

2.2 Black Creek Maintenance and Storage Facility

2.2.1 Reason for Change

The need for a Maintenance and Storage Facility (MSF) was identified in the 2010 EPR, but an assessment of the impacts associated with such a facility was deferred until a later time. Subsequently, in 2011, Metrolinx initiated a study to establish a functional plan for an MSF at Black Creek, capable of accommodating the vehicle requirements for the ultimate Eglinton Crosstown LRT.

Functional requirements for the site include:

- Development of connecting tracks from the LRT mainline to the storage yard tracks;
- Maintenance carhouse;
- Maintenance-of-way facilities, traction power substation, and repair shop/facility building. These facilities could be implemented either as stand-alone facilities or integrated in the maintenance carhouse;
- **Vehicle Capacity Requirements:** the MSF will ultimately need to accommodate 162 Light Rail Vehicles (LRVs), based on the preliminary service plan; and
- **Bus Terminal Requirements:** The MSF site will, in Phase 1 of development, need to accommodate a 15-bay TTC bus terminal, connected to the proposed Mount Dennis LRT Station. Note: the development of the bus terminal layout is discussed further in **Section 2.3**.

2.2.2 Key Challenges and Constraints

The key challenges and constraints associated with the site include:

- **Existing Conditions:** the site was previously used by Kodak until 2005 with several buildings on the property. All buildings, with the exception of Kodak Building #9 have been demolished. Metrolinx has committed to retaining Kodak Building #9. As such, the functional layout of any Black Creek MSF alternative must recognize the presence and sensitivity of the building, and ensure that the design of the MSF site protects the Building;
- **Toronto Region Conservation Authority (TRCA) Top of Bank Definition:** The TRCA has previously provided documentation to the TTC's Transit Expansion Department indicating the line of the top-of-bank for the former Kodak Site, which are considered the limits of the TRCAs regulated area. While it is not necessarily required to protect the Regulated Area from impacts, the TRCA indicated that the stability of the slope must remain intact, and that any lands and/or vegetation lost as part of the Black Creek MSF plan must be compensated for;

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- **Surrounded by Transportation Infrastructure:** the site is bordered by Eglinton Avenue on the south, the CPR rail corridor on the west, Ray Avenue / Industry Street on the north and Todd Baylis Boulevard / Black Creek Drive on the east;
- **Site Elevation:** the site itself is approximately 9 metres above the elevation of Eglinton Avenue; and
- **Potential Site Contamination:** site remediation requirements could potentially be cost-prohibitive if significant excavation is required for the construction of the proposed MSF.

2.2.3 Alternative Design Methods Considered

Recognizing the functional requirements for the Black Creek MSF and constraints associated with the site, there are limited feasible alternative MSF site layouts. Several alternative designs were developed which did not achieve the functional requirements noted in Section 2.2.1 and were therefore rejected. Conceptual site plan layout options had previously been generated based on the following principles:

- The yard layout concept was to reflect the proposed revised LRT mainline alignment and subsequently incorporate a revised connecting track layout; and
- The yard layout concept was to include space for a new 15-bay bus terminal to facilitate passenger transfer between the Mount Dennis Station and connecting bus services in Phase 1 of the Eglinton Crosstown LRT implementation.

The functional requirements for the MSF essentially consume the entire available property, and there are limited permutations of the layout of those functional elements that will reasonably fit within the property boundaries. For example, the largest functional component – the LRV storage tracks – can only fit on the west side of the site based on the ultimate number of vehicles, and was therefore consistent among all alternatives. The layout of the remaining building and parking facilities was therefore confined to the remaining lands on the site, leaving little flexibility to situate the remaining functional elements, and only minor variations between the alternatives. The impacts, therefore, associated with all alternatives were estimated to be consistent.

The preferred concept continued to evolve and was refined into the ultimate conceptual plan reflected in this study. The final location of the buildings and site parking will be determined through detailed design and additional consultation with Stakeholders.

2.2.4 Recommendation

The recommended site layout is discussed in detail in **Section 3** of this report.

2.3 Mount Dennis Bus Terminal

2.3.1 Reason for Change

Under the approved 2010 EPR, the proposed western terminus of the Eglinton LRT facility was to be at Toronto Pearson International Airport. While this remains the ultimate terminus in the west, the current phased implementation approach will result in an interim western terminus at the Mount Dennis LRT Station. As such, Eglinton Avenue west of Mount Dennis will continue to be served by buses in the interim, until such a time when funding allows for the westerly extension of the LRT. These bus services will require an interface with the Mount Dennis LRT Station in order to facilitate passenger transfer between the buses and the LRT system. The number of bus bays was provided by TTC Service planning and are detailed in **Table 3-1**.

This section summarizes the results of a feasibility investigation, carried out as part of the ECLRT EPR Addendum study, focused on the development and assessment of the proposed Mount Dennis Bus Terminal to connect with the proposed Mount Dennis LRT Station. The bus terminal options were evaluated based on criteria selected by the project team.

2.3.2 Key Challenges and Constraints

The following list highlights the key challenges and constraints associated with the development of the proposed Mount Dennis Bus Terminal:

- **Property Availability:** The range of candidate terminal sites within the study area is limited to the areas available adjacent to the proposed Black Creek MSF, or the No Frills site south of Eglinton Avenue (opposite the proposed MSF). The site of the proposed MSF is owned, in its entirety, by MetroInx. The City of Toronto owns a small parcel of land on the south side of Eglinton Avenue, directly opposite the proposed MSF site. These sites are illustrated in **Figure 2-6**.

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Figure 2-6: Candidate Sites for Bus Terminal

- **Kodak Building #9:** As a result of the building's significance to the community, Metrolinx has committed to preserving the building in its current location. To that end, Metrolinx has recently initiated a study to assess the requirements for restoring the building. It should be noted that, while Kodak Building 9 is of heritage value based on Ont. Reg. 9/06 of the Ontario Heritage Act, it not considered to be of provincial heritage value under Ont. Reg. 10/06.

The concurrent Mount Dennis Mobility Hub study will consider alternative future uses for the building. The development of Mount Dennis Bus Terminal design concepts, therefore, is to protect the existing building in place.

- **Transit Access/Egress Requirements:** Upon implementation of the ECLRT, the need for bus services along Eglinton Avenue east of the Mount Dennis LRT Station will significantly diminish. The proposed bus terminal at the Mount Dennis LRT Station will effectively form the hub at which bus routes approaching from the west terminate, and where passengers transfer to the LRT service.

The majority of buses using the terminal will therefore approach from and depart to the west along Eglinton Avenue. A smaller number of connecting services will approach from and depart to the north and south along Black Creek Drive, with limited services continuing easterly on Eglinton Avenue. Bus access to the terminal, under all alternatives, would be as follows:

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- Eastbound buses would access the station from Eglinton Avenue via the existing No Frills right-in/right-out site access;
- Westbound buses could access the site from either Photography Drive (via Black Creek Drive) or via a new bus-only signalized movement at the existing No Frills access from Eglinton Avenue;
- Eastbound bus egress moves from the station would do so via the existing No Frills access directly onto Eglinton Avenue; and
- Westbound buses exiting the station would do so via a new bus-only, signalized movement at Eglinton Avenue.

2.3.3 Alternative Design Methods Considered

A total of four (4) short-listed feasible alternatives were developed for a bus terminal at the proposed Mount Dennis LRT Station. They are described in the following section.

Alternative 1a: MSF Site (Figure 2-7)

This alternative introduces a 15-bay island bus platform immediately east of the existing Kodak Building 9, north of the proposed LRT alignment.

A new structure over Eglinton Avenue would likely be required to accommodate bus and pedestrian circulation to/from the south side of Eglinton Avenue. This new structure is estimated to cost approximately \$2.0M, however the cost savings associated with not having to construct the Mount Dennis Station adjacent to the existing Photography Drive bridge result in a net cost for the new bridge of approximately \$1.0M.

Pedestrians would access the bus station from the Mount Dennis LRT Station, through a pedestrian tunnel, emerging within the bus island. This connection would also facilitate passenger transfer between LRT and bus services, as well as the future GO Rail station.

