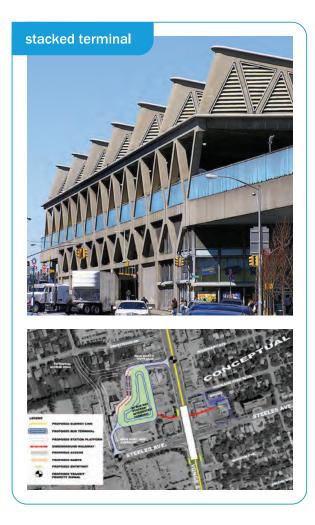
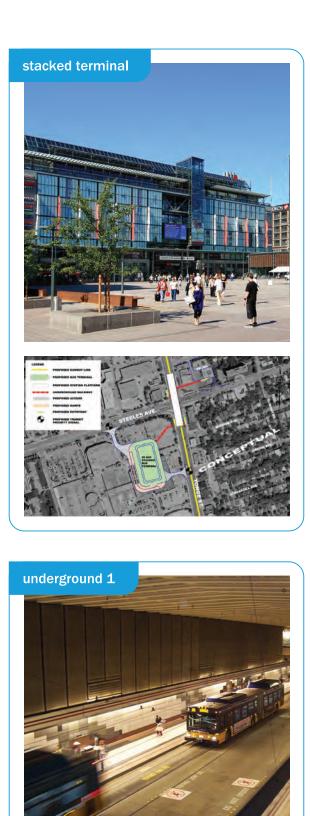
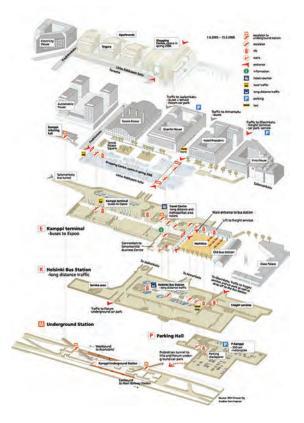
Yonge subway extension: Steeles station options



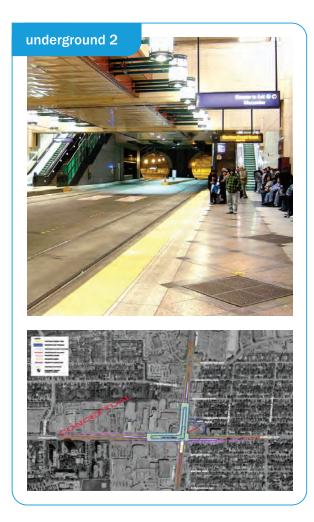














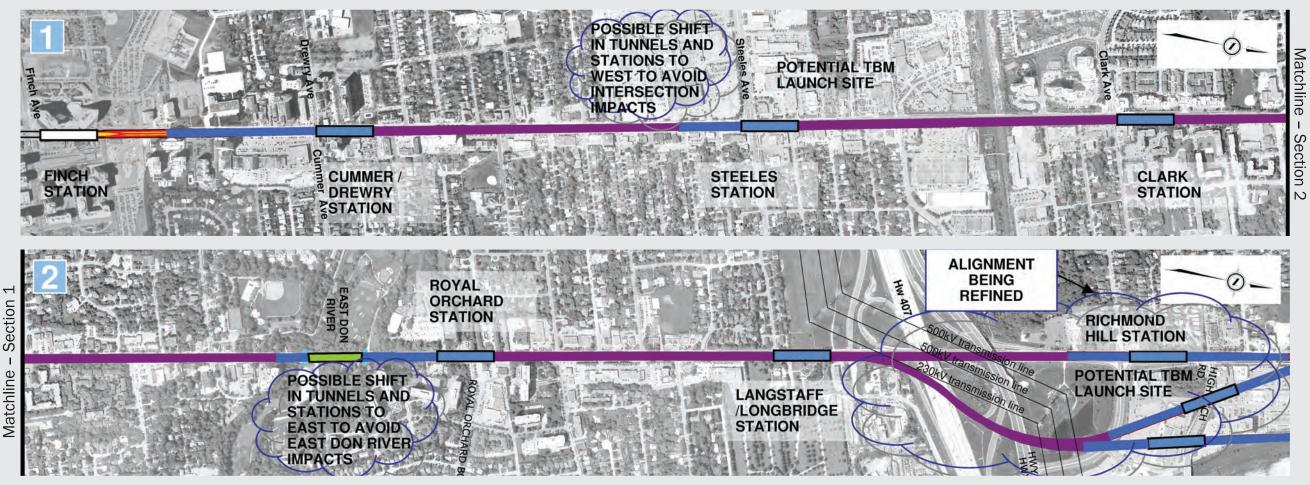






Preliminary construction methodology

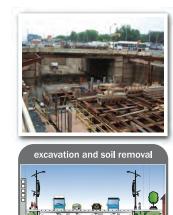
While significant lengths of the subway extension will be tunnelled, the construction of subway stations and track cross-over areas are done using the cut and cover method.



How a subway is built

Tunnelling CONVEYOR BELT COMPLETED TUNNEL EXCAVATED SOIL TUNNEL BORING MACHINE -PLENUM CUTTING SEGMENT ERECTOR ARM PRECAST TUNNEL SHOVE RAMS LINING SEGMENTS

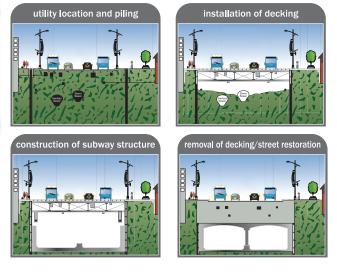
Cut and cover





N

- Subway station
 - Cut and cover
 - Tunnelling
 - Bridge construction
 - Existing tail tracks





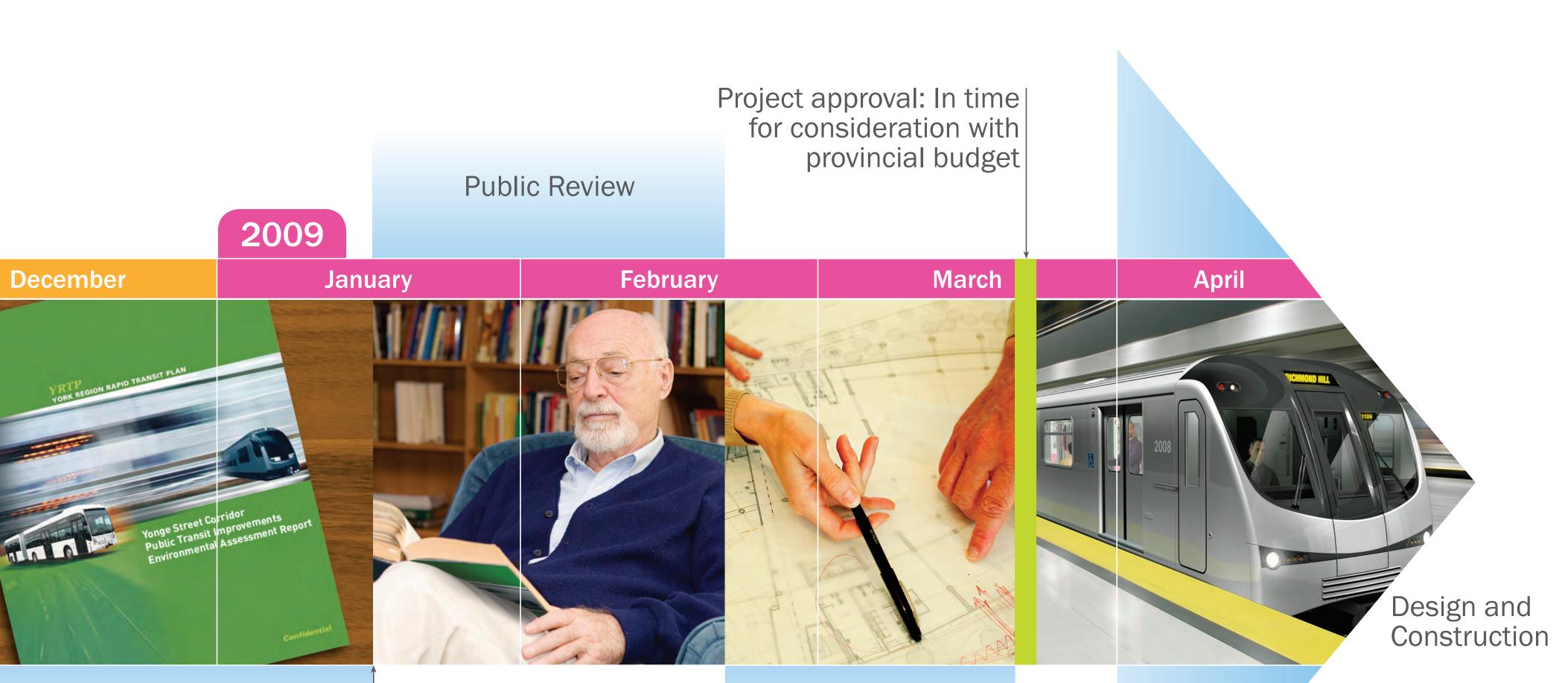




The study needs your input... Notice of study commencement Toronto PCC PCC 3 2008 November October lighway 7: (H3) - Status

