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# EGLINTON CROSSTOWN LRT

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Chaplin Station Open House

September 14, 2016



**METROLINX**

An agency of the Government of Ontario

INFORMATION IS CURRENT AS OF  
SEPTEMBER 14, 2016  
AND SUBJECT TO CHANGE

# How we're building Chaplin Station - Construction Overview

## Distinct phases of construction:

- Preparatory works
- Utility relocations
- Support of excavation (shoring)
- Roof slab construction
- Road restoration
- Deep excavation
- Underground station construction
- Track work and systems installation
- Station structure construction
- Traction power system
- Signalling system
- Testing and commissioning



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# How we're building Chaplin Station – Preparatory Works

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Since fall 2015, CTS has been preparing the line for underground stations and stops construction.

## **Preparatory activities:**

- Pre-construction surveys and seismic testing
- Assess soil condition and measure water levels
- Locate and mark underground utilities
- Clearing/grubbing of shrubs/trees in the future station area
- Demolish existing buildings and infrastructure in the future station area
- Remove street furniture  
(i.e. benches, bus shelters, planters, garbage bins)

# How we're building Chaplin Station – Station Construction

- A modified version of the cut-and-cover method, whereby following support of excavation, a concrete roof slab is constructed and placed over top of the excavated area, the roadway is restored and work continues safely below ground
- The station roof slab is used to support utilities and the roadway
- Benefits include reduction in road disruption (compared to tradition method), increased utility stability and improved safety and working conditions



# How we're building Chaplin Station – Station Construction (cont'd)

## Reinstate Roadway

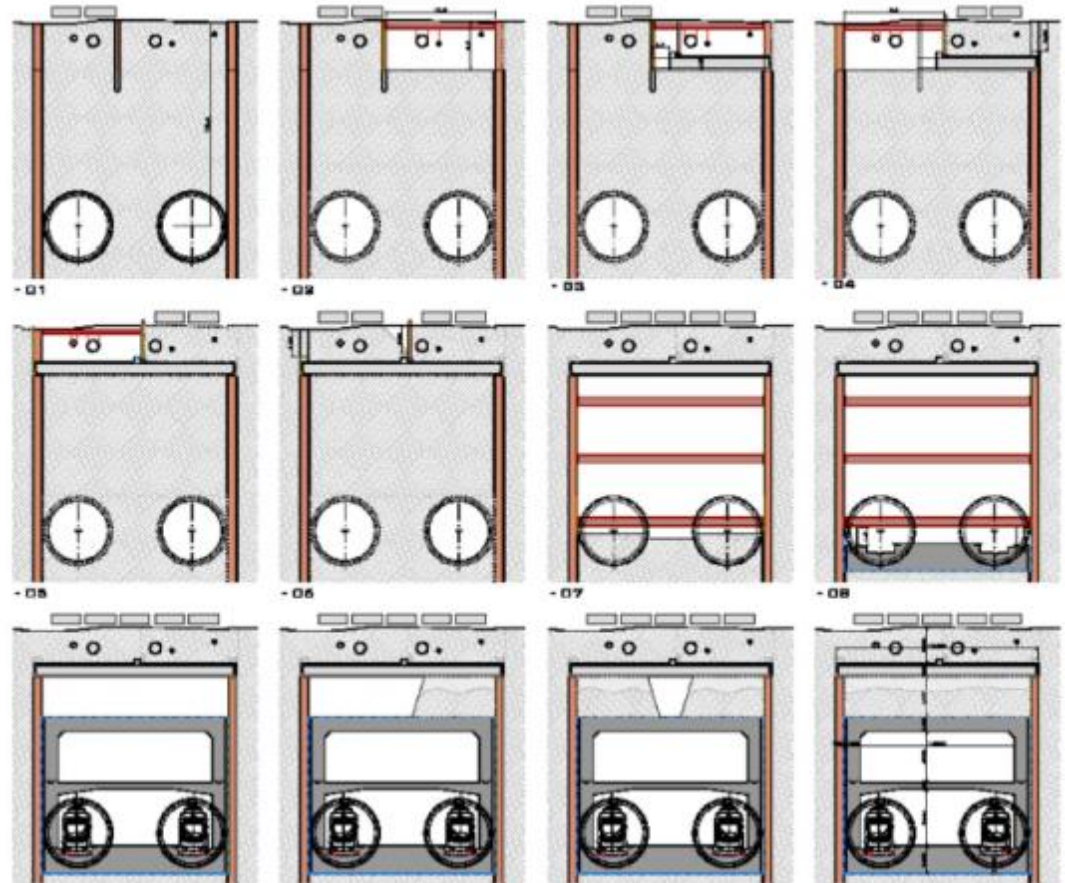
- A concrete roof slab will be constructed over top of the excavated area, utilities will be buried, and the roadway will be reinstated above the roof slab.

## Excavation

- Once the roadway is reinstated, crews will work safely beneath the roadway to construct the station box, build the platform and install rail infrastructure.