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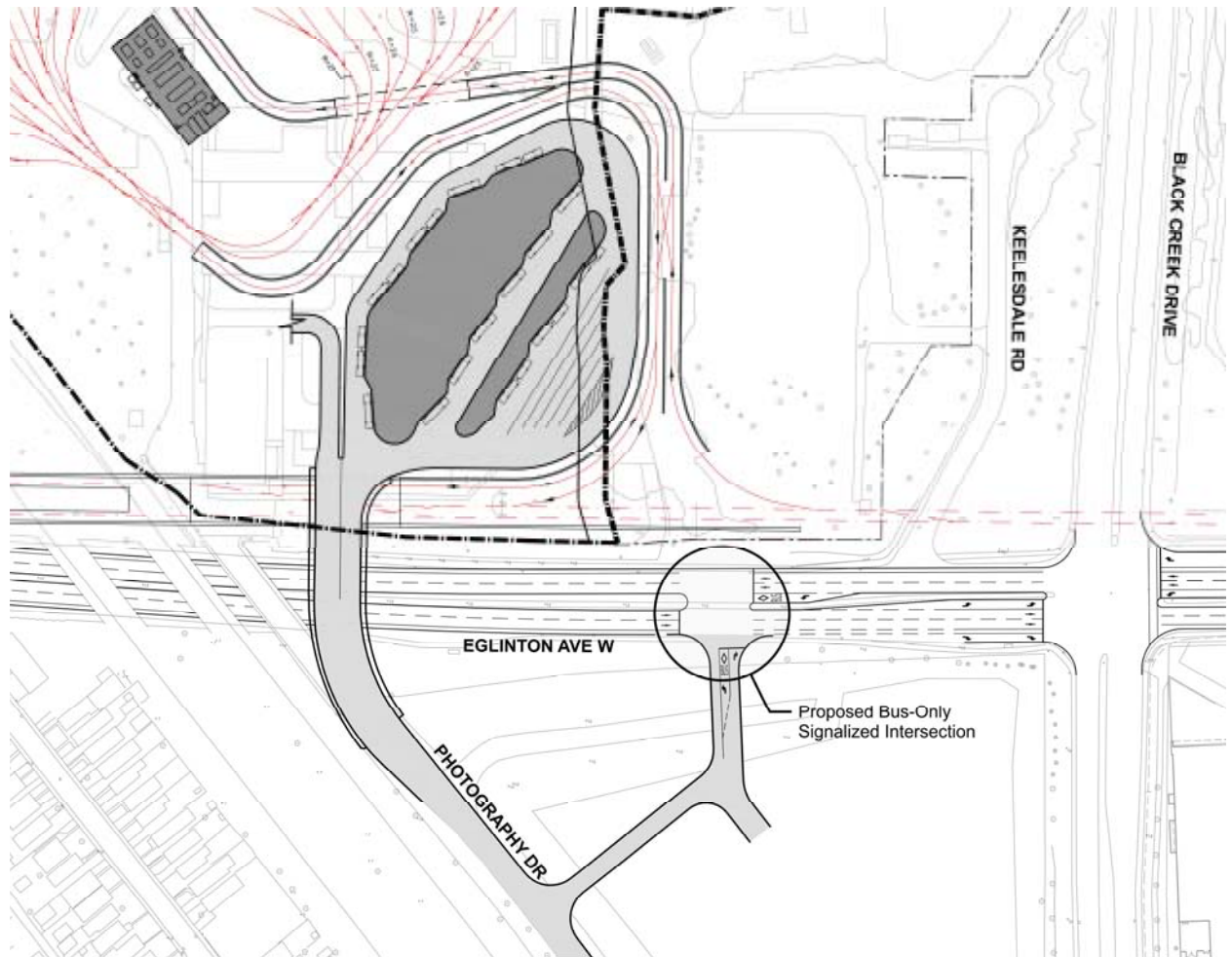


Figure 2-7: Bus Terminal Design Concept 1a – MSF Site

Alternative 1b: MSF Site w/ Kodak Building 9 (Figure 2-8)

Similar to Alternative 1a, this alternative introduces a 15-bay island bus platform on the north side of Eglinton Avenue. This alternative, however, incorporates the existing Kodak Building 9 within the bus terminal island. This configuration requires that a narrow (approx. 5.5m) bus roadway be placed between Kodak Building 9 and the LRT storage yard track. This configuration eliminates the need to construct a new bridge over Eglinton Avenue (as is present in Alternative 1a).

Again, pedestrians would access the bus station from the Mount Dennis LRT Station, through a pedestrian tunnel, emerging within the bus island.

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Figure 2-8: Bus Terminal Design Concept 1b – MSF Site w/ Kodak Building 9

Alternative 2a: South Site – Single-level Bus Terminal (Figure 2-9)

This alternative introduces a 15-bay island bus platform in the City of Toronto-owned property south of Eglinton Avenue opposite the proposed Black Creek MSF site. The bus platform would be positioned at approximately the existing elevation of Photography Drive approaching the Eglinton Avenue structure.

Pedestrian access to the terminal from Eglinton Avenue would be through an entrance at the existing Eglinton Avenue grade, through a pedestrian tunnel under the bus circulation roadway, emerging in the bus terminal island. The passenger tunnel would also provide access to Photography Drive with a proposed elevator and stairway, where transferring passengers could use Photography Drive to connect to the proposed Mount Dennis LRT Station.

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Figure 2-9: Bus Terminal Design Concept 2a – South Side, Single-Level Terminal

Alternative 2b: South Site – Two-level Bus Terminal (Figure 2-10)

This alternative introduces a two-level bus platform in the City of Toronto-owned property south of Eglinton Avenue opposite the proposed Black Creek MSF site.

Pedestrian access to the terminal from Eglinton Avenue would be via a new pedestrian overpass or underpass with stair and elevator access from the southern side of Eglinton Avenue, immediately east of the Photography Drive overpass.

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Figure 2-10: Bus Terminal Design Concept 2b – South Side, Two-Level Terminal

2.3.4 Evaluation

The following is a list of the key factors under which the alternative bus terminal configurations were assessed.

- **Property Impacts:** quantitative assessment of the amount of additional private property required to construct the bus terminal and associated access/egress infrastructure.
- **Bus Access:** Qualitative assessment of the internal station circulation requirements for buses. Long, circuitous routes would be less desirable than direct routes that afford buses less “out-of-way” travel.
- **Passenger Access/Pedestrian Circulation:** Comparison of the ease with which pedestrians could access the station from the street, or transfer between transit services, under each bus-terminal alternative.
- **Capital Cost:** Comparison of the order-of-magnitude capital cost implications associated with the alternatives.
- **Potential for Impacts to Natural Environmental Features:** Qualitative assessment of the potential for impacts to sensitive natural features, species of concern, designated Area of Scientific Interest (ANSI), or Environmentally Sensitive Area;
- **Potential for Impacts to Cultural / Heritage Resources:** Qualitative assessment of the potential for impacts to Kodak Building 9, either direct or indirect, due to either the construction of or proximity of the bus terminal to Building 9.
- **Operating Costs:** Costs associated with the daily operation and maintenance of the bus terminal.

The following table summarizes the assessment of the Mount Dennis Station Bus Terminal alternatives. The evaluation ratings are presented in the table according to the following colour-coding:

- Best performing: Dark Green
- Fair: Lime
- Poor: Coral

2.3.5 Recommendation

On balance of the benefits and drawbacks of each of the alternatives, it was concluded that **Alternative 1a: MSF Site** was preferred and will be reflected in the revised plan for the LRT system and Black Creek MSF site.

Table 2-2: Assessment of Bus Terminal Alternatives

Factor	Alternative 1a: MSF Site	Alternative 1b: MSF Site w/ Kodak Bldg 9	Alternative 2a: South Site (Single-level terminal configuration)	Alternative 2b: South Site (two-level terminal configuration)
Property Requirements	No additional property required; can be constructed entirely within Metrolinx-owned lands.	No additional property required; can be constructed entirely within Metrolinx-owned lands.	Requires acquisition of approximately 4,000m ² of property from No Frills site, displacing approximately 55 parking spaces.	Requires acquisition of approximately 4,000m ² of property from No Frills site, displacing approximately 55 parking spaces.
Bus Access / Egress / Internal Circulation	Single-level terminal offers good vehicle circulation with few potential conflict points. Access from Photography Drive will require an additional bus-only structure over Eglinton Avenue.	Single-level terminal offers good vehicle circulation with few potential conflict points. Bus access from Photography Drive will preclude the ability for general purpose use.	Single-level terminal offers good vehicle circulation with few potential conflict points. Relies on signalized intersection for westbound egress moves.	Two-level station configuration complicates internal vehicle circulation by introducing more potential conflict points for buses. Relies on signalized intersection for westbound egress moves.
Pedestrian Access / Passenger Circulation	Average walk for passenger transfer = 230m, w/ 2 changes of level	Average walk for passenger transfer = 230m, w/ 2 changes of level	Average walk for passenger transfer = 260m, w/ 3 changes of level	Average walk for passenger transfer = 240m, w/ 4 or 5 changes of level
Capital Cost	Moderate	Moderate	Lowest	Highest
Potential for Impacts to Natural Environmental Features	No significant impacts to natural environment features.	Mitigation may be required for encroachment on TRCA-regulated land (top-of-bank setback)	No significant impacts to natural environment features.	No significant impacts to natural environment features.
Potential for Impacts to Cultural Heritage Features	Construction in close proximity to Building 9. Potential to integrate pedestrian connection to building.	Construction in close proximity to Building 9. Potential to integrate pedestrian connection to building. Likely precludes adaptive community use of Building 9 due to access limitations.	No impacts to Kodak Building 9.	No impacts to Kodak Building 9.
Conclusion	Recommended	Not Recommended	Not Recommended	Not Recommended

