Planning for Regional Express Rail in Greater Toronto Area

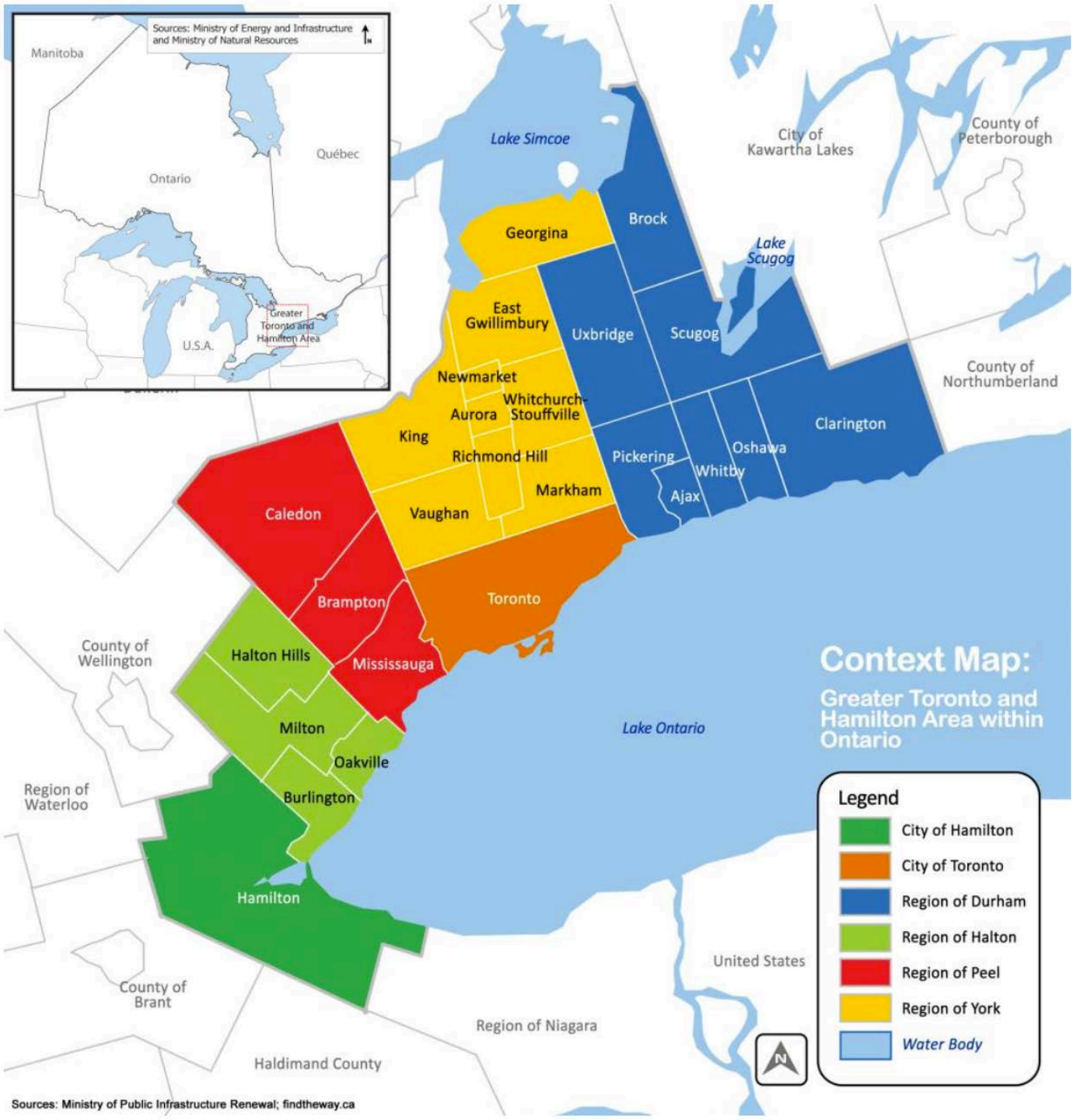
Craig Lametti

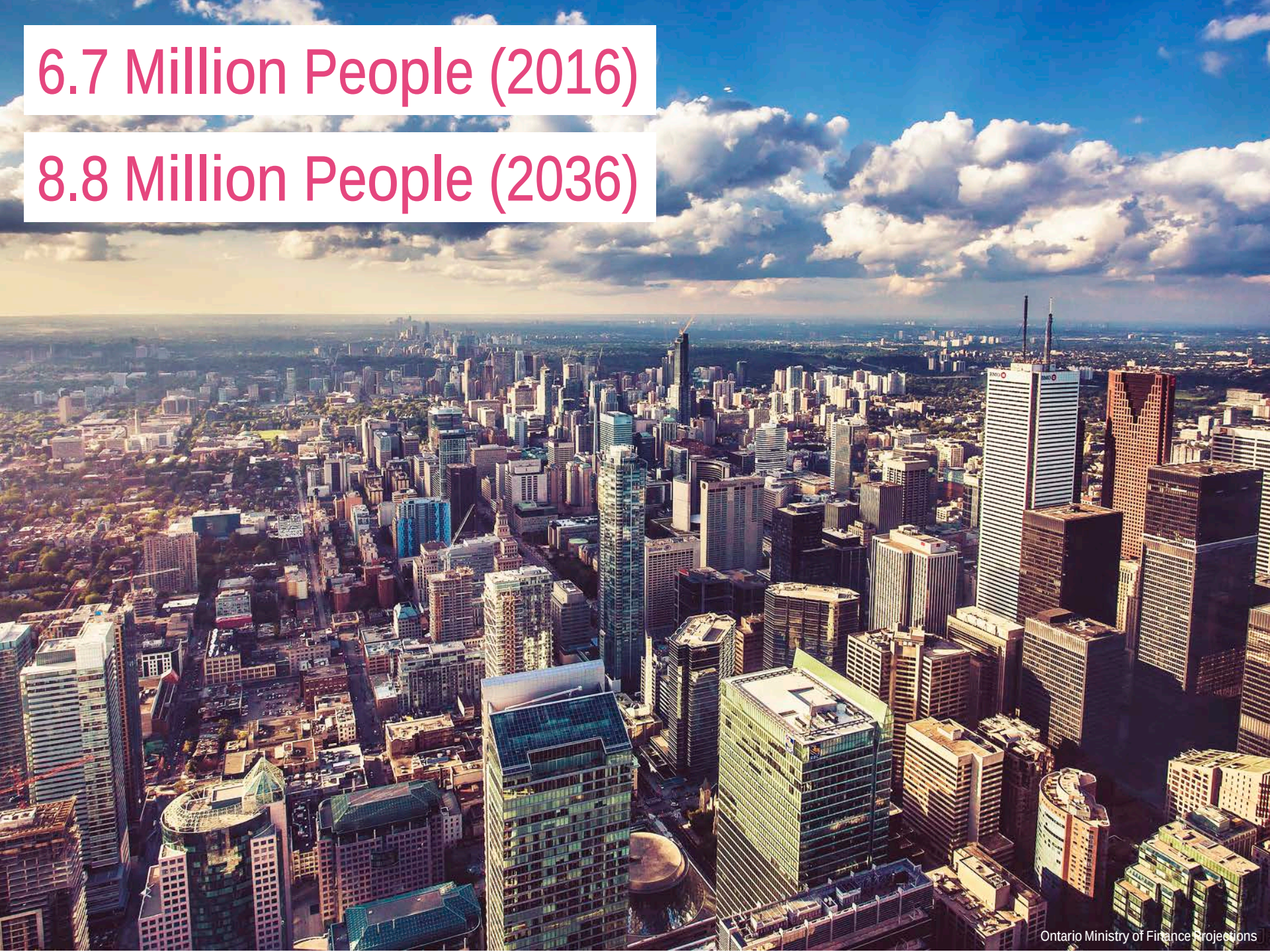
URBAN STRATEGIES INC.

The Greater Toronto Area (GTA) is Growing

GTA

+ Hamilton

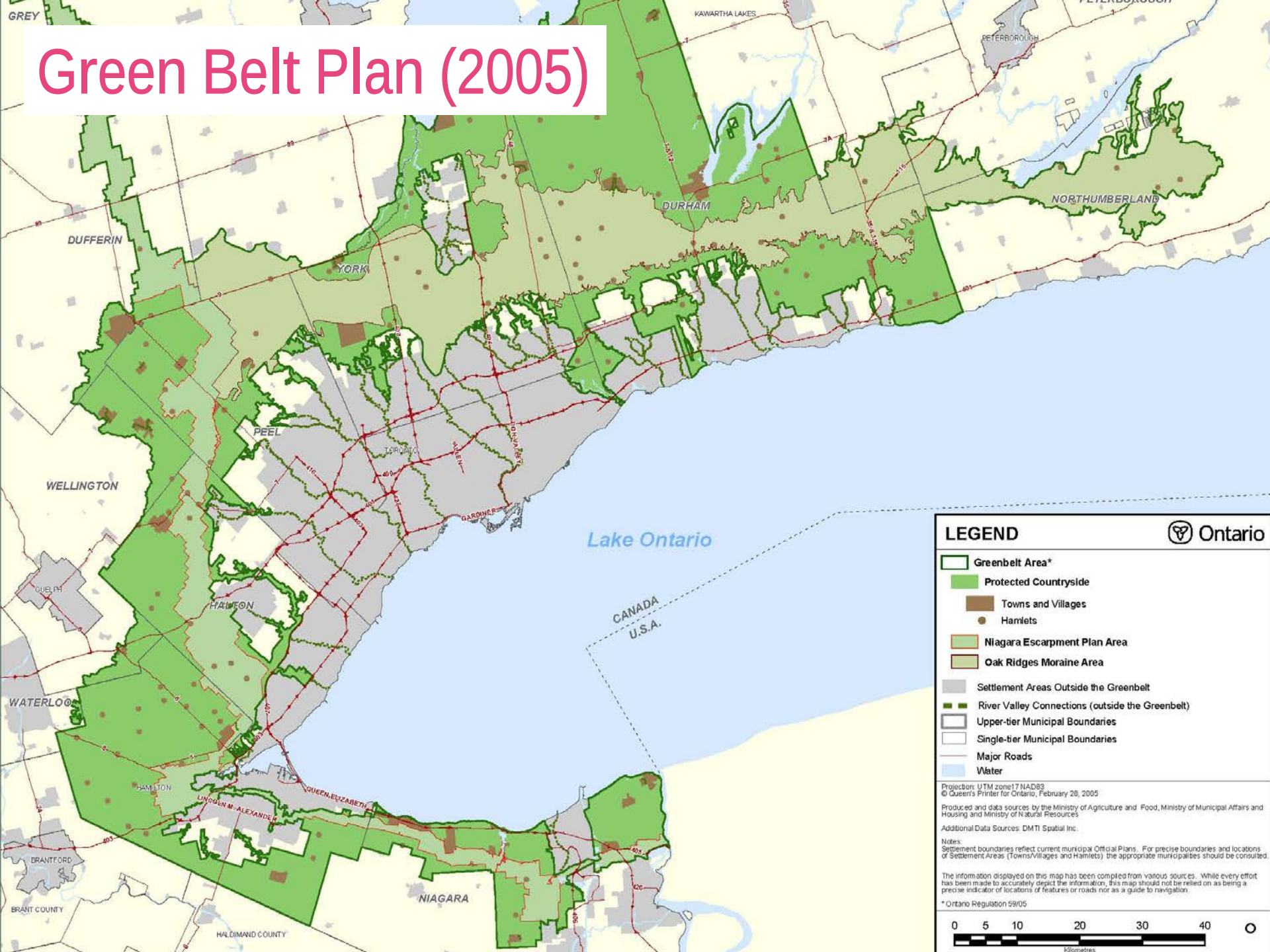



6.7 Million People (2016)
8.8 Million People (2036)
Ontario Ministry of Finance Projections

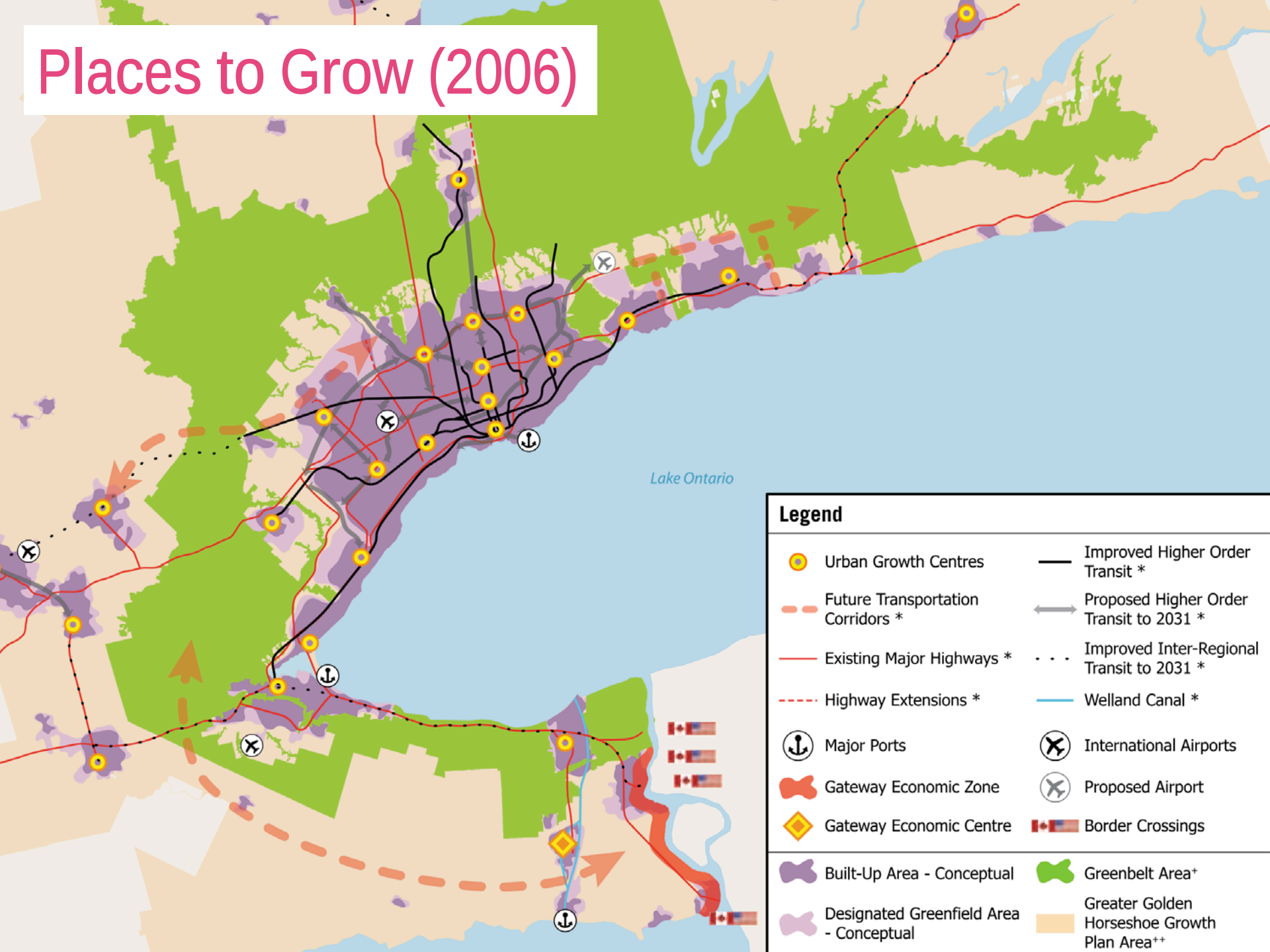

My lawn is better than yours
Is not


The average GTA commuter spends 79 minutes a day traveling to and from work

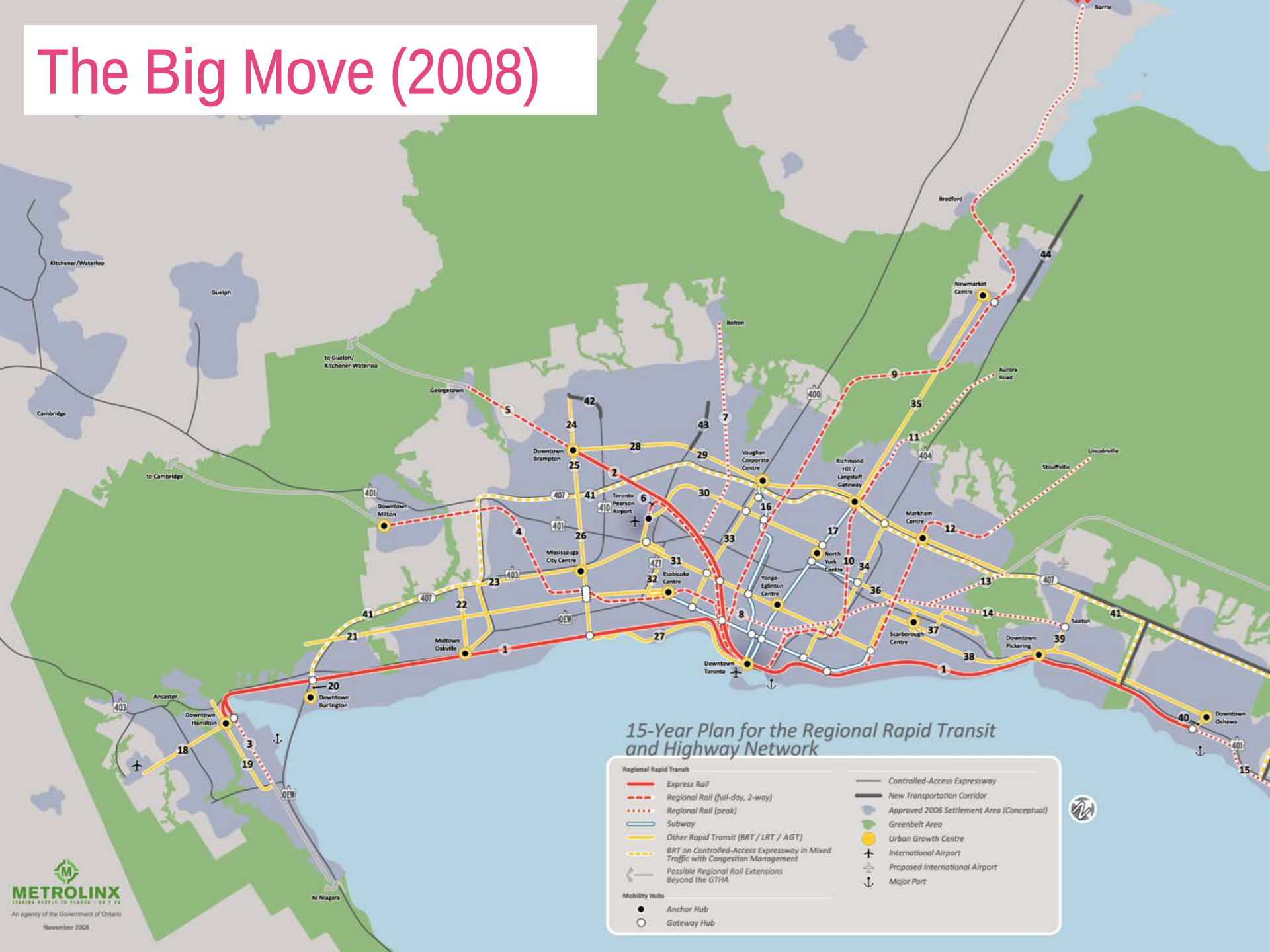
Green Belt Plan (2005)



