

**THE CITY OF EDMONTON**  
**PROJECT AGREEMENT**  
**VALLEY LINE WEST LRT**

***Schedule 5 – D&C Performance Requirements***

***Part 5: Facilities***

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## PART 5: FACILITIES

### SECTION 5-1 – GENERAL REQUIREMENTS

- A. Part 5 [*Facilities*] sets out the general Design and Construction Requirements for all Building Structures and all associated equipment, components, materials, systems, and sub-systems unless otherwise specified.

#### 5-1.1 REFERENCE SECTIONS

- A. Except as otherwise specified in this Part 5 [*Facilities*], the Design and Construction of all Building Structures and all associated equipment, components, materials, systems, and sub-systems shall comply with the following:
1. Sustainable Urban Integration according to Part 2 [*Sustainable Urban Integration*] of this Schedule;
  2. structural: according to Part 4 [*Transportation and Building Structures*] of this Schedule;
  3. Systems: according to Part 6 [*Systems*] of this Schedule; and
  4. Maintenance and Storage Facilities: according to Part 8 [*Maintenance & Storage Facilities*] of this Schedule.

#### 5-1.2 APPLICABLE CODES, STANDARDS AND REGULATIONS

- A. Without limiting Section 1-1.7 [*Reference Documents*] of this Schedule and except as otherwise specified in this Part 5 [*Facilities*], the Design and Construction of Building Structures and associated equipment, components, materials, systems, and sub-systems must comply with:
1. Valley Line West LRT Facilities Design and Construction Standards; and
  2. CSA S478, *Guideline on Durability in Buildings*.

#### 5-1.3 PERFORMANCE CRITERIA

##### 5-1.3.1 Durability

- A. This Section 5-1.3.1 [*Durability*] sets out the requirements associated with durability and service life expectations for the Design and Construction of all Building Structures.
- B. Major elements of Buildings Structures shall have a Design Service Life as set out in Section 1-2.9 [*Design Service Life*] of this Schedule.
- C. Architectural materials and components as described in Section 5-1.4 [*Materials and Components*] of this Schedule shall have an Expected Service Life as specified in Table 5-1.3.1.1 [*Expected Service Life of Architectural Materials and Components*] of this Schedule.

**Table 5-1.3.1.1: Expected Service Life of Architectural Materials and Components**

Component	Expected Service Life (Years)
Acoustic Suspended Ceilings	20
Bird Control Devices	5

<b>Component</b>	<b>Expected Service Life (Years)</b>
Carpet Tiles	10
Coiling Grilles	20
Entrance Floor Grilles	10
Exterior Door Hardware	25
Exterior Doors and Frames	25
Exterior Louvres and Vents	25
Exterior Metal Panel Screens	50
Exterior Windows	50
Fall Protection Systems	50
Fibreglass Reinforced Plastic (FRP) Wall Paneling	50
Finish Carpentry, Millwork, and Architectural Woodwork	25
Fire and Smoke Protection	50
Floor Grilles	20
Interior Formed Metal Wall Panels	50
Graffiti and Stain Resistant Coatings	10
Gypsum Board Assemblies	50
High Performance Floor Coatings	30
Interior Access Doors and Panels	25
Interior Door Hardware	25
Interior Doors and Frames	25
Joint Sealants	15
Leaning Rails, Seating/Benches and Waste and Recycling Receptacles	10
Lockers	30
Overhead Doors	10

<b>Component</b>	<b>Expected Service Life (Years)</b>
Panel Folding Doors	20
Platform Edge Tactile Attention Indicator	10
Resilient Flooring	20
Signage	50
Soffit Panels	50
Station Tactile Direction Indicator Surfaces	10
Tile Flooring	50
Wall Painting and Coating	10
Wall Tile	50
Washroom Accessories	10

- D. Conveying equipment and mechanical and electrical components as described in Section 5-1.4 *[Materials and Components]* of this Schedule shall have a Design Service Life as specified in Table 5-1.3.1.2 *[Design Service Life of Conveying Equipment and Mechanical and Electrical Materials and Components]* of this Schedule.

**Table 5-1.3.1.2: Design Service Life of Conveying Equipment and Mechanical and Electrical Materials and Components**

<b>Component</b>	<b>Design Service Life (Years)</b>
Air to Air Energy Recovery	15
Cooling Systems (except Chillers)	20
Cooling Systems – Chillers	25
Cranes	20
Dock Leveler	25
Domestic Water Distribution	30
Domestic Hot Water Heater – Natural Gas	15
Escalators	20
Exhaust Air Ductwork	30

<b>Component</b>	<b>Design Service Life (Years)</b>
Facility Distribution Systems Supplementary Components	30
Facility Hydronic Distribution Piping	40
Fire Suppression	25
Freight Elevators	35
Gas System Piping	40
General Purpose Electrical Power	30
General Service Compressed Air	15
Heating Systems – Boilers	30
HVAC Air Distribution – Terminal Units and Fan Coils	20
HVAC Air Distribution – Diffusers and Grilles	30
In-Ground Lifts	20
Life Safety and Emergency Power	20
Lighting	15
Lighting Controls	15
Passenger Elevators	50
Photovoltaic Systems	20
Plumbing Fixtures	30
Pumps – Base Mount or Inline	20
Return Air Ductwork	30
Sanitary Sewerage Piping	30
Service Lifts	35
Stormwater Drainage Piping	30
Supply Air Ductwork	30
Trench Drains	30

Component	Design Service Life (Years)
Unit Heaters	20
Vacuum Systems	15

- E. Upon the City's request, prepare and submit documentation, such as recorded performance, previous experience, testing, compatibility between sub-components, or modelling, that demonstrates the Expected Service Life and the Design Service Life, respectively, shall be achieved for each material listed in Table 5-1.3.1.1 [*Expected Service Life of Architectural Materials and Components*] and in Table 5-1.3.1.2 [*Design Service Life of Conveying and Mechanical and Electrical Materials and Components*] of this Schedule.

### 5-1.3.2 Commissioning

- A. This Section 5-1.3.2 [*Commissioning*] sets out the project requirements associated with Commissioning all Building Structures.
- B. Unless otherwise stated, commission Building Structures in accordance with Section 9 [*Commissioning*] of Schedule 4 [*Design and Construction Protocols*].
- C. Complete Commissioning Work for:
1. Building Structure envelopes, including all above and below ground assemblies that divide external and internal environments, and are comprised of weather resistant cladding, insulation, moisture retarding and airtight components including joints, junctions and transitions between products, assemblies and components in accordance with CSA Z320 and CSA Z5000;
  2. openings, including labelling and opening forces, operation of hold open devices and positive latching in closed position, electro magnetic locks, and any standalone or integrated initiating devices and interconnections to building life safety, fire alarm and security systems in accordance with CAN/ULC S1001 and NFPA 80;
  3. elevators, including hoist motors, elevator pits, hoist ways, controllers, signalling devices, safety devices, car interiors, and any standalone or integrated initiating devices and interconnections to building life safety, fire alarm and security systems in accordance with CAN/ULC S1001, CSA B44, and NFPA 80;
  4. escalators and any standalone or integrated initiating devices and interconnections to building life safety, fire alarm and security systems in accordance with CAN/ULC S1001, CSA B44, and NFPA 80;
  5. controls and systems, including verification of the building automation system (BAS), and demonstrate that the control requirements of the design are integrated and achieved, and shall:
    - a. define the verification of the control systems;
    - b. document the verification of the sequence of operations; and
    - c. validate prior to functional performance testing all controls through complete end to end point verification (physical point location to graphical representation) and confirm the calibration of all sensors;

6. voice and data cabling infrastructure in accordance with the requirements of the Electronic Industries Alliance and the Telecommunications Industry Association;
7. video surveillance systems, in accordance with ULC-S316 and NFPA 731; and
8. electronic door access systems, in accordance with ULC-S319 and NFPA 731.

#### **5-1.4 MATERIALS, COMPONENTS AND EQUIPMENT**

- A. Unless specifically indicated otherwise, all materials, components and equipment used in Building Structures shall comply with the Valley Line West LRT Facilities Design and Construction Standards.