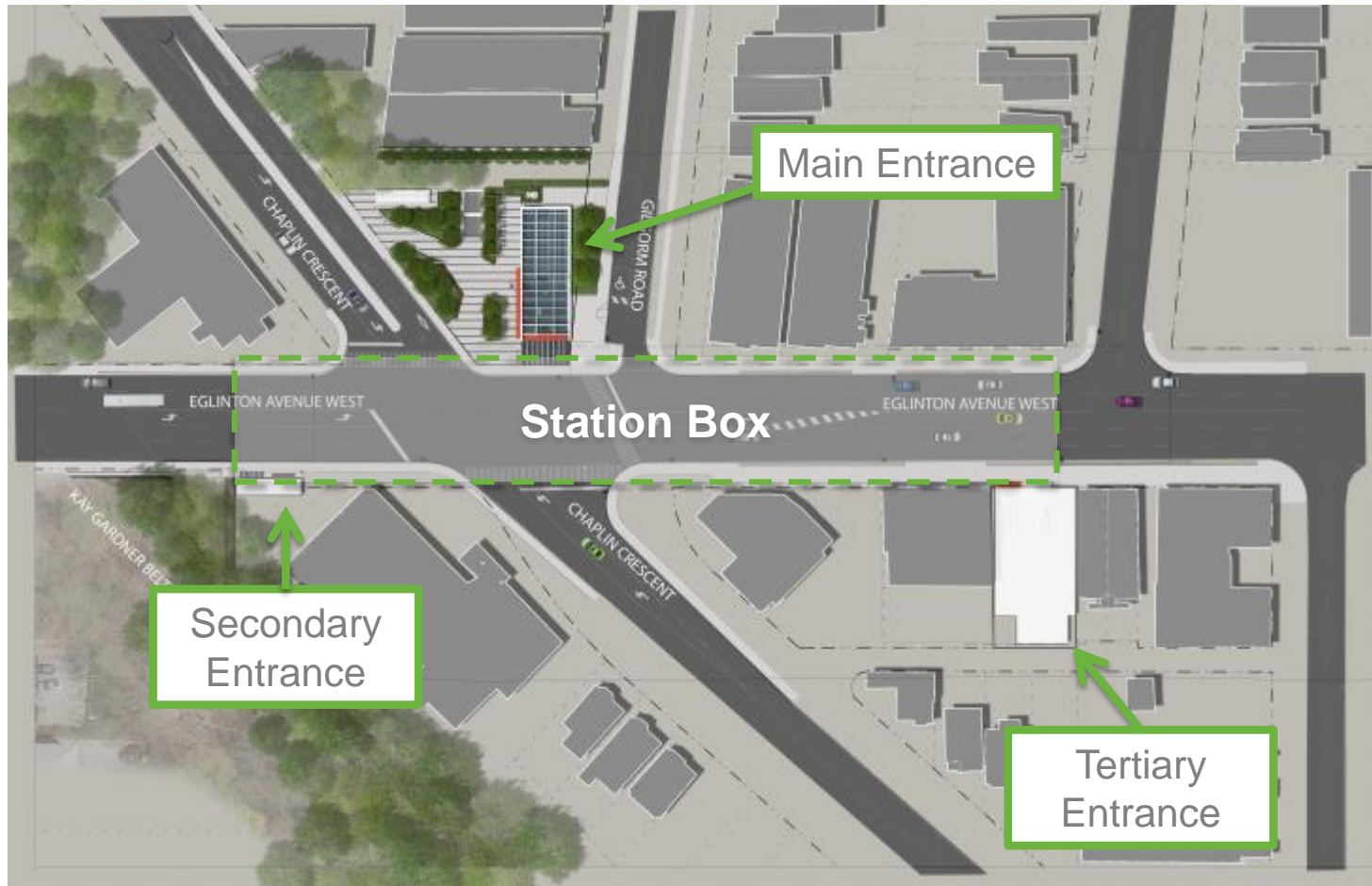
## Architectural & Building Work

- Construction of the station entrance structures will begin in 2018.





# Chaplin Station Map



# Chaplin Station Main Entrance





# Chaplin Station Secondary Entrance



# Chaplin Station Tertiary Entrance





# Chaplin Station Aerial View





# Chaplin Station Exterior Plaza



# Chaplin Station Unique Design Concepts

- Main station entrance is located at the northeast corner of Chaplin Crescent and Eglinton Avenue West
- Secondary station entrance is located at the southwest corner
- Tertiary station entrance is located east of Chaplin Crescent on Eglinton Avenue West, adjacent the former Toronto Fire Hall
- The main and secondary station entrances provide a gateway to the Chaplin Parkette and Kay Gardiner Beltline Trail, respectfully
- 32 sheltered and unsheltered bike parking spots located at the main and secondary station entrances





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# Chaplin Station Tunnel Ventilation System