Places to Grow (2006)

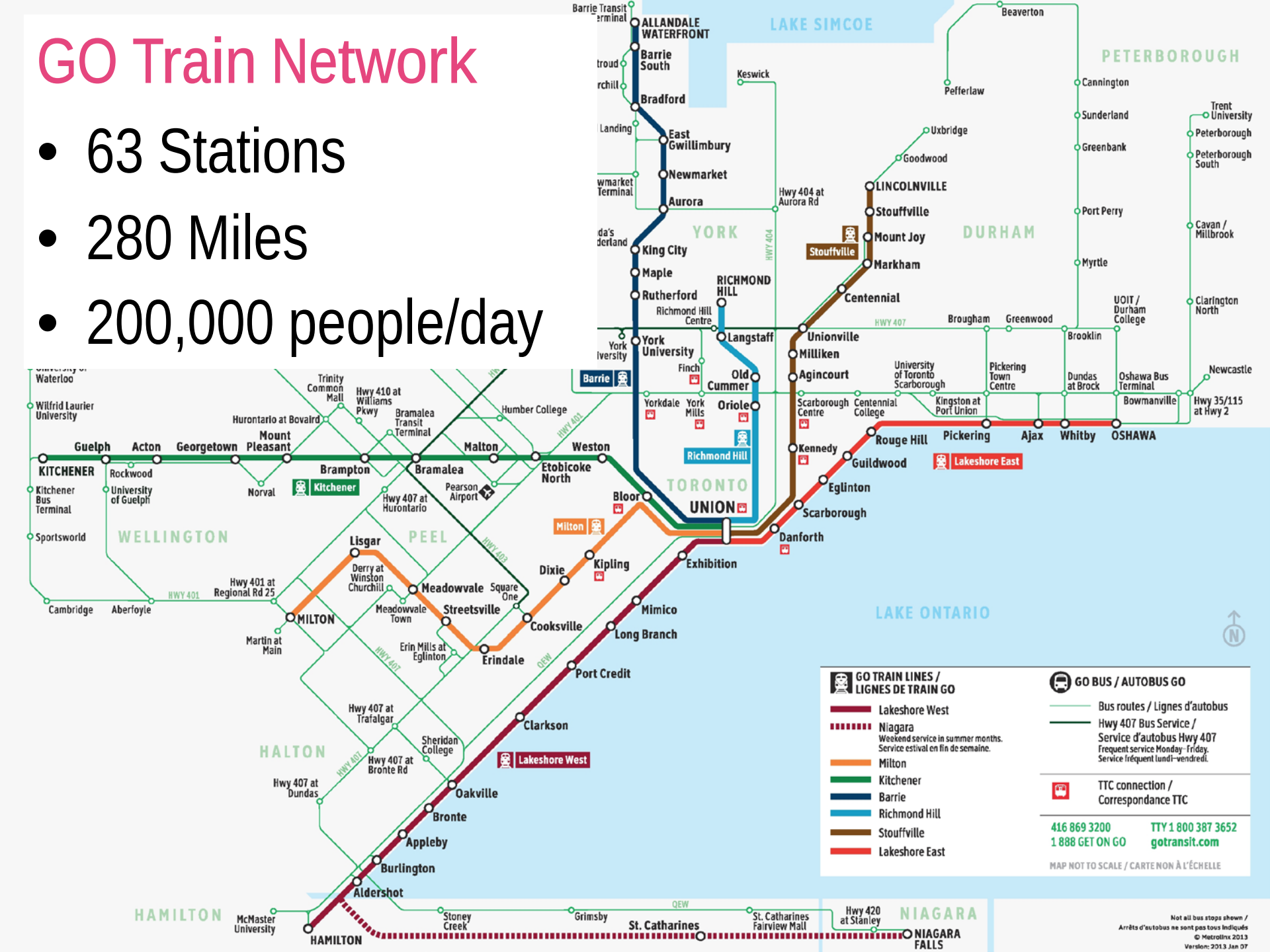


The Big Move (2008)



GO Train Network

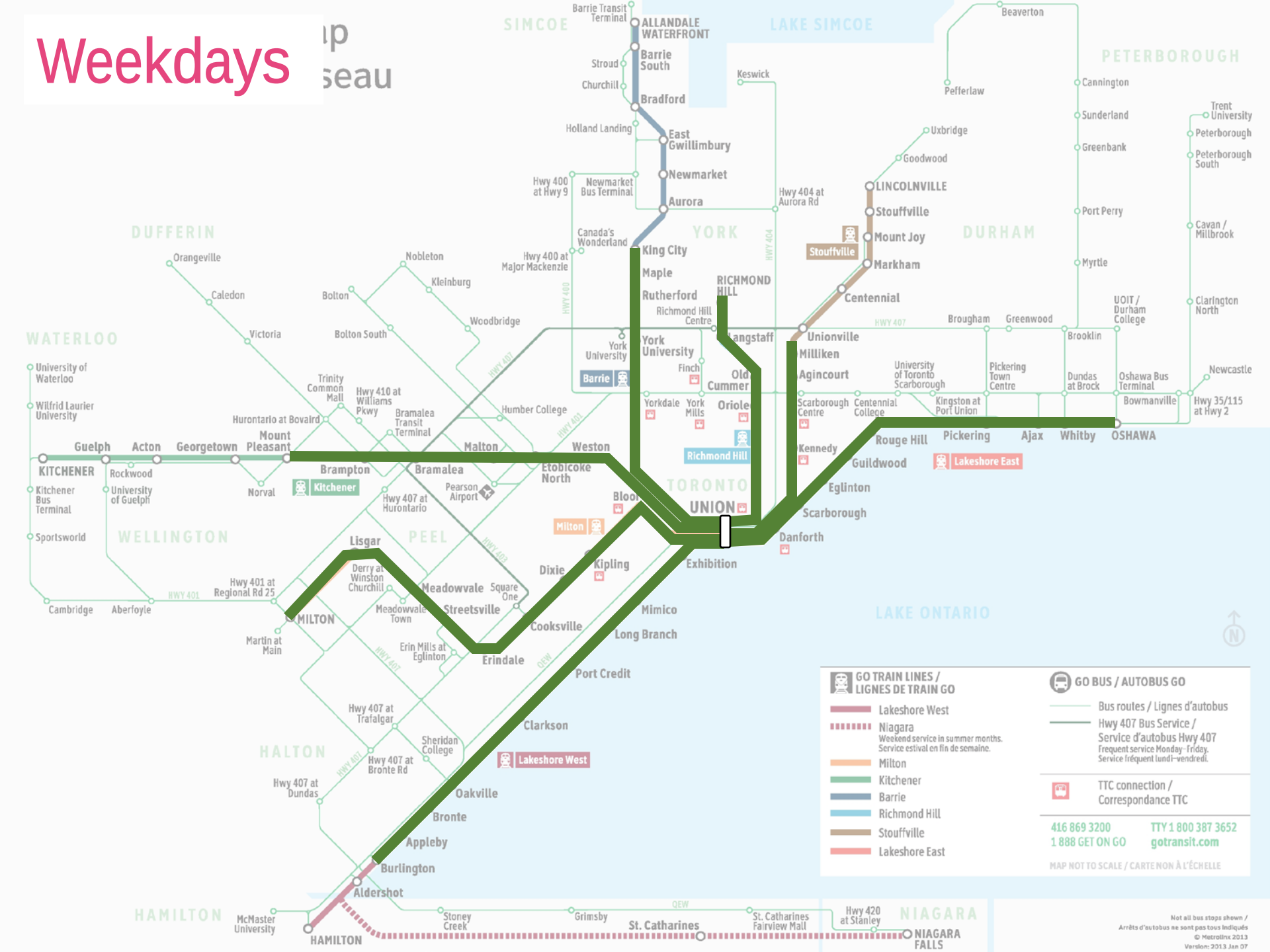
- 63 Stations
- 280 Miles
- 200,000 people/day



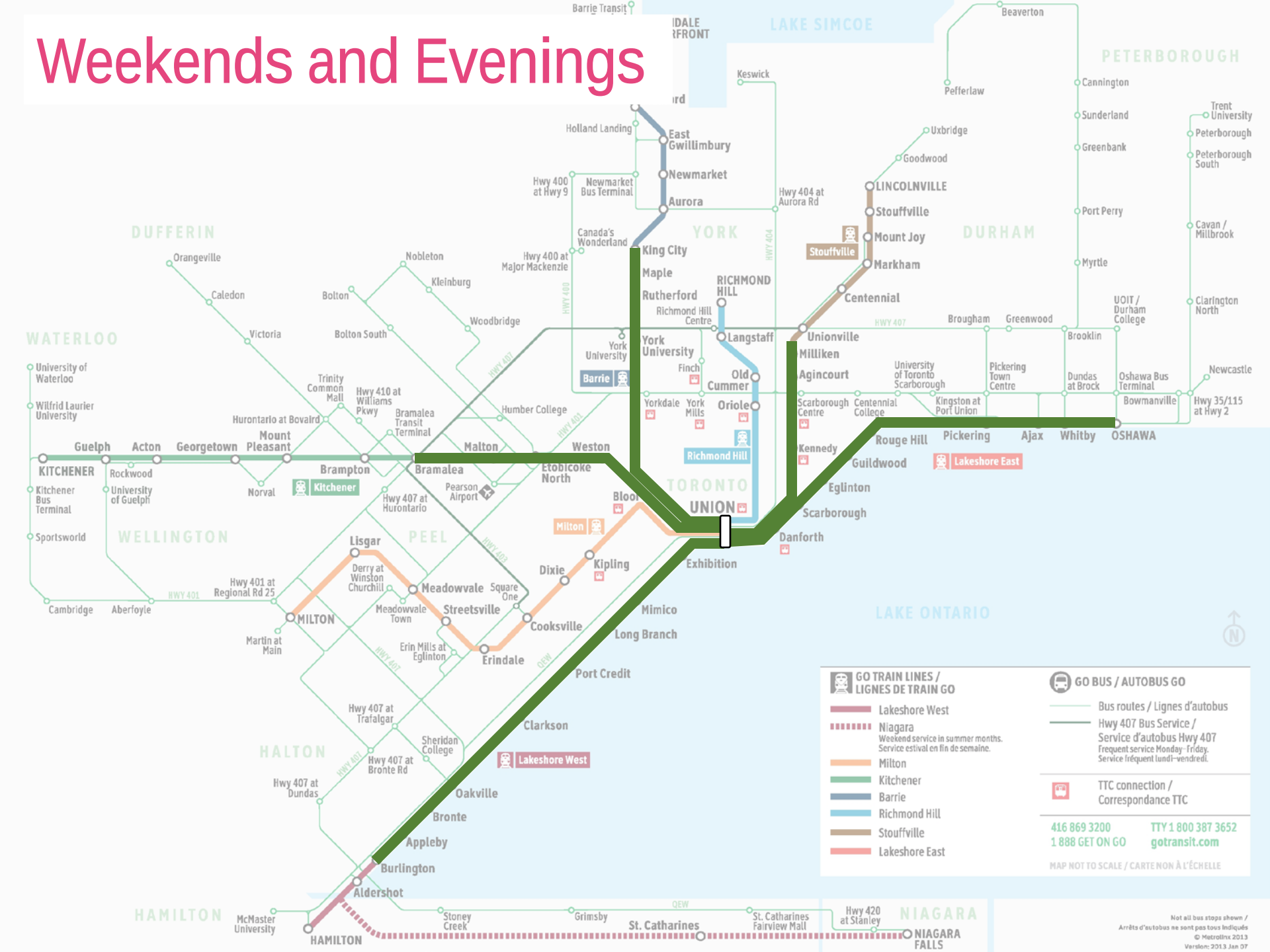
Regional Express Rail (RER)

- Part of a 10-year, $15 billion commitment to transit infrastructure in the GTHA
- Includes GO rail electrification, 15 minute service on GO owned lines
- By-directional service on weekdays, in evenings and on weekends
- All-stop and limited stop service, to meet demand and reduce travel times

Weekdays


Barrie Transit Terminal
ALLANDALE WATERFRONT
Barrie South
Stroud
Churchill
Bradford
Holland Landing
East Gwillimbury
Newmarket
Hwy 400 at Hwy 9
Newmarket Bus Terminal
Aurora
Canada's Wonderland
Hwy 400 at Major Mackenzie
King City
Maple
Rutherford
Richmond Hill Centre
RICHMOND HILL
York University
Barrie
Finch
Old Cummer
Yorkdale
York Mills
Oriole
Richmond Hill
Keswick
Hwy 404 at Aurora Rd
Uxbridge
Goodwood
LINCOLNVILLE
Stouffville
Mount Joy
Markham
Centennial
Unionville
Milliken
Agincourt
Scarborough Centre
Centennial College
Kennedy
Rouge Hill
Pickering
Ajax
Whitby
OSHAWA
Lakeshore East
Guildwood
Eglinton
Scarborough
Danforth
UNION
Bloor
Milton
Exhibition
Kipling
Dixie
Mimico
Long Branch
Port Credit
Clarkson
Lakeshore West
Oakville
Bronte
Appleby
Burlington
Aldershot
HAMILTON
McMaster University
Stoney Creek
Grimsby
St. Catharines
St. Catharines Fairview Mall
Hwy 420 at Stanley
NIAGARA FALLS
Beaverton
Pefferlaw
Cannington
Sunderland
Greenbank
Port Perry
Myrtle
Brougham
Greenwood
Brooklin
UOIT / Durham College
Pickering Town Centre
Dundas at Brock
Oshawa Bus Terminal
Bowmanville
Hwy 35/115 at Hwy 2
Newcastle
Trent University
Peterborough
Peterborough South
Cavan / Millbrook
Clarington North
Orangeville
Caledon
Victoria
Nobleton
Kleinburg
Bolton
Bolton South
Woodbridge
Trinity Common Mall
Hwy 410 at Williams Pkwy
Bramalea Transit Terminal
Humber College
Hurontario at Bovaird
Mount Pleasant
Brampton
Kitchener
Norval
Bramalea
Malton
Weston
Etobicoke North
Pearson Airport
Hwy 407 at Hurontario
Guelph
Acton
Georgetown
KITCHENER
Rockwood
University of Guelph
Kitchener Bus Terminal
Sportsworld
University of Waterloo
Wilfrid Laurier University
Cambridge
Aberfoyle
Hwy 401 at Regional Rd 25
MILTON
Martin at Main
Lisgar
Derry at Winston Churchill
Meadowvale
Meadowvale Town
Square One
Streetsville
Erin Mills at Eglinton
Erindale
Hwy 407 at Trafalgar
Sheridan College
Hwy 407 at Bronte Rd
Hwy 407 at Dundas
DUFFERIN
WATERLOO
WELLINGTON
PEEL
HALTON
HAMILTON
YORK
DURHAM
PETERBOROUGH
SIMCOE
LAKE SIMCOE
LAKE ONTARIO
HWY 400
HWY 401
HWY 403
HWY 404
HWY 407
QEW
GO TRAIN LINES / LIGNES DE TRAIN GO
Lakeshore West
Niagara
Weekend service in summer months.
Service estival en fin de semaine.
Milton
Kitchener
Barrie
Richmond Hill
Stouffville
Lakeshore East
GO BUS / AUTOBUS GO
Bus routes / Lignes d'autobus
Hwy 407 Bus Service / Service d'autobus Hwy 407
Frequent service Monday - Friday.
Service fréquent lundi - vendredi.
TTC connection / Correspondance TTC
416 869 3200
1 888 GET ON GO
TTY 1 800 387 3652
gotransit.com
MAP NOT TO SCALE / CARTE NON À L'ÉCHELLE
Not all bus stops shown / Arrêts d'autobus ne sont pas tous indiqués
© Metrolinx 2013
Version: 2013 Jan 07