##### **5-1.4.1 Pressure Equalized Rain Screen Insulated Structure Technique (PERSIST)**

- A. Design and construct non-glazed exterior walls of all Stations and Maintenance and Storage Facilities using the pressure equalized rain screen insulated structure technique (PERSIST) in accordance with the *Alberta Infrastructure Design and Technology Series 01 – PERSIST* document.

##### **5-1.4.2 Exterior Finishes**

- A. Acceptable exterior finishes for:

1. Stops are:
  - a. steel;
  - b. concrete;
  - c. glass;
  - d. wood;
  - e. standing seam metal roof or mullion-less structural silicone glazing roof;
  - f. masonry, limited to the Lewis Farms Stop Operator washroom; and
  - g. metal privacy screen, limited to the NorQuest Stop.
2. Stations are:
  - a. steel;
  - b. concrete;
  - c. metal panels;
  - d. glass;
  - e. solar shade screens;
  - f. thermoplastic polyolefin (TPO) roof; and
  - g. wood;
3. Utility Complex enclosures are:
  - a. pre-cast brick panels;

- b. metal panels, limited to the 87 Avenue/165 Street Utility Complex and the 107 Street/104 Avenue Utility Complex;
  - c. metal louvres, limited to the 87 Avenue/165 Street Utility Complex;
  - d. pre-cast concrete, limited to the 87 Avenue/165 Street Utility Complex, Oliver Square Utility Complex and the 107 Street/104 Avenue Utility Complex;
  - e. stucco, limited to the 107 Street/104 Avenue Utility Complex;
  - f. Tyndall stone, limited to the Oliver Square Utility Complex; and
  - g. wood;
4. Lewis Farms Storage Facility are:
- a. glass;
  - b. concrete;
  - c. standing seam metal roof where roof slopes are 1V:25H or greater;
  - d. thermoplastic polyolefin (TPO) roof where roof slopes are shallower than 1V:25H; and
  - e. metal panels; and
5. Gerry Wright OMF Building B are:
- a. glass;
  - b. concrete;
  - c. standing seam metal roof where roof slopes are 1V:25H or greater;
  - d. thermoplastic polyolefin (TPO) roof where roof slopes are shallower than 1V:25H; and
  - e. metal panels.

**5-1.4.3 Graffiti and Stain Resistant Coatings**

- A. Graffiti and stain resistant coatings shall be applied to all exposed to Public View surfaces to a minimum height of 3000 mm above finished floor, and:
- 1. for surfaces having cladding, the coating shall be applied to the nearest horizontal cladding joint above 3000 mm above finished floor;
  - 2. not be applied to glass surfaces, including curtainwalls, windows, or aluminium entrance systems; and
  - 3. the application of graffiti and stain resistant coatings shall not alter the colour of the surface to which it is applied such that it creates a visually apparent line between surfaces which have been treated and those which have been left untreated.
- B. Notwithstanding Section 5-1.4.3A [*Graffiti and Stain Resistant Coatings*] surfaces of the Lewis Farm Storage Facility and Gerry Wright OMF Building B need not receive graffiti resistant coatings.

#### **5-1.4.4 Bird Control Devices**

- A. Provide materials which discourage birds from setting, roosting, or nesting, and prevent damage to Structures from droppings and nesting materials.
- B. Minimize canopies, abutment seats and other potential bird roosting areas.
- C. Where preventing birds from setting, roosting or nesting by design is not feasible, provide bird control devices which:
  - 1. are integrated into the overall design of the element and the surroundings;
  - 2. do not have spikes or fabric netting;
  - 3. permit removal and reinstallation without damage to the installation surface, bird control device or mounting system;
  - 4. have mounting hardware, including clips and brackets, concealed from Public View; and
  - 5. prevent frost and snow accumulation.

#### **5-1.4.5 Roofing Appendences**

- A. Roofs, including eaves troughs and downspouts, shall be designed to prevent snow and ice falling onto areas below, which are accessible to persons or vehicles.
- B. Roofing systems shall include snow guard systems which are:
  - 1. integrated into the overall design of the roof; and
  - 2. approved by the roof system manufacturer.
- C. Stack jack flashings shall protect all sleeved penetrations through roofing systems.
- D. Fall Protection systems are required at Stations and Maintenance and Storage Facilities.
  - 1. fall restraint systems and safety nets are not permitted.
  - 2. design and install fall protection systems to accommodate open source maintenance.
  - 3. fall restraint systems shall be integrated with the building architecture.

#### **5-1.4.6 Entrance Floor Grilles**

- A. Entrance floor grilles shall:
  - 1. be located at every public at-grade entrance to the Stations in order to control chemical and dirt pollutants; and
  - 2. be at least as wide as the applicable entry door(s) and extend a minimum of 3 m into the building.

#### **5-1.4.7 Aircraft Warning Lights**

- A. Design and construct aviation obstruction lighting in accordance with all applicable requirements in the *Canadian Aviation Regulations*, including obtaining all approvals required by Transport Canada.

#### **5-1.4.8 Radon Mitigation Systems**

- A. Radon mitigation systems shall be provided for the Maintenance and Storage Facilities and Stations.

#### **5-1.5 MANUFACTURER WARRANTY**

- A. Provide a Manufacturer Warranty for all elevators for a minimum of ten (10) years covering repair or replacement of defective major operating components, hoist devices, operating consoles and devices, switches and push button assemblies.
- B. Provide a Manufacturer Warranty for all escalators for a minimum of ten (10) years covering repair or replacement of defective major operating components, operating consoles and devices, switches and push button assemblies.
- C. Labour necessary to correct elevator and escalator defects shall be warranted for a minimum of one (1) year.
- D. Provide a Manufacturer Warranty for the roofing assembly and roofing finishes of each Building Structure which includes the repair or replacement (including labour necessary to correct defects) of defective roofing and base flashing materials that split, tear, separate at the seams or from the substrate, or do not remain watertight for a minimum of fifteen (15) years.

## SECTION 5-2 – STOPS AND STATIONS

### 5-2.1 INTRODUCTION

#### 5-2.1.1 General

- A. This Section 5-2 [*Stops and Stations*] sets out the general requirements for the Design and Construction of all Stops and Stations.
- B. Wherever the term “Stops and Stations” is used in this Section 5-2 [*Stops and Stations*] of this Schedule, it includes all fourteen (14) Stops, WEM Station, and Misericordia Station, unless noted otherwise.

#### 5-2.1.1.1 Performance Requirements

- A. Stops and Stations shall be designed and constructed to:
  - 1. be fully barrier free;
  - 2. provide unimpeded and natural flow for Passengers and pedestrians;
  - 3. be welcoming and comfortable spaces;
  - 4. provide a safe environment; and
  - 5. integrate fully into their urban context.

#### 5-2.1.2 Sustainability Requirements

- A. Design and Construct the WEM and Misericordia Stations to:
  - 1. achieve 20% or greater energy efficiency than required by the NECB 2011 for the conditioned spaces on the L1 Ground and L2 Mezzanine levels as follows:
    - a. demonstrate energy efficiency improvement in accordance with *Part 8 – Building Energy Performance Compliance Path* of NECB 2011, except that:
      - i. Sentence 8.4.4.4.3 of NECB 2011 shall not apply; and
      - ii. the size, shape and layout of windows and doors used in the reference building energy model shall be identical to the size, shape and layout of windows and doors used in the proposed building energy model.
- B. The design of the WEM and Misericordia Stations shall:
  - 1. locate permanent generators to minimize Passenger and pedestrian exposure to noise, vibration, odour and exhaust;
  - 2. maximize the use of hydronic mechanical systems, passive heating and cooling strategies, such as natural ventilation to minimize energy consumption; and
  - 3. capture stormwater on-site to be used for passive irrigation for nearby landscaped areas in accordance with Section 2-14.23 [*Irrigation*] of this Schedule.