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3. UPDATE OF THE PROJECT DESCRIPTION

The purpose of this section is to define the recommended changes to the previously approved ECLRT, including the following key elements:

- Realignment of the ECLRT between Jane Street and Black Creek;
- Consolidation of the Weston and Black Creek LRT Stops;
- Implementation of an LRT Vehicle Maintenance and Storage Facility at Black Creek Drive;

The proposed changes were based on the following:

- The feasibility studies described in **Section 2**;
- Design Criteria developed for Metrolinx in **Section 3.3**;
- The assessment of existing and future conditions described in **Section 4**; and
- Consultation with the public, stakeholders, government and technical agencies in **Section 6**.

The following sections describe the proposed changes.

3.1 Design Principles

The design principles presented in the 2010 Environmental Project Report for the Eglinton Crosstown LRT remained in effect throughout the development of the changes to the previously-approved plan. The design principles are:

- Must provide fast, reliable, frequent and comfortable transit service from a passenger perspective;
- Fully accessible to persons with mobility difficulties;
- Must achieve highest level possible of safety and security for both passengers and employees;
- Must be achieved with minimum environmental impacts; and
- Must incorporate excellence in urban design – pedestrian realm, facilities, amenities, and landscaping.
- Excellent passenger transfer facilities between LRT and subway stations, and between LRT lines - typically grade-separated from other vehicular traffic -- minimizing vertical and horizontal movement required by passengers when transferring between lines;
- Transfer stations to be fully accessible between inter-connecting lines;
- Surface passenger stops to be located and designed for easy passenger transfer to intersecting bus routes, and to provide safe, signal-protected access between the stops and surrounding land uses;

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- Fare transactions to be done through proof-of-payment fare media and random-check enforcement; and
- Vehicles, stations, and infrastructure must allow for:
 - the highest possible level of, and ease of, maintenance;
 - the highest possible level of customer and employee security; and
 - must be fully accessible for people of differing levels of mobility.

3.2 Operations Plan

3.2.1 LRT Service

The service objective is to provide a peak-hour maximum capacity of 8000 person per hour per direction with at least 40% of passengers being able to be seated in the peak-hour demand. The service is proposed to operate at headways as low as 2 minutes in tunnel sections, and 3 minutes where the LRT is at grade within the median of the roadway. It is expected that these requirements will result in all facilities being designed to accommodate ultimate train lengths of approximately 90 metres.

LRT operating headways will likely vary throughout the corridor. The tunnel portion of the LRT corridor will have turn back capability at both ends of the tunnel section to allow the LRT to operate with short turn service and provide shorter headways than on the surface sections. Headways on the surface section of the LRT also may vary depending on ridership demand.

3.2.2 Bus Service

The need for parallel bus service along Eglinton Avenue will be determined through TTC Service Standards process based on observed ridership patterns and specific community needs, relative to the additional cost of providing the service.

The following changes are proposed for the new bus terminal at Mount Dennis:

- **32 Eglinton West** bus service would be shortened to operate from Renforth Station to the proposed Mount Dennis Bus Terminal, with peak service every 5 minutes.
- **34 Eglinton East** bus service would be renamed “34 Eglinton”. Service would operate from the proposed Mount Dennis Bus Terminal to Kennedy Station, via Eglinton/Yonge and Eglinton West stations. Peak service would operate every 15 minutes.
- **89 Weston** bus service would be revised to serve the proposed Mount Dennis Bus Terminal in both directions via Weston Road / Black Creek Drive / Eglinton Avenue / Weston Road. Local peak service would operate every 5 minutes, with additional express service every 10 minutes.

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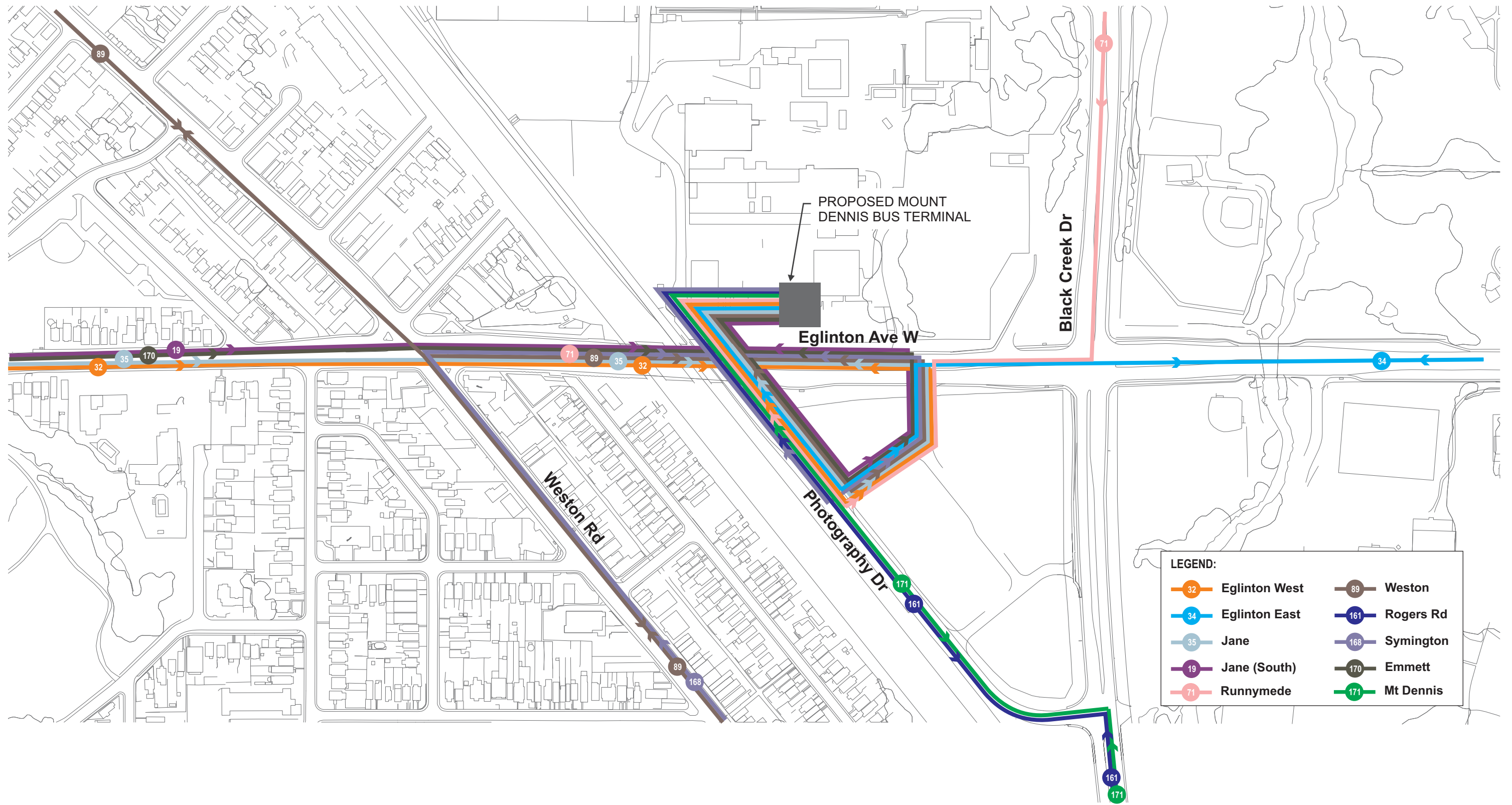
- **35 Jane** (Jane Station-Steeles) local bus would be split into two routes:
 - **35 Jane** (Mount Dennis Bus Terminal – Steeles West Station) would operate both ways via Jane Street and Eglinton Avenue to/from the proposed Mount Dennis Bus Terminal. Peak service would operate every 3 minutes.
 - New **19 Jane South** (Jane Station – Mount Dennis Bus Terminal) would operate both ways via Jane Street / Eglinton Avenue to/from the proposed Mount Dennis Bus Terminal. Peak service would operate every 6 minutes.
- **35E Jane Express** bus service would operate from the proposed Mount Dennis Bus Terminal to Steeles West Station via Eglinton Avenue / Jane Street / Steeles Avenue both ways. Peak service would operate every 10 minutes.
- New **170 Emmett** bus service would operate to/from the proposed Mount Dennis Bus Terminal via Eglinton Avenue / Emmett Avenue / Jane Street / Eglinton Avenue. Peak service would operate every 15 minutes.
- **161 Rogers Road** would be operated to the proposed Mount Dennis Bus Terminal, both ways via Rogers Road, Weston Road, and Eglinton Avenue. Peak service would operate every 8 minutes. Service west of Jane Street would be replaced by the revised 171 Mount Dennis service.
- **168 Symington** would be extended from the Avon Loop to the proposed Mount Dennis Bus Terminal, both ways via Weston Road and Eglinton Avenue. Peak service would operate every 4 minutes.
- **71 Runnymede** bus service would operate via the proposed Mount Dennis Bus Terminal, both ways via Rockcliffe Boulevard, Lambton Avenue, Ray Avenue, Industry Street, the Mount Dennis garage, Industry Street, Todd Baylis Boulevard, Trethewey Drive, Black Creek Drive, Eglinton Avenue, and return via the reverse routing. Peak service would operate every 15 minutes.
- **171 Mount Dennis** bus service would be changed to operate from the proposed Mount Dennis Bus Terminal south on Black Creek Drive, west on Humber Boulevard, west on Alliance Avenue, north on Jane Street, east on Lambton Avenue, south on Rockcliffe Boulevard, east on Alliance Avenue, north on Cliff Street, east on Cordella Avenue, east on Louvain Street, east on Humber Boulevard, and north on Black Creek Drive. Peak service would operate every 20 minutes.