Weekends and Evenings



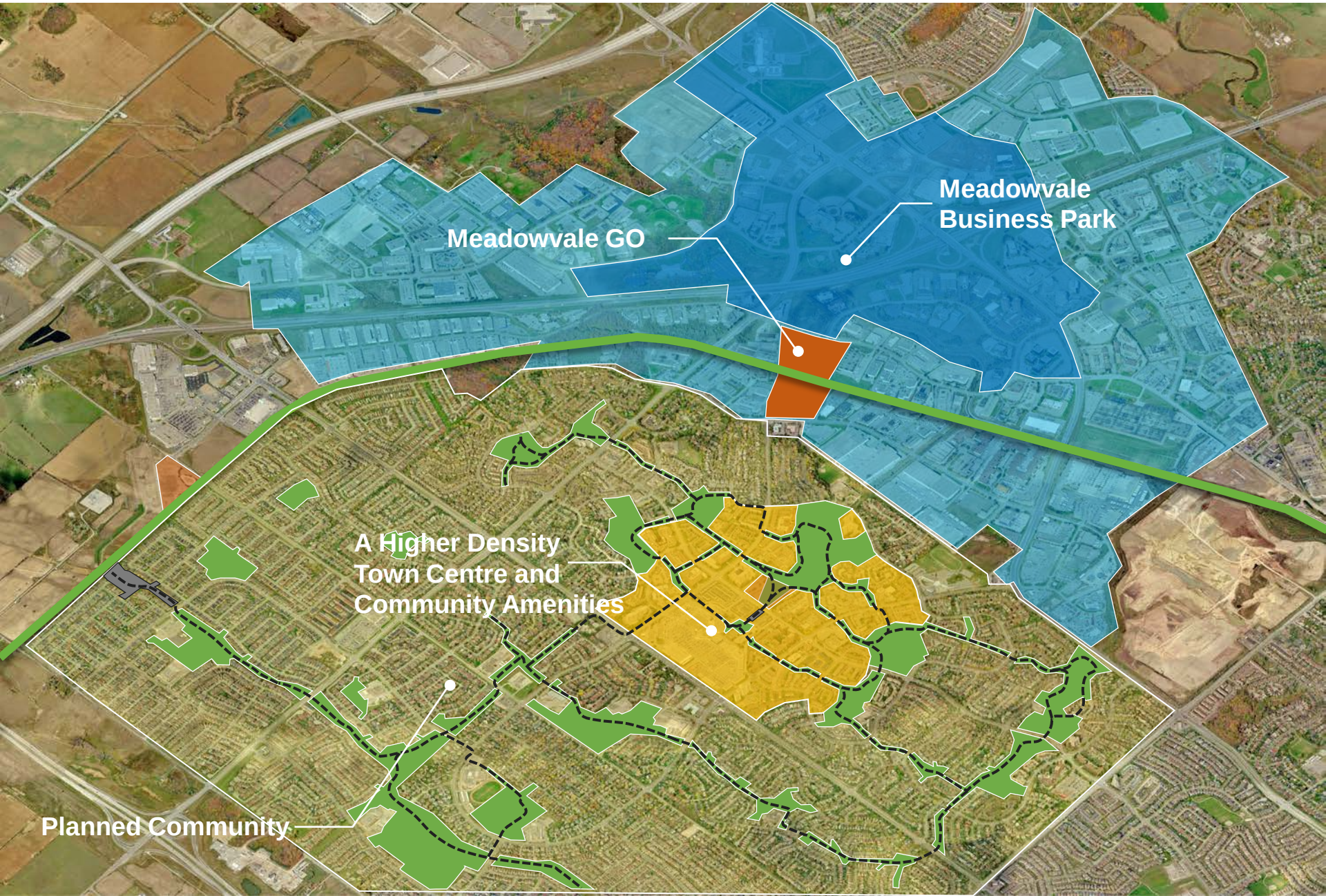
- What is required at GO Stations to support this level of service?
- How does it change the role of stations within their communities?
- What kind of development and change should be expected and encouraged?

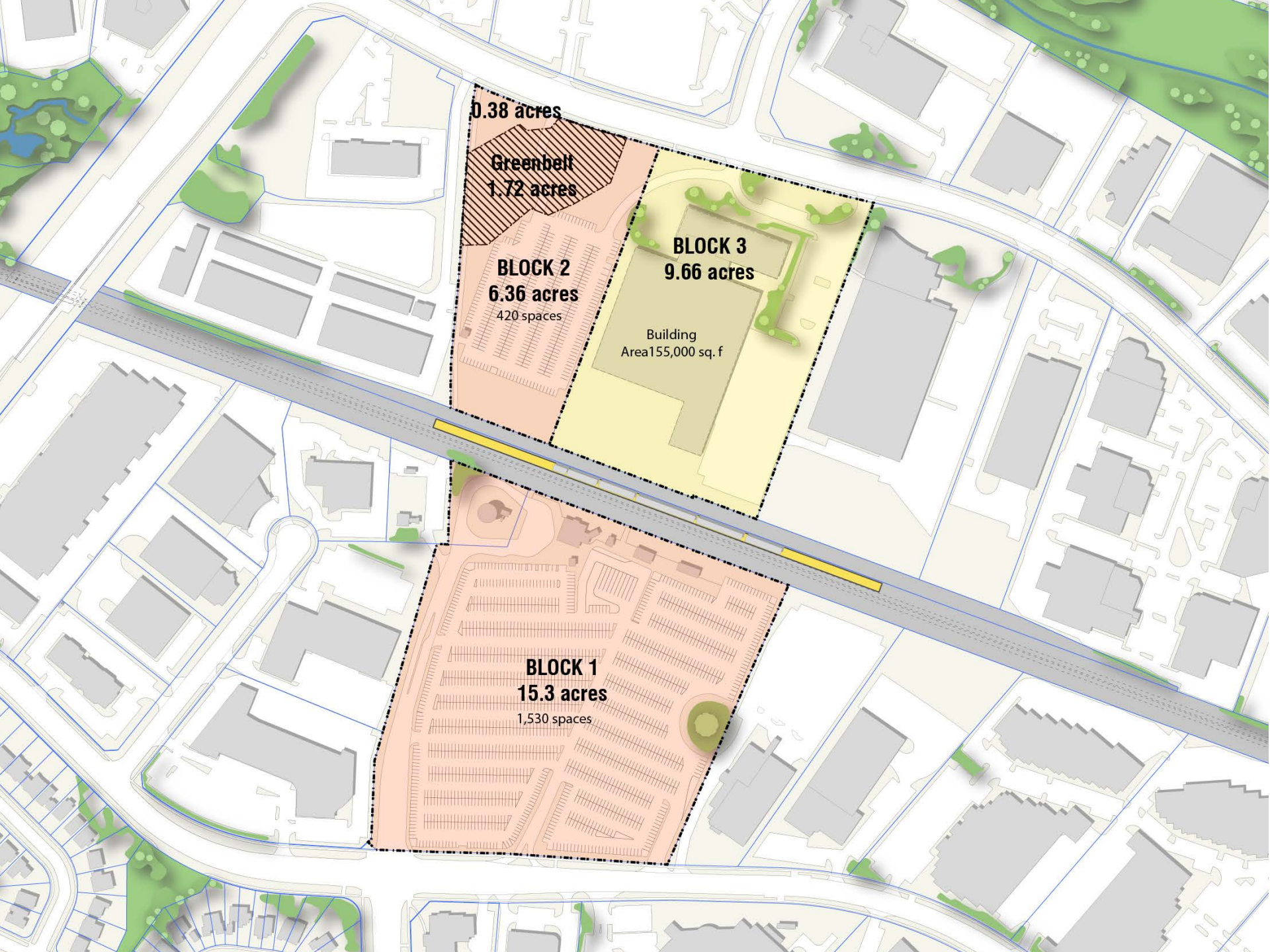
What does it mean for GO Transit Stations?


I know I parked
here…somewhere


Don't Eat Me!
More Parking
Parking
Bus
Passenger Pickup and Drop Off
Parking
With over 69,000 parking spaces Metrolinx is now the largest parking provider in North America

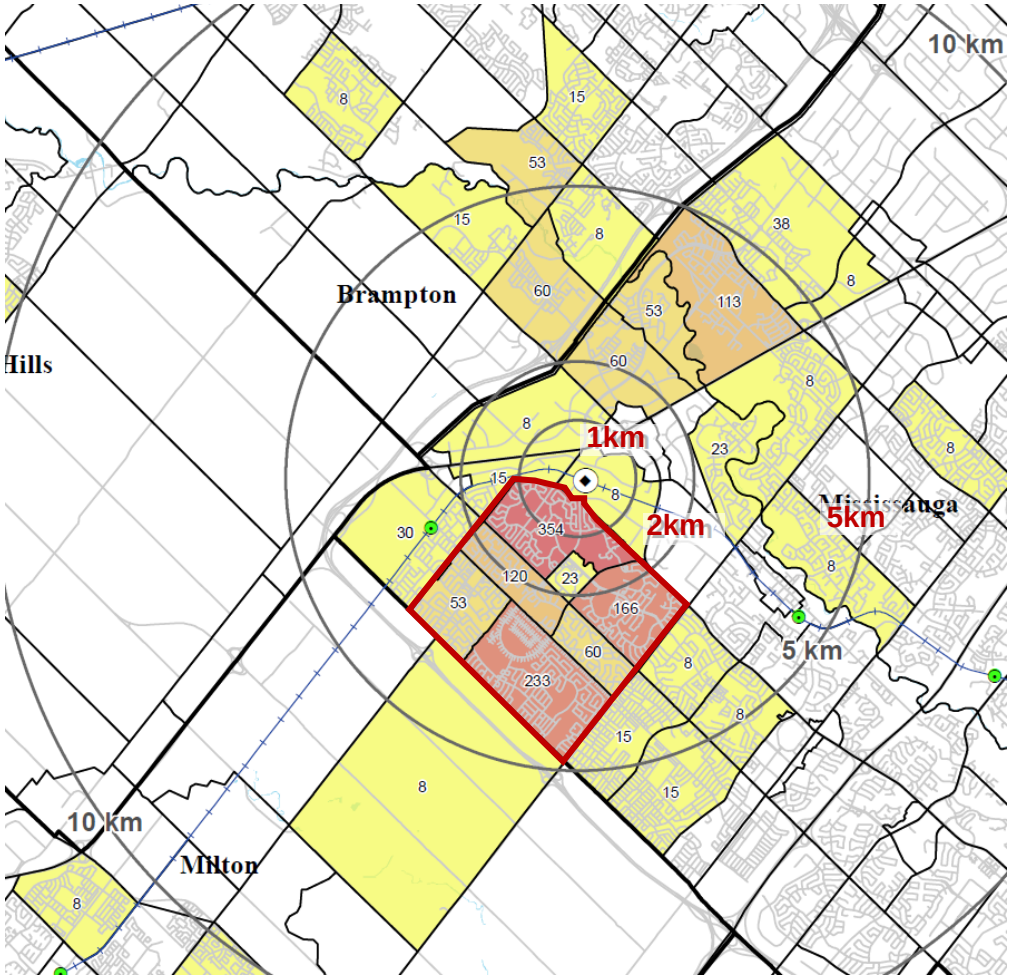
Meadowvale GO Station Master Plan




0.38 acres
Greenbelt
1.72 acres
BLOCK 2
6.36 acres
420 spaces
BLOCK 3
9.66 acres
Building
Area155,000 sq. f
BLOCK 1
15.3 acres
1,530 spaces

How people get to the station

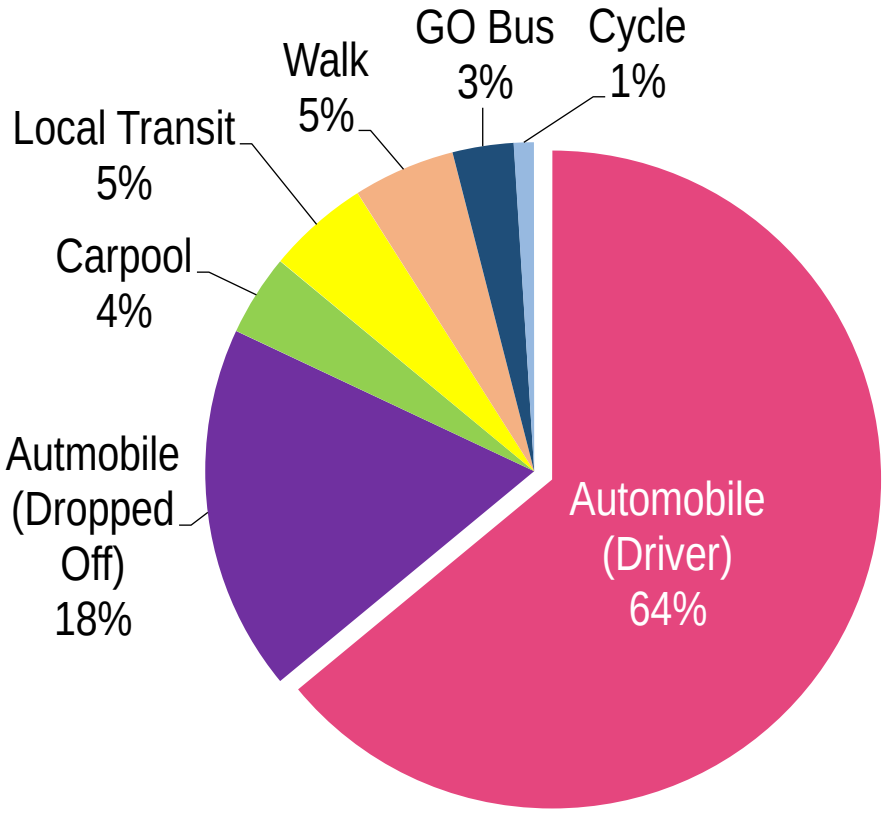
Over 85% of passengers live within 5km (15 minute bike ride) of the station



- 12% from adjacent city's north of the highway
- 17% arrive from Mississauga north of the highway
- 6% arrive from other Mississauga neighbourhoods south of the highway
- Approximately 65% of users arrive from the Meadowvale Community

How people get to the station

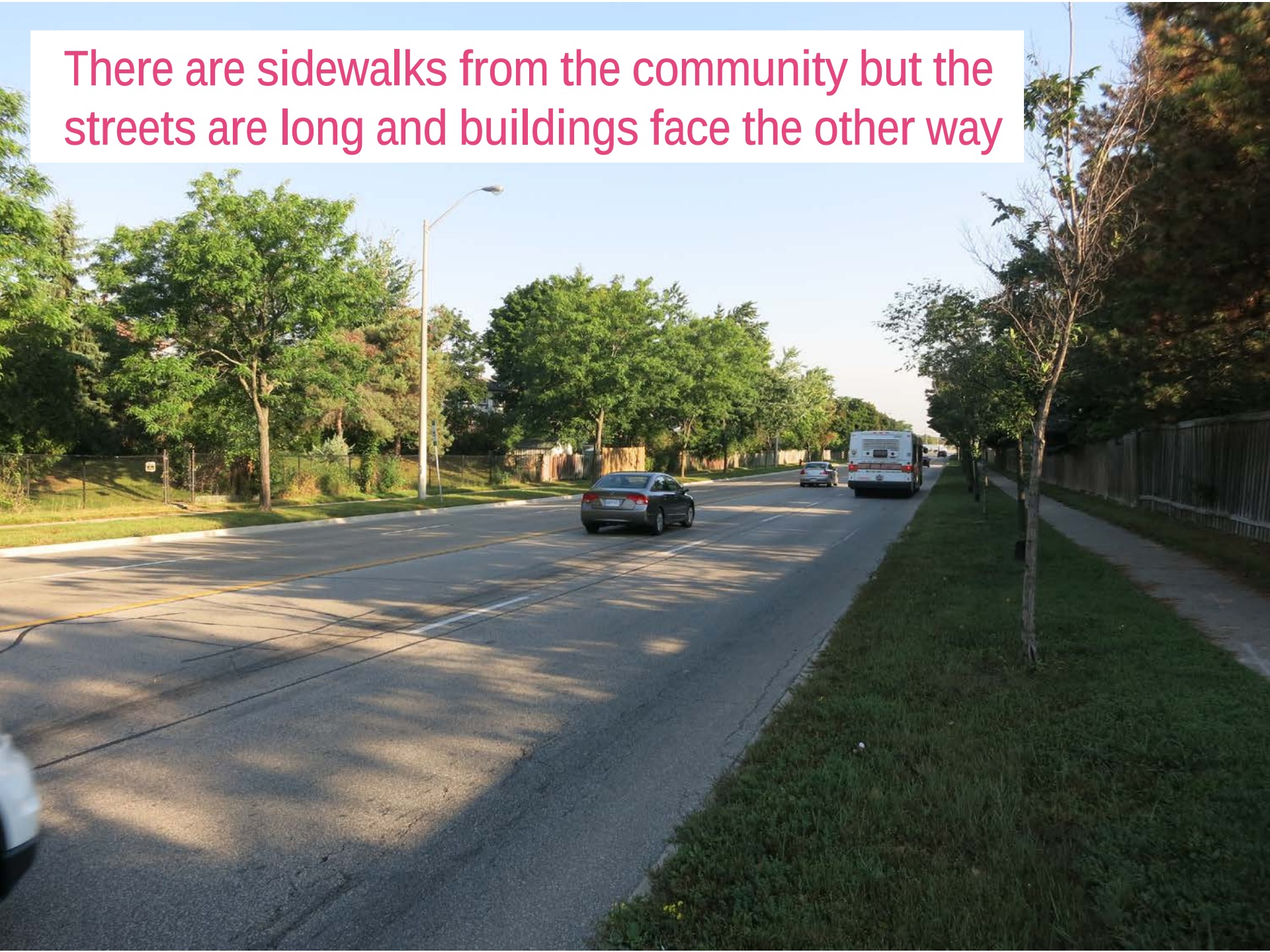
Of the 1,600 daily passengers, a high percentage of passengers are currently arriving by car