### **5-2.1.3 Key Information for Stops and Stations**

A. The following key information for the Stops and Stations is specified in Table 5-2.1.3 [*Key Information for Stops and Stations*] of this Schedule:

1. Stop/Station name;
2. type: at-grade or elevated;
3. configuration: side-loading Platform, split side-loading Platform, or centre-loading Platform as defined in Sections 5-2.6.1 [*Side-Loading Platforms*] and 5-2.6.2 [*Centre-Loading Platforms*] of this Schedule;
4. entraining peak load as defined in NFPA 130; and
5. any notes.

**Table 5-2.1.3: Key Information for Stops and Stations**

Stop/Station Name	Type	Configuration	Entraining Peak Load (PPHPD)		Notes
			Eastbound	Westbound	
Lewis Farms Stop	At-Grade	Centre-Loading	2500 AM 500 PM	0 AM 0 PM	Terminus Stop; integrated with Lewis Farms Park and Ride and existing Lewis Farms Transit Centre
Aldergrove/Belmead Stop	At-Grade	Side-Loading	500 AM 100 PM	100 AM 100 PM	South Platform integrated with sidewalk
WEM Station	Elevated	Side-Loading	1000 AM 1000 PM	800 AM 800 PM	Integrated with WEM Transit Centre
Misericordia Station	Elevated	Side-Loading	800 AM 800 PM	800 AM 800 PM	N/A
Meadowlark Stop	At-Grade	Side-Loading	800 AM 300 PM	100 AM 200 PM	N/A
Glenwood/Sherwood Stop	At-Grade	Split Side-Loading	200 AM 100 PM	100 AM 200 PM	N/A
Jasper Place Stop	At-Grade	Side-Loading	1300 AM 800 PM	200 AM 400 PM	N/A

Stop/Station Name	Type	Configuration	Entraining Peak Load (PPHPD)		Notes
			Eastbound	Westbound	
Stony Plain Road/149 Street Stop	At-Grade	Side-Loading	300 AM 100 PM	100 AM 400 PM	N/A
Grovenor/142 Street Stop	At-Grade	Side-Loading	300 AM 200 PM	100 AM 400 PM	N/A
Glenora Stop	At-Grade	Split Side-Loading	500 AM 300 PM	100 AM 400 PM	N/A
124 Street Stop	At-Grade	Split Side-Loading	500 AM 400 PM	100 AM 400 PM	N/A
Brewery/120 Street Stop	At-Grade	Side-Loading	500 AM 400 PM	100 AM 400 PM	N/A
The Yards/116 Street Stop	At-Grade	Split Side-Loading	400 AM 500 PM	100 AM 400 PM	N/A
MacEwan Arts/112 Street Stop	At-Grade	Split Side-Loading	500 AM 400 PM	100 AM 400 PM	N/A
NorQuest Stop	At-Grade	Side-Loading	200 AM 1300 PM	200 AM 1100 PM	West Platform integrated with sidewalk

Stop/Station Name	Type	Configuration	Entraining Peak Load (PPHPD)		Notes
			Eastbound	Westbound	
Alex Decoteau Stop	At-Grade	Side-Loading	200 AM 1000 PM	200 AM 1100 PM	North Platform integrated with sidewalk

## 5-2.2 STOP AND STATION EGRESS

- A. Egress at all Stops and Stations shall comply with NFPA 130, based on the entraining loads specified in Table 5-2.1.3 [*Key Information for Stops and Stations*] of this Schedule and a link load/detraining load based on a maximum Train load of 750 Passengers.

## 5-2.3 STOP DESIGN VARIABLES

- A. In accordance with Section 2-10.2.2 [*Design Constants and Variables*] of this Schedule, only the design elements listed in Table 5-2.3 [*Stop Design Variables*] may vary from Stop to Stop. Stop elements that are not listed in Table 5-2.3 [*Stop Design Variables*] shall be consistent across all Stops.

**Table 5-2.3: Stop Design Variables**

Design Variable
Canopies
Seating/benches
Leaning Rails
Waste and recycling receptacles
Floor/Platform finish
Track slab finish
Treatment of glazing (fritting or etching)
Location of Passenger Interface Equipment, signage and CCTV cameras

## 5-2.4 SIGNAGE

### 5-2.4.1 General

- A. This Section 5-2.4 [*Signage*] of this Schedule sets out general parameters and requirements for signage at all Stops and Stations. Signage and wayfinding shall contribute to a positive customer service experience for all persons in addition to notifying persons of regulations.
- B. The general design, content, size, colour, typography and mounting height for each type of sign described in this Section 5-2.4 [*Signage*] of this Schedule shall comply with the *Light Rail Transit – Graphic Standards Manual* included in the Disclosed Data.
- C. The use of free-standing poles for the sole purpose of mounted signage is not permitted.
- D. For the purpose of this Section 5-2.4 [*Signage*], the following Stop/Station names shall be used for all signage.
1. Lewis Farms;
  2. Aldergrove/Belmead;
  3. West Edmonton Mall;
  4. Misericordia;

5. Meadowlark;
6. Glenwood/Sherwood;
7. Jasper Place;
8. Stony Plain Road/149 St.;
9. Grovenor/142 St.;
10. Glenora;
11. 124 Street;
12. Brewery/120 St.;
13. The Yards/116 St.;
14. MacEwan Arts/112 St.;
15. NorQuest; and
16. Alex Decoteau.

#### **5-2.4.2 Wayfinding**

- A. Sufficient and clear wayfinding signage shall be provided at all Stops and Stations.

##### **5-2.4.2.1 Stop/Station Identification Sign**

- A. The purpose of a Stop/Station identification sign is to notify Passengers on the LRV which Stop or Station they are arriving at, therefore, the signage must be visible by Passengers from approaching LRVs as they enter the Stop/Station.
- B. Immediately below each Stop/Station identification sign shall be a single line "Route Map" which identifies all the Stops and Stations along the Valley Line and highlights the Stop/Station on which it is placed:
  1. Provide written notice to the City at least ninety (90) days before issuing the Final Design package for Stop/Station identification signs. The City will provide the content for Stop/Station identification signs within thirty (30) days of receiving the written notice.
- C. Notwithstanding the information in Appendix 1 of the *Light Rail Transit – Graphic Standards Manual*, the "No Smoking" and "No Trespassing" pictograms shall:
  1. not be integrated with the Stop/Station identification sign; and
  2. be placed separately within 2 m of each Stop/Station identification sign.
- D. A minimum of four (4) Stop/Station identification signs shall be provided on each Platform that shall:
  1. be spaced such that the minimum space between them is not less than 20 m and the distance between the last Stop/Station identification sign and the end of the Platform shall not exceed 30 m;
  2. be parallel to the direction of LRV travel; and
  3. be double-sided:

#### **5-2.4.2.2 Directional Wayfinding Sign**

- A. The purpose of the directional wayfinding sign is to easily direct alighting Passengers to the end of the Platform in the direction they intend to go.
- B. Directional wayfinding signs shall be LED backlit such that they are viewable from the minimum distance requirements specified in the *Light Rail Transit – Graphic Standards Manual* at night.
- C. The primary information included on a directional wayfinding sign shall include:
  - 1. a directional arrow;
  - 2. location specific information to be provided by the City:
    - a. provide written notice to the City at least ninety (90) days before issuing the Final Design package for directional wayfinding signs. The City will provide the content for directional wayfinding signs within thirty (30) days of receiving the written notice; and
  - 3. where required by the NBCAE, the location of an “Exit”, which shall be identified alongside the general destination.
- D. Provide a minimum of four (4) directional wayfinding signs on each side-loading Platform and a minimum of eight (8) on each centre-loading Platform that shall:
  - 1. be spaced such that the space between them is not less than 20 m and the distance between the last directional wayfinding sign and the end of the Platform shall not exceed 15 m; and
  - 2. be perpendicular to the direction of LRV travel.
- E. All directional wayfinding signs shall be double sided.
- F. The first directional wayfinding sign facing persons entering the Platform at either end of a Stop shall contain one (1) “To Trains” pictogram as well as the following text:
  - 1. “Proof of Payment Required Upon Entering Trains”; and
  - 2. “City of Edmonton Bylaw Fine for Violation”.
- G. At the Stations provide a minimum of one (1) directional wayfinding sign at the bottom of all stairs and escalators on the L1 Ground level indicating the location of elevators accessing the Platform(s).
- H. At the Stations provide directional wayfinding signs on the L2 Mezzanine level at stairs, escalators, and elevators (if applicable) indicating west- and eastbound Platforms.
- I. At the Stations provide at the bottom of all stairs and escalators on the L2 Mezzanine level and above all elevator doors at the L1 Ground level and the L2 Mezzanine level (if applicable) a sign with one (1) “To Trains” pictogram as well as the following text:
  - 1. “Entering Proof of Payment Area”; and
  - 2. “City of Edmonton Bylaw Fine for Violation”.