Prepare project report

Toronto report to Commission/Council



MOE review

Submit project report

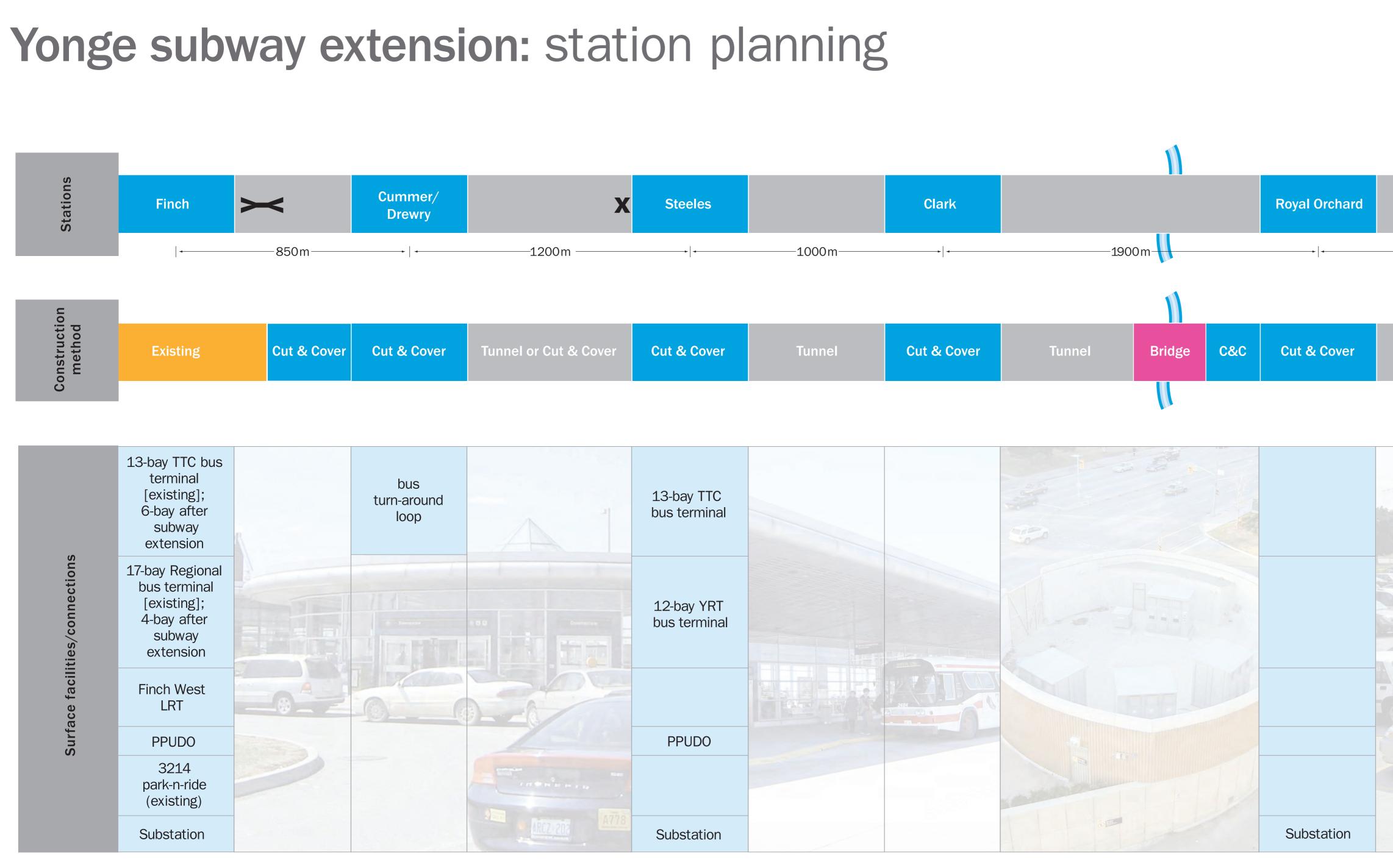
be involved

Next public consultation centre: November 26









Screening criteria

Existing densities	80	85	110	80	30	40
Planned densities*	110 - 120	180 - 290	170 - 225	100 - 130	95 - 170	240 - 580
Transportation connection						\checkmark
Natural environment			1	✓		✓
Cultural environment			1	✓		✓

Tail track: 🔀

*Persons per hectare

Not to scale

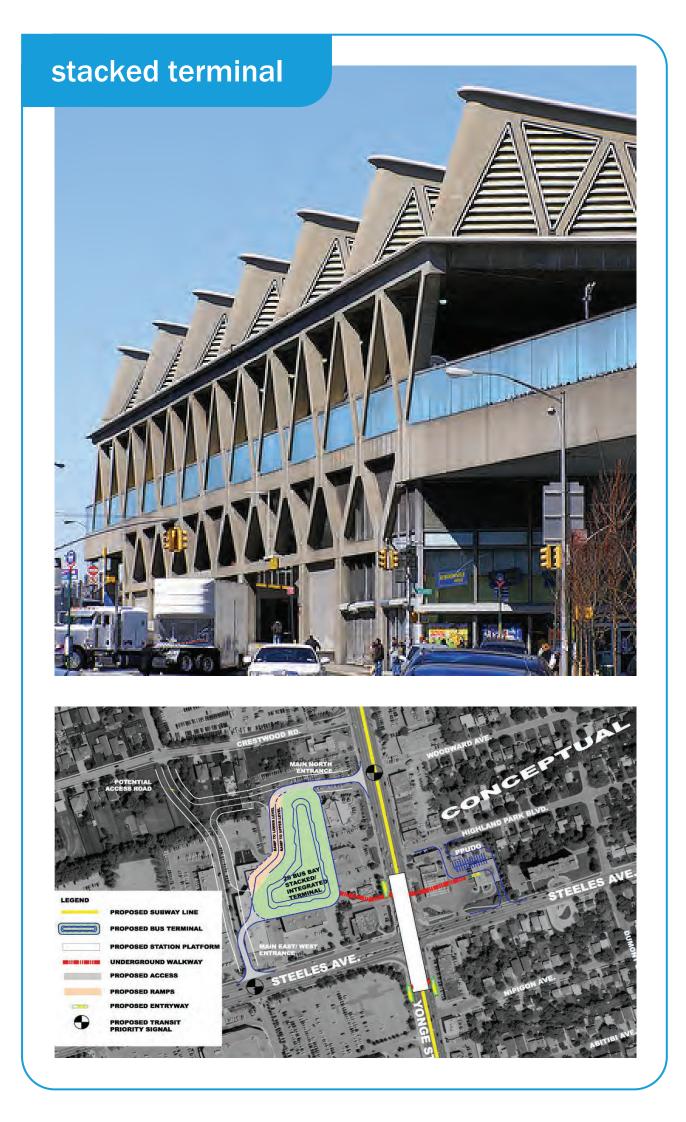
	Longbridge/ Langsatff	X	Richmond Hill Centre
900m		1100m	
Tunnel	Cut & Cover	Tunnel	Cut & Cover
			28-bay YRT Viva bus terminal
			407 Transitway & Richmond Hill GO Rail
	PPUDO		PPUDO
	Approx. 2000 to 2500 park-n-ride		

