Metrolinx

Third Party Entrance Connection Requirements

Revision 0

Metrolinx

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Preface

This is the first edition of the Metrolinx Third Party Entrance Connection Requirements. This interim document will be updated as necessary to incorporate new insights and align with relevant future standards. The purpose of the Third Party Entrance Connection Standard is to ensure a consistent, seamless, safe and inclusive customer experience and a highly functional integration of transit stations with adjacent developments. It provides Third Party suppliers/contractors and project delivery teams with Metrolinx design requirements broadly, including prescriptive and performance criteria applicable to third party pedestrian connections across all transit modes (GO, Subway, LRT).

This standard is applicable to all projects where third party pedestrian entrance connections to transit are proposed or within scope.

Suggestions for revision or improvement should be sent to Metrolinx Design Division, Attention: Senior Manager, Design Standards.

October 2020

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DEFINITIONS

Term	Definition
Exit width	The width of a passageway and all doorways along the path of travel to the public realm
Fruin Level of Service (LOS)	Level of Service as described in 'Pedestrian Planning and Design', John J Fruin, 1971
Public access point	The doors either interior or exterior that provide access to the transit exclusive use area of the third party entrance connection from a publically accessible area. This may include access from a retail concourse, a building lobby, or a dedicated entrance to the street or other public area.
Third party	The third party with ownership of the adjacent connecting property. This can include a property management company, developer, condo corporation, etc.
Transit exclusive use area	Refers to any portion of the connection designed with the sole purpose of accessing a Metrolinx transit facility, independent of ownership

ABBREVIATIONS

Term	Definition
AVM	Add Value Machine
BAS	Building Automation System
CCTV	Closed Circuit Television
GFI	Ground Fault (Circuit) Interrupter
I&IT	Information and Information Technology
IFC	Issued for Construction
LOS	Level of Service (Fruin)
LRT	Light Rail Transit
NFHB	Non-Freeze Hose Bib
OBC	Ontario Building Code
PA	Public Address (communication system)
PSOS	Project Specific Output Specification
SFTP	Station Fare Transaction Processor
TVM	Ticket Vending Machine

1. SCOPE

This document specifies design requirements applicable to third party entrance connections to Metrolinx stations including LRT, Bus, Subway, and "GO" rail. This includes connections at grade, above grade, and below grade.

The requirements and guidance are intended to assure seamless, high quality integration of transit stations into adjacent development where direct or indirect access to the stations is proposed, to provide benefit to both the transit system and its passengers.

Notes:

1) *These* requirements *do not provide requirements with respect to maintenance and operational requirements, procedures*, or legal matters for the connection. These shall be set out separately in Metrolinx property and/or easement agreements *with the third party.*

2) For brevity:

a. The proposed pedestrian connection between the public access of a third party building or structure, and the Metrolinx station (LRT, BUS, Subway, or "GO") shall be referred to as the "connection".

b. The required vestibule within the connection is referred to as the "vestibule".

c. The third party with ownership of the adjacent connecting property entering into an agreement to design and construct *the connection* is referred to as *the "third party*".

2. CONTRACTUAL REQUIREMENTS

2.1. Operating hours of the connection shall match the service hours of the station unless noted otherwise.

2.2. All requirements in this standard shall be met for all elements within the connection from the station box up to the fire separation.

2.3. All elements of *the connection* between the station and the Metrolinx side of the fire separation shall follow all Metrolinx requirements for the transit mode irrespective of the maintenance and operational arrangement.

a) Example: LRT – Applicable requirements include minimum widths of station circulation elements in the applicable LRT Project Agreement / PSOS, the Metrolinx Light Rail Transit (LRT) Design Criteria Manual, among others. See section 2.11.1 for further information.