The following table prepared by TTC Service Planning, summarizes the representative bus service plan for the proposed Mount Dennis Bus Terminal. The project team has had several discussions with TTC and it has been confirmed that 15 bus bays are required at this location.

Figure 3-1 illustrates the conceptual bus routing through the study area.

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Table 3-1: Bus Services at Mount Dennis Bus Terminal

Route	Terminating or Through?	Peak Periods		Bus Bays Required
		Headway (min)	Trips/hr	
161 Rogers Rd	Terminating	8.00	7.5	1
32 Eglinton West	Terminating	5.00	12.0	1
34 Eglinton	Terminating	15.00	4.0	1
89 Weston local northbound	Through	5.00	12.0	1
89 Weston local southbound	Through	5.00	12.0	1
89 Weston Express northbound	Terminating	10.00	6.0	1
35 Jane	Terminating	3.00	20.0	1
35E Jane Express	Terminating	10.00	6.0	1
19 Jane South	Terminating	6.00	10.0	1
170 Emmett	Terminating	15.00	4.0	1
168 Symington	Terminating	4.00	15.0	1
71 Runnymede	Terminating	15.00	4.0	0.5
171 Mount Dennis	Terminating	20.00	3.0	0.5
TTC Wheel-Trans				1
Unloading (1 for every 4 routes)				2
Total 12 metre bays				6
Total 18 metre bays				9
TOTAL BUS BAYS REQUIRED				15

3.3 Design Criteria

3.3.1 Transit Elements

LRT vehicles will be of modern design with a length of approximately 30 metres. Trainsets will initially consist of two cars, with opportunity to expand to three cars when ridership levels warrant. The capacity of the LRT for planning purposes is 260 passengers for two car trainsets and 390 passengers for three car trainsets. Maximum operating speed is 60 km/hr; though vehicles will not be permitted to operate above the posted speed limit along Eglinton Avenue

Trains will be powered by electricity from overhead catenary wires. Train operations on the surface sections of the LRT corridor, both train control and opening/closing of doors, will be controlled by on-board staff. In the underground and grade-separated section of the LRT corridor, vehicles will be controlled by Automatic Train Operation (ATO).

The LRT vehicles will be fully accessible to all riders, with low floor vehicles with level boarding from platforms. Boarding will occur on all doors to reduce time

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spent serving stops/stations. Doors will be located on both sides of the vehicle to accommodate centre and parallel platforms. Operator cabs will be located on both ends of the trainsets to permit operation in either direction without the requirement for turnaround loops.

The track technology to be used is a combination of a continuously welded rail with a rubber sleeve that isolates the rail from the concrete. This elimination of rail joints combined with the isolating sleeve provides a smooth operation with limited noise and vibration.

To develop a conceptual plan for the Addendum, the Transit Expansion Department Design Criteria Manual was used.

3.3.2 Road Elements

For the realignment of Eglinton Avenue West at Black Creek Drive the following road design criteria was used.

Design Parameters	Proposed Standards
Posted Speed	60 km/h
Pavement Width	2 x 3.3 metres through lanes 2 x 1.6 m for delineated bicycle lane
Left Turn Lane	1 x 3.0 metres
Median	7.4 metres for LRT
Minimum Grade	0.5 %
Maximum Grade	(Roadway) 5.0 %
Minimum Curve Radius	230 metres

3.3.3 Typical Runningway

The 2010 EPR illustrated a centre-lane alignment for the Eglinton Crosstown LRT as well as the other seven lines in the Transit City Program. This document identifies a preferred cross-section for the Eglinton Crosstown LRT, and, where applicable, supplementary roadway elements. In order to remain consistent and ensure compatibility with the remaining sections of the previously-approved plan, the alignment and station modifications addressed in this Addendum assumed cross-sections consistent with those recommended in the 2010 EPR.

3.3.3.1 Typical Runningway at Surface

The typical LRT runningway, when on the surface, is comprised of the following key elements within a 7.4m LRT right-of-way:

- Two LRT tracks;
- Raised curbs for separation between the LRT tracks and median;
- Raised curbs for separation between the LRT tracks and general traffic; and
- A centre-median pole line, supporting the catenary power supply.

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This typical configuration, illustrated in **Figure 3-2**, shows a typical 36-metre cross section for a median transit corridor which includes the following supplementary roadway elements:

- Two 3.3 metre-wide vehicular traffic lanes operating in each direction;
- A 1.6 metre-wide bicycle lane in each direction; and
- A 6.1 metre-wide boulevard, including sidewalks, on each side of the street.

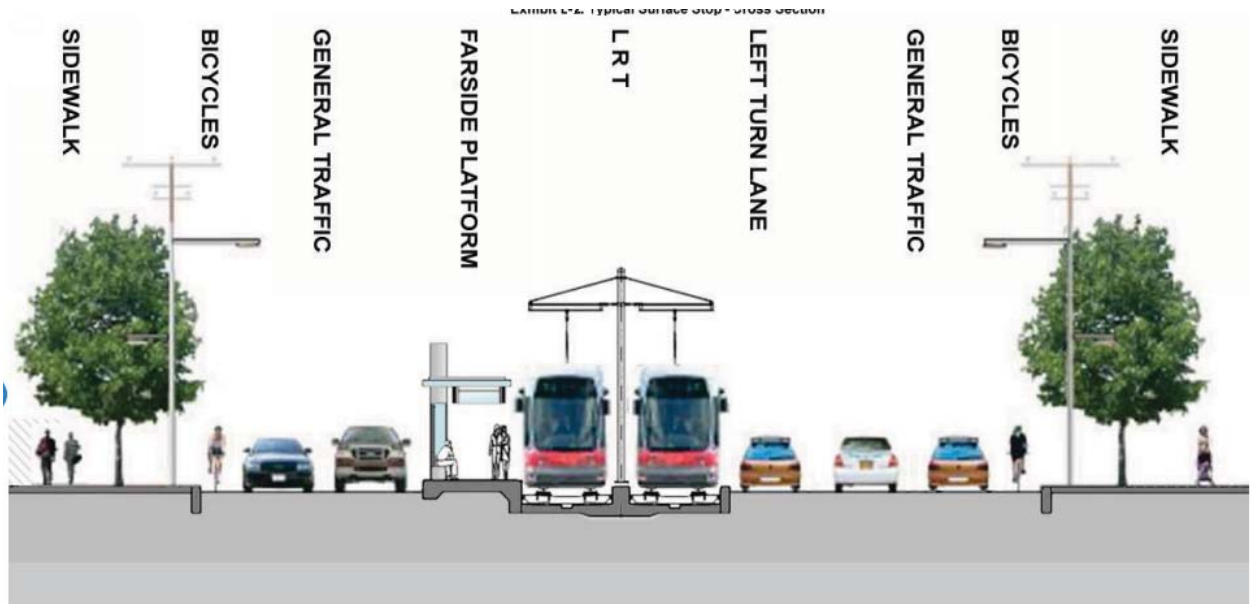


Figure 3-2: Typical LRT Runningway At Surface

3.3.3.2 Typical Runningway Below Grade

The tunnels are typically located under the Eglinton Avenue (West and East) alignment. Between stations the underground alignment of the tunnels can be designed to avoid as many subsurface obstacles and utilities as possible. The cross sectional alignment of the tunnels between stations can be seen in **Figure 3-3**.