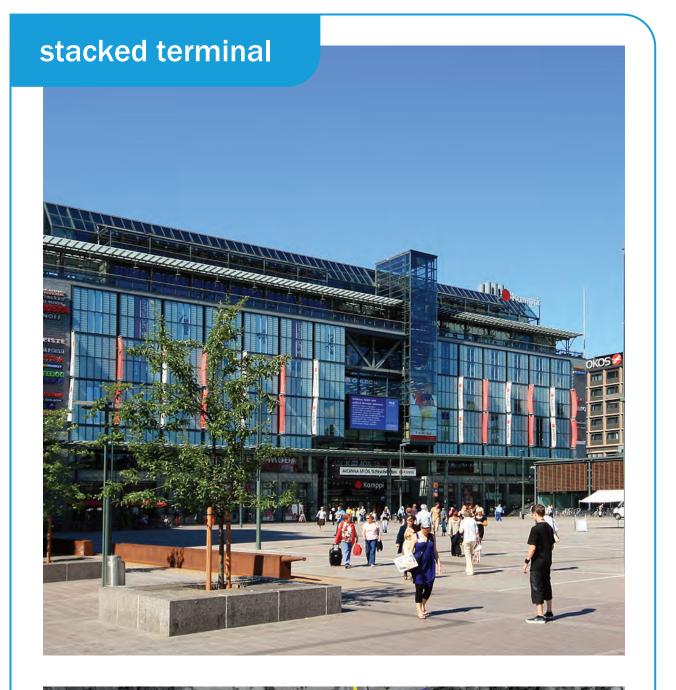


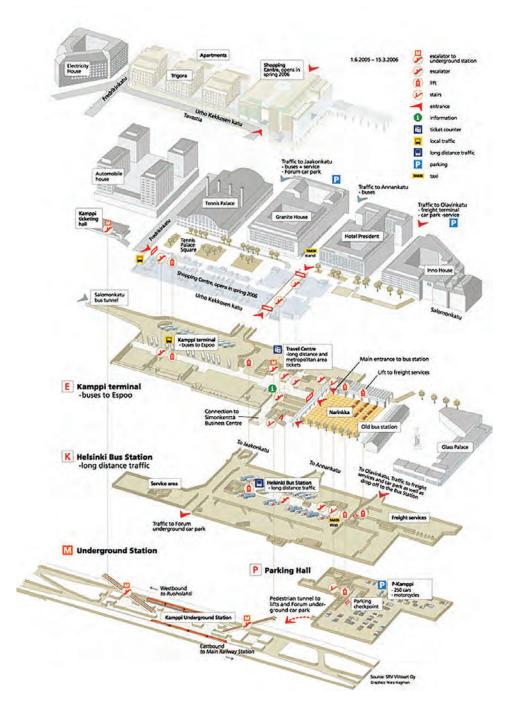




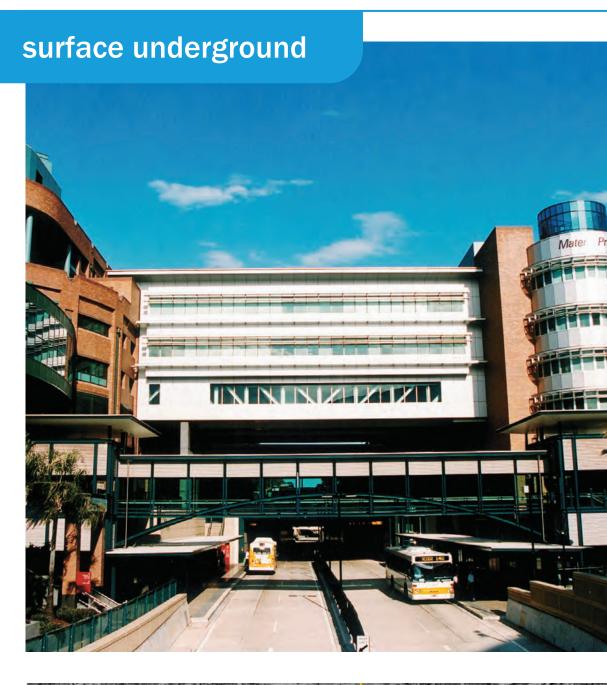
Yonge subway extension: Steeles station options