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- Hosts the station's Tunnel Ventilation System (TVS)
- Designed to extract and control smoke from tunnels and stations in the event of a fire
- Controls excessive air velocities and air pressure transients
- Removes heat and controls air temperature during operations
- Supplies outdoor air ventilation and facilitates contaminant removal
- Chaplin Station TVS is comprised of station fans, electrical equipment, tunnel ventilation control panels, supervisory control and data acquisition (SCADA) interface, and Tunnel Ventilation Fire Command Post
- The tunnel ventilation grates are located at grade, 12 meters west of the main station entrance

# Chaplin Station Construction Lookahead (2016 – 2017)

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## Fall 2016

- Continue installation of monitoring points
- Continue relocation of telecommunication (Bell) lines (6 weeks)
- Demolition of 641 Eglinton Avenue West (Toronto Fire Hall) to make way for the future tertiary station entrance (8 weeks)
- Relocation and reconfiguration of traffic poles and signals throughout intersection to accommodate construction staging (1 week)
- Start of support of excavation (shoring) of the main station entrance (8 weeks)
- Relocation of aerial hydro to temporary poles and underground duct bank (6 weeks)
- Relocation of a watermain on the north and south sides of Eglinton Avenue West (6 weeks)
- Replacement and relocation of a sanitary sewer on Eglinton Avenue West between Gilgorm Road and Latimer Avenue (5 weeks)

## December 2016

- Expected start of long-term shoring in the roadway, beginning on the north side of Eglinton Ave W (4 months)

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# Traffic and Pedestrian Changes

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- To accommodate utilities relocation and support of excavation (SOE) construction stages, temporary traffic changes, such as road closures, lane reductions, turn restrictions, pedestrian rerouting and bus stop relocations may be in effect
- Additionally, changes to existing traffic conditions, such as relaxation of turn restrictions or additional restrictions, may be enacted in development with local elected officials, traffic engineers and the local community

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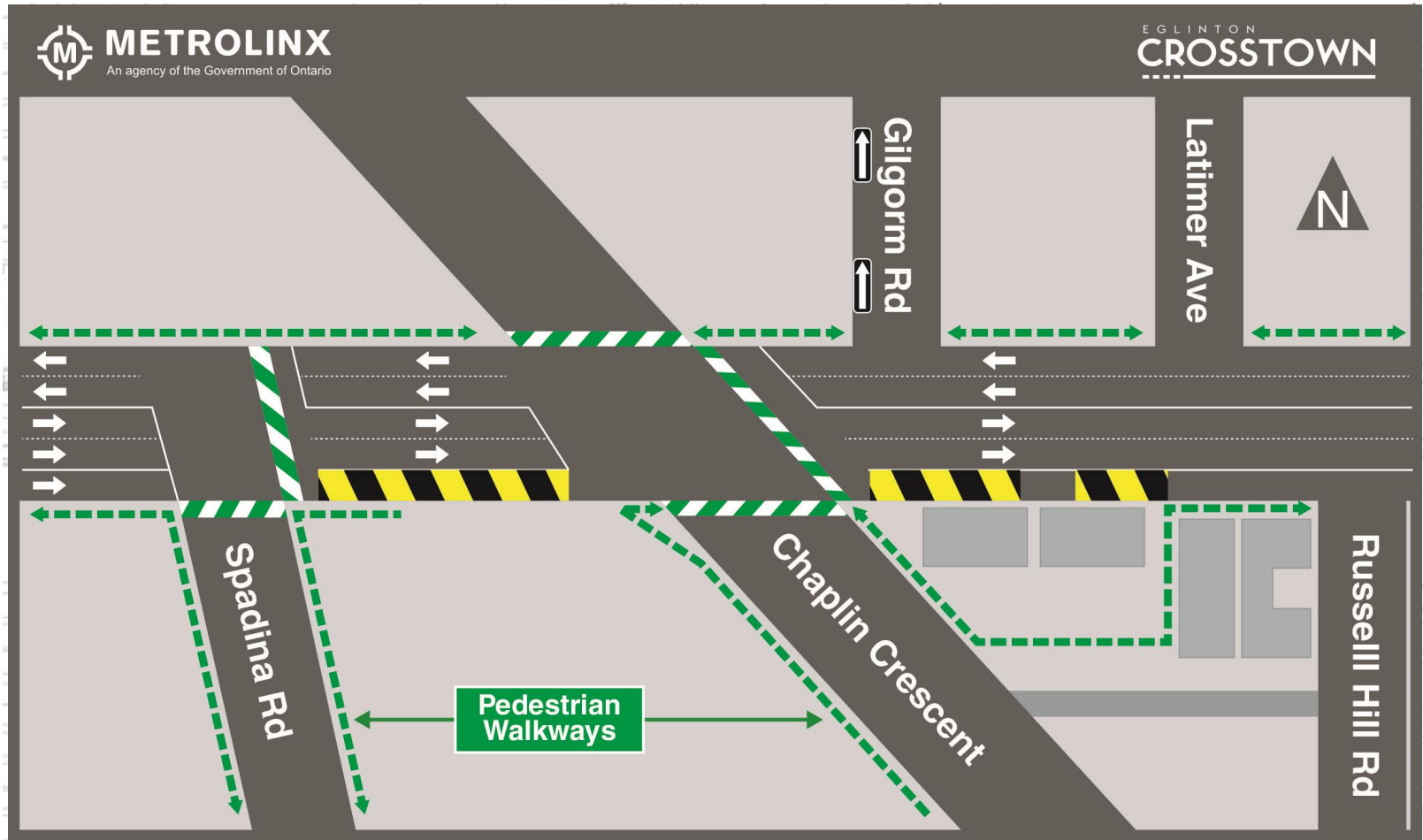
# Chaplin Station Construction Stages