2.4. All elements in the *connection* from the fire separation leading to the public access point via the third party building, shall match or exceed the performance characteristics of Metrolinx requirements for the transit mode. This includes but is not limited to situations where a connection is provided directly onto the street.

a) The following performance characteristics, which are critical to ensuring safety, comfort, and predictability, shall match or exceed Metrolinx requirements:

1) Durability (scratch resistance, chemical resistance, fade resistance, design life, service life, etc.)

2) Safety (slip resistance, edges and profiles)

3) Accessibility

4) Maintainability (cleanability, ease of maintenance)

5) Minimum clearances (minimum ceiling heights, corridor and/or stair widths)

6) Lighting (levels, temperature, CRI)

7) Fruin Level of Service (LOS)

8) Fire Protection

9) Security

10) Others at Metrolinx discretion

2.5. If fare gates or fare systems must be located on the third party side of the fire separation due to site constraints, all design requirements for the transit mode shall apply from the station to the public access point. These requirements include but are not limited to fire protection, security, finishes, colours, lighting, and materials, in addition to requirements listed in section 2.4.

2.6. All direct and indirect financial impacts of the connection on Metrolinx, including but not limited to fare collection/fare gates and associated infrastructure, potential non-fare revenue sources Eg. (potential advertising revenue, potential vending machines, other retail) shall be fully mitigated and/or offset by the third party.

a) All variation costs I.e changes in direct or indirect costs incurred by Metrolinx operational partners that are caused by the entrance connection shall be borne by the third party.

b) This shall include Metrolinx fare machines where applicable. See fare control section for further details.

2.7. The proposed connection submissions shall demonstrate understanding of, and resolve all impacts to station function including planning, customer journey, wayfinding, fare collection, operations, maintenance, non-fare revenue sources such as third party advertising and retail opportunities.

2.8. Operational control, branding and advertising of the 'vestibule' shall reside with Metrolinx.

2.9. All associated Capital project costs (hard and soft project costs) associated with the design, construction, operation and maintenance of the connection are to be borne by the third party.

2.10. Easements registered on title shall be obtained for the entirety of the connection on third party property to allow access for inspection, maintenance, repair, and modification as needed or desired by Metrolinx personnel and contractors.

2.11. REFERENCE STANDARDS

2.11.1. Metrolinx Standards

The work shall be compliant with the latest version of all applicable Metrolinx requirements (standards, drawings, specifications, etc) including but not limited to:

	Transit Mode			
	GO Rail	LRT	Subway	Bus
Metrolinx Design Standards, Front End, DS-00	●	●	●	●
Metrolinx Universal Design Standard, DS-02	●	●	●	●
Metrolinx Wayfinding Design Standard, DS-03	●	●	●	●
Metrolinx GO Station Architecture Design Standard, DS-04	●			●
Metrolinx GO Design Requirements Manual (DRM)	●			●
Metrolinx GO Standard Drawings and Specifications	●			●
Metrolinx Subway Design Standard (in development)			●	
Metrolinx Transit Oriented Development Guideline for Subways (in development)			●	
Metrolinx Light Rail Transit (LRT) Design Criteria Manual		●		
Metrolinx GO Rail Station Access Plan	●			
Metrolinx Project Specific Output Specifications (forming a part of the relevant Project Agreement)	●	●	●	●

2.11.2. External Standards

All applicable regulatory codes and standards shall be followed, including but not limited to the following:

- CSA B651 Accessible Design for the Built Environment
- CSA S478 Standard Guideline On Durability In Buildings
- Canadian Electrical Code
- Ontario's Building Code (OBC) including section 3.13 Rapid Transit Stations
- Ontario Fire code (OFC)
- Occupational Health and Safety Act, Regulations 851 – Industrial Establishments
- Ontario Electrical Safety Code
- National Fire Protection Association (NFPA) codes including but not limited to:
    - NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems
    - NFPA 13 Standard for the Installation of Sprinkler Systems
- All required codes and standards as they apply to each project and program

2.11.3. All applicable codes and municipal requirements shall be followed for associated design elements of fire protection systems.