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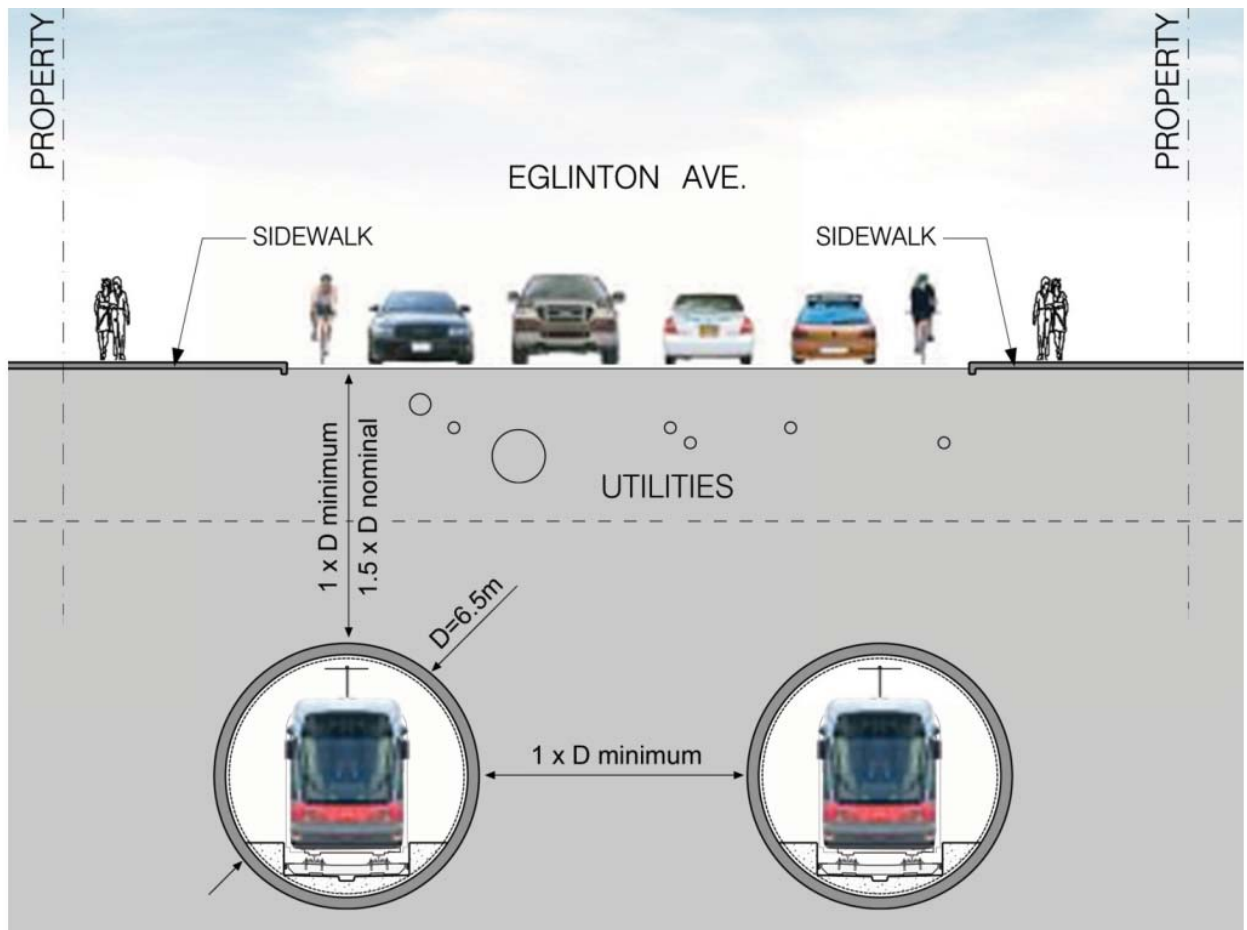


Figure 3-3: Typical LRT Runningway Below Grade

3.3.4 Stations

The Mount Dennis LRT Station along the underground LRT will have entrances at street level to allow access and egress for walk-in traffic. Entrances will be located north of the Eglinton Avenue roadway at either end of the station. The locations of the entrances will be designed to coincide with bus routes and pedestrian routes for convenient passenger transfer.

In accordance with Metrolinx design criteria, main entrances will include elevators, escalators and stairs (**Figure 3-4**). Secondary entrances will have stair only access to the concourse level. Stairs and escalators will be oriented to allow for direct line of site between concourse and street level at all entrances. In cases where this is not possible, to ensure visibility and day light access, the entire perimeter of the entrance will have glass enclosure.

The concourse at all stations and stops will be proof of payment and all ticket vending and validation will be at this level.

The stations will include escalator and elevator access between the concourse and platform level. A low-floor center platform configuration has been selected for the stations. A 90m platform will be designed to accommodate 3-car trainset at

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each of the stations; however, initially only 2-car trainsets will use a 60 metre long portion of the platform.

See **Figure 3-4** and **Figure 3-5** for typical station configuration.

Fire Ventilation Requirements

The typical LRT Station is proposed to have ventilation shafts/units. The size and configuration of these units is subject to a separate study which will be carried out in the design phase. The purpose of the ventilation shafts is to balance air pressure in the tunnels and in case of underground fire they provide emergency exhaust and fresh air supply.

The typical station is proposed to have two vent shafts located at each end of the station preferably on opposite sides of the Eglinton Avenue right-of-way. Due to complications with configuration at certain sites the vent shafts may have to be consolidated to one side of Eglinton Avenue. At surface level the vent shafts will be located outside of the public right-of-way on adjacent properties or boulevards.

