Greater Toronto Area

This route started as a project for Bombardier/TCS to aid in training new GO Transit operators in 2006/07. It was originally built in two pieces; GO East and GO West. Accuracy of the trackwork and signaling was most important, as was the physical operation of the equipment. Reliable smooth simulator operation was also important. The route did not have as many background details as most MSTS routes to enhance the smooth operation. The route takes the East and West GO Project and combines them into one large project. More details and track work were added and the route and equipment were refined into the Greater Toronto Area (GTA).

Route Build: Andy Hockin
Locos: Ed Sketcher
Equipment: Ian Dodd, Ed Sketcher
Downtown Towers: Ian Dodd, Ed Sketcher
Activities: Andy Hockin
Sound Recordings: Robin Claxton

The route has over 230 miles of main track, 43 passenger stations, dozens of yards and hundreds of industrial leads. GO Transit, Via and CN equipment is included in 20 activities that run over 8 subdivisions. The subs include all of the USRC, Halton, Weston, Oakville, Uxbridge and portions of the York, Bala, Newmarket and Kingston. The trackwork is accurate for modern operation including the latest upgrades not shown in the included CN track profiles. The passenger activities are taken from the operating schedule all beginning or ending at Union Station.
The Toronto skyline has been built with over 30 accurately modeled towers and buildings. These include some that are just now being completed during the current downtown building boom.

Major yards modeled in the route include the Brampton intermodal, the Willowbrook/Via service centers in Mimico, the Oakville Ford plant and the Aldershot. The Union Station Rail Corridor (USRC) has been accurately modeled which made the use of Xtracks necessary due to the countless double slip switches on each approach ladder. The number of single dwarf signals in the USRC had to be reduced from the prototype, as there were too many signals in the area for MSTS to process. There are still enough of them to give a great feel of the area.
The GTA has many features that will only work with the use of the MSTS “Bin”. The Bin fixes many issues with MSTS and it helps with the stability of the sim. The route will operate without it, however the sim may post messages indicating problems. The bin can be downloaded from the link in the requirements section below.

The GTA will be open to development by any person willing to submit objects or activities to Maple Leaf Tracks. If anyone would like to make or improve a model of a structure, vegetation, texture, etc, to be placed on the route, MLT on approval of the submission, will build an update for the owners of the GTA. These updates will include any necessary fixes to the route and will be free to download and distribute to the GTA owners. Changes to the trackwork unfortunately cannot be made due to the nature of MSTS.

During the combining of the East and West GO projects, the Oshawa leg could not be added. The database became corrupted due to the local route database that defines the dynamic track becoming too large for MSTS to process. This will be looked into to see if that leg can be added to the GTA. Other route combining will also be looked into such as adding the Niagara Corridor and the Bala Sub.

In certain areas, the frame rate (fps) will drop due to the number of track and world objects. The USRC and Mimico yard are two of these areas. If your fps drops or the sim crashes, the following suggestions will help:
Do a disc clean and defragmentation of your computer. Turn off all programs running in the background such as messenger. Go into the MSTS options and turn off all shadows and specular lighting. Lower the world object density to 8 or 7. Set the display resolution to 1024 or higher. You may also need to adjust other options to improve performance. Start each act from a fresh boot of the computer.

Required elements not supplied by MLT for the GTA are as follows:

MSTS V1.2  http://tsinsider.com/Support/v1Downloads.aspx#tsupdate

MSTS “Bin”  http://mstsbin.uktrainsim.com/

Xtracks  http://www.nklj.se/xtracks/XTracks.htm
BLOCK AND INTERLOCKING SIGNALS

In these illustrations, letter plates will appear only on those aspects whose indications are thereby modified.

Special application signals, Rules 406A, 407A and 408A, will appear only on subdivisions or at locations so specified in special instructions.

Signal indications provided for under Rules 406A, 407A and 408A will be used in all CTC territory and will be illustrated in this book as a part of Rules 406, 407 and 408.