### **5-2.4.3 Regulatory**

#### **5-2.4.3.1 No Smoking Signs**

- A. The purpose of the “No Smoking” sign is to aid in the enforcement of the City of Edmonton Bylaw 14614 – Public Places Bylaw.
- B. In addition to the pictograms required elsewhere in this Schedule [*D&C Performance Requirements*] a minimum of one (1) “No Smoking” sign shall be provided at every public at-grade entrance to the Stations.

#### **5-2.4.3.2 Security Camera Signs**

- A. The purpose of the security camera sign is to notify the public that CCTV cameras may be operating along the LRT Corridor, including at the Stops and Stations.
- B. Provide one (1) security camera sign at every Platform Access Point for all Stops and at every entrance to the Stations.

### **5-2.4.4 Information**

#### **5-2.4.4.1 Washroom Access Control Signs**

- A. The purpose of the washroom access control sign is to provide the necessary instructions to the public on how to get access to the washrooms.
- B. For every public washroom, provide one (1) washroom access control sign.
- C. Washroom access control signs shall be displayed not more than 0.5 m away from the door to the washroom and shall be next to the washroom access phone specified in Section 6-1.13 [*Telephone System*] of this Schedule.

#### **5-2.4.4.2 Elevator Service Information Board**

- A. The purpose of the elevator service information board is to provide the necessary information to the public in case of an interruption in elevator service.
- B. Provide one (1) elevator service information board for every elevator door installed as part of the Project.
- C. The elevator service information board shall be located not more than 0.5 m from the elevator doors.

#### **5-2.4.4.3 Room Identification Signs**

- A. The purpose of the room identification sign is to provide information about the room’s functions.
- B. Provide each door to a room within the Stations with a room identification sign identifying the contents and/or function of the room.

#### **5-2.4.4.4 Transit Watch Information Sign**

- A. The purpose of the transit watch information sign is to provide a phone number that can be used to reach the transit help desk for the purpose of aiding in the safety and security of transit users.
- B. Provide one (1) Transit Watch Information Sign at every Platform Access Point for all Stops and at every public at-grade entrance to the Stations.

#### **5-2.4.5 Accessibility**

##### **5-2.4.5.1 Automatic Door Signs**

- A. The purpose of the automatic door sign is to identify to the public which doors are automatic.
- B. Provide a minimum of one (1) automatic door sign at every automatic door indicating that it is an automatic door.

#### **5-2.4.6 Safety**

##### **5-2.4.6.1 Emergency Phone Sign**

- A. The purpose of the emergency phone sign is to identify the location of an emergency phone to facilitate locating it for persons in distress.
- B. Provide emergency phone signs indicating the location of each emergency telephone ("blue light phone").
- C. The number and placement of the emergency phone signs shall ensure that a minimum of one (1) sign is visible from all points on the applicable Platform.

##### **5-2.4.6.2 Security Camera Identification Sign**

- A. The purpose of the security camera identification sign is to allow security and persons in danger to identify their exact location at a Stop and within the Stations.
- B. Provide one (1) security camera identification sign for every CCTV camera installed as part of the Project, displaying the identification reference of the applicable camera, pursuant to Section 6-1.11.2.2 [*System Requirements*] of this Schedule.
- C. The security camera identification sign shall be supported from above and be legible from both sides.
- D. The security camera identification sign shall be located not more than 250 mm from the camera.

##### **5-2.4.6.3 Escalator Safety Sign**

- A. The purpose of the escalator safety sign is to increase the public's escalator safety awareness.
- B. Provide a minimum of one (1) escalator safety sign at the top and bottom of every escalator.
- C. Escalator safety signs shall be mounted:
  - 1. to the interior rail of the escalator; or
  - 2. at a distance not greater than 1.0 m from the bottom of the escalator at a nominal height of 1.5 m above ground.

##### **5-2.4.6.4 In Case of Fire – Do Not Use Elevator sign**

- A. The purpose of "In Case of Fire – Do Not Use Elevator" sign is to advise persons not to use the elevator in case of a fire.
- B. Provide a minimum of one (1) "In Case of Fire – Do Not Use Elevator" sign for every elevator door installed as part of the Project, mounted at a distance not greater than 0.5 m from the elevator door at nominally 1.5 m above ground.

#### **5-2.4.7 ETS Schedule Boards**

- A. Provide wall space within the heated waiting area at the L1 Ground level of WEM Station for a minimum of four (4) co-located ETS schedule boards.
- B. ETS schedule boards shall be placed in such a way that:
  - 1. queuing does not negatively impact pedestrian flow;
  - 2. they are easily accessed by persons; and
  - 3. they are easily accessible by ETS for regular replacement.
- C. ETS schedule boards shall not be placed on any transparent or translucent surfaces.
- D. Each ETS schedule board shall be 690 mm tall by 890 mm wide.
- E. ETS schedule boards will be provided by ETS and shall be installed by Project Co.
- F. Easy access to the ETS schedule boards shall be provided to ETS for the regular replacement of the bus routes and schedule signage.
- G. To permit the future installation of electronic ETS schedule boards, provide all necessary systems infrastructure as described in Section 6-1.20.3.2 [*ETS Schedule Boards*] of this Schedule.

#### **5-2.4.8 ETS Departure Information Boards**

- A. Reserve wall space within the heated waiting area at the L1 Ground level of WEM Station for two (2) ETS departure information boards, to be supplied and installed by the City after the Construction Completion Date.
- B. Reserved locations for future ETS departure information boards shall be located in such a way that:
  - 1. queuing does not negatively impact pedestrian flow;
  - 2. they are easily accessed by persons;
  - 3. they are not placed on any transparent or translucent surfaces; and
  - 4. they are easily accessible by ETS for regular replacement.
- C. For reference, each ETS departure information boards shall be 1390 mm (width) x 990 mm (height) x 125 mm (depth).
- D. To permit the future installation of electronic ETS departure information boards, provide all necessary systems infrastructure as described in Section 6-1.20.3.1 [*ETS Departure Information Boards*] of this Schedule, and:
  - 1. the required systems infrastructure for the future ETS departure information boards shall be concealed from Public View.

#### **5-2.5 SURGE AND QUEUING SPACES**

- A. Provide the amount of surge and queuing areas required to meet the peak loads from Table 5-2.1.3 [*Key Information for Stops and Stations*] of this Schedule at each Stop and Station and without impeding Passengers and pedestrian flow for Patrons not using the escalators, stairs, elevators and TVM as applicable, as follows:

1. surge area provided at the top and bottom of escalators shall be a minimum of 6 m long multiplied by the width of the escalator;
2. surge area provided at the top and bottom of public stairs shall be a minimum of 5 m long multiplied by the width of the stair;
3. surge area in front of an elevator shall conform to the National Building Code of Canada, with a minimum length of 3.5 m, and shall not impede Passenger and pedestrian flow for non-elevator users; and
4. queuing area provided at Ticket Vending Machines (TVM) shall be a minimum of 3 m long in any direction and 1.5 m wide and shall not impede Passenger and pedestrian flow for non-TVM users.

## **5-2.6 PLATFORMS AND PLATFORM AMENITIES**

### **5-2.6.1 Side-Loading Platforms**

- A. A side-loading Platform provides access to a single Track; two side-loading Platforms facing each other are referred to as “Side-Loading” in the “Configuration” column in Table 5-2.1.3 [*Key Information for Stops and Stations*]; two side-loading Platforms that are split across an intersection are referred to as “Split Side-Loading” in the “Configuration” column in Table 5-2.1.3 [*Key Information for Stops and Stations*] of this Schedule.
- B. A side-loading Platform shall have a minimum width of 4.0 m from the trackside Platform edge to the outside curb/barrier Platform edge, or to the transition to a sidewalk or the Lands boundary.