2.11.4. Standards by the Underwriter's Laboratories of Canada shall be adhered to as referenced in the above codes.

3. PLANNING REQUIREMENTS

3.1. The connection shall fit the overall plan of each transit station to provide maximum functionality, customer convenience, and to minimize customer walking distance from public realm/other transit connections, and minimize required maintenance.

3.2. Crime Prevention Through Environmental Design (CPTED) principles shall be incorporated into the design of the connection.

3.3. Safety by Design principles shall be incorporated into the design of the connection.

3.4. The location and layout of the connection shall be approved by Metrolinx.

3.5. The connection shall be made through a passageway with a vestibule ('vestibule') to separate the transit station and adjacent building.

3.6. The connection shall contain a fire separation having a fire resistance rating with a minimum two (2) hour rating. Rated assembly is to provide maximum amount of glazing possible to meet CPTED requirements.

3.7. All circulation elements within connections, which are intended for the egress of transit customers from the station to the public access point (including the street), or access to the station from the public access point, shall provide a minimum width that is the greater of:

a) All applicable Metrolinx width requirements for the transit mode and station, as described in section 2.11.1.

   1) Example: LRT – Applicable requirements would include minimum widths of station circulation elements in the applicable LRT PA / PSOS, The Metrolinx Light Rail Transit (LRT) Design Criteria Manual, among others.

b) The width required to ensure a Fruin Level of Service C/D based on pedestrian flow modelling within the peak period and with simultaneous emergency evacuation, including all contributions from new development and ridership growth projected to the latest ridership year that the station and connection are designed to, but no earlier than the year 2031.

c) 5 metres for connections greater than 25 m in length

d) 7 metres for connections greater than 50 m in length

e) 10 metres for connections greater than 100 m in length

f) A minimum clear width of 3.6 metres where no dimensionally greater requirements exist

3.8. At minimum, all intersections, nodes and access points in connections longer than 25 metres shall be highlighted via regions of differing visual character, including finishes, lighting, graphics, projections, and/or approved design features, subject to Metrolinx approval.

3.9. Circulation elements within connections shall be designed to meet all applicable regulatory codes including OBC and NFPA130, in addition to meeting Metrolinx requirements.

4. FARE CONTROL

4.1.1. If the subject station utilizes fare control areas in the station/platform, the connection shall lead to the unpaid fare control area of the transit station. Otherwise, connections shall be designed to accommodate automatic fare control systems outside of the footprint of the station.

4.1.2. If the subject station does not utilize fare control areas in the station/platform (such as GO), the connection shall be designed to accommodate Metrolinx fare vending and/or validating systems (TVM, AVM, SFTP) unless this is already provided on the path of travel to platforms.

4.1.3. All fare control areas shall be designed to accommodate Metrolinx fare control system requirements as they apply to each station, subject to review by Metrolinx.

5. REQUIREMENTS DURING CONSTRUCTION

5.1. Impacts to the Station and the customer experience shall be minimized during construction of the third party entrance connection and safety shall be ensured at all times.

5.2. The third party shall submit a mitigation plan that demonstrates how impacts to customers will be minimized or eliminated during construction, subject to review by Metrolinx.

5.3. Refer to the latest version of the Metrolinx Operations & Maintenance Requirements for Customer Facing Facilities for applicable requirements during construction.

6. SUBMITTALS

6.1. All proposed third party entrance connections to Metrolinx stations are subject to review at different stages of design development in accordance with Appendix C of Metrolinx Design Standards (DS-00).

6.2. At a minimum, all design and engineering documents for the connection shall be submitted to Metrolinx for review at the following stages:

a) 30% Design

b) 60% Design

c) 90% Design

d) 100% Design

e) Issued for Construction (IFC)

Note: Metrolinx will share review material with relevant authorities and/or operational entities as it deems necessary.

6.2.2. The third party shall provide a building code report for the proposed connection prepared by a registered building code agency, showing compliance with applicable law including the Ontario Building Code.