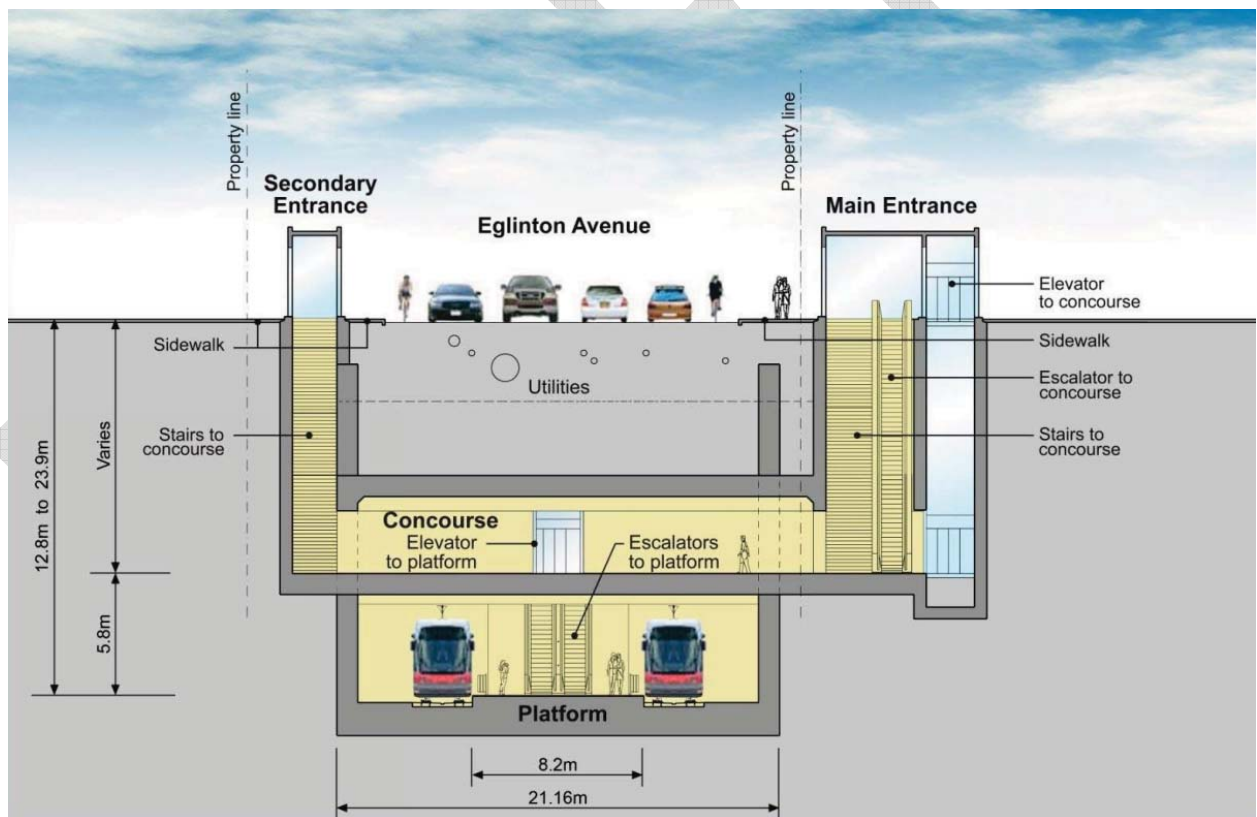


Figure 3-4: Typical Station Cross Section

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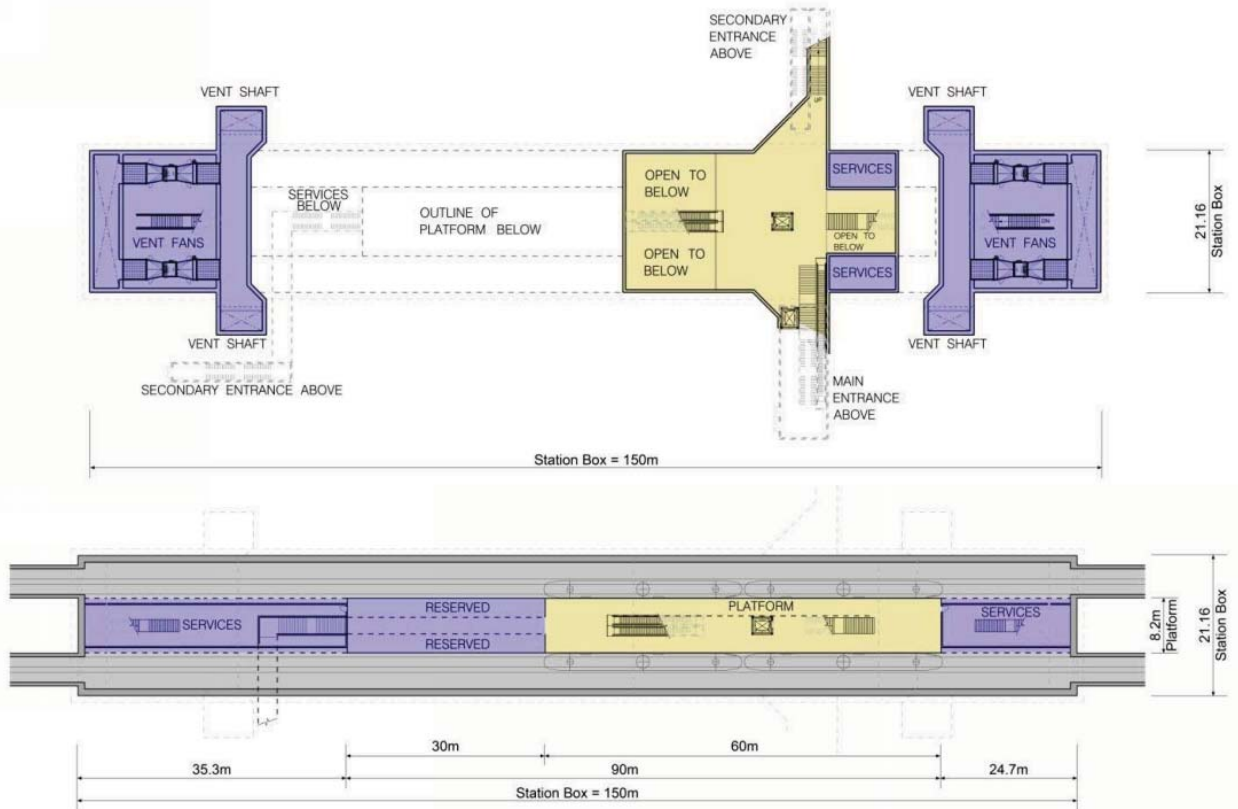


Figure 3-5: Typical Station Plan



Figure 3-6: Secondary Entrance (Example)

3.3.5 Special Trackwork

Crossovers and storage (pocket) tracks are recommended for this corridor. Crossovers enable trains to transfer tracks in order to change direction. A storage (pocket) track is a third track between main tracks which allows trains to be stored off of the main tracks during low service periods or when vehicles are disabled.

In accordance with the design standard, crossovers will be located every 4 kilometres, at the last stations on either end of the tunnel and at terminal stations. Storage (pocket) tracks will be provided for a minimum of one train at or near all terminal stations.

3.4 Proposed Crosstown LRT Design

3.4.1 Alignment

The study area for the EPR Addendum is approximately from Jane Street to the west launch shaft east of Black Creek. The following describes the revised alignment design from east to west. The revised alignment through this section is illustrated in **Figure 3-7**.

The proposed alignment will tie into the previously approved design at the west launch shaft, approximately 150 metres east of Black Creek. East of this point, the approved underground LRT section continues easterly. West of the launch shaft, the alignment rises at a 5% vertical grade on the north side of Eglinton Avenue. The proposed LRT passes over Black Creek on a new bridge, at approximately the same elevation as the existing Eglinton Avenue / Black Creek Bridge, and continues to rise at a 5% vertical grade westerly, passing over Black Creek Drive on a new bridge. At this point the profile crests and begins to descend at 2% vertical grade while running parallel to Eglinton Avenue, approximately 35m to the north. The LRT mainline connects to the MSF service tracks in this location before flattening to a 1% vertical grade as it enters into Mount Dennis Station. The proposed LRT passes under the CPR and GO Railway corridors within the station at an elevation similar to Eglinton Avenue which also passes under the rail corridors. West of Mount Dennis LRT Station, the existing Eglinton Avenue West ascends at a steep 5 % grade towards Weston Road. The LRT alignment exits to the west of the Mount Dennis LRT Station on a descent, the alignment begins to curve southerly back towards Eglinton Avenue and proceeds underground through a new structure. Once underground, the LRT curves to re-align back down the centre of Eglinton Avenue with a vertical profile to minimize construction impacts. As Eglinton Avenue descends toward Jane Street at a 5% grade, the LRT continues under the middle of the roadway at a flat grade until it emerges through a tunnel portal within the median of Eglinton Avenue. The horizontal grade of the LRT matches Eglinton Avenue approximately 100m east of the Jane Street and continues as an at-grade LRT through the Jane Street intersection to a proposed station stop on the west side. Westerly the LRT will continue as an at-grade centre-median LRT as previously approved.

3.4.2 Stops and Stations

The previous centre median at-grade stop at Weston Road has been relocated and redesigned as an underground station with protection for direct passenger connections to a potential future GO Station, north of Eglinton Avenue under the GO Transit and CP Railway corridors. A cross-section illustrating this concept is presented in **Figure 3-8**. The station will have multiple entrances off of Eglinton Avenue and direct passenger connections to the bus terminal and passenger pickup/drop-off area. As illustrated in **Figure 3-7e**, underground pedestrian tunnel connections will be provided to facilitate passenger transfer between the proposed Mount Dennis Bus Terminal, PPUDO, Mount Dennis LRT Station, and protect for connections to the future Mount Dennis GO Station. The Secondary entrance on the north side of Eglinton Avenue at the east end of the station will provide access for passengers destined to the Community Centre as well as pedestrians along Eglinton Avenue access to Kodak Building #9 and the bus terminal. The entrance building will be located under the new Photography Drive bridge over Eglinton Avenue and will be setback as far north as possible to maximize the pedestrian area in front of the entrance. As previously noted, shifting the LRT alignment further north to place the entrance building outside of the Eglinton right-of-way will result in impacts to Building #9, additional property acquisition and increased costs.

The previously proposed Black Creek stop has been removed due to vertical alignment constraints of the LRT. The only other LRT stop within this study area is an at-grade centre median stop, located west of Jane Street.

3.4.3 Mount Dennis Bus Terminal

As discussed in **Section 1.4.3**, a two-phased approach to implementing the Eglinton Crosstown LRT will be employed due to funding limitations. Phase 1 consists of the section from Mount Dennis LRT Station to Kennedy Station, and Phase 2 consists of the section from Mount Dennis LRT Station westerly to Pearson International Airport. Phase 2 is currently unfunded. In the interim between the completion of Phases 1 and 2, bus services will remain in operation on Eglinton Avenue between the Airport and Mount Dennis Station to supplement the LRT operation east of Mount Dennis LRT Station. In order to accommodate transfer between these bus services and the LRT, a new bus terminal is required at the proposed Mount Dennis LRT Station.