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Stage	Activity	Duration	Target Start Date
1	Utilities Relocation; Shoring	8 months	Fall 2016
2	Utilities Relocation; Shoring	2 months	Spring 2017
3	Shoring	8 months	Summer 2017
4	Shoring	2 month	Fall 2017

# Bell Utilities Relocation – Current Staging Plan

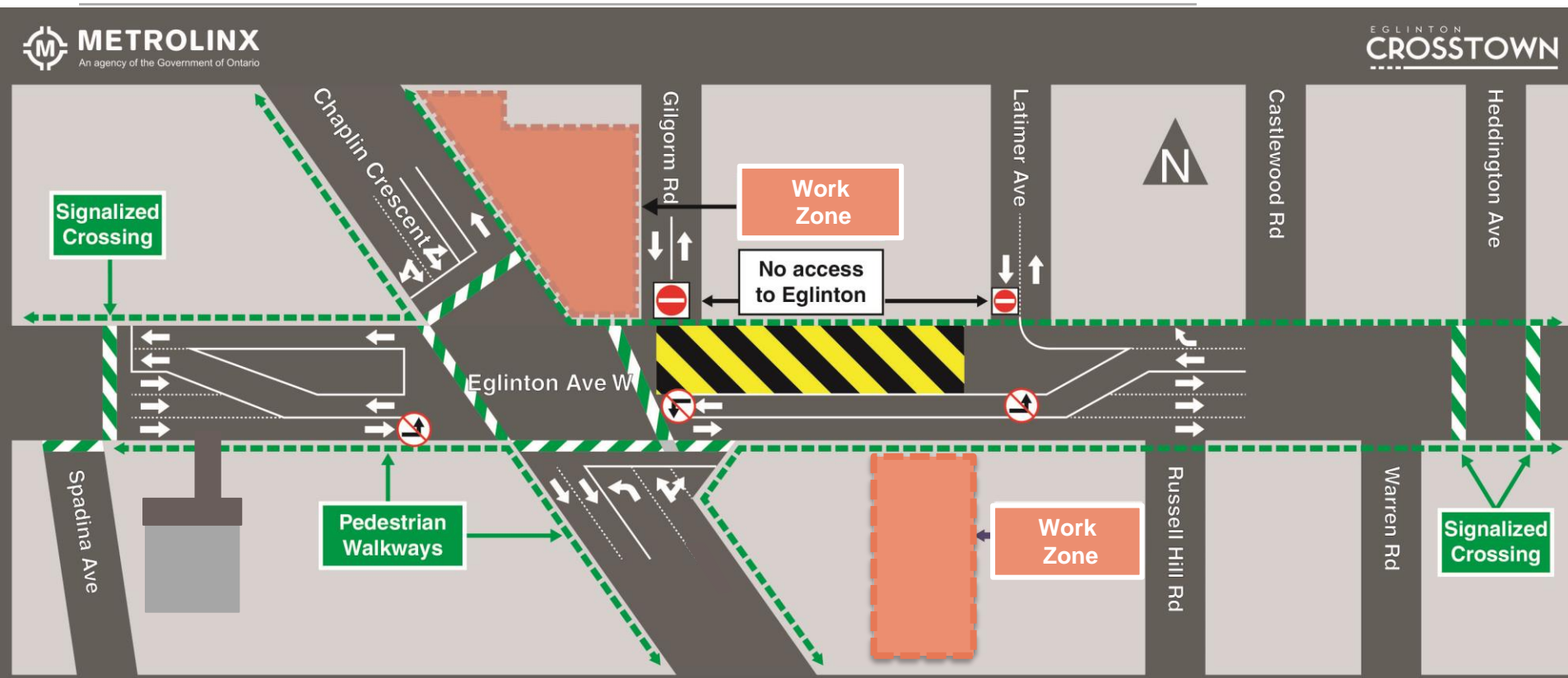
Began August 29 (7 weeks)