7. FIRE SEPARATION

7.1. Connections shall be designed with provision of:

a) A vestibule separated from the station and from the third party building by glazed screen assemblies on each side of the vestibule.

1) All glazed assemblies shall prioritize transparency and shall not use wired glass.

b) A fire separation having minimum two (2) hour fire resistance rating, and shall satisfy OBC Part 3 and the building code report provided by the third party.

1) The fire separation must be composed of a fire-rated glazed assembly that utilizes fire-rated glass with maximum glazing and maximum transparency.

i) The glazing shall not be composed of wired glass:

2) The fire separation shall be located:

i) outboard of station property, between the station entrance doors and the public access point, and

ii) before the fare gates along the path of travel from the third party building to the station entrance

7.2. The vestibule shall contain no occupancy.

8. FIRE LIFE SAFETY

8.1. Where the connection comprises part of the station calculated egress, it shall follow all applicable standards, codes and legislated fire life safety requirements including but not limited to the Ontario Building Code, municipal requirements, and applicable fire codes.

8.1.1. The third party shall provide a fire life safety code report and fire life safety plan for the Station with the proposed connection showing, how egress from the connection functions (Eg. mag locks, door strikes) in addition to detailing integration with the station and third party development.

a) Fire life safety plan to include required signage and communication elements to assure the safety of users in the event of an emergency.

9. FIRE PROTECTION SYSTEM

9.1. Fire protection system shall be designed for the connection including vestibule as per Metrolinx Standards and all applicable regulatory codes including OBC and NFPA

9.2. The Fire protection system design is subject to review by Metrolinx and relevant authority, to be included in the connection design submissions.

9.3. The Vestibule shall be protected with close spaced sprinklers located on both sides of each vestibule screen assembly and installed in accordance with NFPA, OBC.

9.4. The water supply and sprinkler system for the vestibule shall be provided from the fire protection system of adjacent building.

10. FIRE ALARM SYSTEM

10.1. Vestibule and Metrolinx close-spaced type sprinklers, shall be:

a) Zoned separately from the adjacent building sprinklers;

b) Provided with a discrete annunciation alarm to adjacent building main fire alarm panel;

c) Annunciated separately on Metrolinx fire alarm panel.

10.2. For fire alarms not including Stage 1 alerts, the fire alarm system in adjacent building shall activate a hazard sign on the transit station side of the connection to the requirements of OBC Part 3 and indicate hazard to Metrolinx fire alarm panel. In some instances Metrolinx may require the provision of smoke detectors in addition, which shall be identified in both the adjacent building and the transit station panel.

10.3. The third party shall be responsible for running all wires and conduit to Metrolinx fire alarm panel as required.

10.4. Where a transit station is not equipped with a fire alarm panel, the third party shall run all wiring and conduits suitable for future connection to a location within the station as determined by Metrolinx (Facilities Engineering & Assurance) and ensure that the Station PA system and security systems is integrated into the connection and third party building fire alarm system. Two way communication shall be ensured between the station and third party for PA system and fire alarm system.

10.5. Final connection to Metrolinx fire alarm panel will be the responsibility of Metrolinx.

11. FIRE VENTILATION

11.1. The fire ventilation system shall be designed for the connection including the vestibule according to applicable best engineering practices, in accordance with Metrolinx requirements, and in compliance with all applicable codes and standards. The third party shall provide engineering, construction and validation accordingly.

11.2. Where a connection functions as a means of egress in the event of fire within the rapid transit station, the staircases and/or corridors within the connection shall be designed such that the air velocity does not exceed 9.15 m/s through any portion of the connection with fire ventilation systems operating.