**405 Clear Signal**
Proceed.

**407 Clear to Medium**
Proceed, approaching next signal at medium speed.

**408 Clear to Slow**
Proceed, approaching next signal at slow speed.

**409 Advance Clear to Stop**
Proceed, next signal is displaying Clear to Stop, be prepared to stop at second signal.

**410 Clear to Stop**
Proceed, preparing to stop at next signal.

**411 Limited to Clear**
Proceed, limited speed passing signal and through turnouts.

**415 Limited to Stop**
Proceed, limited speed passing signal and through turnouts, preparing to stop at next signal.

**416 Medium to Clear**
Proceed, medium speed passing signal and through turnouts.

**420 Medium to Stop**
Proceed, medium speed passing signal and through turnouts, preparing to stop at next signal.
421  Slow to Clear

Proceed, slow speed passing signal and through turnouts.

425  Slow to Stop

Proceed, slow speed passing signal and through turnouts, preparing to stop at next signal.

426  Restricting Signal

Proceed at restricted speed.

428  Stop and Proceed Signal

Stop, then proceed at restricted speed.

429  Stop Signal

Stop.

Unless required to clear a switch, crossing, controlled location, or spotting passenger equipment on station platforms, a train or engine not authorized by Rule 564 must stop at least 300 feet in advance of the STOP signal.
LEGEND

SWITCHES
1 =#20 (45MPH)
3 =#16 (30MPH)
5 =#12 or Smaller (15MPH)

- Stop Boards
- Crossing Pushbutton
- Radio Tower
- Switch Blower
- Switch Heater
- Hot Box Scanner
- Station
- In CTC - Hand operated Swt.
- In ABS - X-over Swt.
- Electric Lock
- Station Platform
- Station Platform
- No Longer in use.
- Out Building
- Crew Protect

General Elevation Information denoted by triangles beneath the Ft. Speed Lines =

- Moderate Grade (>0.4%)
- Heavy Grade (0.6-1.0%)
- Severe Grade (<1.0% or sustained Grade)
West Limits Union Station Rail Corridor
50 feet West of Strachan Ave. Crossing
For Both CN and CP Rail.
CN = Mile 1.6
CP = Mile 1.45

Note: Westward movements = 30 MPH
Mile 1.3 to 1.6 until Strachan Ave. occupied.
Eastward movements = 30 MPH
Mile 1.9 to 1.6 until Strachan Ave. occupied.
Note: PSO=35 MPH all Trains
Between Mile 8.2 and Mile 9.3
Note: Max Speed=30 MPH
On North Track Mile 12.5 to 14.1

ALL

Home Depot
G791-712'
G799-1466'

Goreway Dr. Ramp
Goreway Dr.

Hwy. No. 427/409 Ramp
Hwy. No. 427

G400

Northwest Dr.

Virtual Railfan

ALL

Carlingview Dr.

Hwy. No. 27

Rtc: CH4T2, *5-011#

Note: Max Speed=30 MPH
On North Track Mile 12.5 to 14.1

ALL

American Can

Kuehne & Nagel

Valentine Developments

Howell Warehousing

G795-841'

American Lead

RR

RTC: CH4T2,

*5-011#

ALL

MacMillan Bloedel

Hwy. No. 27

Rtc: CH4T2,

*5-011#

Hwy. No. 27

Rtc: CH4T2,

*5-011#

Hwy. No. 27

Rtc: CH4T2,

*5-011#
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<table>
<thead>
<tr>
<th>Mileage</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>325.35</td>
<td>Scarborough Jct. Swt.</td>
</tr>
<tr>
<td>325.45</td>
<td>Kennedy Rd. Culvert</td>
</tr>
<tr>
<td>325.53</td>
<td>JCT. Swt. 325.53</td>
</tr>
<tr>
<td>325.56</td>
<td>61.03 Kingston Sub.</td>
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| 325.66  | |}

**Notes:**
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- Mile 61.03 Uxbridge Sub.
Oakville-Kingston Connecting Tracks
(Max. Speed = 15 MPH)
North Connecting Track-10,032 ft. (Including USRC)
South Connecting Track-10,665 ft.
Northward movements stopped at Oriole GO Station
Max = 25 MPH
until crossing mile 12.36 fully occupied.