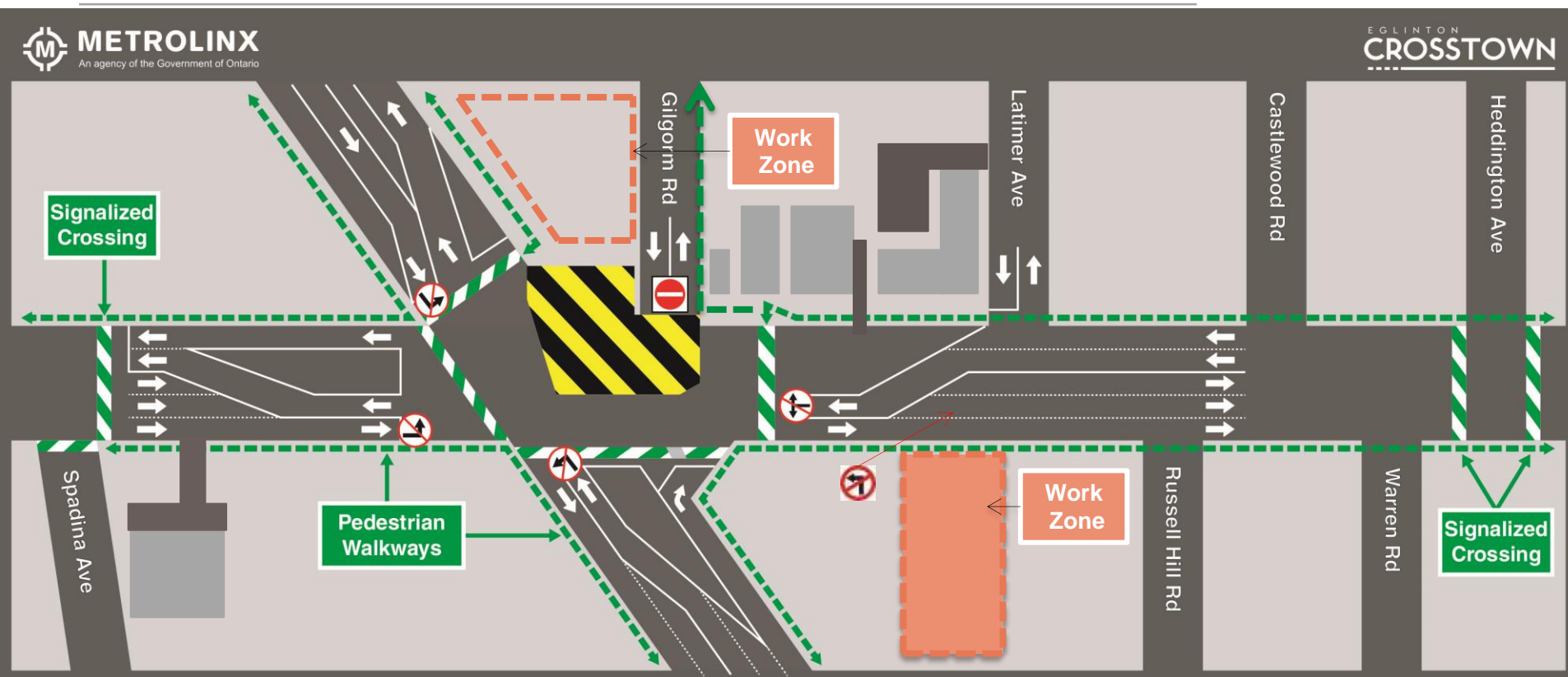
# Chaplin Station Staging Plan – Stage 1

## Beginning Fall 2016 (35 weeks)



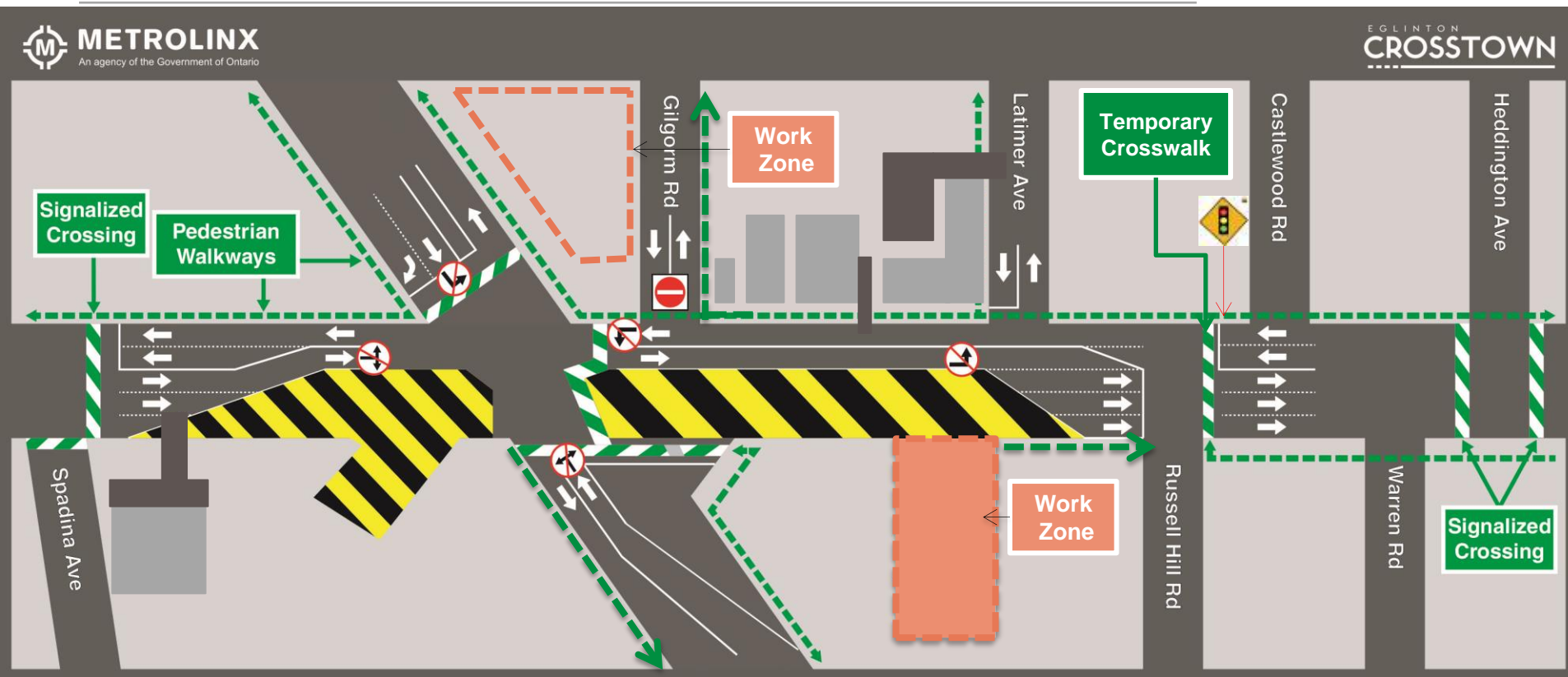
# Chaplin Station Staging Plan – Stage 2