### **5-2.6.2 Centre-Loading Platforms**

- A. A centre-loading Platform is located between two Tracks and provides access to both Tracks.
- B. The minimum width of a centre-loading Platform is 9.0 m from edge of Platform to edge of Platform.

### **5-2.6.3 General Platform Requirements**

#### **5-2.6.3.1 General**

- A. Where a Platform is integrated with a sidewalk, as per Section 5-2.9.3B [*Aldergrove/Belmead Stop*], Section 5-2.9.4B [*Jasper Place Stop*], Section 5-2.9.5B [*Grovenor/142 St. Stop*], Section 5-2.9.6B [*NorQuest Stop*] and Section 5-2.9.7B [*Alex Decoteau Stop*] of this Schedule, the entire width of the Platform/sidewalk shall be the Platform.

#### **5-2.6.3.2 Platform Length**

- A. Platform lengths shall not be less than 90 m.

#### **5-2.6.3.3 Platform Height**

- A. The Platform height as measured from top of closest Track rail shall be 300 mm.
- B. Vertical construction tolerances for the interface between the Track and Platform shall be in accordance with Section 4.2.6.3 [*Suggested Track Construction Tolerances*] of TCRP Report 155.

#### **5-2.6.3.4 Platform Cross-Fall**

- A. The cross-fall of the Platform shall slope down and away from, and be perpendicular to, the trackside Platform edge.

1. Notwithstanding Section 5-2.6.3.4A [*Platform Cross-Fall*] of Schedule 5, the cross-fall of the west Platform of the NorQuest Stop, which shall be perpendicular to the Trackway, may slope down and towards the trackside Platform edge.
- B. The Platform cross-fall shall be between 1.3% and 2.5%.
- C. Water from Platforms shall not:
1. ingress into buildings that are adjacent to the Platform; or
  2. pond on the Platform.

#### **5-2.6.3.5 Platform Horizontal Clearance to LRV**

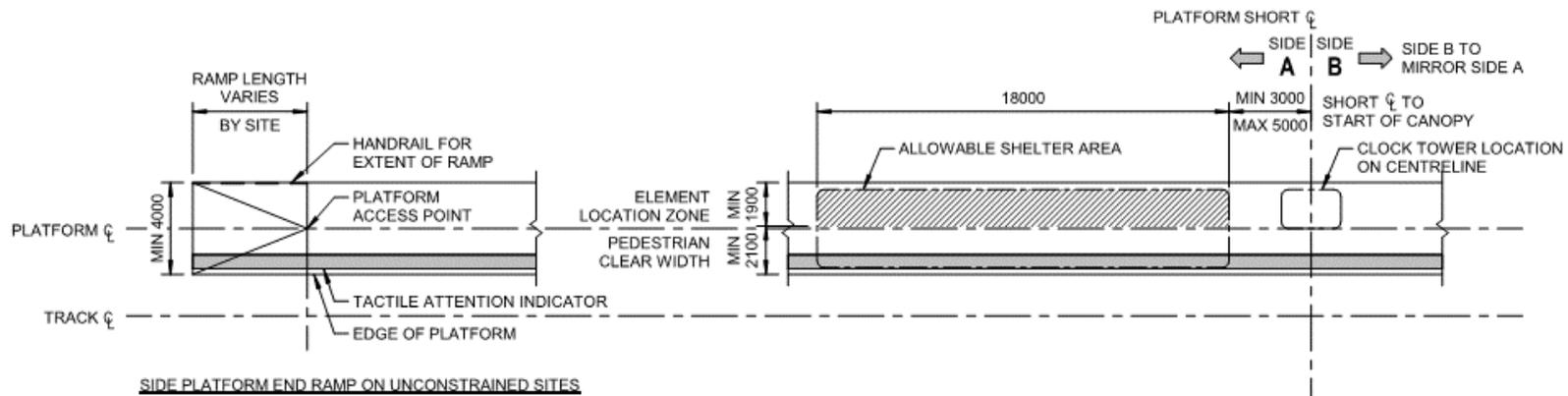
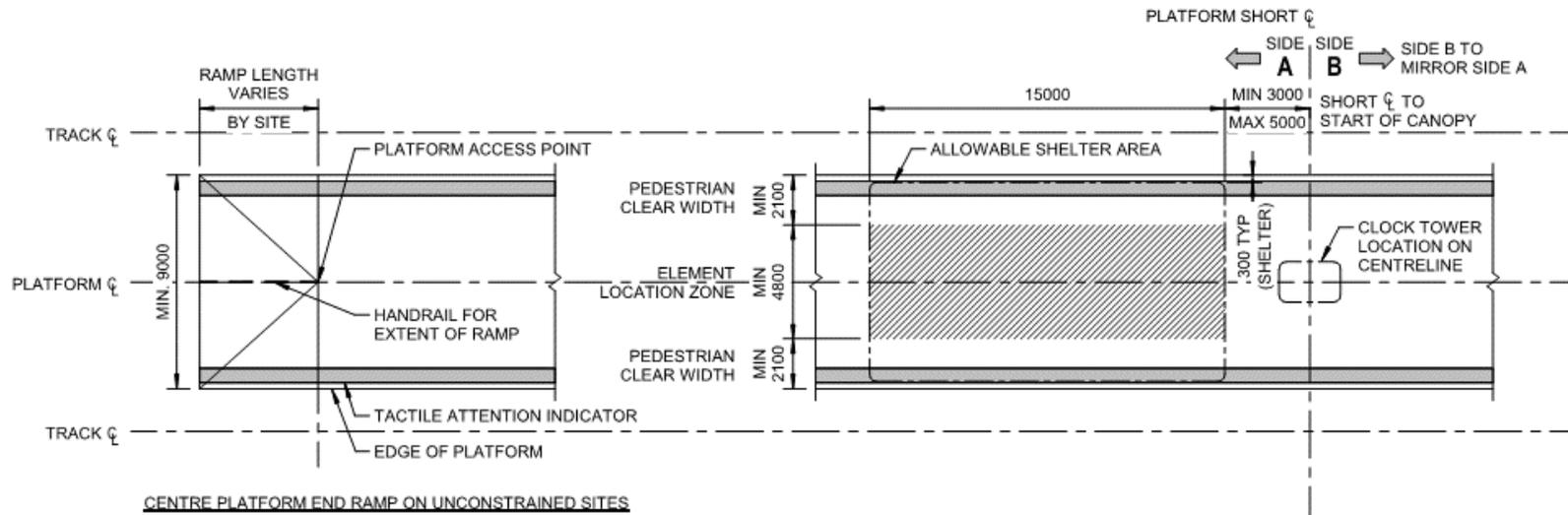
- A. The distance between the centreline of the Track closest to the Platform and the trackside Platform edge shall be 1400 mm in accordance with Stage 1 LRV dimensions.
- B. Horizontal construction tolerances for the interface between the Track and Platform shall be in accordance with Section 4.2.6.3 [*Suggested Track Construction Tolerances*] of TCRP Report 155.

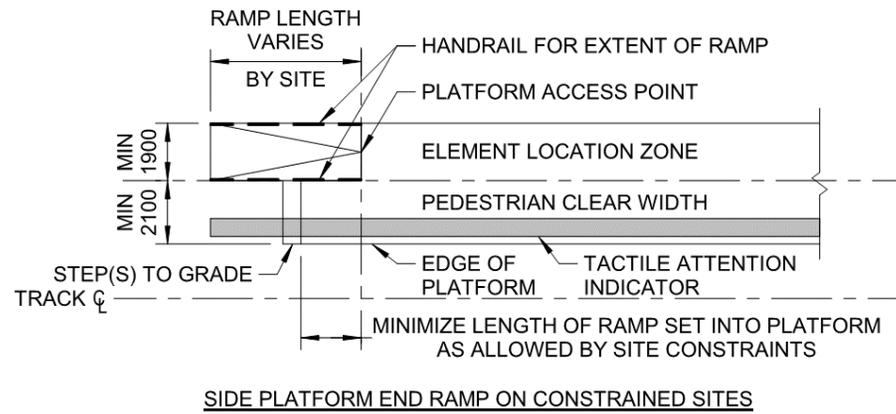
#### **5-2.6.3.6 Platform Edge Tactile Attention Indicator**

- A. Platform edge tactile attention indicators shall be 600 mm wide and shall be setback 250 mm from the Trackside Platform edge.