Oriole
11.3
42572

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Note: Any movement within circuit limits with No. 11 SWT in Hand throw MUST reset circuit. Entire movement Must be clear of circuit limits before circuit can be reset.
Note: All Trains = 45 MPH at Mile 15.2

Note: All Trains = 45 MPH at Mile 14.2

15.25 = 711'

13.73 = 690'
Note: All Trains = 45 MPH at Mile 22.3 and Mile 22.7
Davenport

4.6
42163

American Standard

E241 347'
E245 340'
E242 470'

Gate

Controlled Interlocking.
Controlled by CP
RTC Toronto
CROR Rule 610 must be obtained
from CP RTC prior to
obtaining CROR Rule 564
from RTC-YB Toronto

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R3-3.65-4.82
Newmarket Sub.
99/12/15mm
Note: Any movement within circuit limits with No. 15 or No. 17 SWT in Hand throw MUST reset circuit. Entire movement must be clear of circuit limits before circuit can be reset.

Snider
12.9
41969

Note: PSO all Trains Max. speed=50 MPH Mile 12.9 to Mile 13.3 Newmarket Sub.

Note: Movements on South Connecting track Snider must be authorized by R564 and R566 between Snider and Snider South

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Track Abandoned
Movements are PROHIBITED
North of Mile 43 Newmarket Sub

CROR Rule 105
and Special Instruction 1

CROR Rule 105
and Special Instruction 1
Note: Only switches Nos. 19 & 27 is Dual Control. All others are Power switches.
North Service Track

Willowbrook Yard

CN - CP Joint Yard

Mimico South Yard

RTC: CH8T1, 5-460#

See Desk manual for Mimico Yard Details.
Note: Permissible speed through Nos. 5, 9 and 11 swts = 30 MPH

Note: All switches at Canpa are Power Switches

ALL

Gilbey's CDN Distillery
Flincote Lead
Atlas Roofing
The Banana Track

A
B
C
D
Note: Movements stopped on No 3 Track within 1000' of crossings: 10.59, 10.84 and 11.02 Must push start button to lower gates.
RTC: CH8T1, *5-460# 

Note: Max. 45 MPH for ALL Trains Mile 13.0-13.2 No. 1 Track only.
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Auto Switch Liner (auto lines for westward movements ONLY)
Normal position when set for Auto Parts Lead.

RTC: CH8T1, *5-460#
Note: Maximum speed = 30 MPH for ALL trains on No. 3 track between Mile 20.7 and mile 21.7

Note: Permissible speed through switches Oakville Yard = 30 MPH
Note: Psgr. trains Max. = 80 MPH on No. 1 Track between Mile 22.1 and Mile 31.8

Maximum speed = 45 MPH for PSGR trains and 30 MPH for FRT trains. Between mile 22.1 and mile 22.2 on Turnout to NO. 1 track
Note: Psgr. trains Max. = 80 MPH on No. 1 Track between Mile 22.1 and Mile 31.8

Note: Various Procor Derails Located on Procor Trackage. Switching on these tracks may only be performed in the presence of a Procor Rep. who will be responsible for these derails.
Note: Psgr. trains Max. = 80 MPH on No. 1 Track between Mile 22.1 and Mile 31.8

Note: Psgr. trains Max. = 80 MPH on No. 1 Track between Mile 22.1 and Mile 31.8

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R5-25.70-27.50
Oakville Sub.
04/10/15dmn

RTC: CH8T1, *5-460#
Note: Max. = 45 MPH for PSGR and 30 MPH for FRT trains between Mile 31.4 and Mile 31.7 on curve on No. 1 track.

Note: Psgr. trains Max. = 80 MPH on No. 1 Track between Mile 22.1 and Mile 31.8
Note: No. 1 Crossover self restores to normal position after having been used in reverse. See Subdivision footnote.
Note: Oakville - Grimsby Connecting Track
CROR Rule 105 (A) Applicable. Maximum Speed = 15 MPH