## Beginning Spring 2017 (8 weeks)



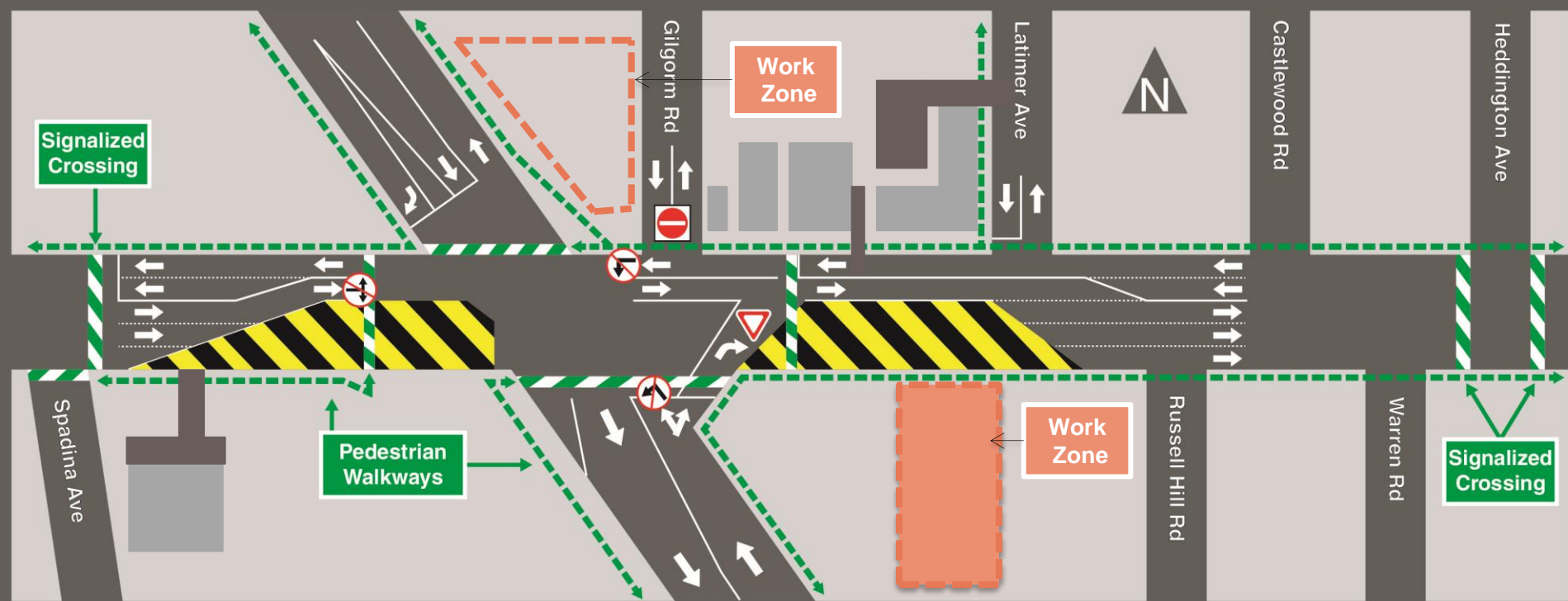
# Chaplin Station Staging Plan – Stage 3