11.3. Where an existing sidewalk entrance is replaced with a connection, the existing sidewalk entrance shall be closed and reconfigured to suit the requirements for make-up air for fire ventilation. The owner of adjacent building shall be responsible for the construction of ancillary sources of make-up air through dedicated shafts complete with motorized dampers and ventilation louvres. The shafts shall include the following:

a) Provisions for drainage where exposed to the outdoors;

b) Maintenance access;

c) Street grating designed to match applicable municipal requirements;

1) Note: Metrolinx requirements may be used at Metrolinx discretion

d) Openings terminated at a higher level than the surrounding grade level to exclude run-off drainage into the shaft;

e) Other requirements determined on a case by case basis.

Note: Where there is pressure caused by train piston effect or emergency fire ventilation fan operations, the vestibule doors are subjected to higher pressure which may cause the door opening force to exceed the limit set by OBC or NFPA 130 if these forces are not factored into the connection design.

11.4. For the connection, the third party shall undertake detailed analysis pertaining to ventilation system design under normal and emergency operation conditions including make-up air requirement, excessive pressure on door, excessive air velocity through stair, impact to Metrolinx station air quality and ventilation, and impact to station egress capacity and route etc

11.5. The fire ventilation system design is subject to review by Metrolinx and relevant authority, to be included in the connection design submissions

12. POWER SUPPLY

12.1. The third party shall provide all normal power to a connection unless noted otherwise.

12.2. An emergency power source shall be provided from the third party building electrical system to power fare systems, life safety (incl. lighting), CCTV, and PA systems within the connection for a minimum of 90 minutes at full load capacity, unless noted otherwise, subject to review by Metrolinx, relevant municipal authority and/or operational partners.

13. LIGHTING

13.1. Lighting levels to match Metrolinx specified levels according to transit mode and station type

13.2. Control requirements shall follow Metrolinx specifications based on the transit mode and station type

13.3. Emergency lighting levels to meet or exceed Metrolinx emergency lighting levels based on the transit mode and station type.

14. DIGITAL SIGNAGE AND/OR INFORMATION DISPLAY SYSTEM(S)

14.1. Digital signage requirements shall meet the applicable Metrolinx requirements for the transit mode and station

14.2. Where a fare gate is provided as a part of the connection, a standard digital information display system shall be included, co-located with the two-way intercom outside of the fare paid zone, at decision point, subject to review by Metrolinx and relevant municipal authority and/or operational partners.

14.3. Communication feeds to be routed to station communications room.

15. CCTV

15.1. CCTV requirements including coverage shall match or exceed the applicable Metrolinx requirements for the transit mode and station, including project specific operational and security requirements.

15.2. CCTV system shall provide 100% coverage of the connection, including the vestibule.

15.3. Dedicated CCTV coverage shall be provided to monitor fare equipment and all communication interfaces

15.3.1. The CCTV coverage plan is subject to review by Metrolinx and relevant municipal authority, to be included in the connection design submissions.

15.4. All Metrolinx required CCTV communication feeds to be securely routed to station communications room and shall not be accessible to, or shared with the third party.

16. BUILDING AUTOMATION SYSTEM (BAS)

16.1. BAS requirements including coverage shall match or exceed the applicable Metrolinx requirements for the transit mode and station

16.1.1. The BAS design is subject to review by Metrolinx and relevant authority, to be included in the connection design submissions

16.2. Communication feeds to be routed to station communications room.

17. PA SYSTEM

17.1. PA system requirements shall match the applicable Metrolinx requirements for the transit mode and station and integrate into the relevant station systems.

17.2. The PA system design is subject to review by Metrolinx and relevant municipal authority, to be included in the connection design submissions

17.3. Communication feeds to be routed to station communications room.

18. TWO WAY INTERCOM

18.1. Two way Intercom for emergency and customer support shall be provided within the connection, before the Fare Gate, and outside the Fare control area

18.2. The intercom system shall match the applicable Metrolinx requirements for the transit mode and station, and integrate into the relevant station systems.