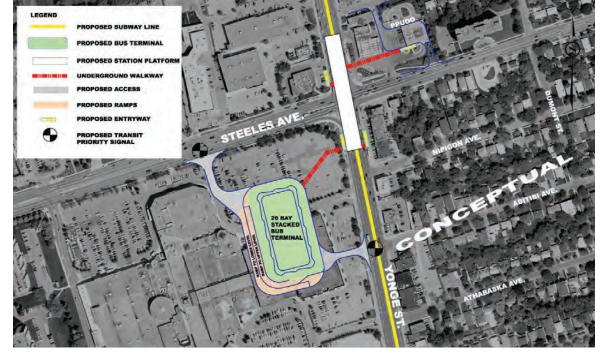


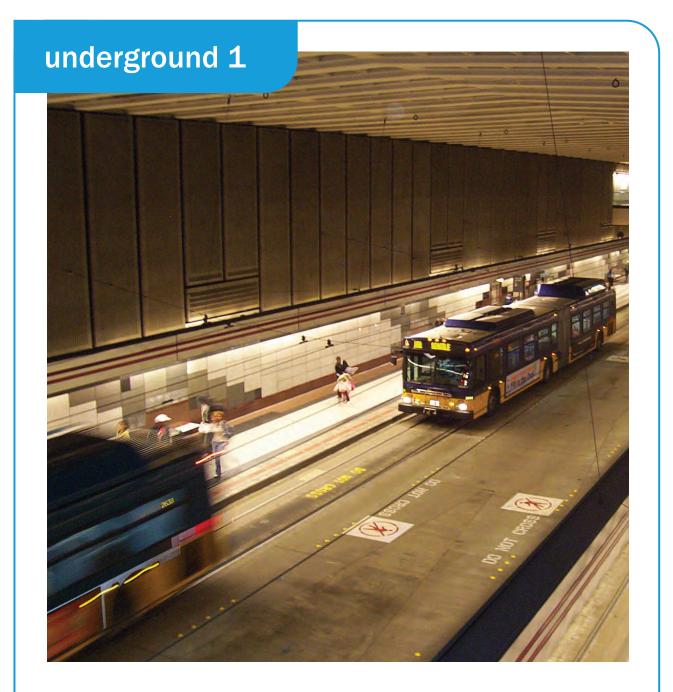






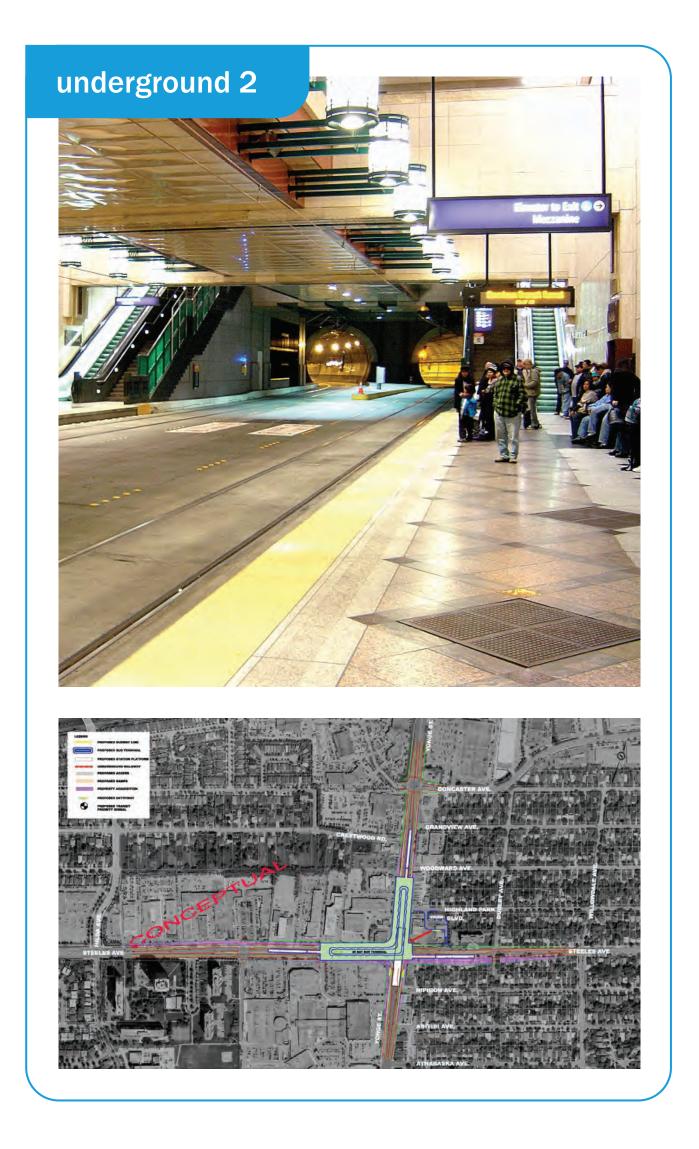




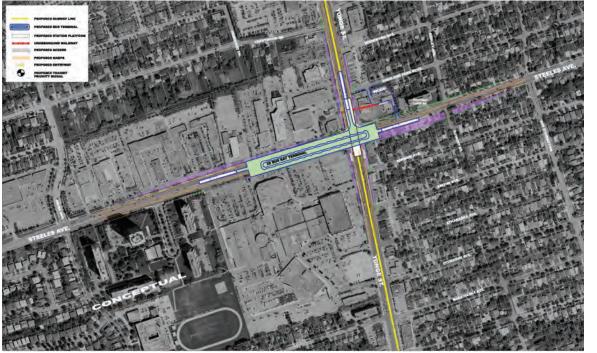


















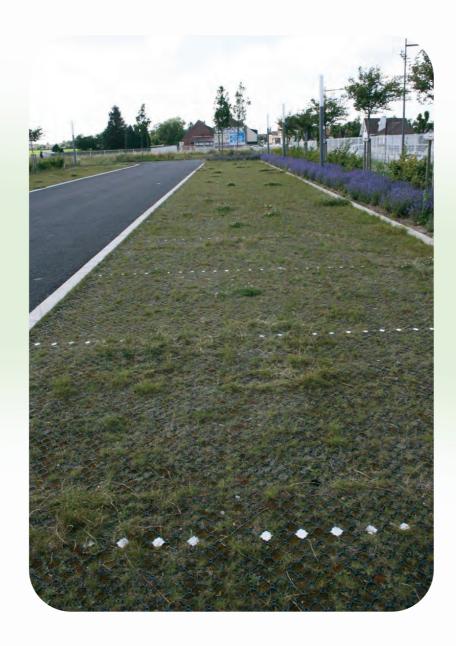
Longbridge / Langstaff station

Design features that address community concerns:

- Noise buffers
- Maintaining a green corridor connection
- > Bio swales
- Sustainable treatments for the parking area





















Proposed inter-regional connectivity





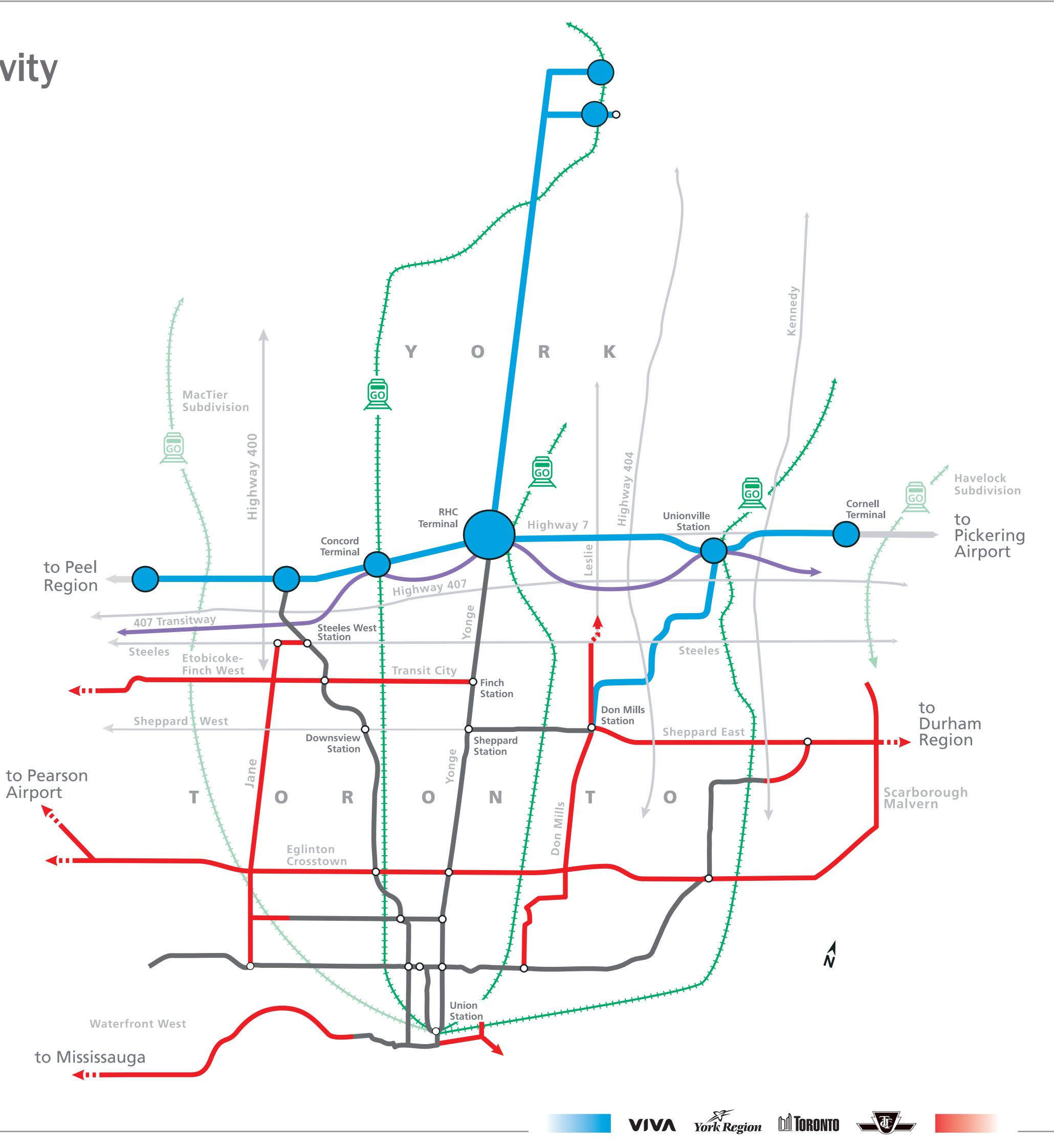












What are the major phases of planning and building a subway?

	200
Complete Functional Design	
Provincial Project Approval [6 months duration] October 2008 – April 2009	
Project Notice To Proceed Initial Capitalization May 2009	
Project Management Governance AFP Set-up: 1 year, mid 2010	
Property CEAA [12 months duration] 2009-2011	
Design Engineering [48 months overall duration] 2010-2013 [multiple projects starts and completion]	
Construction [66 months overall duration] 2011-2016 [multiple projects starts and completion]	
Subway System Commissioning [1 year duration] Throughout 2016	
In-service Late 2016	

08	2009	2010	2012	2013	2014	2015	2016	2017

Key targets

- > project begins: 2009
- > design / engineering: 2009
- > construction: 2011
- > open: 2016







What's old is new again

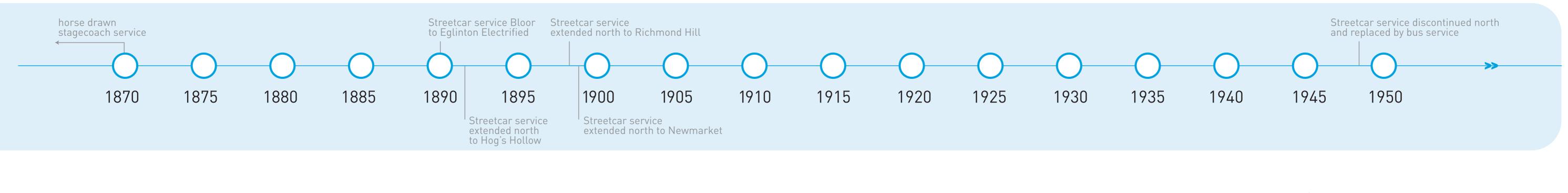
- Prior to 1877 Horse-drawn stagecoach service ran north on Yonge Street to Richmond Hill 1890 – Streetcar service on Yonge Street from just north of Bloor Street to Eglinton Avenue electrified 1892 – Electric streetcar service extended north on Yonge Street to southern brow of Hogg's Hollow 1897 – Electric streetcar service extended north on Yonge Street to Richmond Hill 1899 – Electric streetcar service extended north on Yonge Street to Newmarket
- **1948** Electric streetcar service discontinued north on Yonge Street from Glen Echo Road and replaced by bus service





















