Replace and Remove expected to have regular Toronto avenue street level retail, shops, restaurants, resulting in estimated 1,800 and 2,100 jobs respectively



Tourism

- Remove expected to have a positive impact on waterfront access and perception of the area

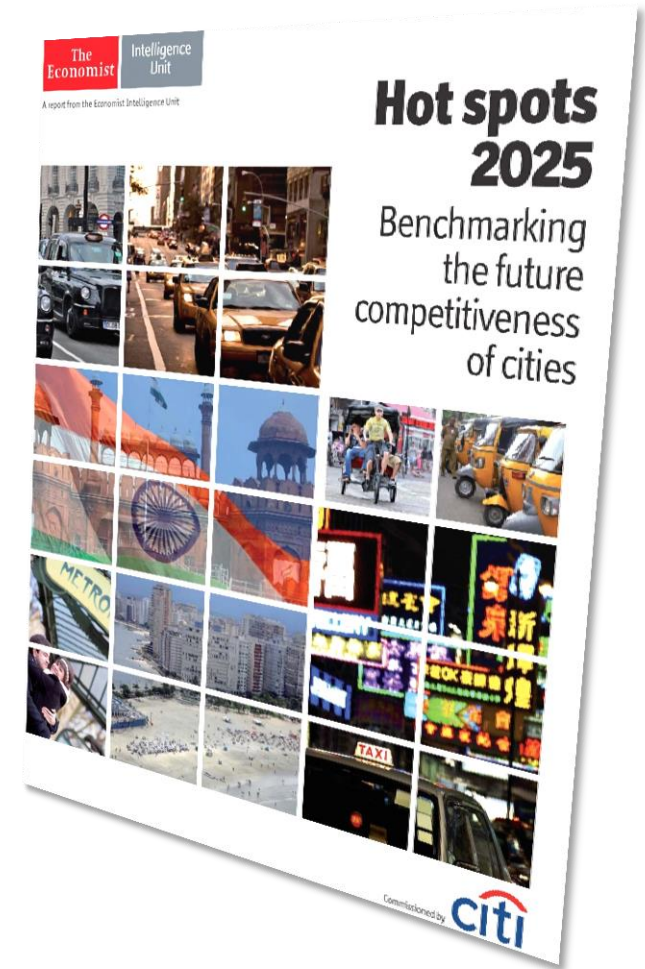
On Street Parking

- Parking possible for Remove on-Lake Shore during off-peak hours.

Maintain	Improve	Replace	Remove
Less Preferred	Less Preferred	Moderately Preferred	Preferred 39

Citigroup/ Economist Competitiveness Ranking (North American Cities on World List) 2013

City	Rank	CDB Through Highways
New York	1	Remove
Chicago	9	Never Built
Toronto	10	Under Study
Washington	14	Maintain
Los Angeles	17	Maintain
San Francisco	18	Remove
Boston	19	Replace
Houston	27	Maintain
Vancouver	28	Never Built
Dallas	32	Maintain
Atlanta	33	Maintain
Seattle	35	Replace
Montréal	36	Under Study
Miami	40	Maintain
Philadelphia	48	Improve