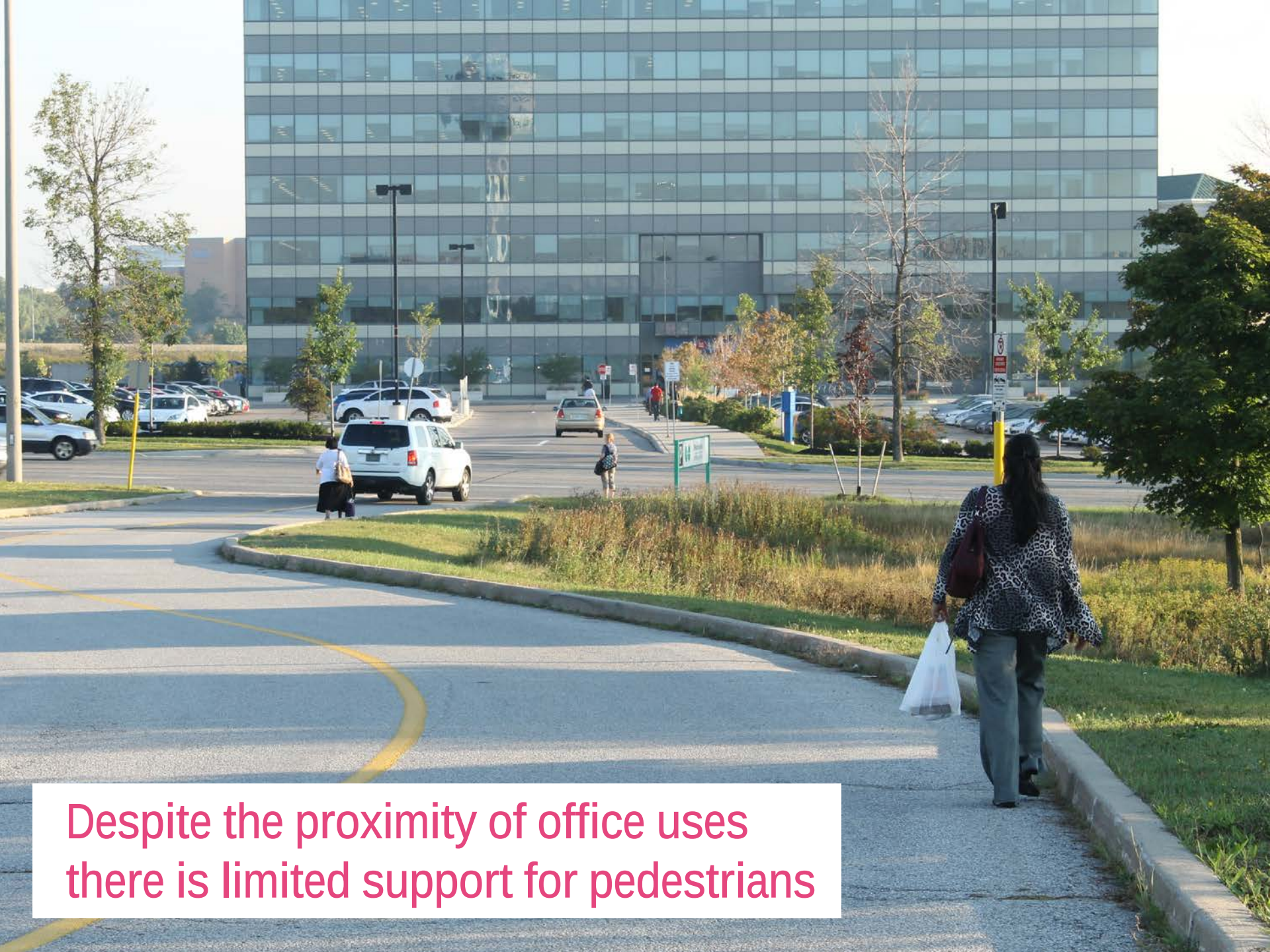
- Over 80% of users arrive at the station by car
- 64% are parking in the park and ride lot
- Metrolinx has set a target automobile mode share of 50% for 2031

Source: 2013 GO Rail Passenger Survey

There are sidewalks from the community but the streets are long and buildings face the other way



There are no dedicated connections between the community's extensive trail network and the GO station



Despite the proximity of office uses there is limited support for pedestrians

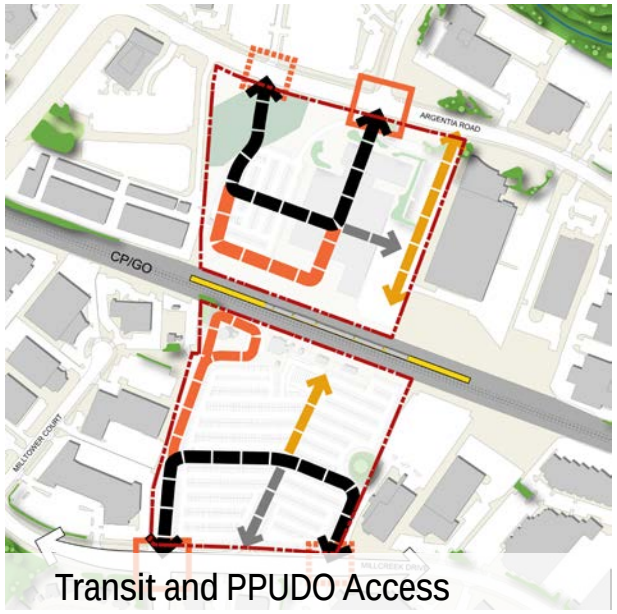
What will RER mean for the station?

- If the modal split were to remain the same as today it would require a doubling of the parking capacity
- Achieving Metrolinx's 50% auto modal split would require a significant increase in people taking local transit, walking, cycling and being dropped off at the station - assuming a similar modal split as today for the remaining proportion of travelers would mean:
  - 1,000 people using the PPUDO
  - 275 taking local transit
  - 275 walking
  - 27 biking

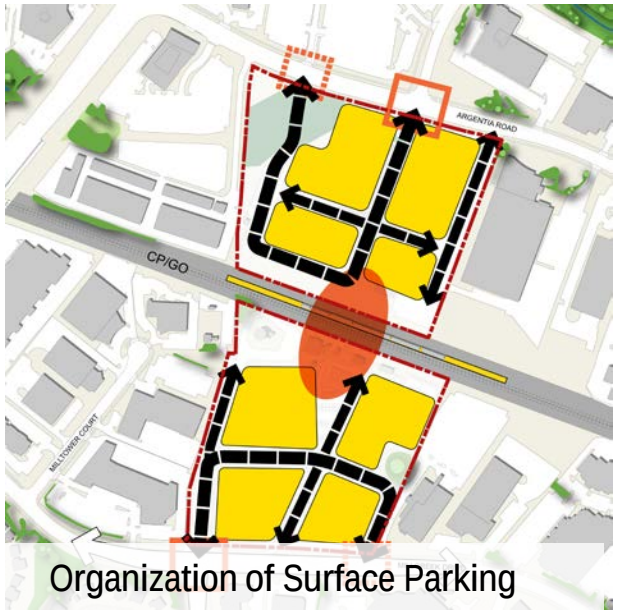
Modes we should be prioritizing

Short and Long-Term Planning Framework

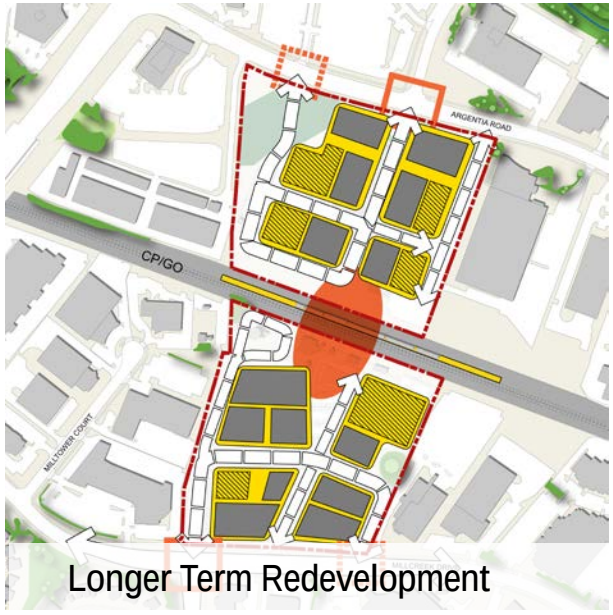
Pedestrian and Cycling Access



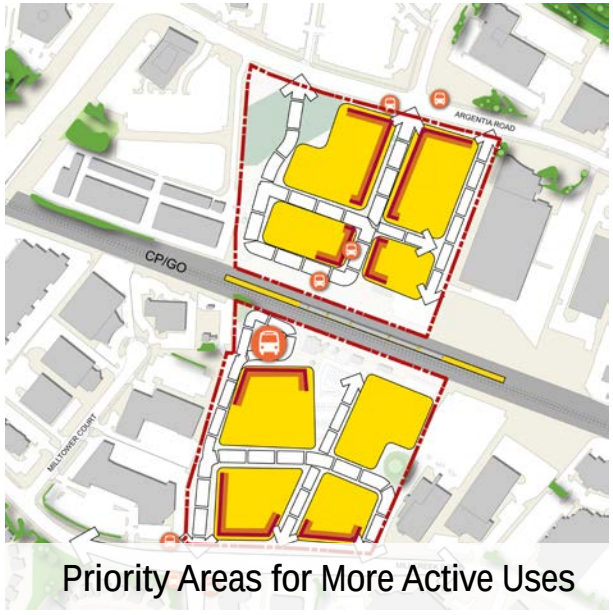
Transit and PPUDO Access



Organization of Surface Parking



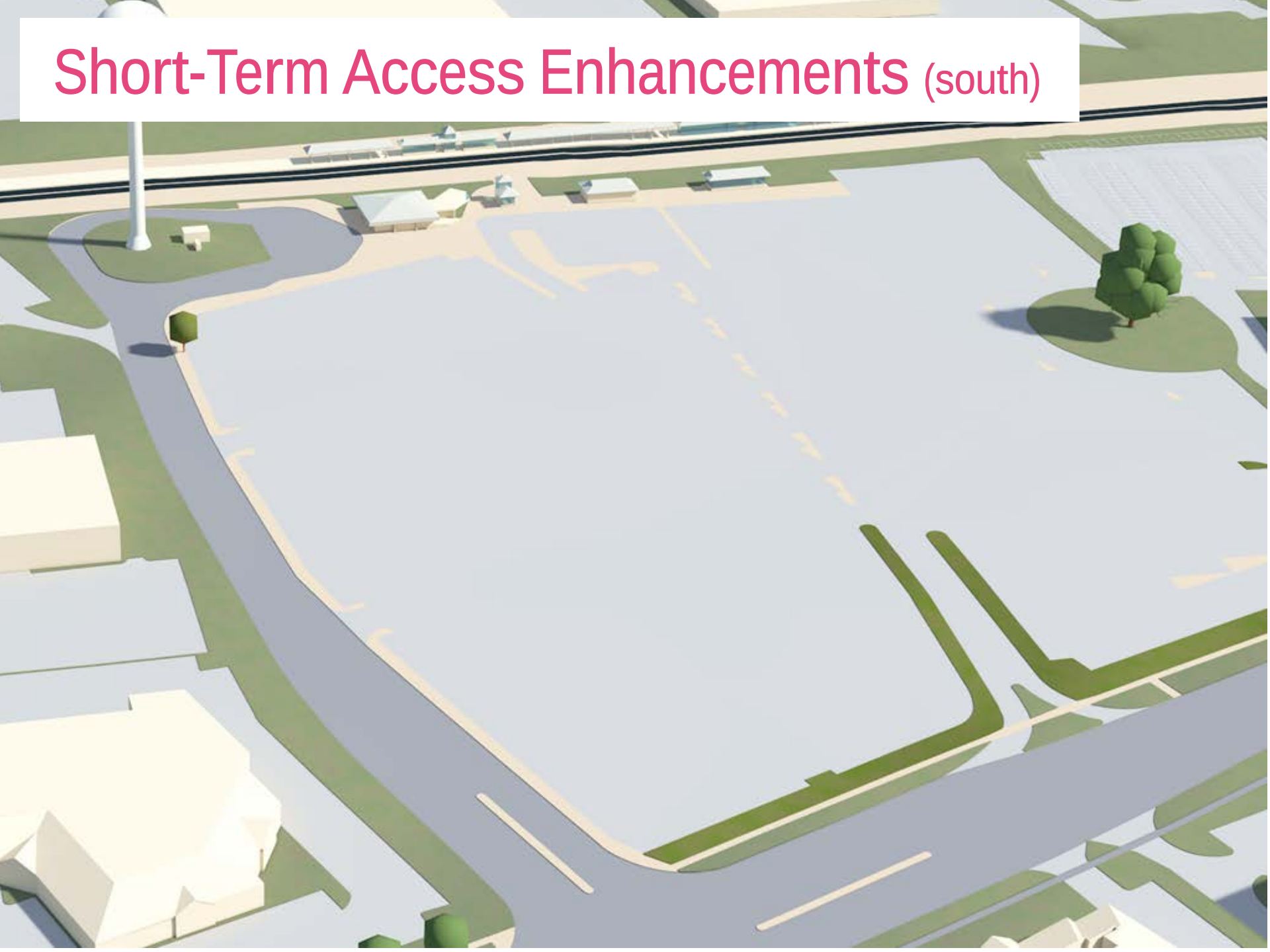
Longer Term Redevelopment



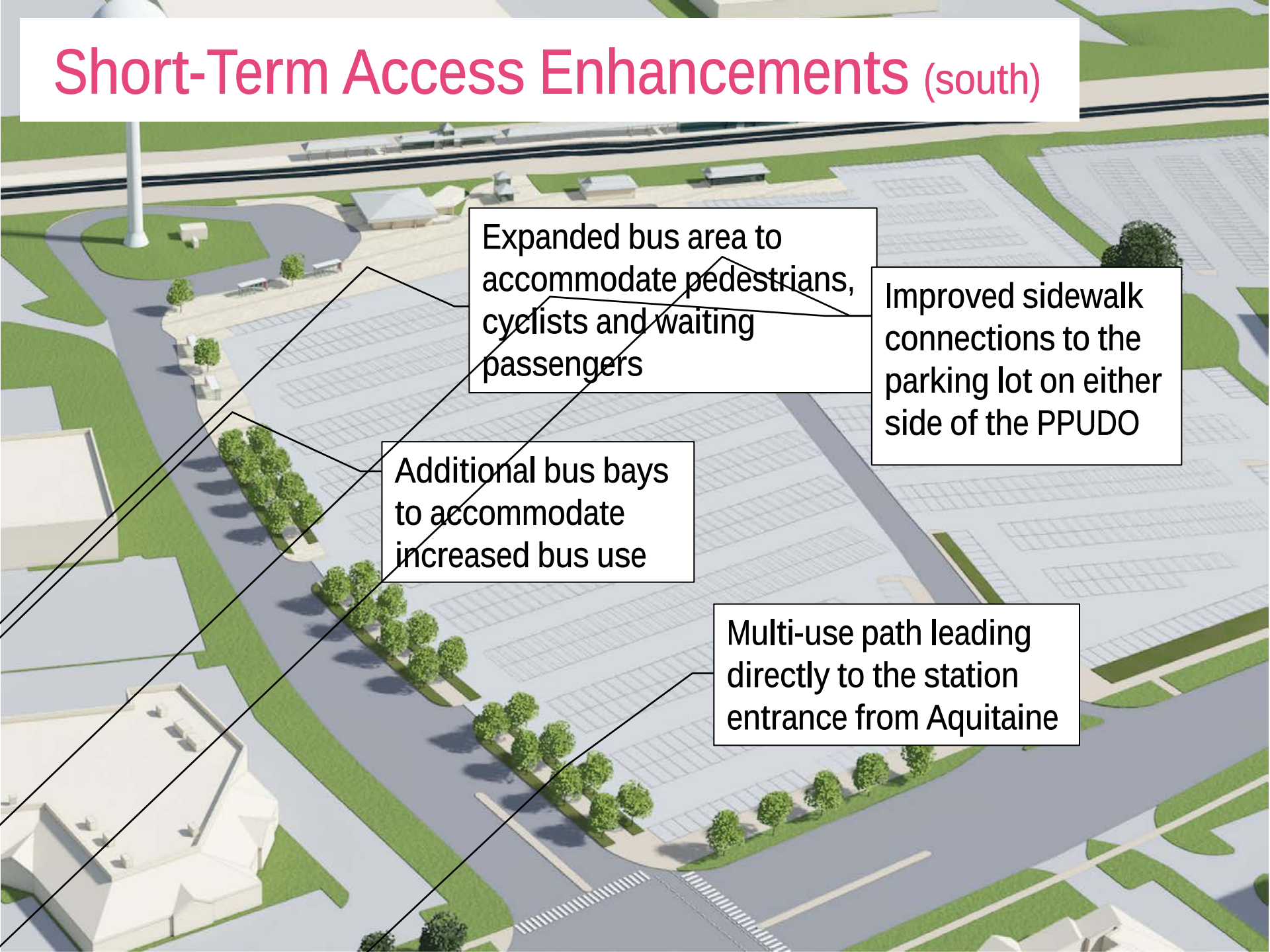
Priority Areas for More Active Uses

The planning framework helps to guide short term access improvements while setting the stage for the longer term reurbanization of the station lands

Short-Term Access Enhancements (south)



Short-Term Access Enhancements (south)