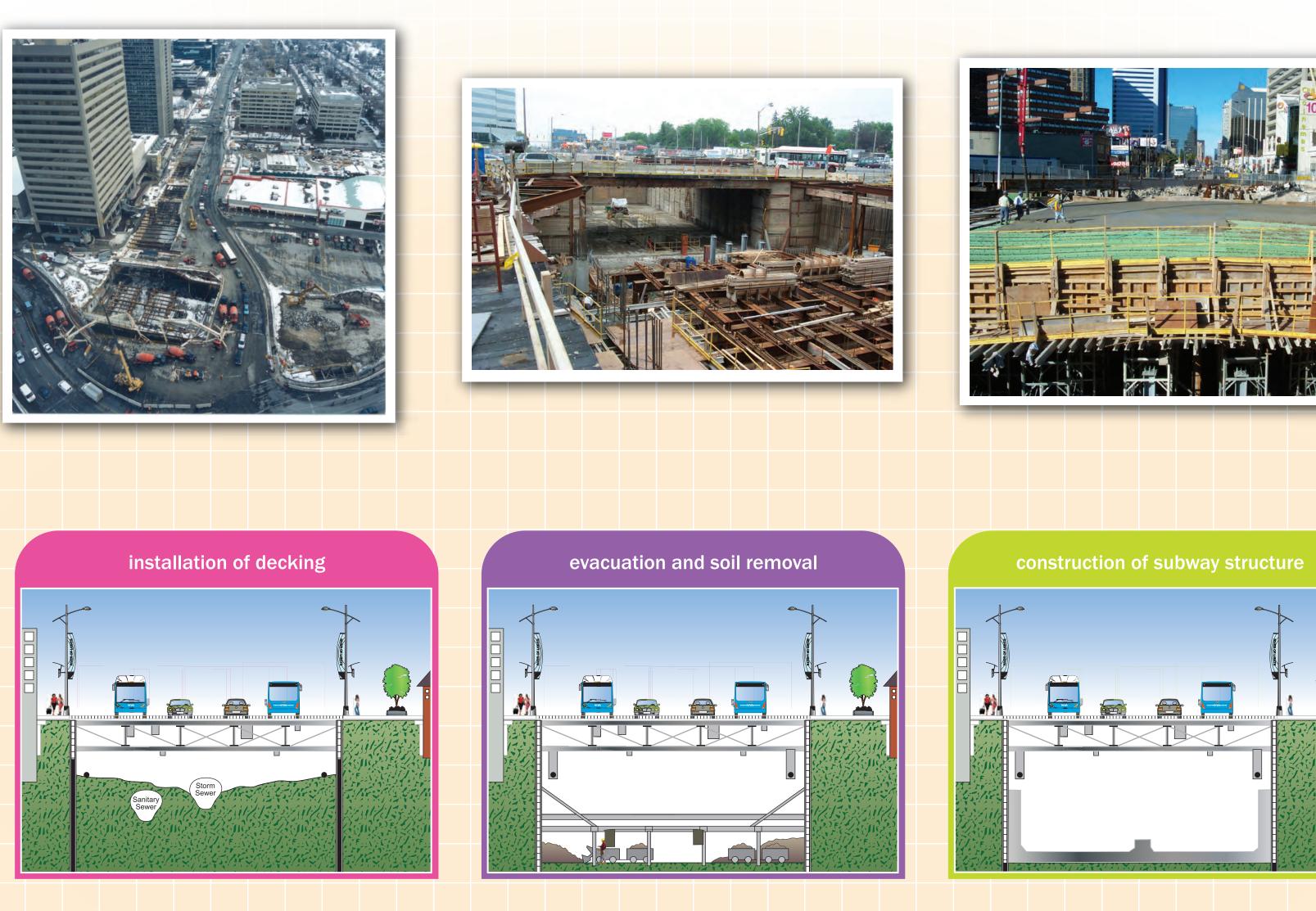


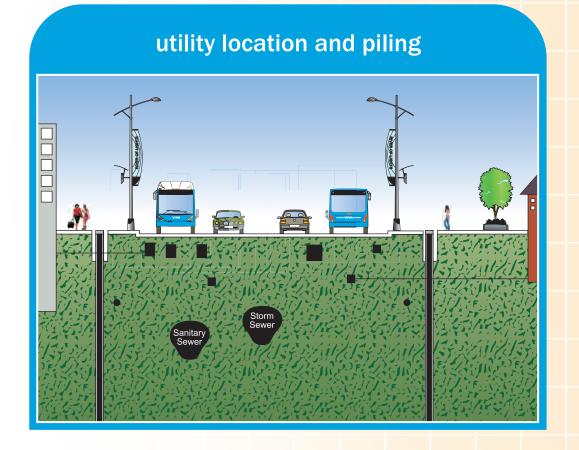






How is a subway built?









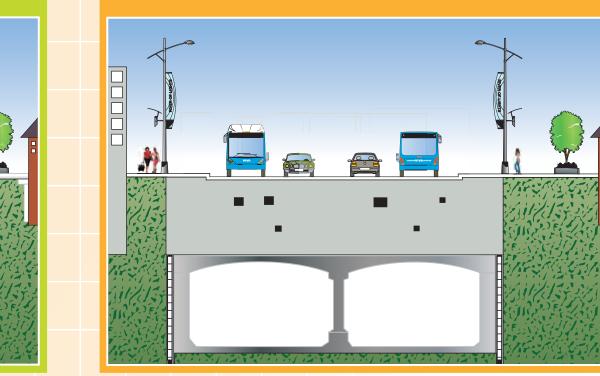








removal of decking/street restoration













What comes with a subway?





pedestrian entrance









What are we studying?

This study will identify the options for the future Yonge Street Subway extension, including:

- Numbers and locations of stations
- >How the subway will cross the East Don River
- > The location of the terminus of the subway at Highway 7, its features and how it works

















Metrolinx | the big move



Top 15 Priorities

Within the first 15 years of the RTP's implementation, the top **15** priorities for early implementation are:

- **1.** Viva Hwy 7 and Yonge St through York Region
- Brampton's Queen St Acceleride 2.
- Spadina subway extension to Vaughan Corporate Centre 3.
- Yonge subway extension to Richmond Hill Centre 4.
- Eglinton rapid transit from Pearson Airport 5. to Scarborough Centre
- 6. Upgrade/extension of Scarborough Rapid Transit line
- 7. Finch/Sheppard rapid transit from Pearson Airport to Scarborough Centre and Meadowvale
- 8. Express Rail on Lakeshore line from Hamilton to Oshawa
- 9. Rapid transit in Hamilton from McMaster University to Centennial Parkway
- **10.** Hurontario rapid transit from Port Credit to Brampton
- **11.** 403 Transitway from Mississauga City Centre to Renforth Gateway
- **12.** Rail link between Union Station and Pearson Airport
- **13.** Rapid transit service along Hwy 2 in Durham
- **14.** Improvements/extension of GO Rail service to Bowmanville
- **15.** Early phases of BRT service on Dundas St in Halton and Peel

Note: The numbers shown on the map refer to Metrolinx project numbers and do not reflect project priorities.