18.3. The two way intercom system and placement is subject to review by Metrolinx and relevant municipal authority, to be included in the connection design submissions

18.4. Communication feeds to be routed to station communications room.

19. FINISH MATERIALS

19.1. All finish materials on the Metrolinx side of the fire separation to follow applicable Metrolinx requirements for the transit mode of the transit facility (GO Station Architecture Design Standard, LRT Design Criteria Manual, Metrolinx Subway Design Standards, among others and any project-specific requirements)

19.2. All finish materials in the connection shall meet or exceed the following requirements:

a) Requirements as described in section 2.4, and

b) Noncombustible construction in accordance with OBC Part 3 and NFPA 130;

c) Slip resistant qualities in both wet and dry states and moisture absorption in accordance with Metrolinx Standards.

d) For connections that are providing significant pedestrian volumes per Metrolinx assessment, (typically more than one tower), the tunnel finishes shall be designed such that they contribute to a consistent customer experience.

20. DOORS AND HARDWARE

20.1. All doors and hardware requirements within the transit exclusive use area shall match or exceed the applicable Metrolinx requirements for the transit mode and station

20.2. Doors, door frames and glazed screen assemblies enclosing the vestibule in the connection shall be fabricated from stainless steel, unless noted otherwise.

20.3. Glazed single swing doors, with maximum glazed areas that meet CPTED requirements shall be provided in each glazed screen.

20.4. The required number of single doors in each glazed screen assembly shall be either based on the level of egress requirements for the compliance with OBC and ridership data and pedestrian flow modelling as per Metrolinx standards or minimum of three (3) single doors, whichever is greater.

20.5. Each door shall be furnished with Metrolinx standard hardware groups including a panic bar which allows the door to be readily opened for emergency egress during either station operating or non-operating hours. The panic bar shall have an option of key operation to keep the door locked or unlocked depending upon station operating hours and have a pull for passenger entry when the station is in operation.

21. SECURITY AND ACCESS CONTROL

21.1. The vestibule shall provide Metrolinx unfettered access through the connection 24 hours/day seven days a week.

21.1.1. If the vestibule is secured/locked for any time period, access control must be provided by KEY/FOB type system.

21.1.2. Security and access control requirements shall match or exceed the applicable Metrolinx requirements for the transit mode and station

21.1.3. Security and access control requirements are subject to review by Metrolinx and relevant authority, to be included in the connection design submissions

22. ACCESSIBILITY

22.1. One door in each screen assembly of the vestibule shall be equipped with automatic door operator (ADO) equipment in accordance with Metrolinx Standards.

22.2. Pedestrian path through adjacent development from public street to transit entrance is to be designed to minimize travel distance, to be intuitive and safe to the customer.

22.3. The connection shall be designed in accordance with the Metrolinx Universal Design Standard, DS-02

23. VERTICAL CIRCULATION

23.1. Connections must provide barrier-free accessible vertical access. The connection shall include passenger elevators to be provided and maintained by the third party

23.1.1. Passenger elevators shall match the applicable Metrolinx requirements for the transit mode and station.

23.1.2. Elevator cab shall be one of three (3) types; forward motion, standard passenger shape and single entry cars, unless noted otherwise

23.1.3. Elevator controls including sizes and types of hall call and car call buttons, tactile figure sizes, braille characters, mounting heights and landing floor designations shall conform to applicable Metrolinx Standards.

23.2. Elevator design shall comply with the following:

a) ASME A17.1/CSA B44 Safety Code for Elevators and Escalators, except for Appendix E Elevator Requirements For Persons With Physical Disabilities in Jurisdictions Enforcing NBCC (latest edition);

b) Elevator Requirements for the Physically Disabled, also known as Appendix Section E as found in B44 Elevator Safety Code, as mandated by the Ontario's Building Code (latest edition);

c) CAN/CSA-B44.1/ASME-A17.5 Standard for Elevator and Escalator Electrical Equipment (latest edition);

d) CAN/CGSB-12.1/ CAN2.12.1, Glass, Safety, Tempered or Laminated (latest edition).