## Beginning Summer 2017 (23 weeks)



# Chaplin Station Staging Plan – Stage 4

## Beginning Winter 2018 (4 weeks)



# Summary of Traffic Changes for Chaplin Station

Stage	Traffic Changes	Associated Activities	Approx. Start Date	Approx. Duration
1	<ul style="list-style-type: none"><li>• Close Gilgorm Rd at Eglinton Ave W</li><li>• Convert Gilgorm Rd to a two-way street</li><li>• Restrict access to Eglinton Ave W from southbound Latimer Ave</li><li>• Restrict left turns onto Latimer Avenue from eastbound Eglinton Ave W</li></ul>	Utilities Relocation and shoring	Fall 2016	35 weeks
2	<b>Continue Stage 1 configuration, plus:</b> <ul style="list-style-type: none"><li>• Restrict north and southbound left turns</li><li>• Restrict westbound right turn</li><li>• Restore access to Eglinton Ave W from southbound Latimer Ave</li></ul>	Utilities Relocation and shoring	Spring 2017	Eight (8) weeks
3	<b>Continue Stage 2 configuration, plus:</b> <ul style="list-style-type: none"><li>• Restore westbound right turn</li><li>• Restrict northbound right turn</li><li>• Restrict eastbound left turn</li></ul>	Shoring	Summer 2017	23 weeks
4	<b>Continue Stage 3 configuration, plus:</b> <ul style="list-style-type: none"><li>• Restore southbound left turn</li></ul>	Shoring	Winter 2018	Four (4) weeks



# Summary of Pedestrian Changes for Chaplin Station

## Stage 1

- Relocate north and south crosswalks further north and south, respectively

## Stage 2

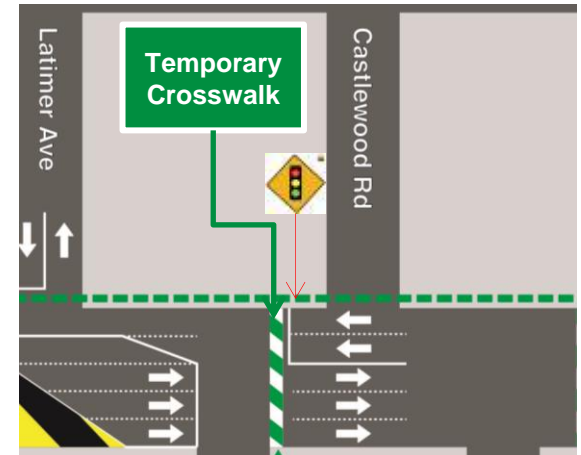
- Relocate east crosswalk further east

## Stage 3

- Restrict north-south crossing on the west side of Chaplin Crescent
- Relocate east crosswalk further west
- Implement temporary signalized crosswalk and traffic signal east of Russel Hill Rd and Eglinton Ave W

## Stage 4

- Relocate west and east crosswalks further west and east, respectively



# Proposed Closure of Gilgorm Rd and Mitigation

## Why?

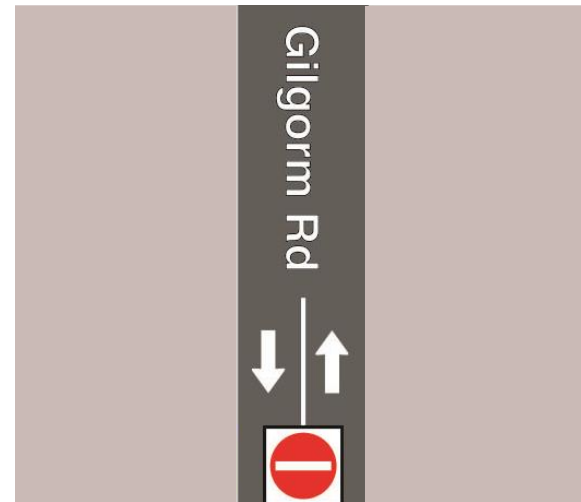
- Location of station box obstructs access to Eglinton Ave W during construction stages 1 and 2
- to prevent unsafe traffic movements and congestion closure of Gilgorm Rd for all stages

## Mitigation

- Convert Gilgorm Rd from a one-way to a two-way street to facilitate entry and egress for local traffic

## Duration

- Approximately 20 months, beginning fall 2016



# Turn Restrictions and Proposed Mitigation

## Why?

- Insufficient turn radius due to location of station box
- To prevent traffic congestion during construction stages 1 through 4

## Mitigation

- Temporarily relax peak hour turn restrictions on nearby local streets to facilitate alternative route access to east and westbound Eglinton Ave W, including Latimer Ave, Castlewood Ave, Heddington Ave and Shields Ave at Roselawn Ave

## Duration

- For approximately 20 months



# Advanced Signage

- Advanced signage will be placed along Eglinton Ave W and cross streets to inform motorists and pedestrians of traffic changes at the intersection
- At Chaplin Station, advanced signage will be placed as far north as Spadina Rd, as far south as Russel Hill Rd, as far east as Heddington Ave and as far west as Spadina Rd



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# Bus Stop Relocations

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Five (5) TTC bus stops at the four corners of Eglinton Avenue West and Chaplin Crescent will be relocated throughout various stages of utilities relocation and shoring.