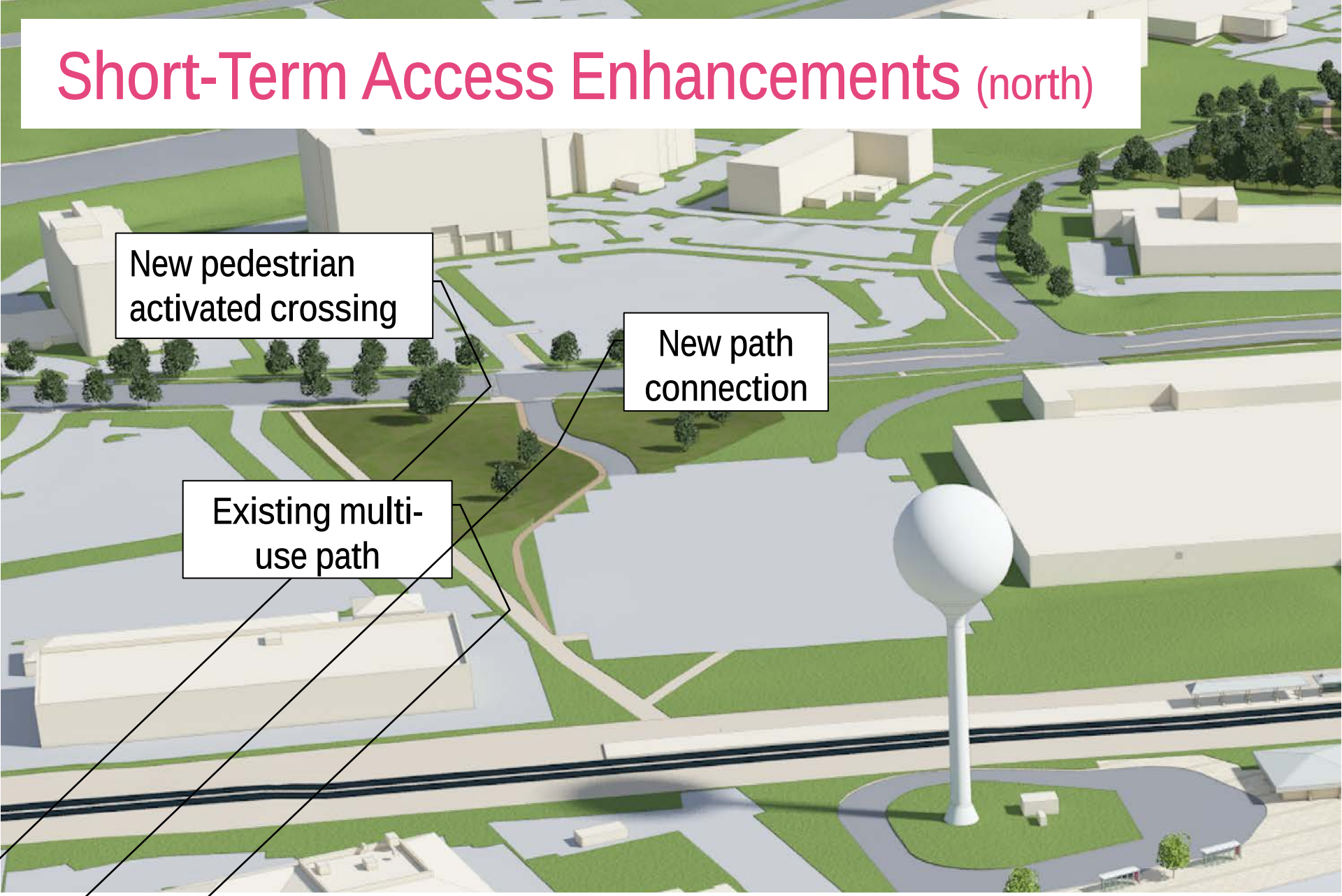


Short-Term Access Enhancements (south)

New Cycling Connection

MILLCREEK DRIVE
CADIZ CRESCENT
COPENHAGEN ROAD
DERRY ROAD WEST
ESTORIL ROAD
CHERBOURG GARDENS
MONTEVIDEO ROAD
MILLTOWER COURT
TRONDHEIM CRESCENT
WILLOWMORE WAY
MARKWOOD COURT
MARKWOOD PLACE
GLEN ERN DRIVE
CANBERRA ROAD
AQUITANE AVENUE
BARRISDALE DRIVE
BARRISDALE CT
MAPLEWOOD PARK
HUNTER'S GREEN
SHELTER BAY PUBLIC SCHOOL
LAKE AQUITANE PARK

Short-Term Access Enhancements (north)



METROLINX


Millcreek Dr
Argentia Rd
Derry Rd

Parking ehem drives future development potential

- The cost of structured parking is currently greater than the value that land could be sold for - i.e. it does not currently make sense to develop structured parking to free up land for development

- Every space is worth ~$4,000 in yearly revenue

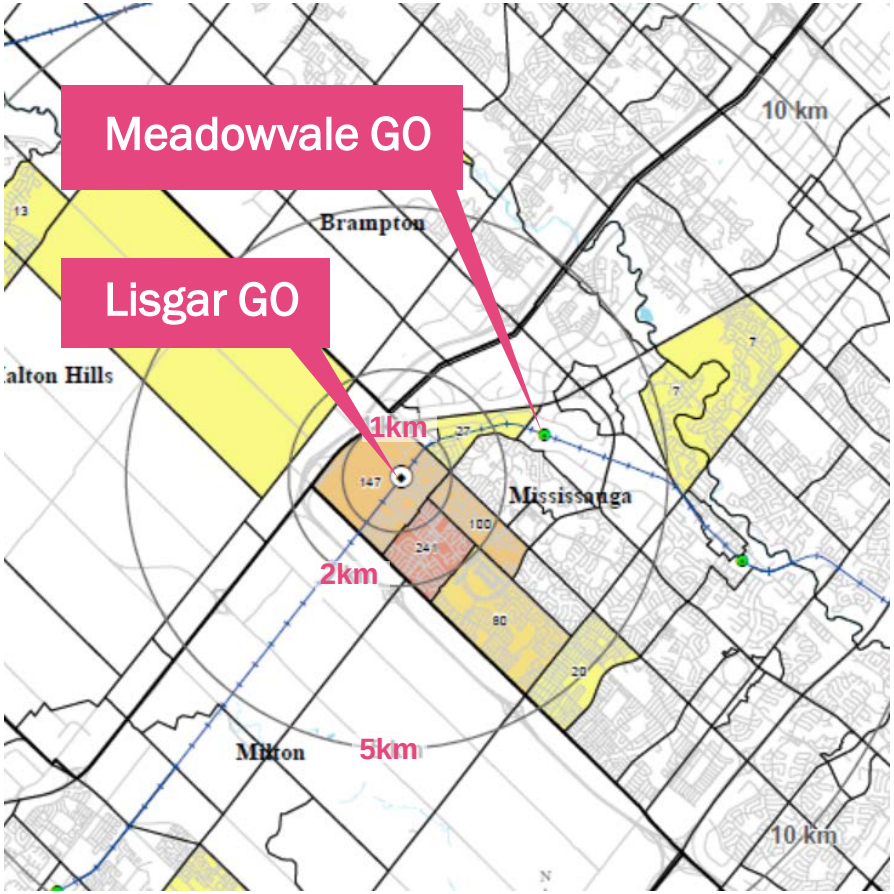
- Long term options had to be designed to accommodate the parking requirements both today and in 2031 assuming a 50% modal split

Opportunities to reallocate parking

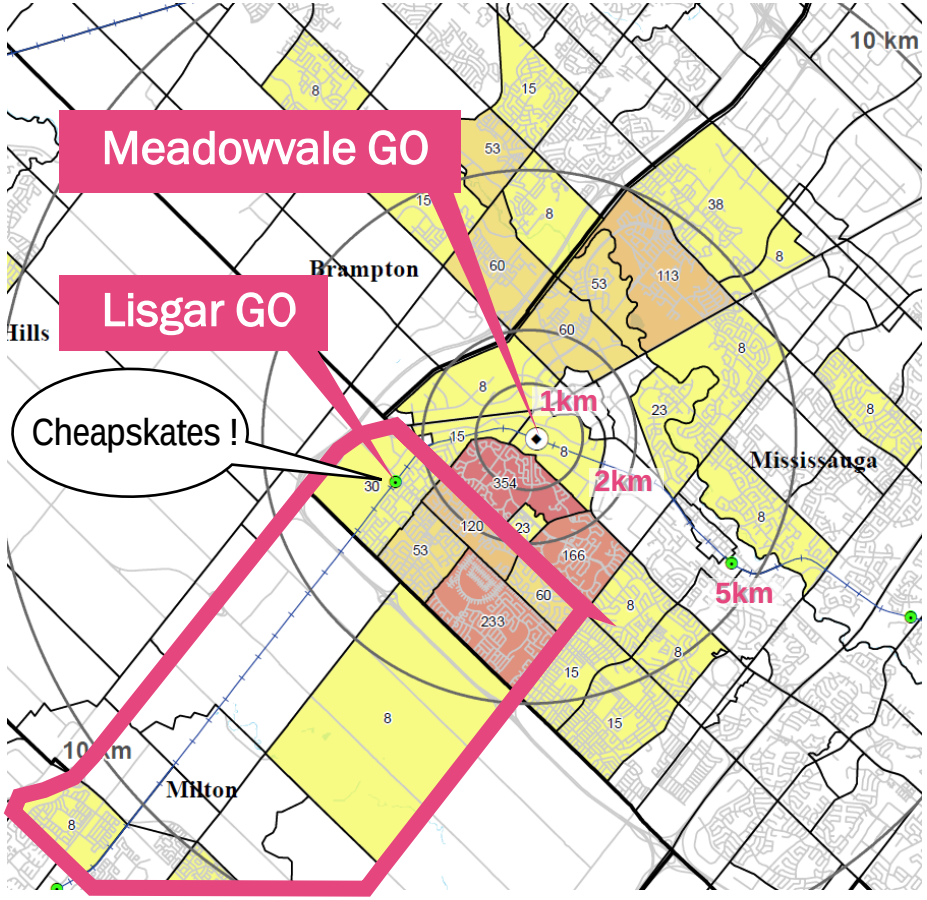
1. Explore opportunities for shared parking

Opportunities to reallocate parking

2. Create a balanced cost structure for the two Meadowvale GO stations



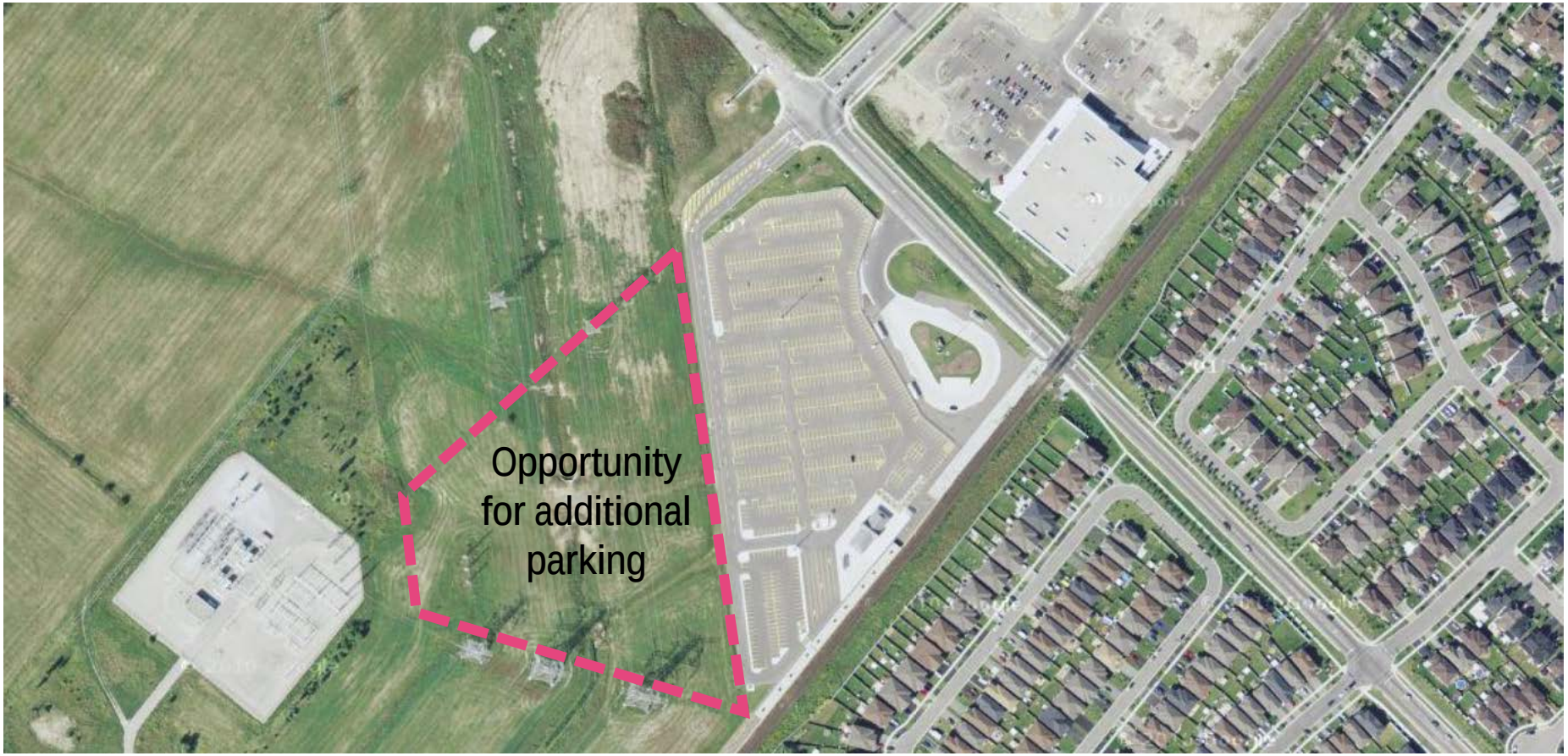
Lisgar GO Catchment



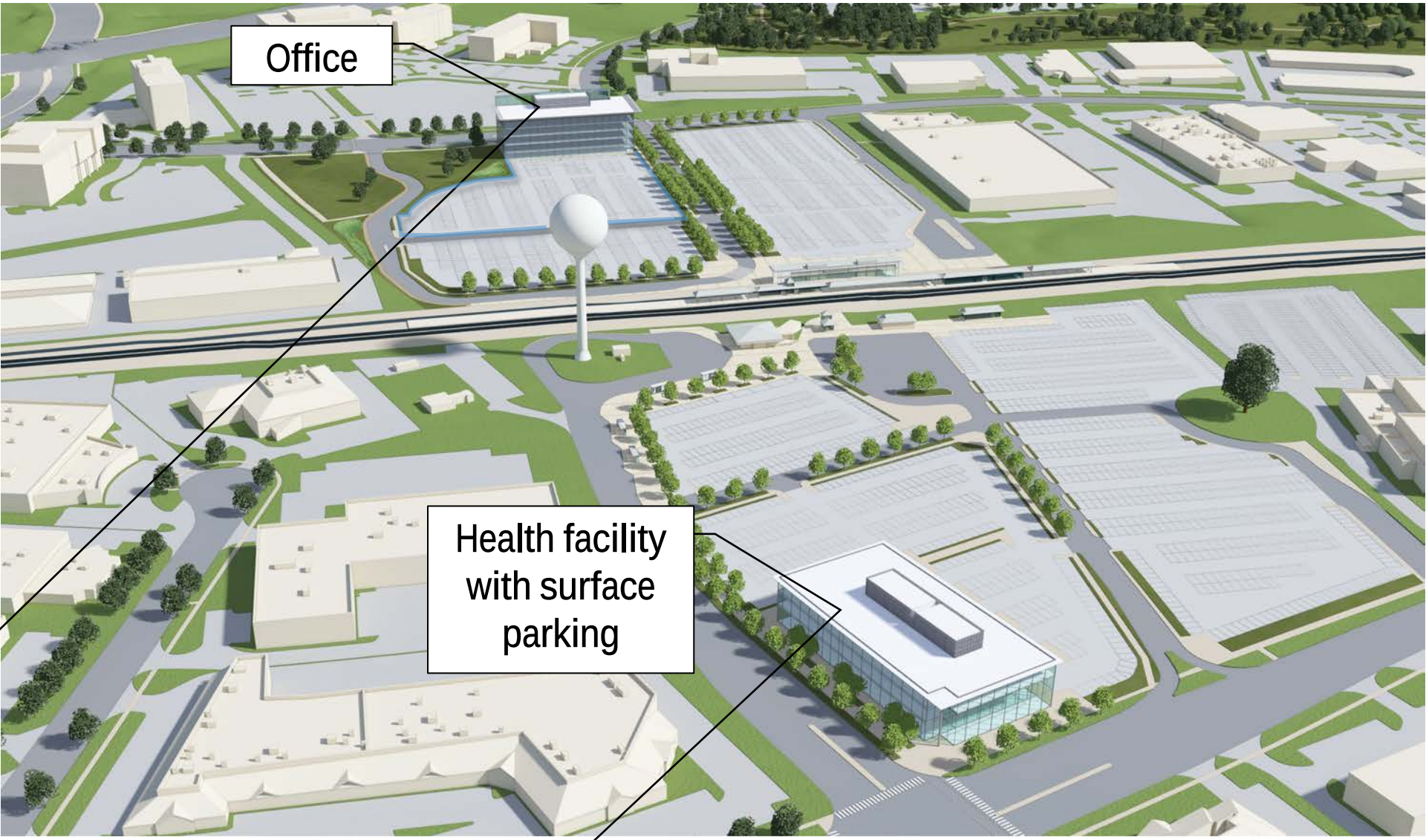
Meadowvale GO Catchment

Opportunities to reallocate parking

2. Create a balanced cost structure for the two Meadowvale stations



Intensification of the station over time



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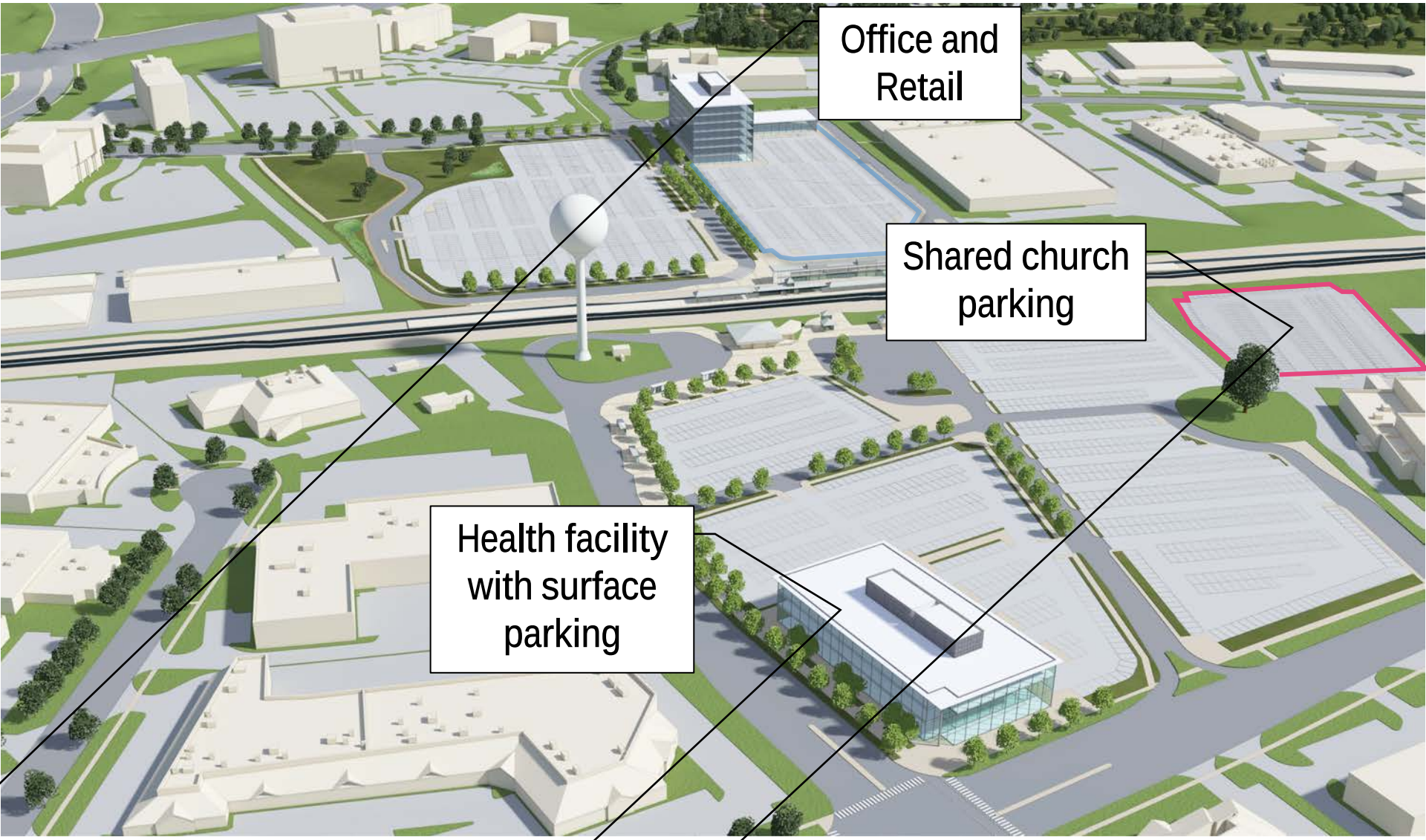