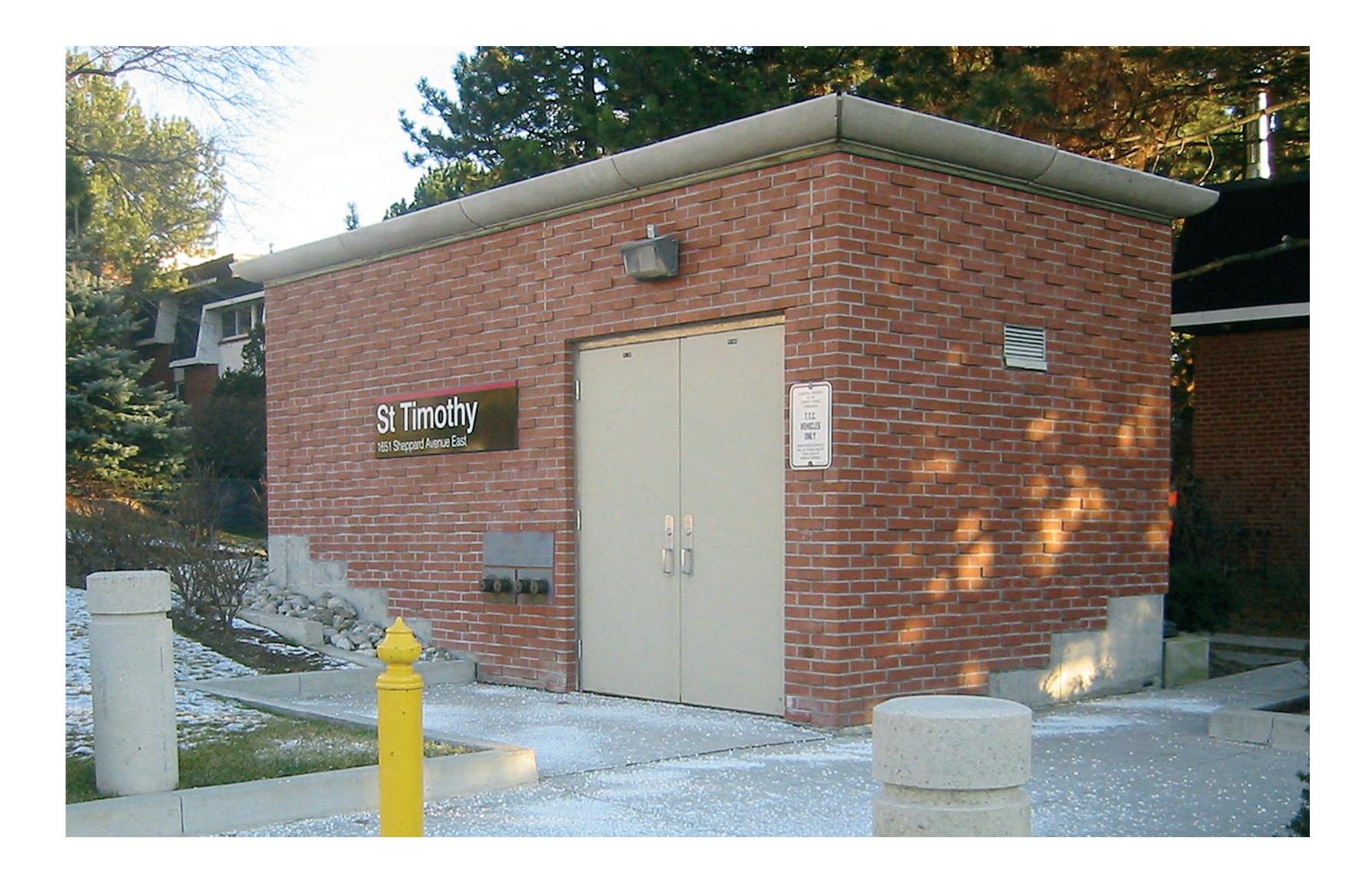


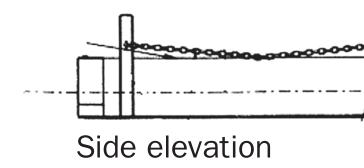


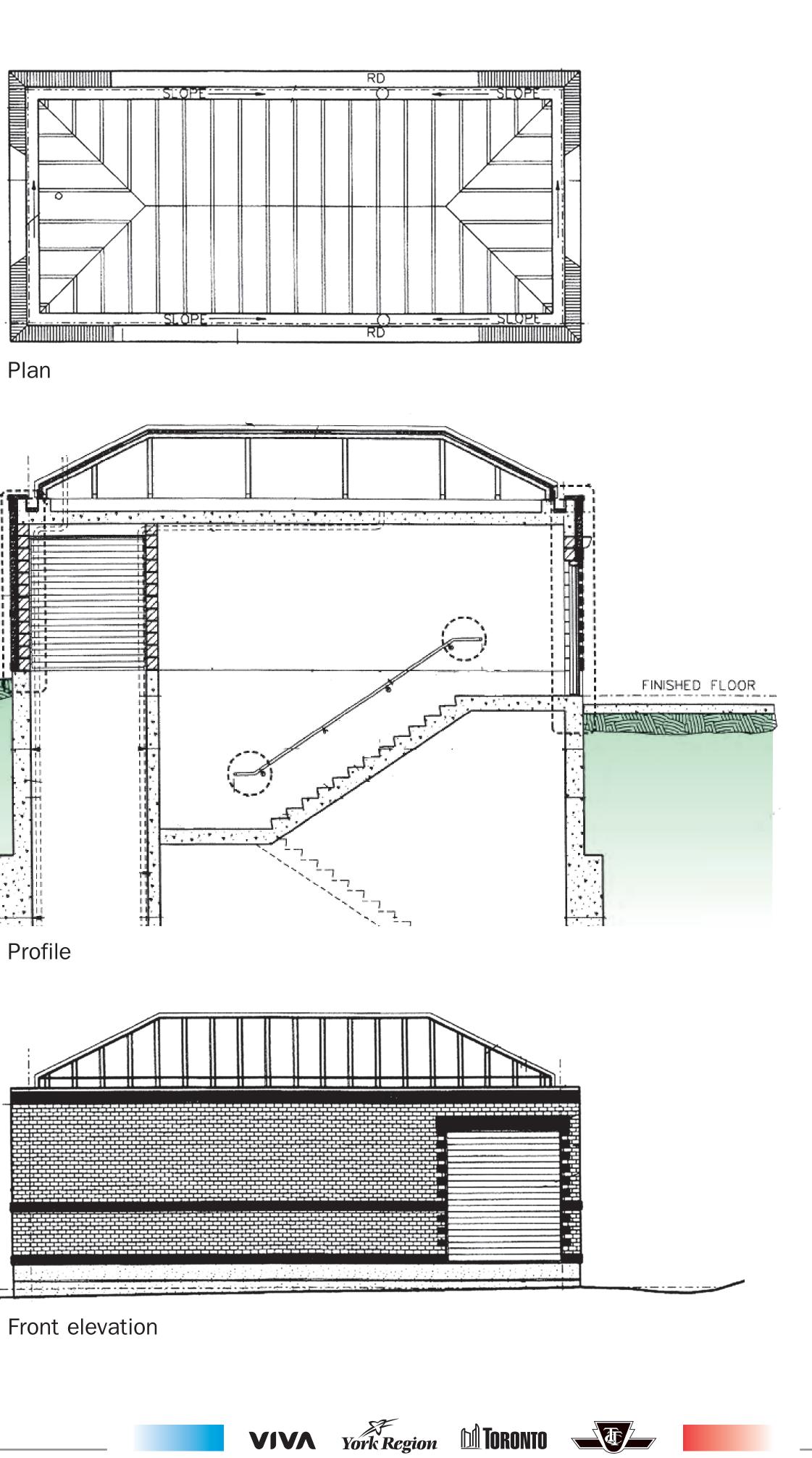


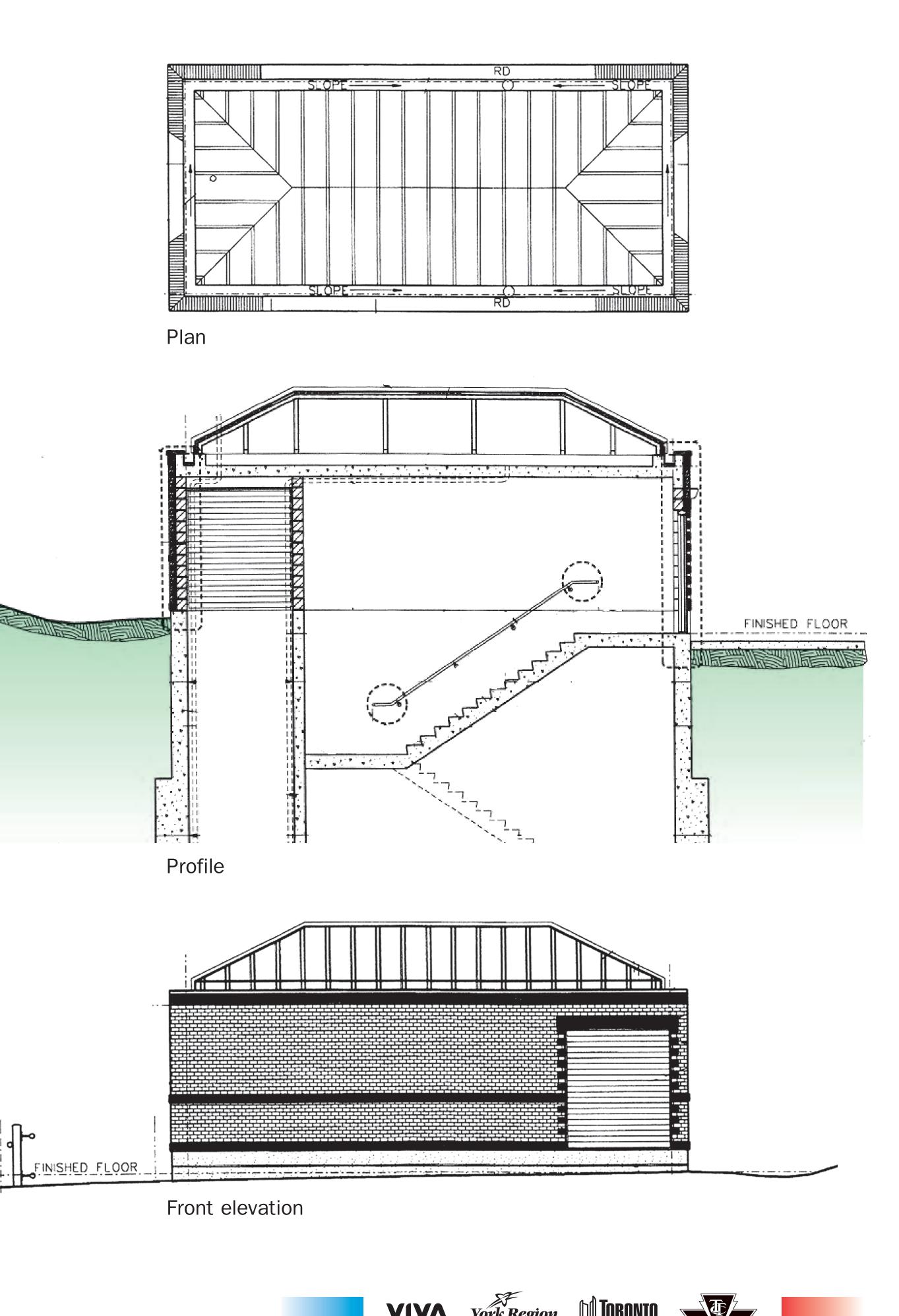


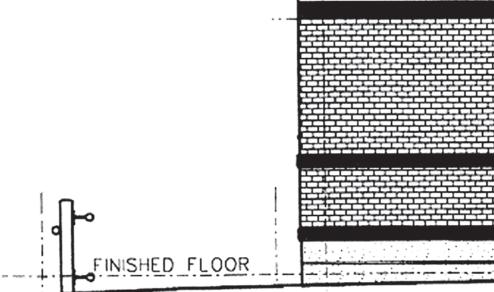
Emergency exit building example







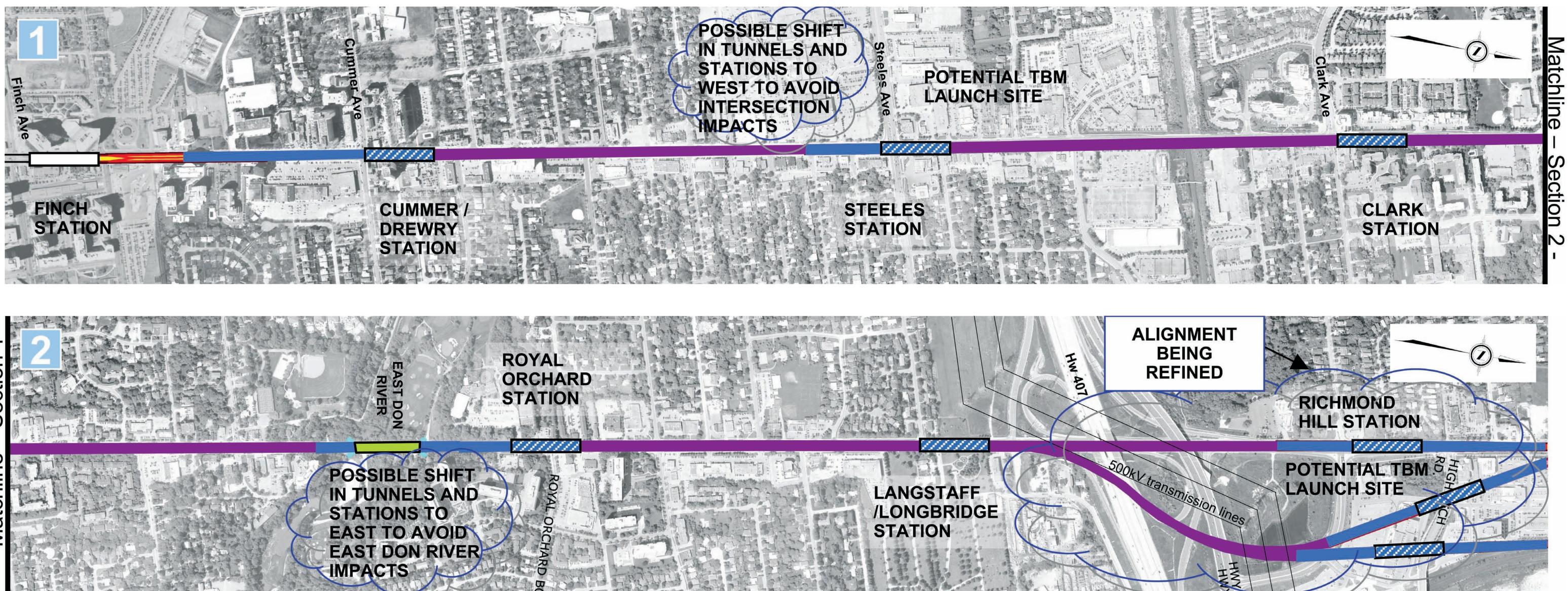