#### **5-2.6.3.7 Platform Configuration and Functional Zones**

- A. Provide a Pedestrian Clear Width on every Platform, such that the Pedestrian Clear Width:
1. is the width on a Platform into which no elements must intrude unless they are outside a clearance height of 3.0 m measured from top of Platform to the underside of the element;
  2. shall be a minimum of 2.1 m wide, as shown in Figure 5-2.6.3 [*Stop Platform Functional Layout*] of this Schedule; and
  3. shall be a minimum of 3.0 m wide in areas:
    - a. where the length of an obstruction exceeds 6.0 m measured along the Platform; or
    - b. where the clear space between adjacent obstructions, which have a combined length exceeding 6.0 m measured along the Platform, is smaller than 3.5 m.
- B. The underside of all hanging elements, excluding ETS TV screens on Stop Platforms, shall be built to a constant datum along the entire length of a Platform.
- C. Stop Platform elements shall be symmetrically configured and mirrored across the short centerline of the Platform.
- D. Canopies, Shelters, Protection Railings and handrails shall be placed as shown in Figure 5-2.6.3 [*Stop Platform Functional Layout*] of this Schedule.
- E. Platform elements on the two side-loading Platforms that form a Stop shall be mirrored across the centerline of the Trackway.





**Figure 5-2.6.3: Stop Platform Functional Lay-Out**

#### **5-2.6.4 On-Platform Poles**

- A. No poles exceeding 4.5 m in height, measured from top of Platform to the top of the pole, shall be permitted on Platforms.

#### **5-2.6.5 Access to Existing Buildings**

- A. Where a Platform abuts an existing building, all existing building access points shall remain accessible to the users of the building.
- B. All existing barrier free access points shall remain accessible to the users of the building.

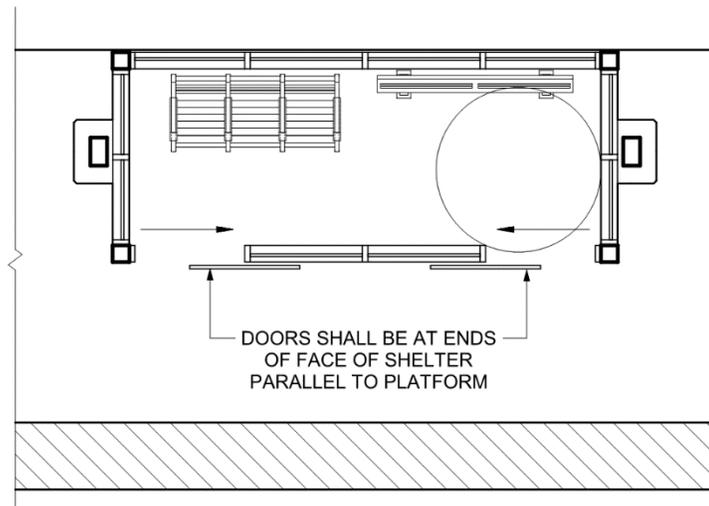
#### **5-2.6.6 Canopies**

- A. A Canopy is a refuge space located on a Platform, having a roof cover,
  - 1. but being open on all four vertical sides for Stop Canopies; and
  - 2. side walls for Station Canopies.
- B. Canopies do not include roofs over TVM's and corporate advertising screens.
- C. Provide Canopies at each Stop and Station; refer to Section 2-10.2.3 [*Canopies*] of this Schedule for the requirements for each Canopy type ("Urban", "Neighbourhood" or "special case").
- D. Each side-loading Platform shall have a minimum of 125 m<sup>2</sup> of floor area covered by Canopies.
- E. Each centre-loading Platform shall have a minimum of 170 m<sup>2</sup> of floor area covered by Canopies.
- F. Canopies shall be rectangular in plan.
- G. All Canopies on Stop Platforms shall:
  - 1. be located within the extents shown in Figure 5-2.6.3 [*Stop Platform Functional Layout*] of this Schedule;
  - 2. have a maximum height of 3.8 m from top of Platform to the underside of structure; and
  - 3. cover the entire Platform width to a minimum of within 300 mm of the trackside Platform edge.

#### **5-2.6.7 Shelters**

- A. A Shelter is a fully enclosed refuge space on a Stop Platform, that utilizes the Canopy as its roof cover.
- B. Provide four (4) Shelters on each side-loading Platform and six (6) Shelters on centre-loading Platforms
- C. The Shelter enclosure shall be glass that shall:
  - 1. extend full height to the underside of the Canopy; and
  - 2. be placed on a cast-in-place concrete curb that is minimum 150 mm and maximum 400 mm high.
- D. Each Shelter shall have a minimum useable floor area of 6.5 m<sup>2</sup>.

- E. Shelters shall be rectangular in plan, with a short interior dimension of a minimum of 1.6 m.
- F. Each Shelter shall be complete with two (2) automatic sliding doors which:
  - 1. meet the accessibility requirements of CSA B651;
  - 2. face the Track that it serves;
  - 3. are activated through an accessible hand swipe sensor;
  - 4. automatically open in case of a door malfunction;
  - 5. sustain an open position when the ambient temperature exceeds 20°C during operations; and
  - 6. are located at the ends of the Shelter face parallel to the Platform as shown on Figure 5-2.6.7 [Stop Shelter Details]
- G. On centre-loading Platforms the Shelter doors shall alternate such that there are an equal number facing each Track.
- H. Each Shelter shall provide:
  - 1. seating for a minimum of three (3) persons;
  - 2. space for a minimum of one Reference Wheelchair; and
  - 3. one (1) 1.5 m long leaning rail.



**Figure 5-2.6.7: Stop Shelter Details**

### **5-2.6.8 Seating**

- A. Provide seating for a minimum of twenty-four (24) persons on each side-loading Platform and for a minimum of thirty-six (36) persons for each centre-loading Platform, including the seating in the Shelters, meeting the requirements of Section 2-10.2.5 [Seating] of this Schedule.
- B. Benches shall be located along the non-trackside Platform edge of each side-loading platform and along the longitudinal centre of each center-loading Platform; for centre-loading Platforms, orientation of the benches shall alternate such that there are an equal number facing each Track.

- C. Each bench shall seat three (3) persons.
- D. Benches shall include seat, back, end arms and arms between each seat, except that seating in Shelters need not have backs.

#### **5-2.6.9 Leaning Rails**

- A. In addition to the requirements of Section 5-2.6.7H [*Shelters*], at the Stop Platforms provide a minimum of:
  - 1. six (6) leaning rails, each having a minimum length of 1.5 m, along the non-trackside Platform edge of each side-loading Platform; and
  - 2. eight (8) leaning rails, each having a minimum length of 1.5 m, along the longitudinal centre of each centre-loading Platform; orientation of the leaning rails shall alternate such that there are an equal number facing each Track.

#### **5-2.6.10 Waste and Recycling Receptacles**

- A. Provide a minimum of two (2) combined waste and recycling receptacles on each Platform, meeting the requirements of Section 5-2.6.10 [*Waste and Recycling Receptacles*] of this Schedule.
- B. Waste and recycling receptacles shall:
  - 1. be located within 20 m to 30 m of each Platform Access Point;
  - 2. accommodate a minimum of two throughput streams: “waste” and “recyclables”;
  - 3. allow for a minimum of 76 L of waste and 76 L of recyclables; and
  - 4. incorporate removable covers over openings.