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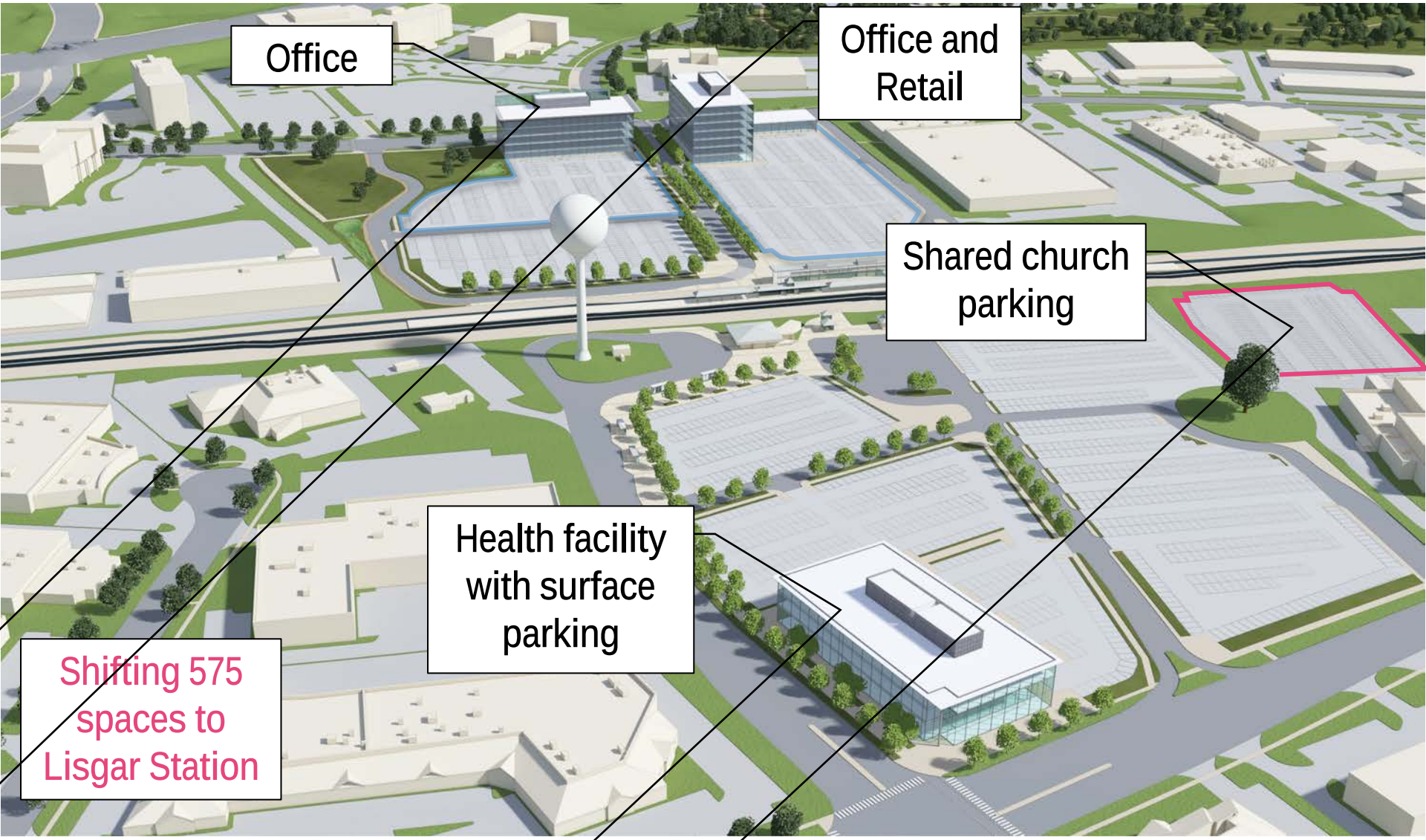

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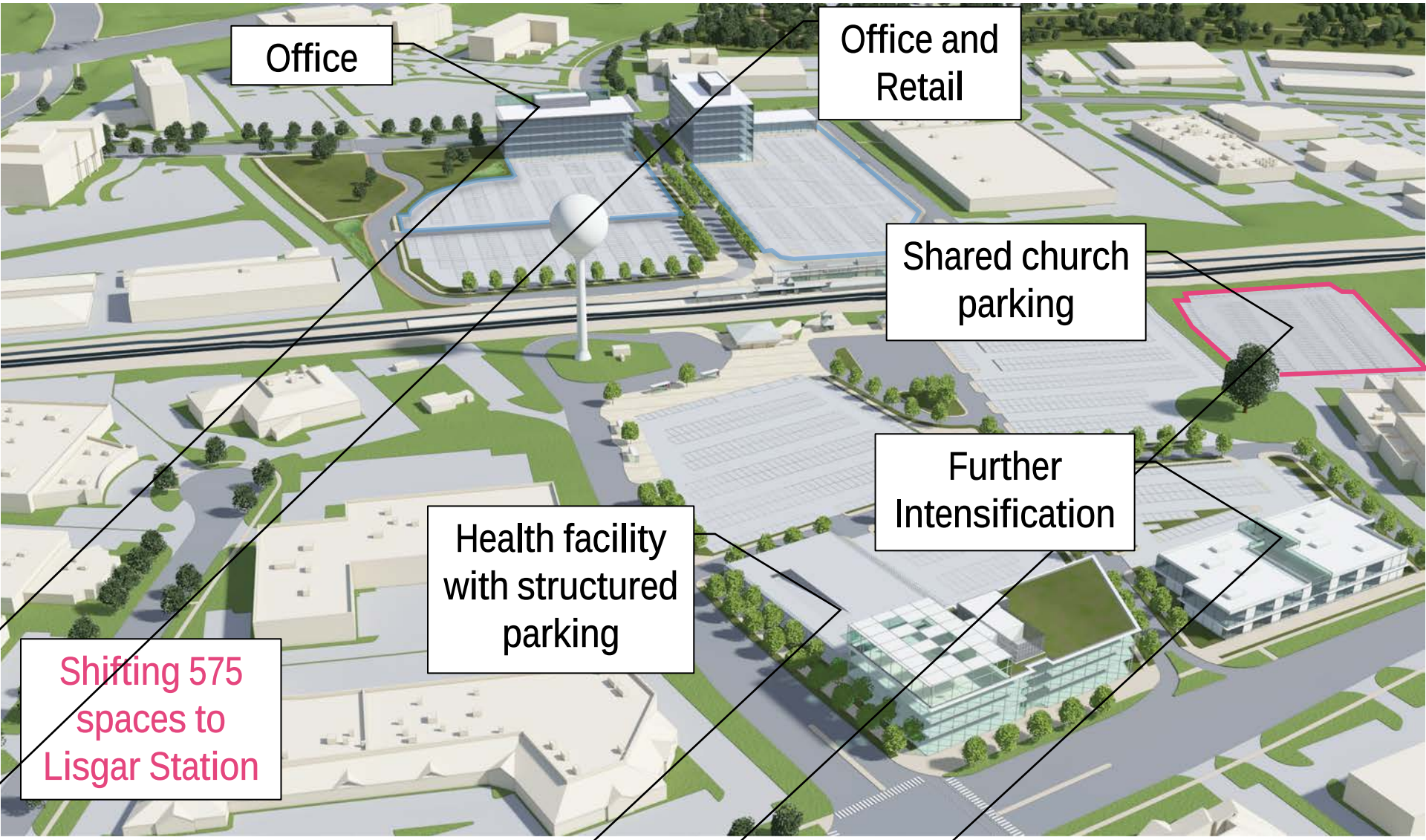
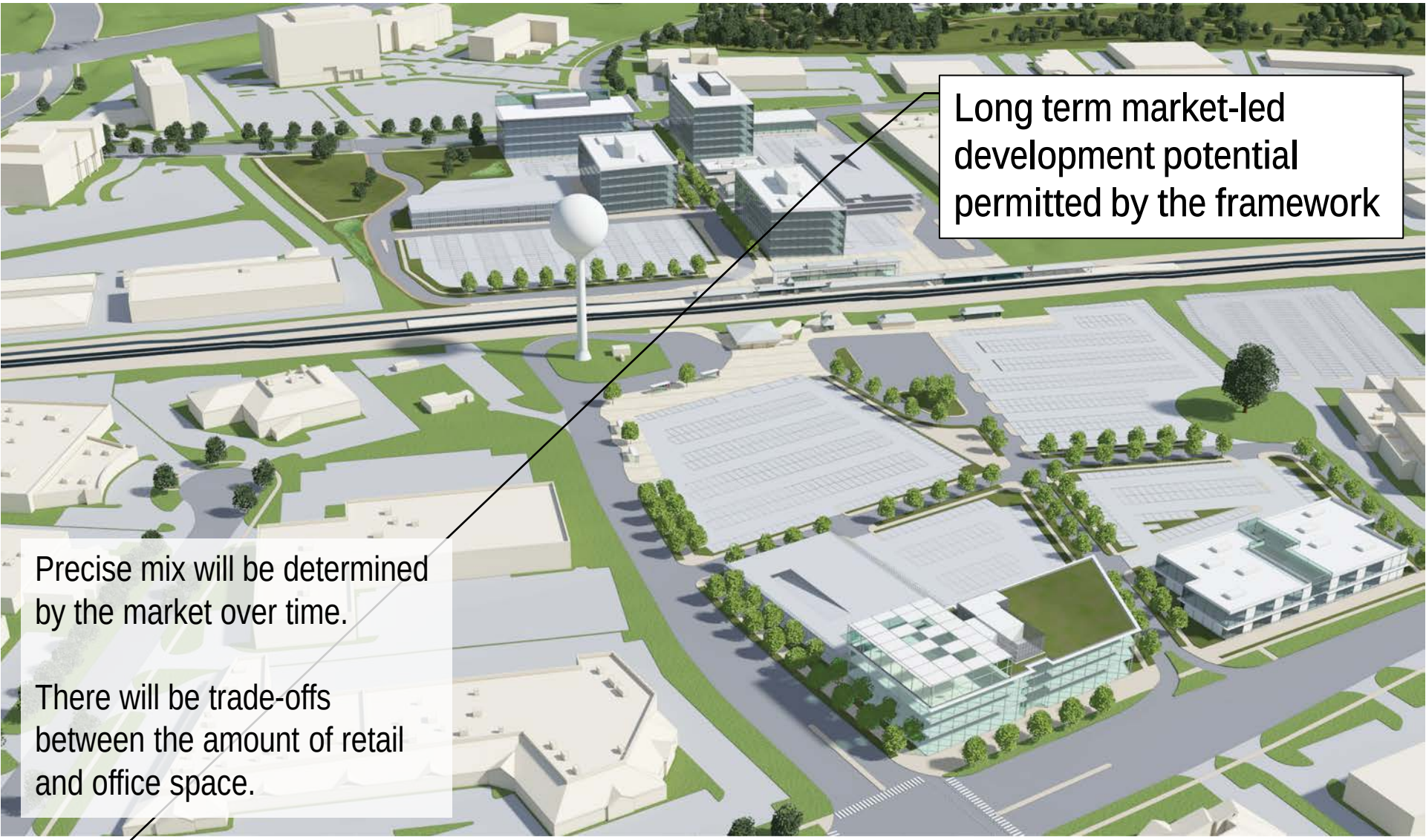


Intensification of the station over time



Intensification of the station over time

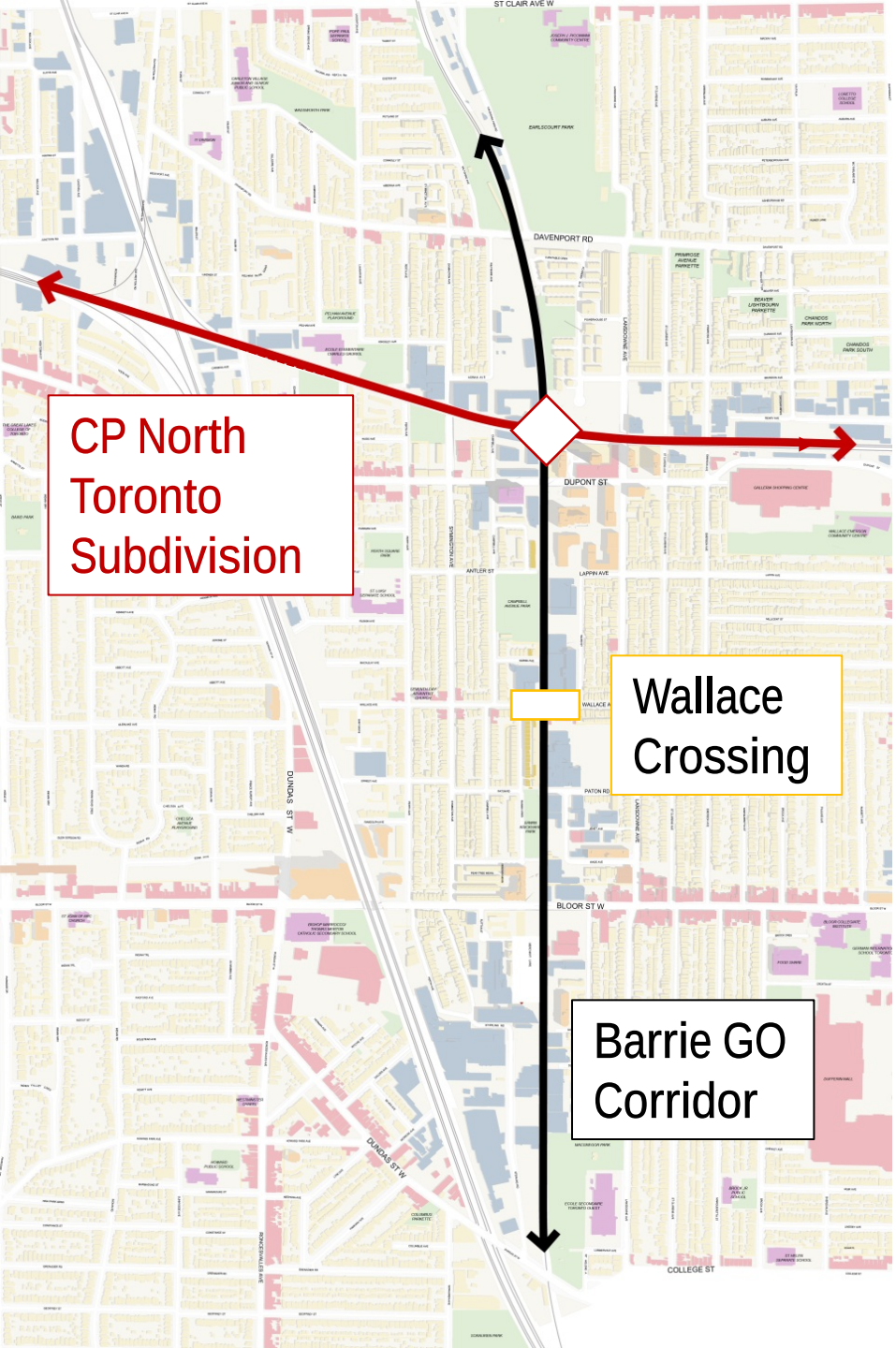
Metrolinx Transit Rail Parking and Station Access Strategy

- Update of the existing access strategy in response to RER
- Informed by best practice precedents
- System-wide perspective
- Focus on walking, cycling and transit modes

- What is required to integrate more frequent services through our communities?
- How can we minimize impacts on adjacent uses?
- Are there any opportunities to leverage the transit improvements for improved active mobility, place-making and city-building?