The terminal program requires 15 bus platforms to meet forecast TTC requirements.

Bus Terminal Layout

The bus terminal layout, illustrated in **Figure 3-7**, is situated on lands within the Black Creek MSF property. The terminal is comprised of two island bus platforms immediately east of the existing Kodak Building #9, north of the proposed LRT alignment. Vehicles within the site would circulate only in a clockwise direction. Bus access to the terminal would be as follows:

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- Eastbound buses would access the station from Eglinton Avenue via the existing No Frills right-in/right-out site access and Photography Drive;
- Westbound buses would access the site Eglinton Avenue via a new bus-only signalized intersection at the existing No Frills right-in/right-out access;
- Bus egress moves from the station would do so via the proposed bus-only signalized intersection on Eglinton Avenue.

Kodak Building #9 is situated too close to the Photography Drive structure over Eglinton Avenue to permit the structure's use by transit vehicles. As such, a new structure over Eglinton Avenue would be required to accommodate bus circulation to/from the south side of Eglinton Avenue.

Pedestrians would access the bus station from the Mount Dennis LRT Station, through a pedestrian tunnel, emerging within the bus island. This connection would also facilitate passenger transfer between LRT and bus services, as well as the future GO Rail station.

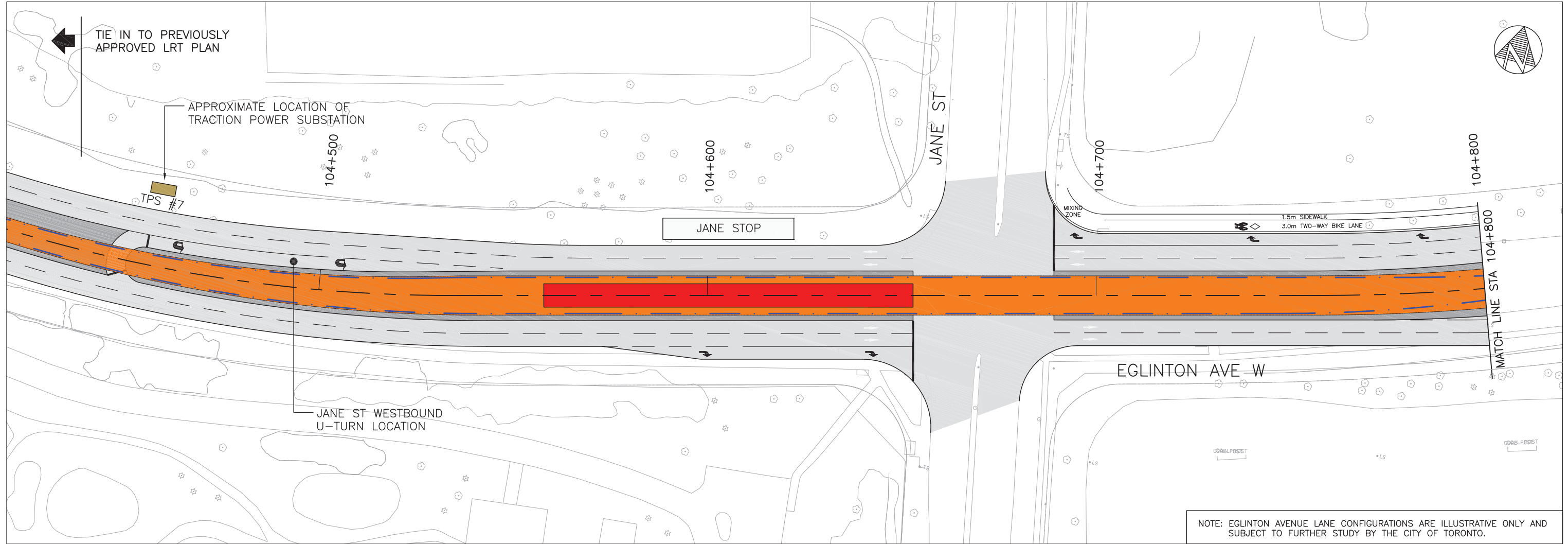
3.4.4 Passenger Pick-Up/Drop-Off

In order to facilitate passenger drop-off to the Mount Dennis Station, bus terminal, and future GO Rail Station, a small Passenger Pick-Up/Drop-Off (PPUDO) area is proposed on the Black Creek MSF site, on the west side of Kodak Building #9. The PPUDO would offer approximately 30 short-term parking spaces and parking facilities for Kodak Building #9. An access to the pedestrian tunnel would be provided adjacent to Kodak Building #9, connecting to the various transit services offered at the site. PPUDO traffic can enter and exit the facility via the right in / right out intersection at No Frills and via Photography Drive and Black Creek Drive.

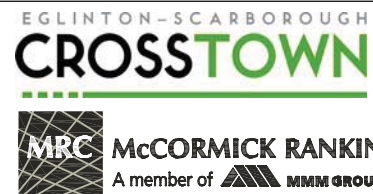
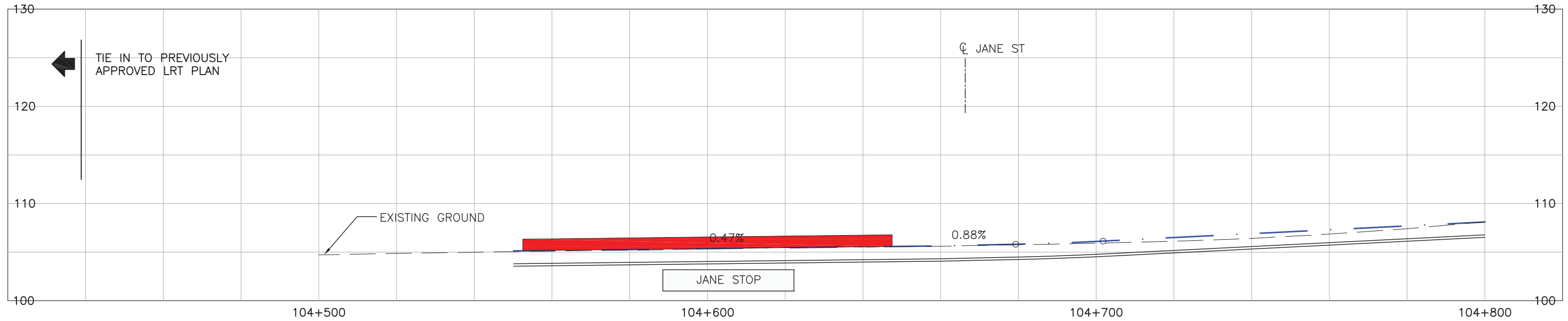
Access to the PPUDO and bus terminal will be via the new Photography Drive bridge which is located to align with a possible future extension to Todd Baylis Boulevard when the bus terminal is down sized in the future when the LRT is extended beyond Mount Dennis Station. The layout of the bridge protects for the future road extension but the impacts / mitigation of the road are not part of this study.

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NOTE: EGLINTON AVENUE LANE CONFIGURATIONS ARE ILLUSTRATIVE ONLY AND SUBJECT TO FURTHER STUDY BY THE CITY OF TORONTO.