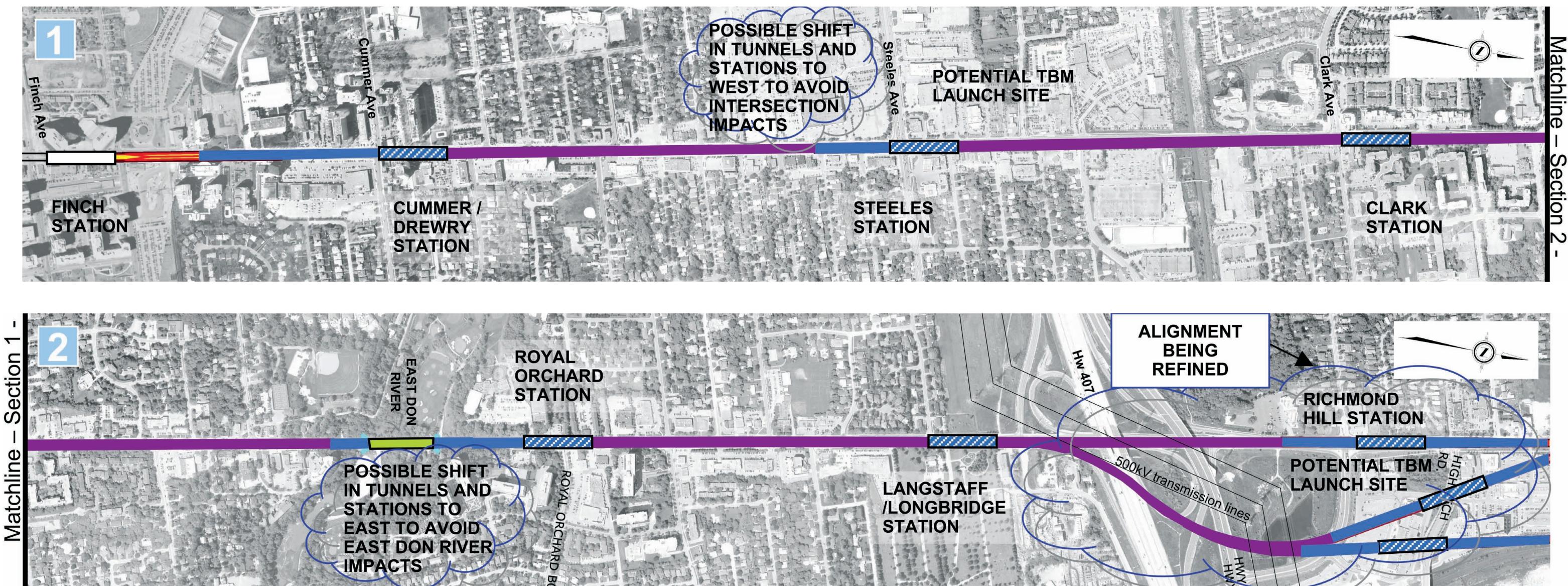




Preliminary construction methodology

While significant lengths of the subway extension will be tunnelled, the construction of subway stations and special track work structure is done using the cut and cover method.