e) CAN/CGSB-12.11/ CAN2.12.11, Glass, Wired, Safety (latest edition);

f) CAN/CGSB-12.12/ CAN2.12.12, Glazing, Plastic Safety (latest edition);

g) CSA C22.1, Canadian Electrical Code, Part 1 (latest edition);

h) Canadian Standards Association and Ontario Hydro Certification for Electrical components;

i) Technical Standard and Safety Act, 2000, Ontario Regulation 209, Elevating Devices (latest edition);

j) Technical Standard and Safety Act, 2000, Ontario Regulation 222, Certification and Training of Elevating Devices Mechanics (latest edition);

k) Technical Standard and Safety Act, 2000, Ontario Regulation 223, Codes and Standards Adopted by Reference (latest edition);

l) Technical Standard and Safety Act, 2000, Statues of Ontario, 2000, Chapter 16;

m) Underwriters Laboratories of Canada.

23.3. Where there are level differences within connections, in addition to elevators, preparation for the future installation of escalators shall be considered in consultation with Metrolinx where required by Metrolinx standards, based on transit mode (Eg. subway).

24. PLUMBING AND DRAINAGE SYSTEM

24.1. Plumbing and drainage system to be engineered for the connection according to regulatory requirements, Metrolinx standards, and best engineering practices on a project-specific basis, including but not limited to provision of sump pumps, and drainage systems.

24.2. The plumbing and drainage system design is subject to review by Metrolinx and relevant authority, to be included in the connection design submissions.

24.3. Floor drains shall be provided for the connection, including the vestibule and adjoining spaces .

24.4. Drainage piping system may be routed to either adjacent building sanitary system or to Metrolinx building sanitary system subject to review by Metrolinx and shall be installed in accordance with OBC.

25. HVAC

25.1. The HVAC system shall be designed for the connection as per Metrolinx Standards and all applicable regulatory codes including OBC, ASHRAE and NFPA.

25.2. Where ventilation system is provided for connection, it shall incorporate adjacent Metrolinx station ventilation system requirement, especially where fire ventilation is required.

26. WATERPROOFING

26.1. The underground portion of the connection shall be waterproofed according to best engineering practices and in compliance with all regulatory and code requirements. The third party shall provide engineering, construction and validation to prevent moisture ingress, and to ensure the station and the connection will not sustain water infiltration nor suffer service impacts.

27. SIGNAGE

27.1. Graphic design conventions and terminology from the Metrolinx Wayfinding Design Standard shall be used in all directional signage leading from the public access point provided by the third party connection, to the station entrance. At station entrance and in the immediate vicinity of the station entrance, Metrolinx Wayfinding Design Standard is to be used.

27.2. Signage shall be posted at all access points of the connection advising users of the hours of service for the connection, with graphic conventions in conformance with the Metrolinx Wayfinding Design Standard.

27.3. Where access is through an adjacent building, it is required that the station be identified, and that all wayfinding signage within the third party building use standard pictograms from the Metrolinx Wayfinding Standard, in consultation with Metrolinx

27.4. In addition to the Metrolinx Wayfinding Standard:

a) Station identification signage shall be provided above the designated entrance door subject to consultation and review by Metrolinx.

b) The name of the transit station shall also be provided above vestibule doors from the adjacent building.