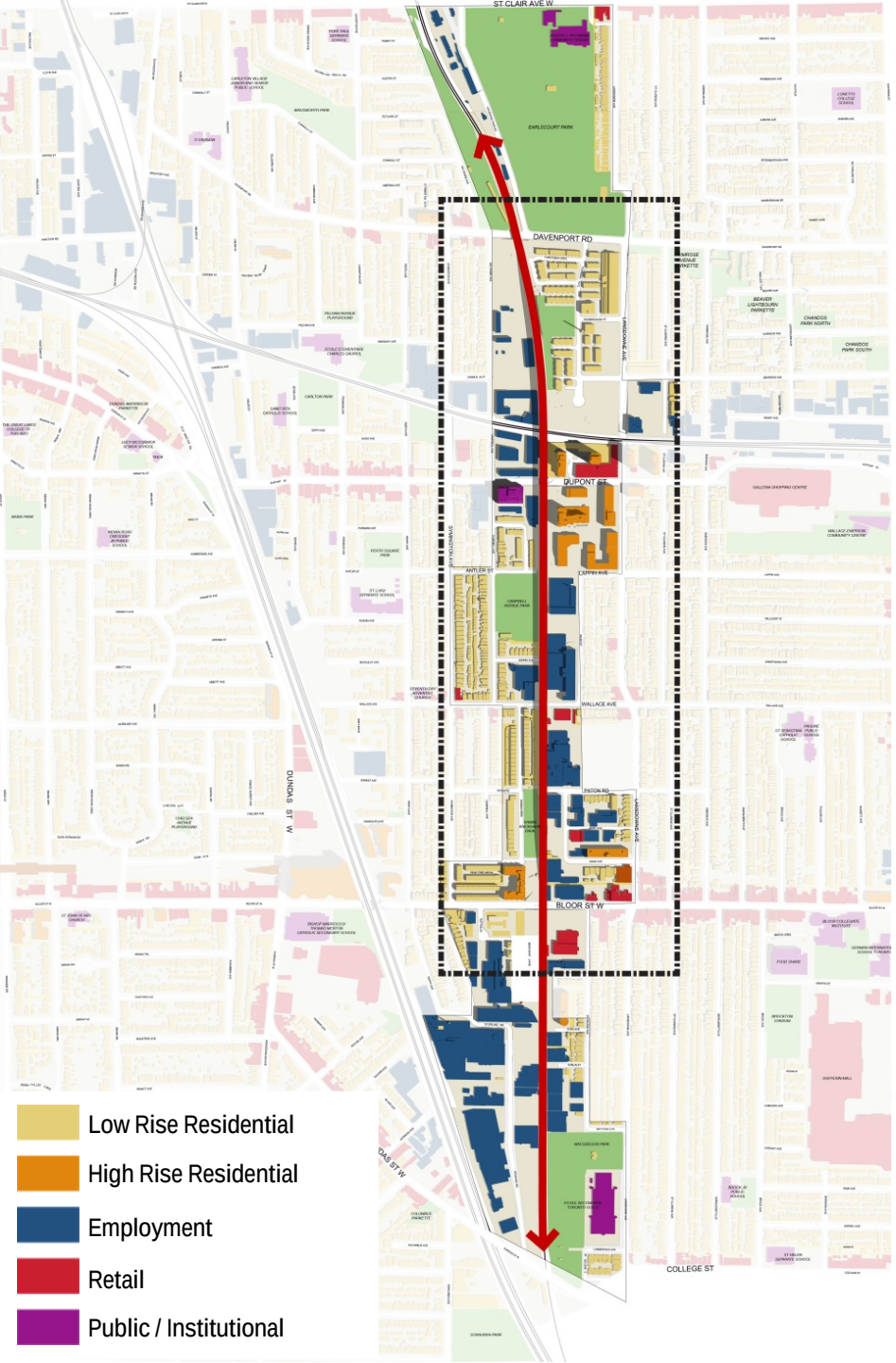
What does it mean for GO Transit corridors?

Davenport Diamond Community Rail Overpass



- GO trains operating to/from Barrie are restricted by CP trains operating on the CP North Toronto Subdivision that cross over the diamond.
- The street level crossing of Wallace creates an additional point of conflict and is disrupting east-west connectivity
- Disruptions will increase with the planned RER improvements

An urban context



Industrial

Neighbourhood

High Density Housing

Parks

Neighbourhood Retail

Office


CP North Toronto Subdivision
Barrie GO Corridor
Earlscourt Park
Davenport Rd
Dupont St
Campbell Ave Park
Antler St
Wallace Ave
Symington Ave
Paton Rd
Erwin Krickhahn Park
Bloor St


CP North Toronto Subdivision
Barrie GO Corridor
MSE Wall
Girder Bridge
MSE Wall
Earlscourt Park
Davenport Rd
Dupont St
Antler St
Campbell Ave Park
Wallace Ave
Symington Ave
Paton Rd
Erwin Krickhahn Park
Bloor St


Earlscourt Park
Davenport Rd
Dupont St
Campbell Ave Park
Lansdowne Ave
Antler St
Wallace Ave
Symington Ave
Paton Rd
Erwin Krickhahn Park


Earlscourt Park
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Earlscourt Park
Davenport Rd
Dupont St
Antler St
Campbell Ave Park
Lansdowne Ave
Wallace Ave
Symington Ave
Paton Rd
Erwin Krickhahn Park

Campbell Park 2015

Campbell Park 2017

Strategies

- Understand the implications of other alternatives
- Explore opportunities to better integrate the overpass into the community
- Increase community engagement to provide input into the design of the overpass

$140 Million

$357 Million

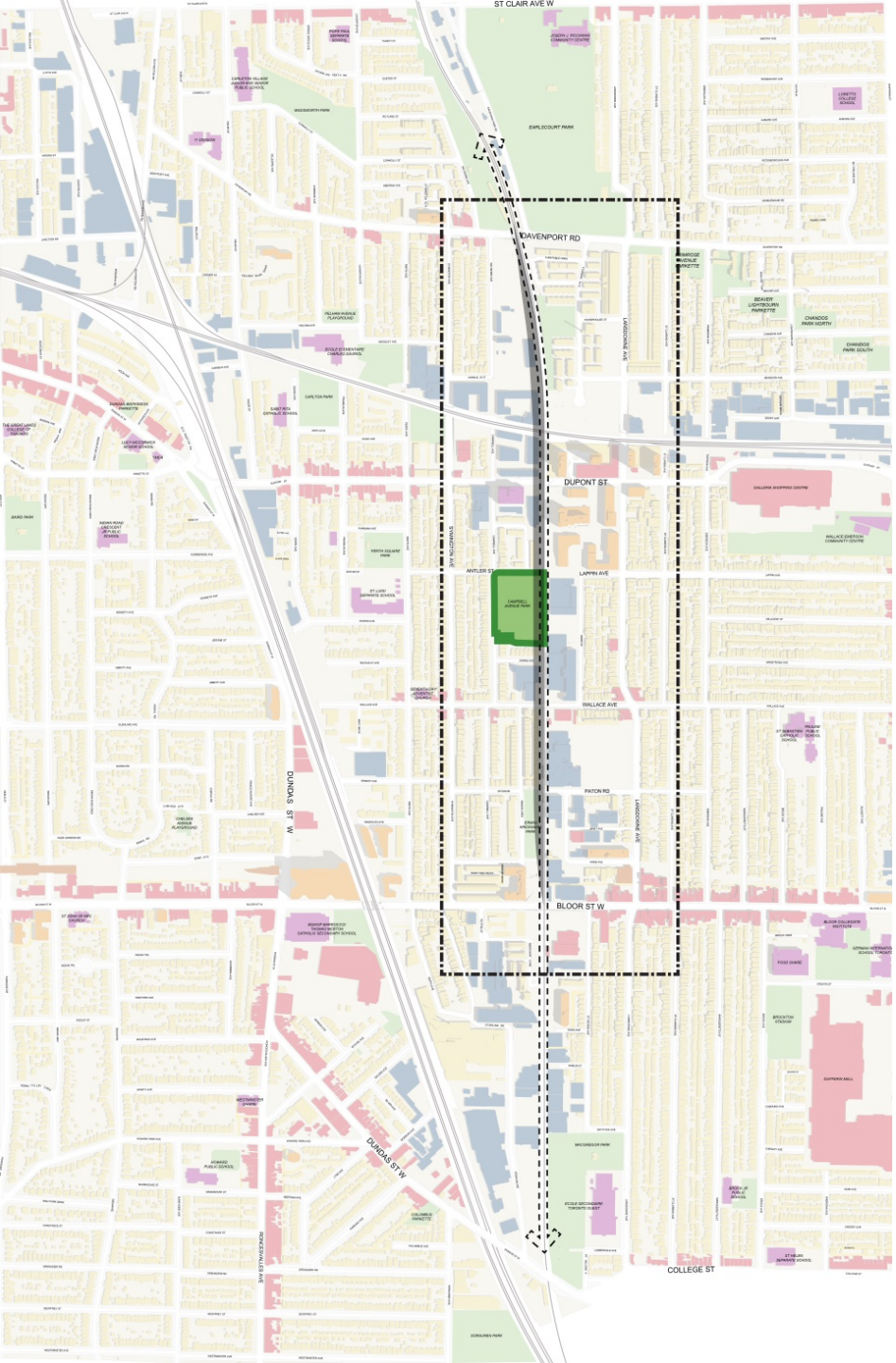
$620 Million

Options Were Assessed Against 5 Questions

1. Do the options support the regional transit network and a new station at Bloor Street?
2. How much is it expected to cost?
3. How will construction impact the community?
4. What will the long-term impacts be on the neighbourhood?
5. What are the long-term opportunities for the neighbourhood?

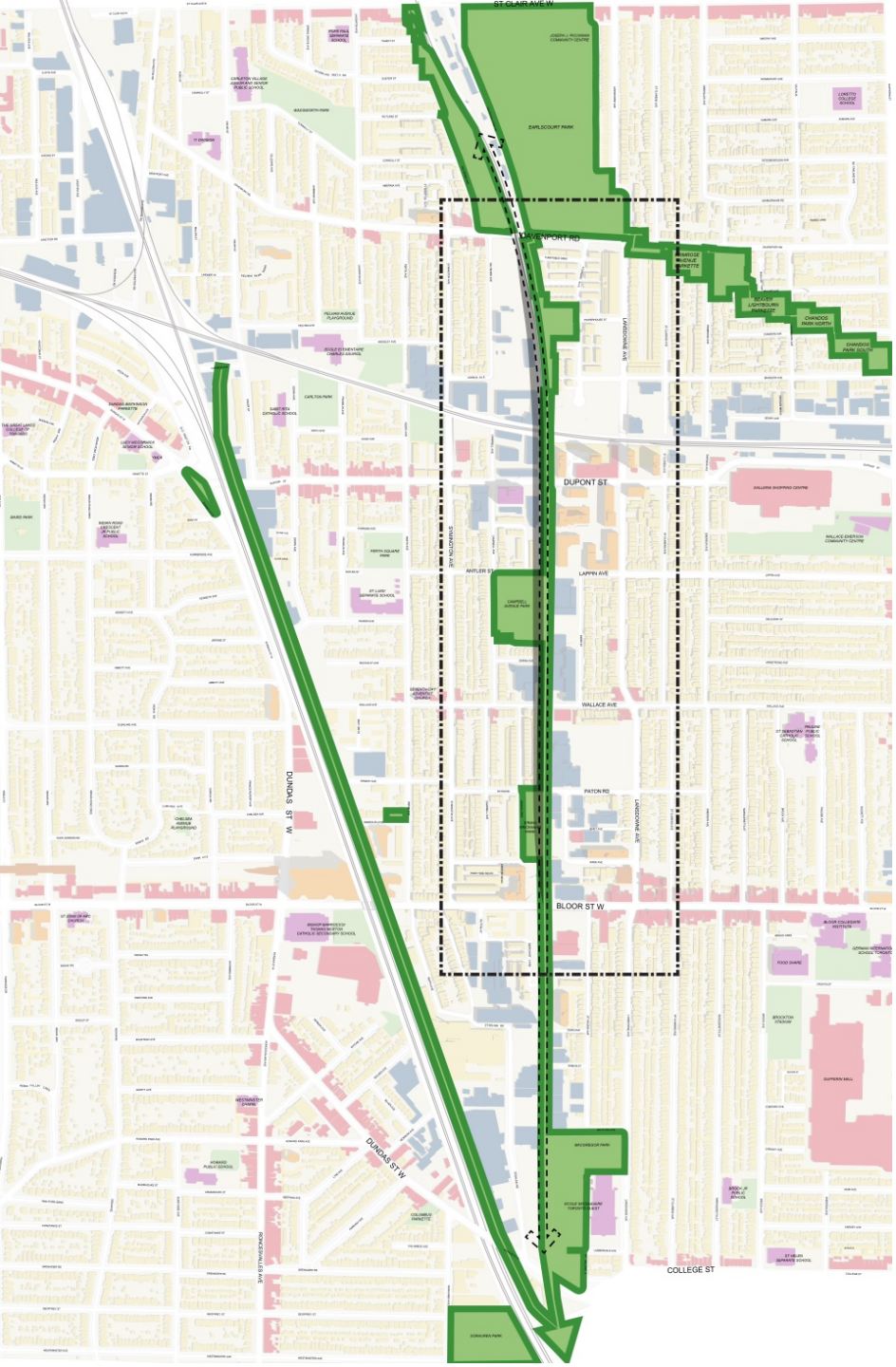
Opportunities to better integrate the structure

Expanding park space and providing more active uses



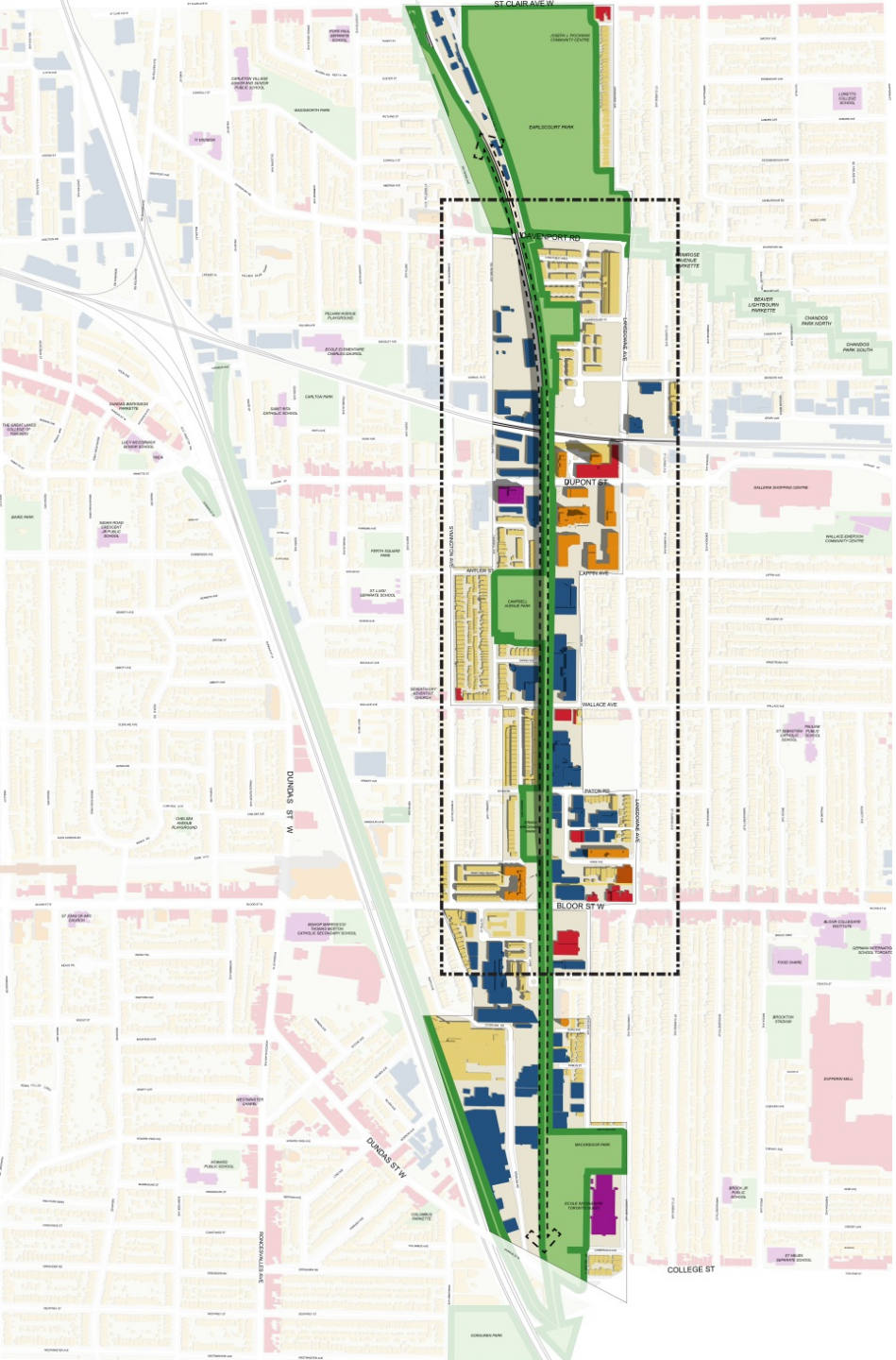
Opportunities to better integrate the structure