Legend

- Subway station
- Cut and cover
 - Tunnelling
 - Bridge construction



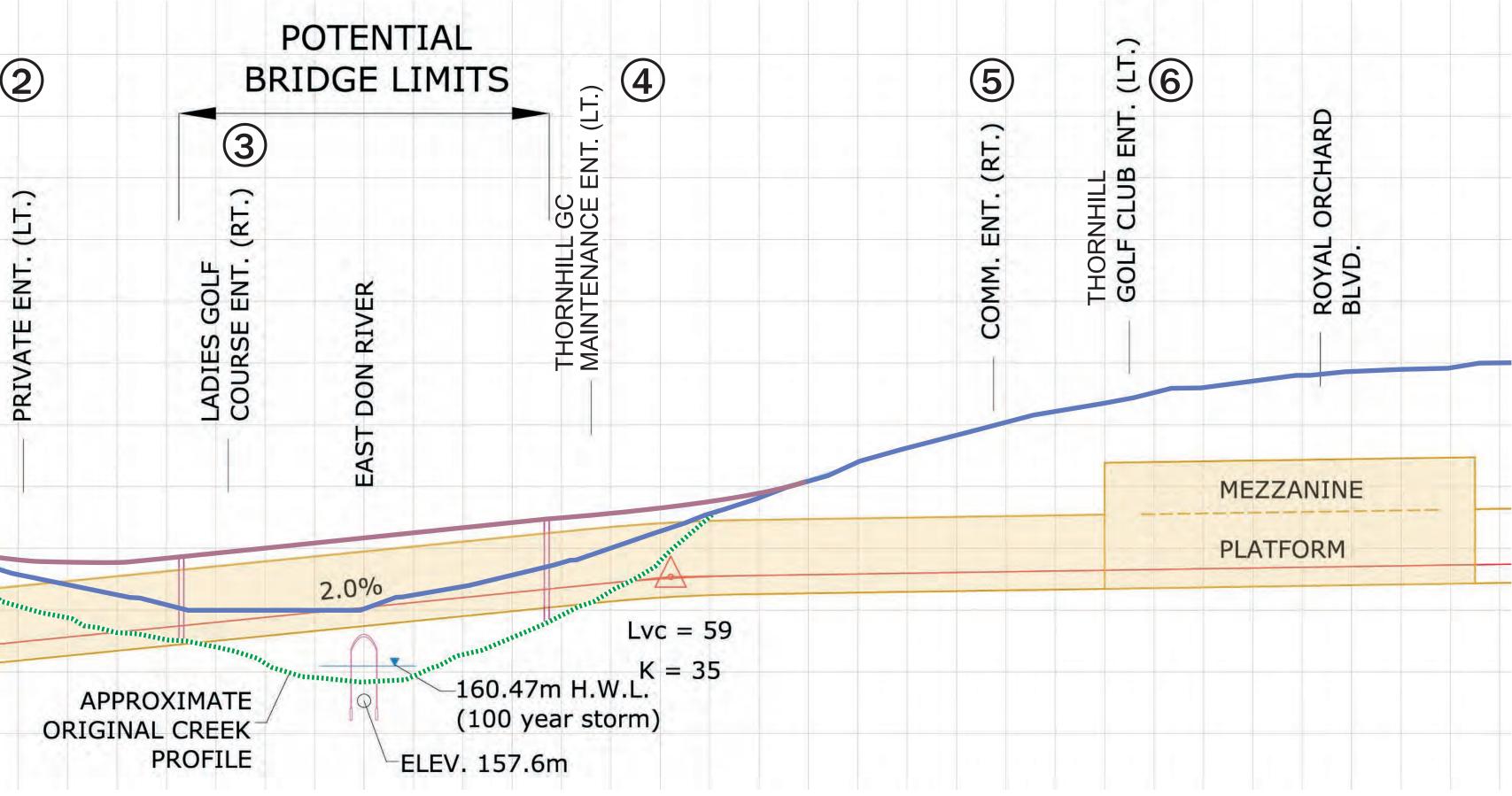




East Don River crossing



	1	
VEXAMINE No. 15 NUMPORT NUM	PRIVATE ENT. (LT.)	
Lvc = 120 K = 71		1 I I II

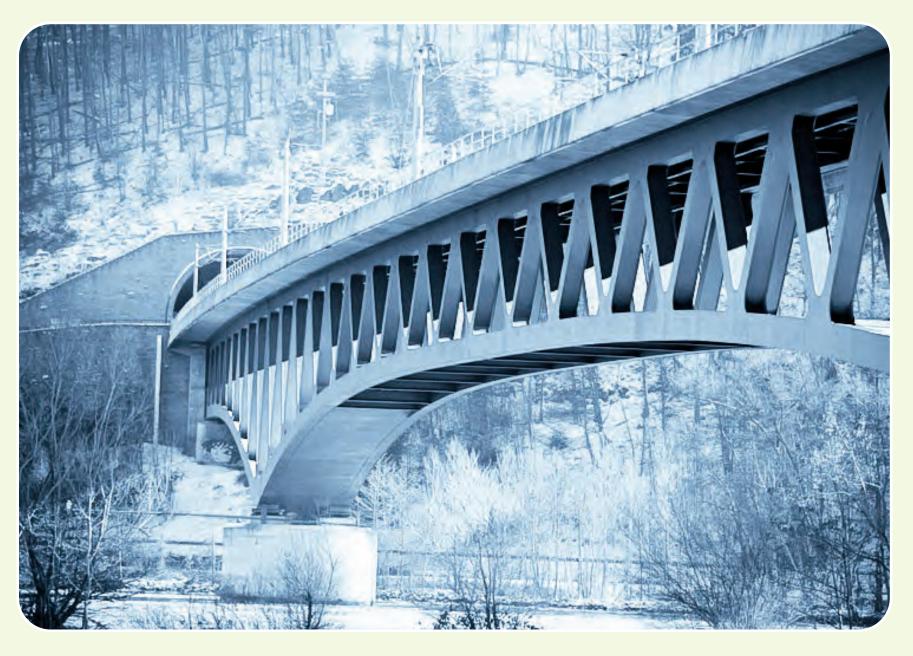








Heritage bridge styles



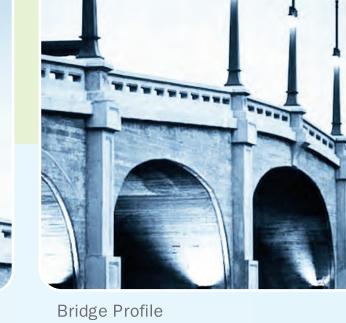




Lighting Feature



Railing Style



Heritage bridge elements

Lighting Feature





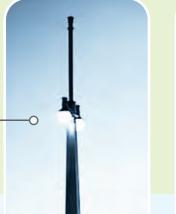


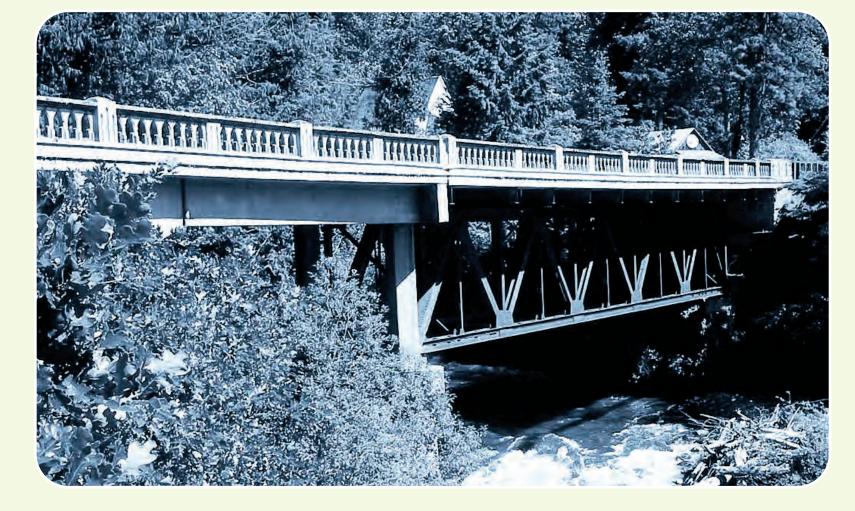
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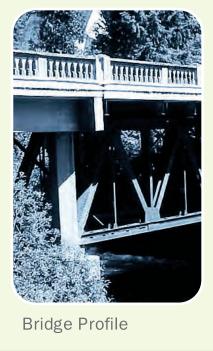
Gateway Feature







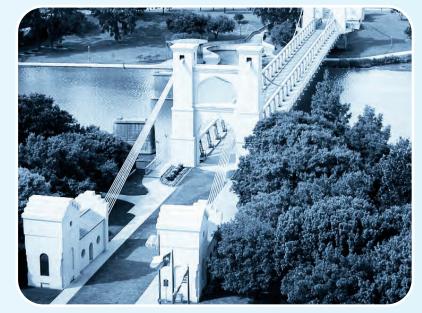








Bridge Profile



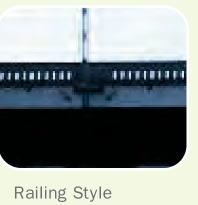
Bridge Profile





Bridge Profile





Bridge Profile



Railing Style



Bridge Profile









Yonge street subway extension: concept plan and profile