#### **5-2.6.11 Passenger Interface Equipment**

##### **5-2.6.11.1 General**

- A. Passenger Interface Equipment shall be located on the Platforms in such a way that:
  - 1. a person standing at the Platform Access Point, to which the Passenger Interface Equipment is closest, has an unobstructed view to the face of the Passenger Interface Equipment; and
  - 2. it does not impede Passenger flow on the Platform.
- B. Locate TVMs, Validators, ETS LAN Cabinets, ETS TV screens, and corporate advertising screens such that they are accessible for maintenance by authorized City Persons without disrupting Operations.
- C. Systems cabinets and corporate advertising screens shall be placed on housekeeping pads so that water on the Platform does not degrade their bases. Housekeeping pads shall:
  - 1. extend a maximum of 25 mm beyond the edges of the system cabinets or corporate advertising screens so as not to create a tripping hazard;
  - 2. be 150 mm in height below corporate advertising screens;
  - 3. be a maximum of 300 mm in height below systems cabinets; and

4. be Integrally Coloured Concrete, matching the Stop Platform.

D. Validators and TVMs shall be placed so that water draining on the Platform does not degrade their bases.

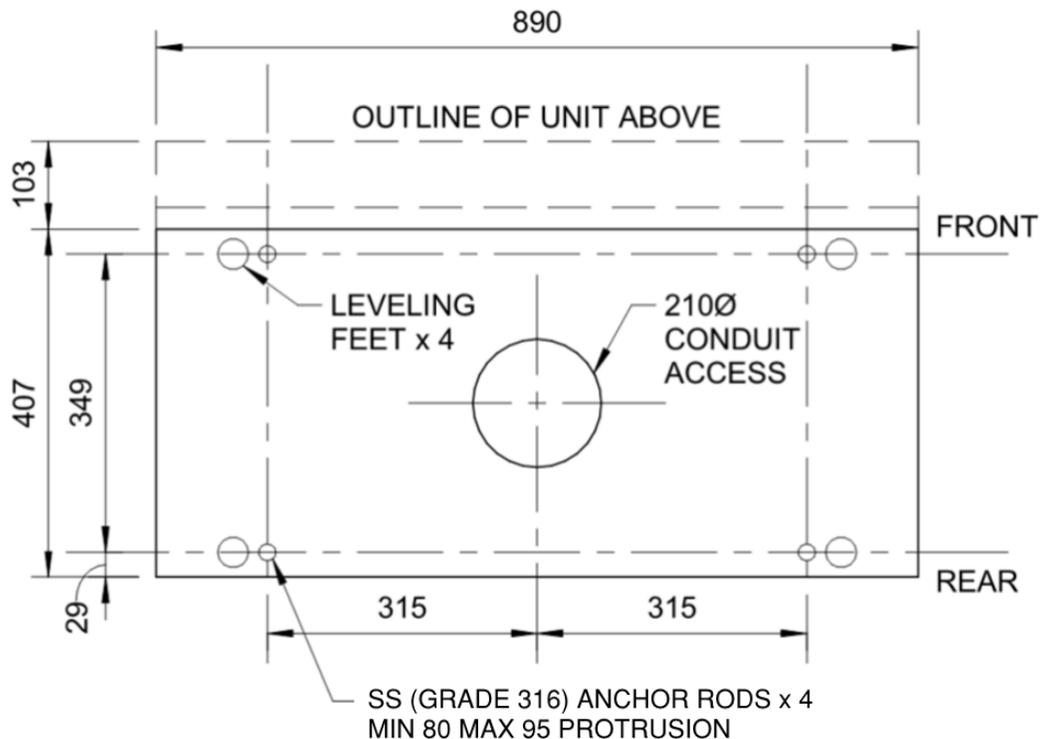
#### 5-2.6.11.2 Ticket Vending Machines

A. Provide TVM infrastructure in accordance with Section 6-1.17 [*Ticket Vending Machine Infrastructure*] of this Schedule.

B. TVMs will be supplied and installed by the City.

C. Provide anchors and anchor holes in accordance with Figure 5-2.6.11.2 [*TVM Baseplate requirements*].

1. Confirm with the City:
  - a. anchor hole diameter, spacing and depth before drilling anchor holes;
  - b. anchor rod specifications before installing anchors; and
  - c. conduit access location and diameter before installing conduit.



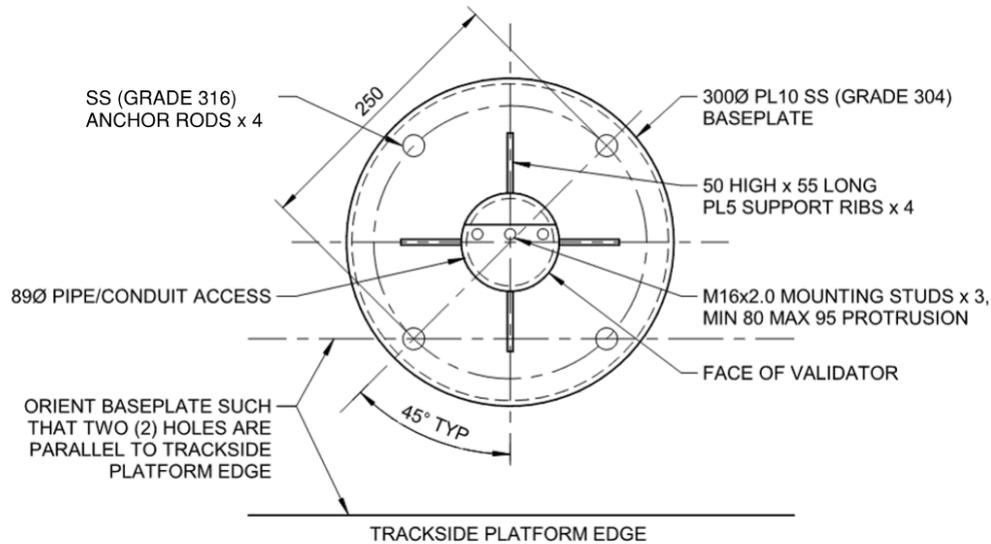
**Figure 5-2.6.11.2: TVM Baseplate requirements**

D. Locate two (2) TVMs back to back, spaced 100 mm apart, and perpendicular to the Track in the longitudinal centre of each side-loading Platform, except:

1. on Platforms integrated with a sidewalk, where the two (2) TVMs may be located side by side, spaced 300 mm apart, and parallel to the Track.
- E. In addition to the requirements of Section 5-2.6.11.2.D [*Ticket Vending Machines*]:
1. at WEM Station:
    - a. locate six (6) TVMs conveniently placed for Passengers in the heated waiting area at the L1 Ground level; and
    - b. two (2) TVMs conveniently placed for Passengers in the heated waiting area at the L2 Mezzanine level.
  2. at Misericordia Station:
    - a. locate two (2) TVMs conveniently placed for Passengers in the heated waiting areas at the L1 Ground level; and
    - b. provide the required infrastructure to accommodate two (2) future TVMs conveniently placed for Passengers in the heated waiting area at the L1 Ground level.
- F. At Lewis Farms Stop, locate two (2) sets of two (2), for a total of four (4), TVMs in the transverse centre of the Platform, with one (1) set within 20 m of the east Platform Access Point and one (1) set within 20 m of the west Platform Access Point.
- G. TVMs on Stop Platforms shall be protected by an insulated metal roof painted to have the same finish as the Canopies at the applicable Stop, no more than 2750 mm tall with a plan area that extends 450 mm from the front face of each TVM and by glass screen walls on two sides extending from ground to the roof along the entire roof length.

### **5-2.6.11.3 Validators**

- A. Provide Validator infrastructure in accordance with Section 6-1.17 [*Ticket Vending Machine Infrastructure*] of this Schedule.
- B. Validators will be supplied and installed by the City.
- C. Provide anchors and anchor holes in accordance with Figure 5-2.6.11.3 [*Validator Baseplate Requirements*]
  1. Confirm with the City:
    - a. anchor hole diameter, spacing and depth before drilling anchor holes;
    - b. anchor rod specifications before installing anchors; and
    - c. conduit access location and pole diameter before installing conduit.