Maintain

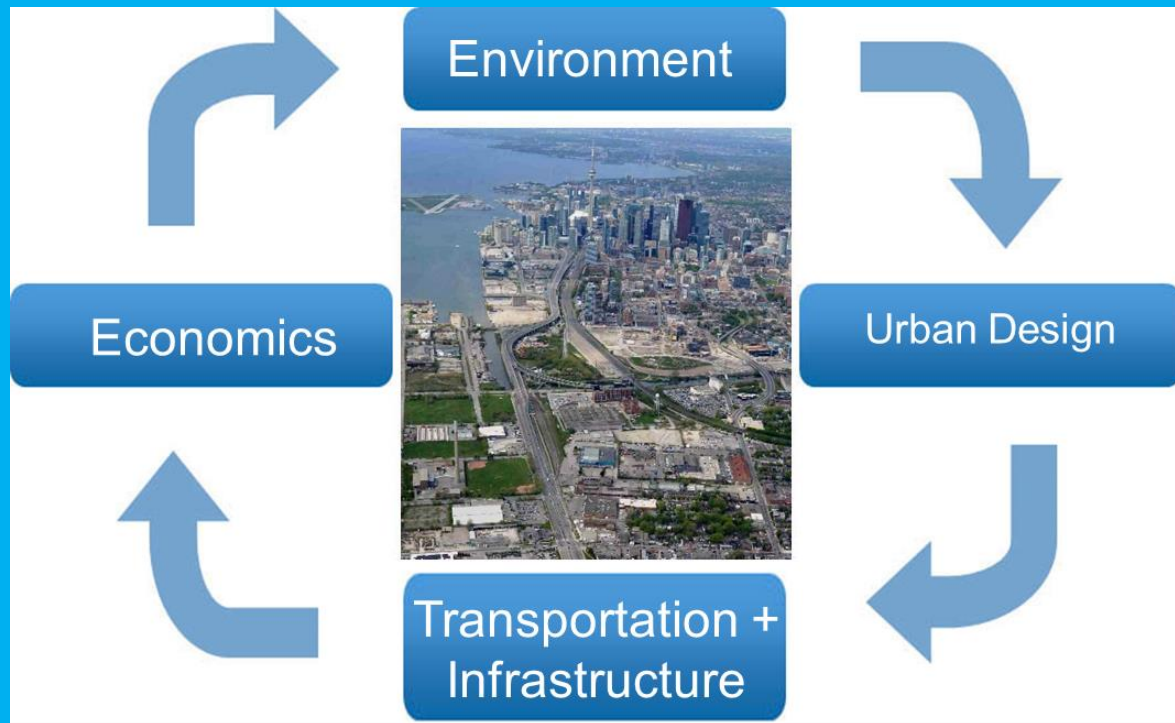
Improve

Replace

Remove

Equally Preferred

Evaluation Summary



Maintain



- Gardiner rehab program maintains existing auto capacity
- No public realm improvements on Lake Shore
- Numerous turn restrictions/ conflict points on Lake Shore
- 6 Years of Lane Closures on the Gardiner Expressway
- \$300M Cost (NPV), \$870M Cost (2013\$)

Improve



- Modified Gardiner rehab program with reduced lanes and standard shoulders
- Public realm improvements on Lake Shore & new cycling trail
- Reduction of turning restrictions and conflicts between autos, pedestrians and cyclists
- 6 Years of Lane Closures on the Gardiner Expressway and Lake Shore
- \$360M Cost (NPV), \$865M Cost (2013\$)

Replace



- New elevated structure built to today's highway standards.
- Public realm improvements on Lake Shore & new cycling trail
- Requires full closure of the corridor for construction
- \$700M Cost (NPV), \$1,390M Cost (2013\$)
- \$65-70M Revenue (NPV), \$150-160M (2013\$)

Remove



- New 8 lane boulevard – greatest impact to auto travel times
- Boulevard lined with 1,200 new trees, dedicated turning lanes, sidewalks, retail frontage and cycling trails
- 3 Years of Lane Closures in the Expressway corridor
- \$240M Cost (NPV), \$470M Cost (2013\$)
- \$80-90M Revenue (NPV), \$220-240M (2013\$)

Preliminary Evaluation Results

	Study Lens/ Criteria Group Summary	MAINTAIN	IMPROVE	REPLACE	REMOVE
TRANSPORTATION & INFRASTRUCTURE	Automobiles	Preferred	Moderately Preferred	Least Preferred	Least Preferred
	Transit	Preferred	Preferred	Preferred	Preferred
	Pedestrians	Least Preferred	Moderately Preferred	Preferred	Preferred
	Cycling	Least Preferred	Moderately Preferred	Preferred	Preferred
	Movement of Goods	Preferred	Preferred	Least Preferred	Least Preferred
	Safety	Least Preferred	Moderately Preferred	Preferred	Preferred
	Constructability	Preferred	Preferred	Least Preferred	Moderately Preferred
URBAN DESIGN	Planning	Least Preferred	Least Preferred	Moderately Preferred	Preferred
	Public Realm	Least Preferred	Least Preferred	Moderately Preferred	Preferred
	Built Form	Least Preferred	Least Preferred	Least Preferred	Preferred
ENVIRONMENT	Social & Health	Least Preferred	Moderately Preferred	Moderately Preferred	Preferred
	Natural Environment	Least Preferred	Least Preferred	Moderately Preferred	Preferred
	Cultural Resources	Preferred	Preferred	Least Preferred	Moderately Preferred
ECONOMICS	Regional Economics	Moderately Preferred	Moderately Preferred	Moderately Preferred	Moderately Preferred
	Local Economics	Least Preferred	Least Preferred	Moderately Preferred	Preferred
	Direct Cost and Benefit	Moderately Preferred	Moderately Preferred	Least Preferred	Preferred

Preferred	Moderately Preferred	Least Preferred
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Next Steps ...

Approved EA Terms of Reference

2009

Public Ideas

Design Ideas

Your Ideas

Public Meeting Jun 13, 2013

Consult on Alternative Solutions

Public Meeting Oct 16, 2013

Evaluate & Consult on Four Alternative Solutions

Public Meeting
Feb 2014

**You
are
here**

Recommendation to City Council

Spring 2014

Develop & Consult on Alternative Designs

Summer & Fall 2014

City Council Approval & Submission to MOE

Spring 2015

MOE Review & Decision

2015 Onwards