- The northwest stop will be relocated approximately 20 m to the north
- The northeast stop at Chaplin Crescent will be relocated approximately 72 m to the north
- The northeast stop at Gilgorm Road will be relocated approximately 140 m to the east
- The southwest stop will be relocated approximately 40 m to the south
- The southeast stop will be relocated approximately 120 m to the east

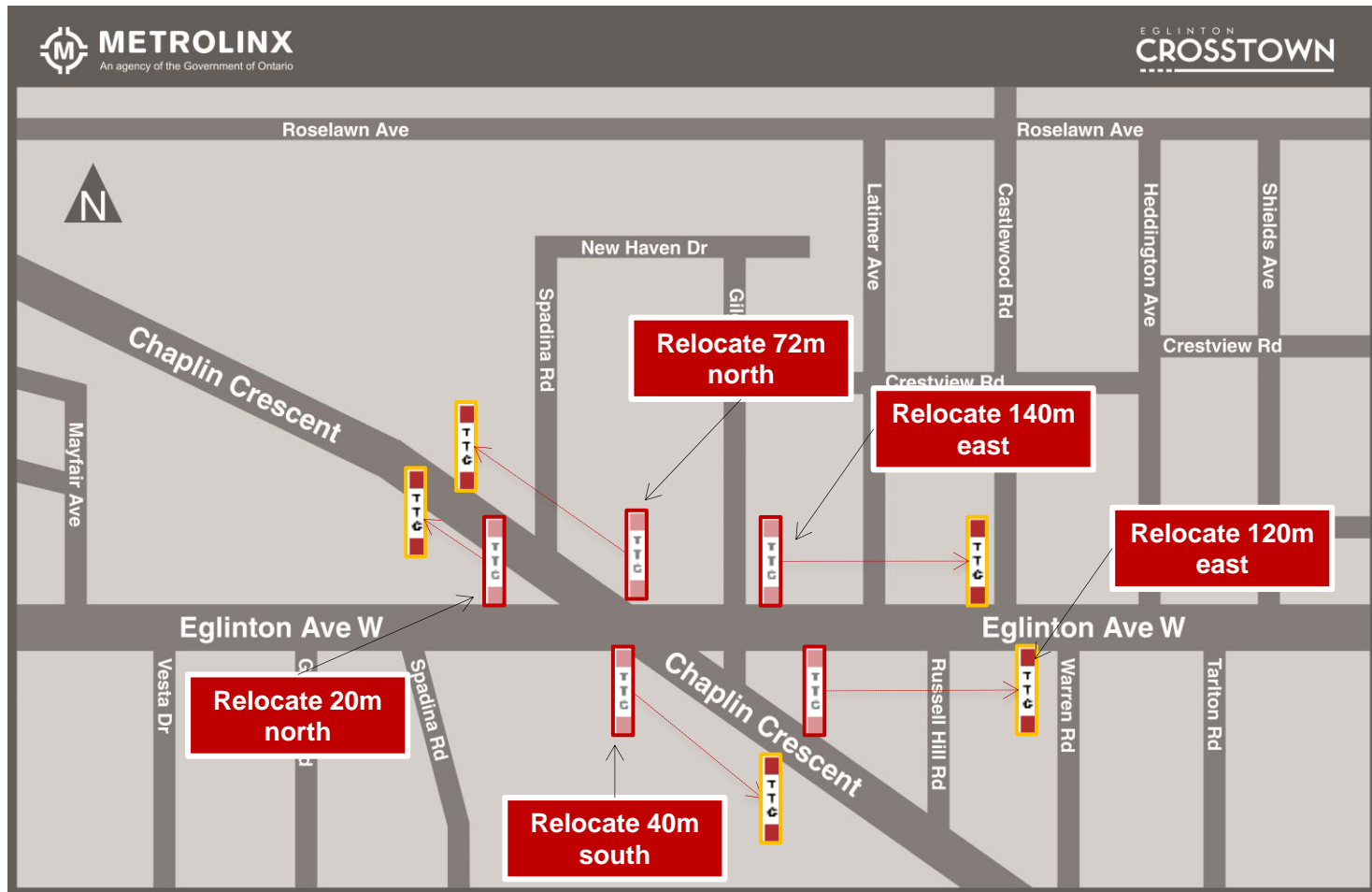
The stops service the following TTC bus routes:

- #32/332 Eglinton Avenue West – West
- #32/332 Eglinton Avenue West – East
- #33 Forest Hill – South
- #14 Glencairn – East

Please look for signage informing passengers of the new temporary stop locations.



# TTC Bus Stop Relocation Map



# TTC Bus Stop Relocation Map

- To accommodate construction staging at Chaplin Station, TTC bus route #33 now travels in reverse direction, from north of Eglington Ave W, Chaplin Cres, Roselawn Ave and Bathurst St
- Beginning in October 2016, a detour along Mayfair Ave to Shallmar Blvd, is proposed for TTC Bus Route #33 to accommodate construction staging at Forest Hill Station (at Bathurst St)
- The duration of the proposed detour is approximately 15 months