Creating an expanded interconnected network of parks and trails



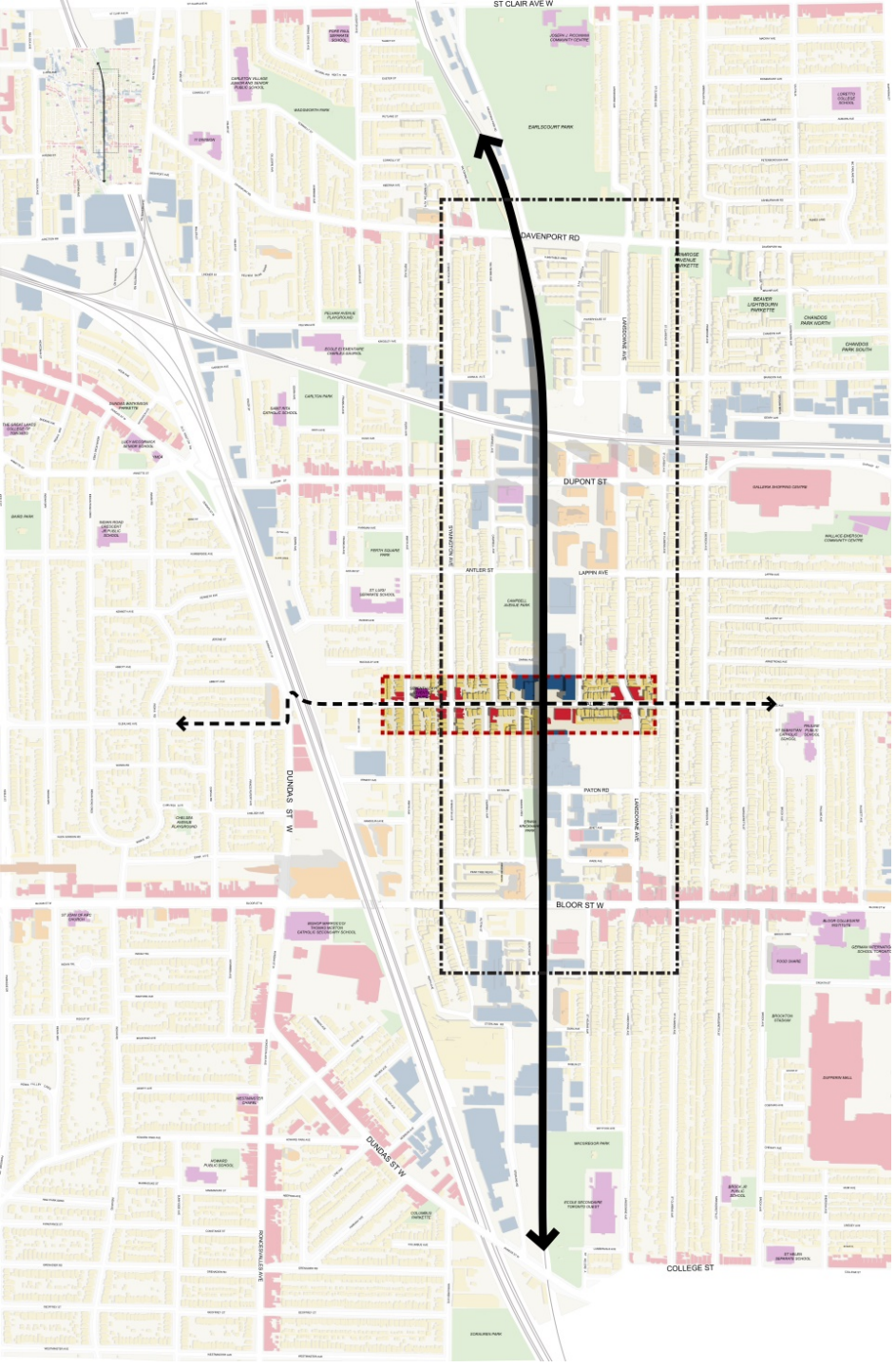
Opportunities to better integrate the structure

Linking diverse places



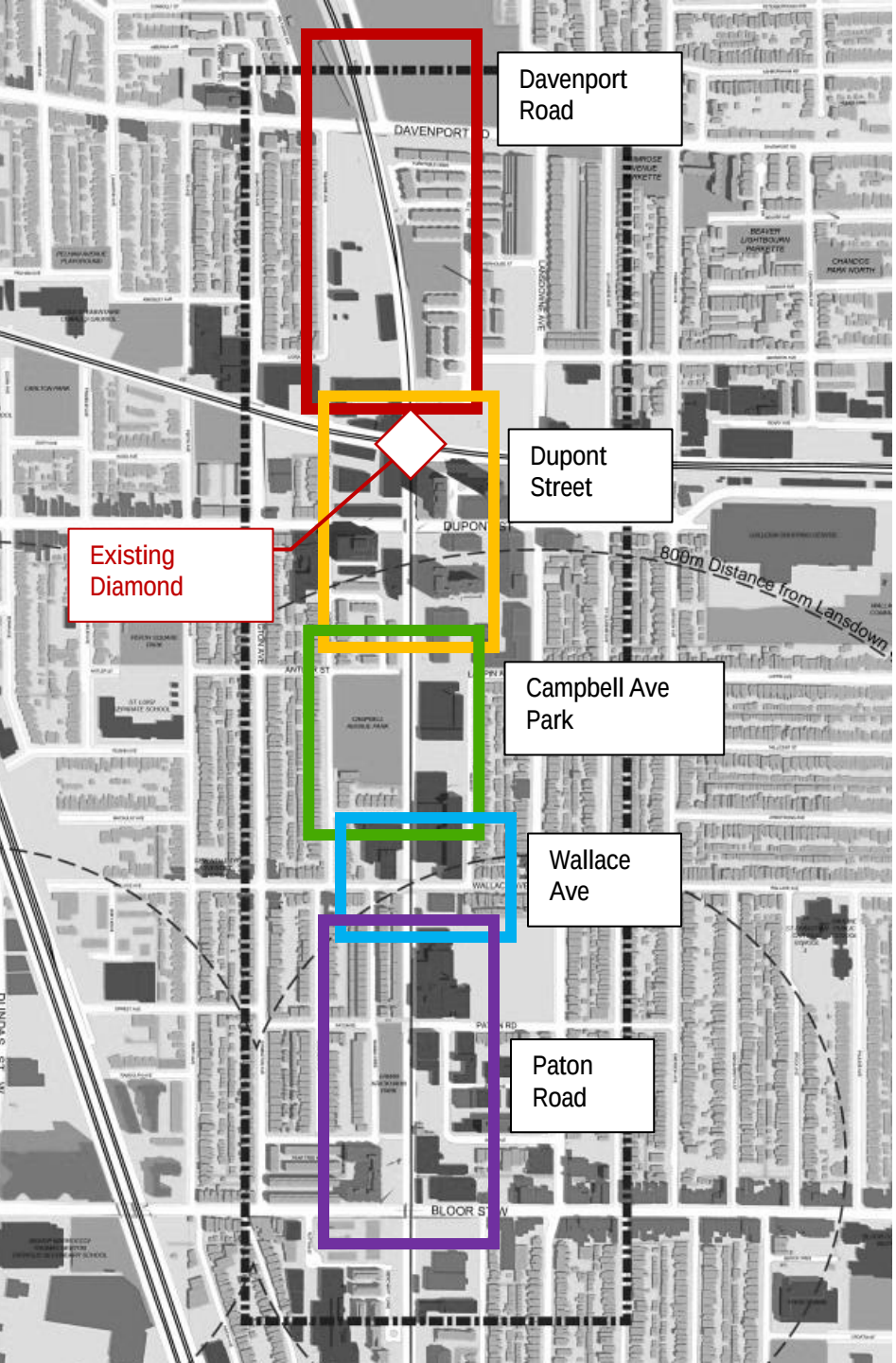
Opportunities to better integrate the structure

New uses at strategic locations to bridge the gap



Opportunities to better integrate the structure

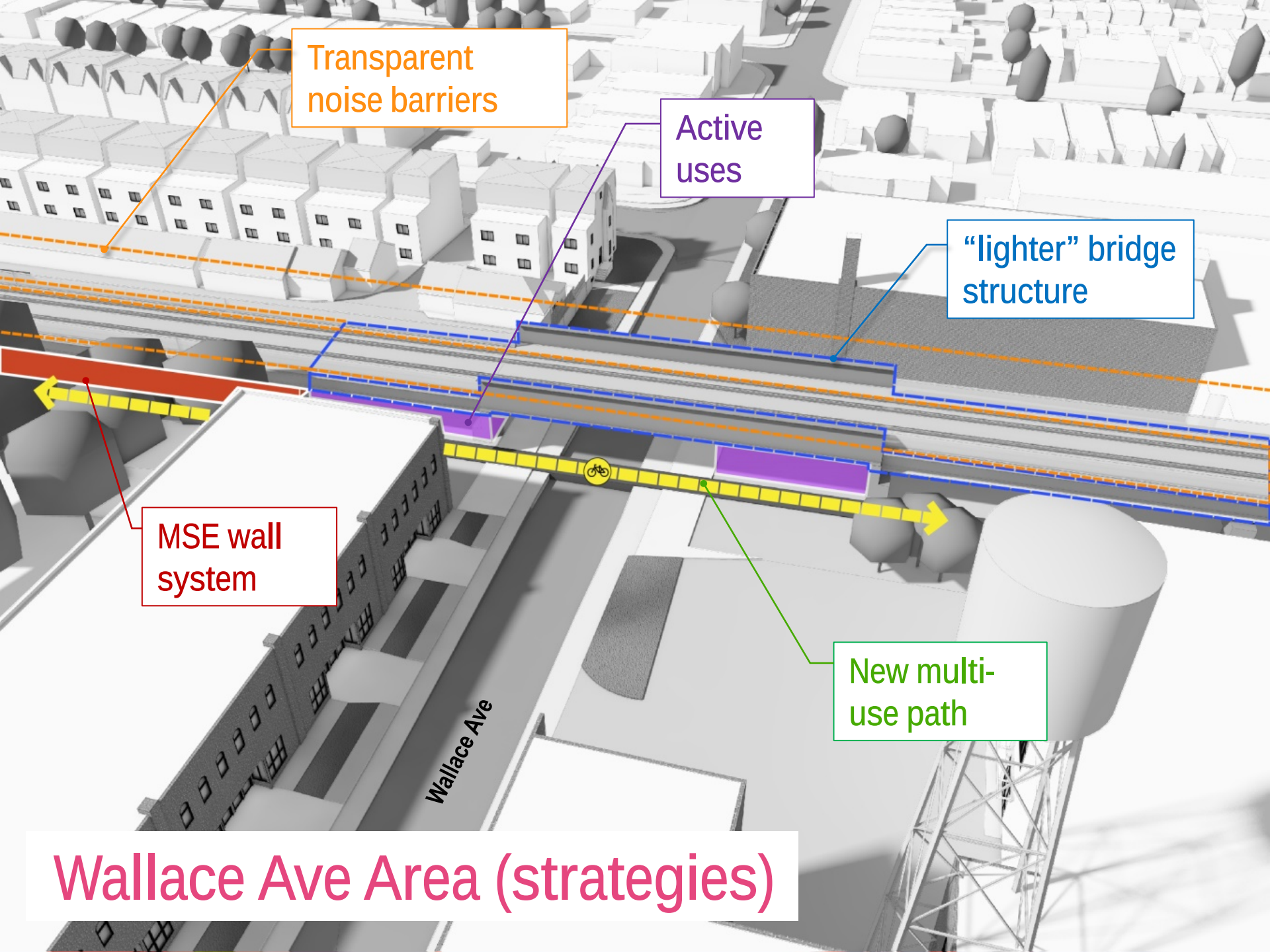
Celebrating the structure with light



5 Zones of Opportunity

1. Davenport Road
2. Dupont Street
3. Campbell Park
4. Wallace Ave
5. Paton Road

Wallace Ave Area (proposed)



Wallace Ave Area (strategies)

Davenport Residents' Reference Panel

- Help ensure that the guideway brings public benefit
- 35-member panel
- 4 full Saturday sessions
- 1,500 collective hours
- Expanded upon the initial planning and design analysis completed by Urban Strategies
- 89 recommendations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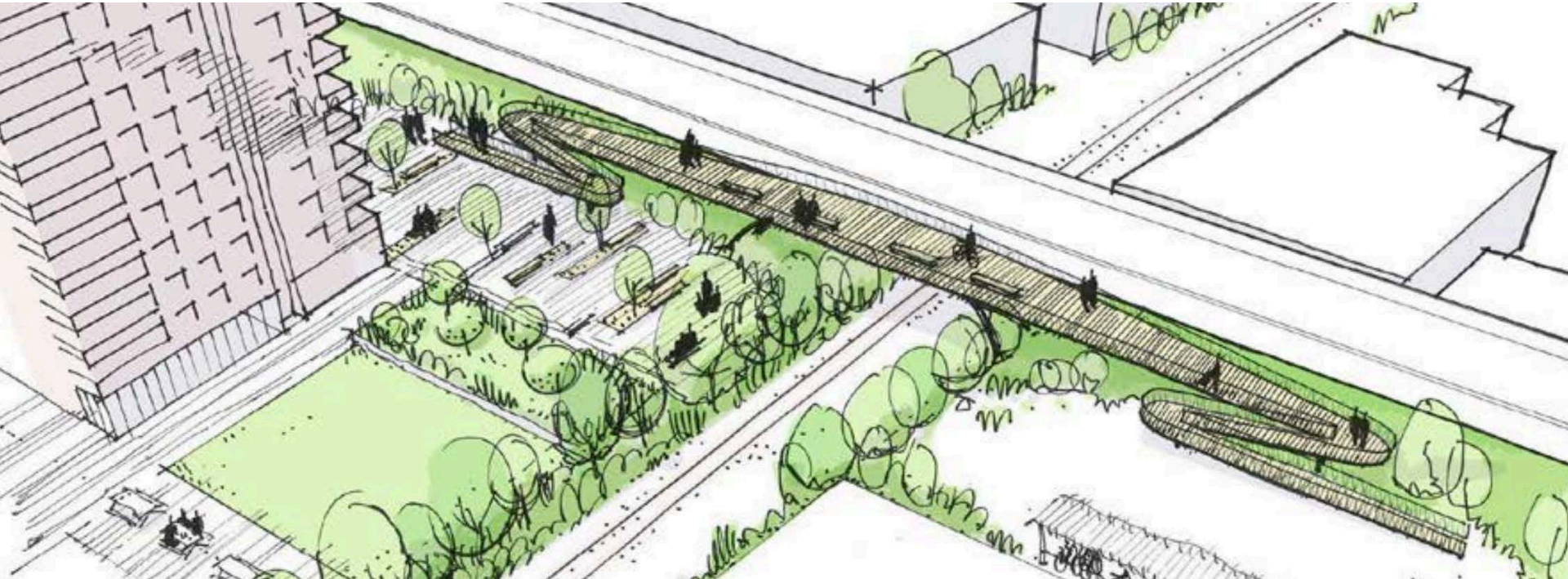
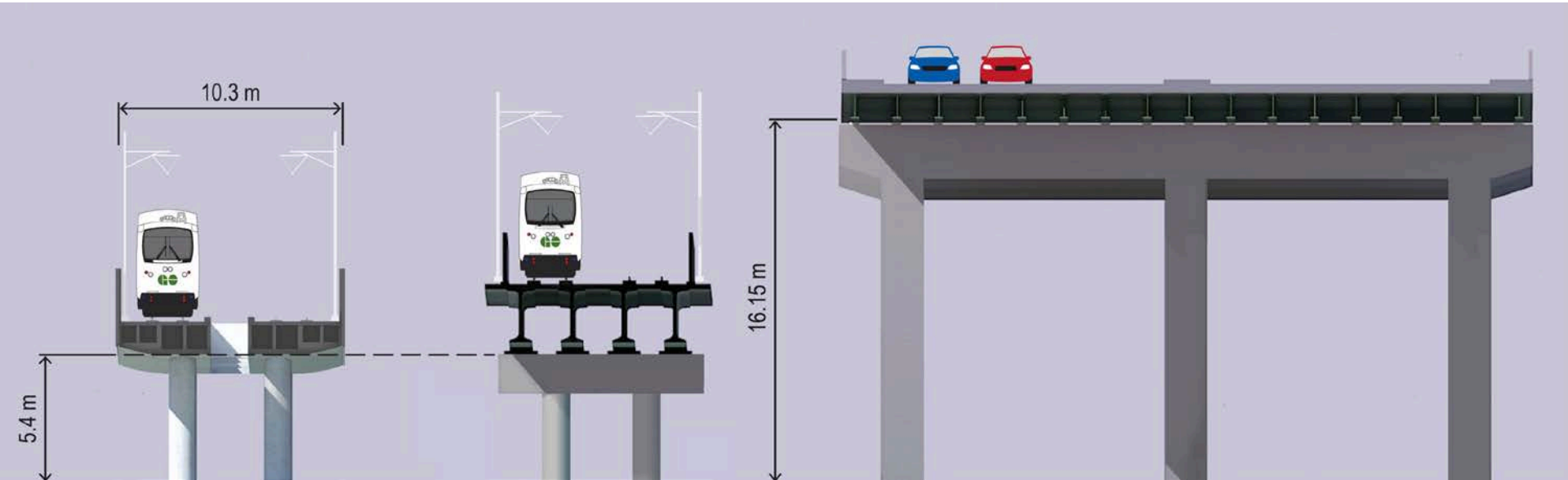


Design Solution Engineered Solution Gardiner Expressway




~~$140 Million~~
$210 Million

David Sisam: Architect, Principal – Montgomery Sisam Architects

"…compelling case for raised tracks…"; "Noise is the big issue, not visual"; "Design is very good, excellent"

Cal Brook: Planner, Architect, Principal – Brook McIlroy

"(Overpass) preferable to tunnel and trench"; "responsible thing to do from a financial perspective"; "Great opportunity to bring the community together"

Mark Langridge, Partner – DTAH

"A lot of design effort to make the overpass into a positive community asset"; "Real City building"; "Not a typical engineering approach"; "Beautiful"

Michael Leckman (Vice Chair): Architect, Principal – Diamond and Schmitt

"A bridge can be a unifier and not a barrier"; "Need unity in approach with community, City and Metrolinx"; "Metrolinx gaining a reputation to show the way with design excellence"

So What's Next?

- New Station Assessment (120 → 50 → 15)

Toronto GO

3 mile to 4 mile spacing

London Overground

1/4mile to ½ mile spacing

So What's Next?

- Regional Wayfinding

Thanks

Craig Lametti

URBAN STRATEGIES INC.