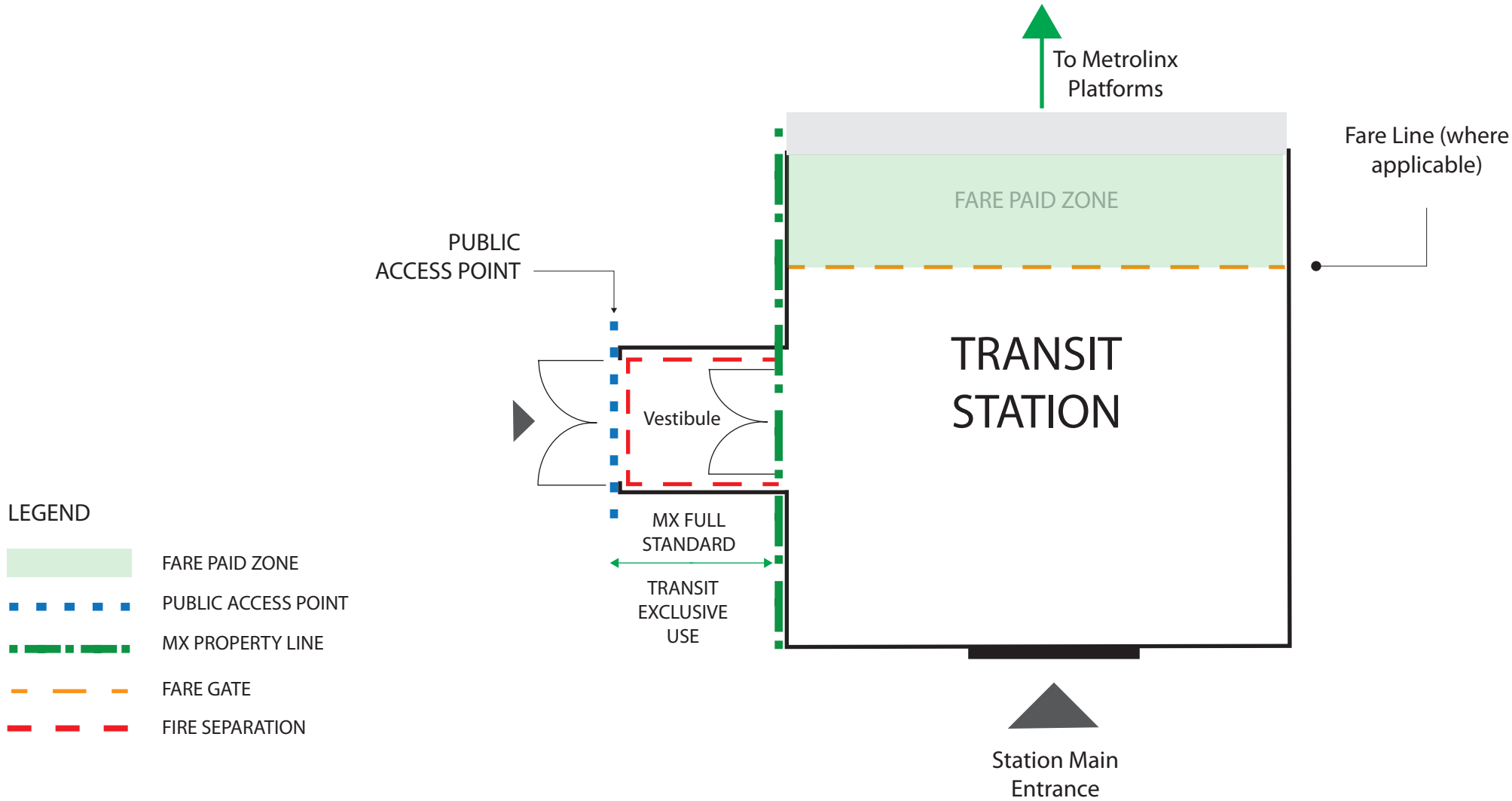
c) Wayfinding signage to destinations outside of transit station shall be provided above the vestibule doors from the transit station according to Metrolinx Design Standards.

d) Signage shall be provided above vestibule within the transit facility side to clearly communicate if the connection is not a fire exit.

e) If the connection is a fire exit, it shall be signed accordingly, in conformance with all regulatory requirements.

f) Signage indicating the ownership and management of the space shall be posted at all access points that are operated by the third party, the design shall be subject to review and co-ordination with Metrolinx (Wayfinding, Design Implementation).

APPENDIX A: CONNECTION OCCURS OUTSIDE FARE PAID ZONE
CONCEPTUAL DIAGRAM



APPENDIX B: CONNECTION OCCURS INSIDE FARE PAID ZONE