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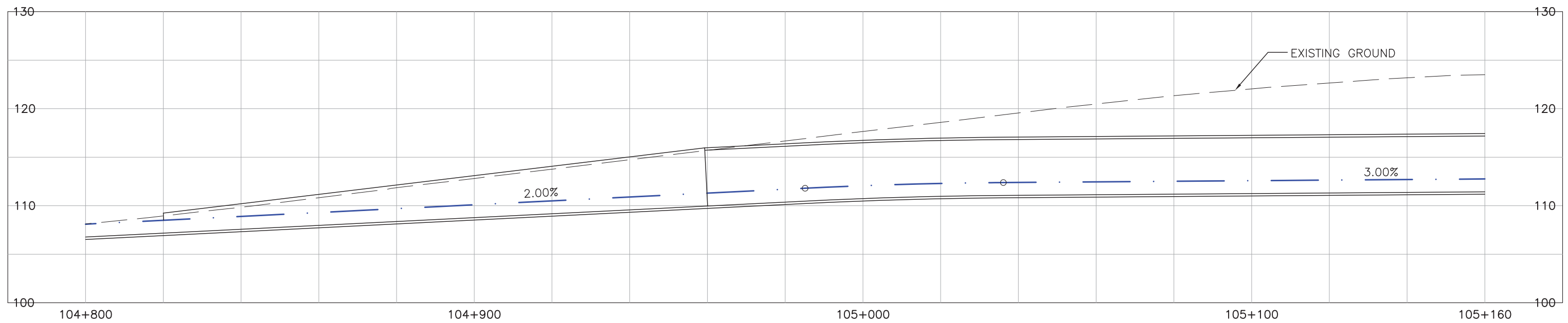
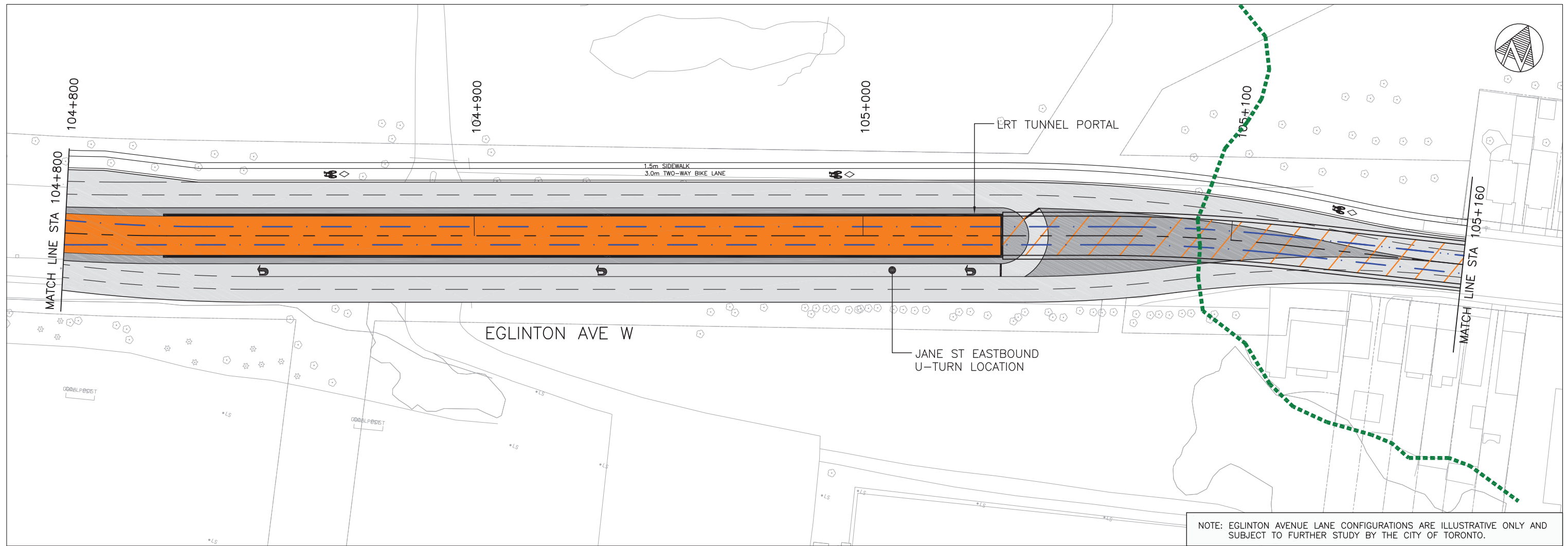
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	LRT ABOVE GROUND
	LRT UNDERGROUND
	LRT ALIGNMENT
	TRCA REGULATED AREA

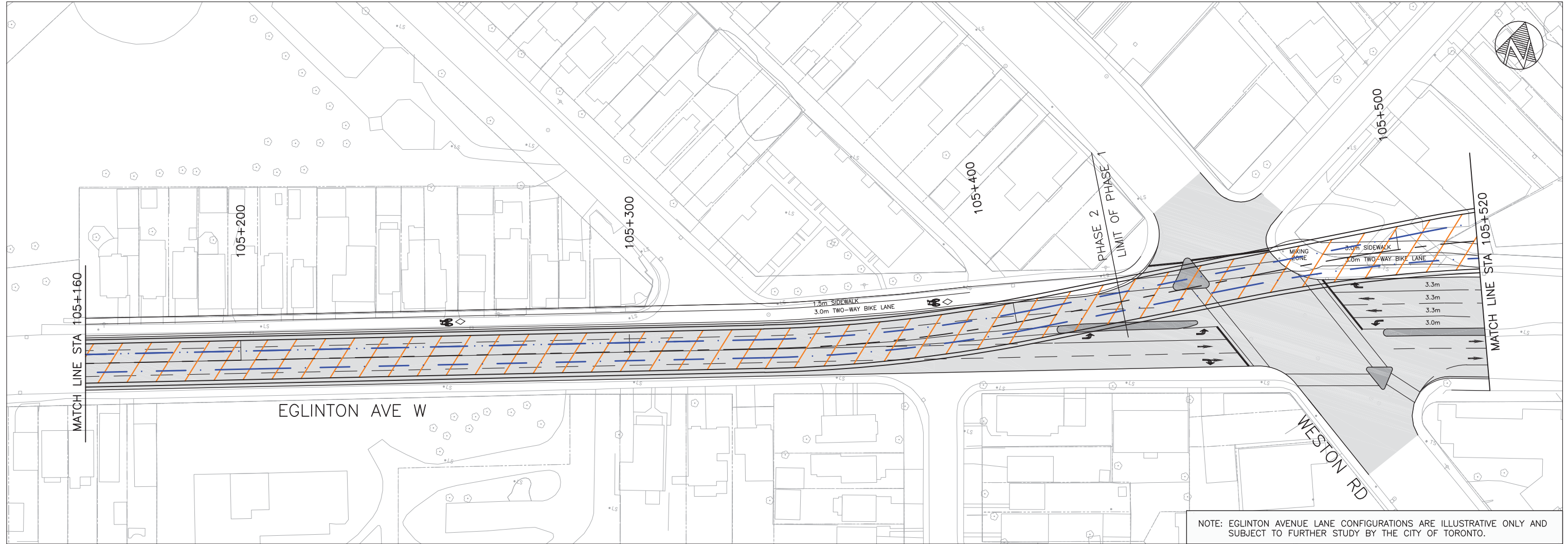
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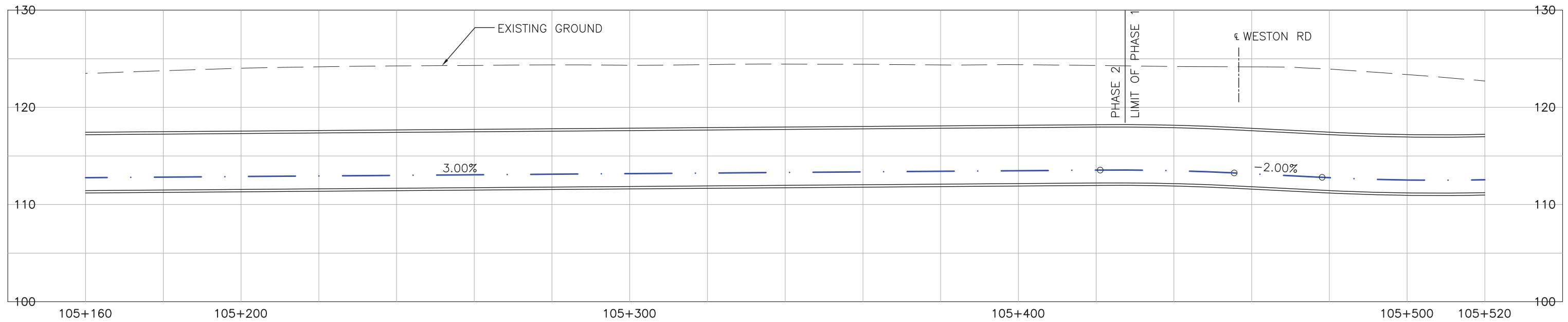
EGLINTON CROSSTOWN LRT
ENVIRONMENTAL PROJECT REPORT ADDENDUM

LRT WEST SECTION PROPOSED ALIGNMENT
STA 104+800





NOTE: EGLINTON AVENUE LANE CONFIGURATIONS ARE ILLUSTRATIVE ONLY AND SUBJECT TO FURTHER STUDY BY THE CITY OF TORONTO.



LEGEND:

	LRT PLATFORM
	LRT ABOVE GROUND
	LRT UNDERGROUND
	LRT ALIGNMENT
	TRCA REGULATED AREA

DATE:
DECEMBER 2012

SCALE:
VER. - 1:400
HOR. - 1:1000

EGLINTON CROSSTOWN LRT
ENVIRONMENTAL PROJECT REPORT ADDENDUM

LRT WEST SECTION PROPOSED ALIGNMENT
STA 105+160 TO 105+520

FIGURE
3-7c