**Figure 5-2.6.11.3: Validator Baseplate Requirements**

- D. Locate six (6) Validators on each side-loading Stop Platform at approximately equidistant spacing longitudinally along the Platform, with one (1) Validator located within 10 m of each Platform Access Point;
- E. At Lewis Farms Stop, locate twelve (12) Validators at approximately equidistant spacing longitudinally along the Platform, with six (6) Validators located along the south side of the Platform and six (6) Validators located along the north side of the Platform, and with two (2) Validators located within 10 m of each Platform Access Point; The two (2) Validators at each Platform Access Point will be on a single double-headed pole; provide sufficient conduit to allow the City to install dual data and power lines to each of these poles.
- F. Locate four (4) Validators on each Station Platform, at approximately equidistant spacing longitudinally along the Platform, with one (1) Validator located within 10 m of each Platform entrance; Furthermore:
  1. at WEM Station, locate a total of seven (7) Validators in the heated waiting area at the L1 Ground level and four (4) Validators in the heated waiting area at the L2 Mezzanine level, conveniently placed for Passengers at the bottom of all vertical circulation elements; and
  2. at Misericordia Station, locate a total of five (5) Validators in the heated waiting area at the L1 Ground level and two (2) Validators in the heated waiting area at the L2 Mezzanine level, conveniently placed for Passengers at the bottom of all vertical circulation elements;

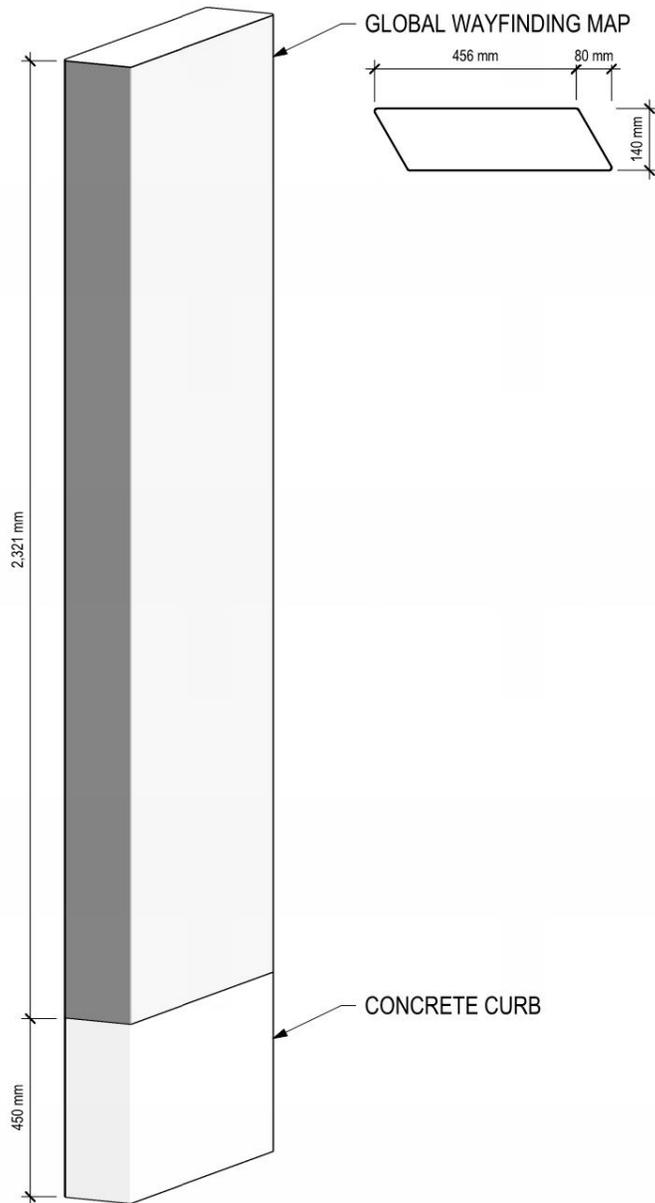
**5-2.6.11.4 Variable Message Signs**

- A. Provide VMS in accordance with Section 6-1.20.2.2 [*Variable Message Signs*] of this Schedule.
- B. Provide two (2) VMSs on each Platform for each Track that a Platform serves, placed such that:
  1. it is clear as to which Track each VMS serves;
  2. the minimum spacing between VMS is not less than 30 m;
  3. each VMS is supported from above, perpendicular to the Tracks;

4. each VMS is double-sided; and
  5. a minimum of one (1) VMS is legible from anywhere on the Platform.
- C. In addition to the requirements of Section 5-2.6.11.4 [*Variable Message Signs*], and Section 6-1.20.2.2 [*Variable Message Signs*], at the Stations provide:
1. one (1) VMS at each decision point where a common path of travel divides between the two Platform destinations that indicates the destination of the next Train for each travel path available;
  2. one (1) VMS above every elevator door at the L1 Ground level and L2 Mezzanine level that indicates the destination of the next Train stopping at the Platform serviced by the elevator; and
  3. one (1) VMS, centrally located at the bottom of each stair/escalator at the L2 Mezzanine level that indicates the destination of the next Train stopping at the Platform serviced by that stair/escalator.

#### **5-2.6.11.5 Global Wayfinding Maps**

- A. Provide systems infrastructure to each Global Wayfinding Map in accordance with Section 6-1.18.3 [*Global Wayfinding*] of this Schedule.
- B. Global Wayfinding Maps will be supplied and installed by the City after the Construction Completion Date.
- C. Global Wayfinding Maps will be 0.536 m (width) x 2.321 m (height) x 0.14 m (depth) and will be without openings from the reinforced concrete curb to their nominal height as shown in Figure 5-2.6.11.5 [*Global Wayfinding Map*].



**Figure 5-2.6.11.5: Global Wayfinding Map**

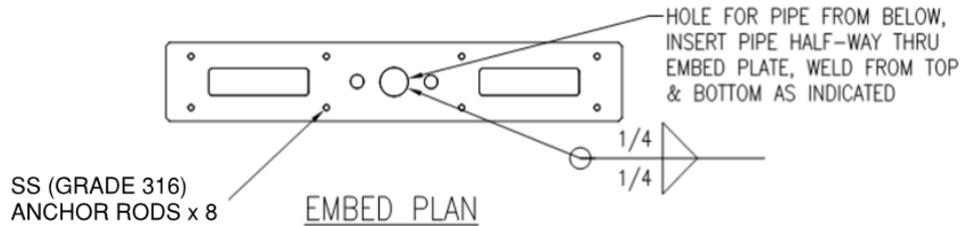
- D. Global Wayfinding Maps will be free standing and fixed to a steel plate, which in turn is fixed to a nominally 0.45 m (height) x 0.54 m (width) x 0.14 m (depth) reinforced concrete curb. The reinforced concrete curb and the steel plate will be designed and constructed by the City at the time of Global Wayfinding Map installation.
- E. Global Wayfinding Maps shall be located so that they are viewable from both sides.
- F. Reserve space for one (1) future Global Wayfinding Map not more than 10 m from:
  1. each Platform Access Point on every Stop Platform; and
  2. every public at-grade entrance to the Stations.

#### **5-2.6.11.6 ETS TV Screens**

- A. Provide systems infrastructure for ETS TV screens in accordance with Section 6-1.18.1 [*ETS TV Screens*] of this Schedule.
- B. ETS TV screens and ETS screen enclosures will be supplied and installed by the City.
- C. Locate systems infrastructure for:
  - 1. two (2) ETS TV screens on each side-loading Platform under the Canopy, outside of Shelters, and in line with the Canopy supporting columns; and
  - 2. two (2) pairs of back to back ETS TV screens, for a total of four (4) ETS TV screens, on each centre-loading Platform, such that each pair shall be in the transverse centre of the Platform.
- D. ETS TV screens shall be:
  - 1. spaced at no less than 25 m and no more than 45 m between each ETS TV screen on a side-loading Platform and between each pair of ETS TV screens on a centre-loading Platform; and
  - 2. suspended parallel to the Tracks below the Canopies within ETS TV screen enclosures.
- E. Provide two (2) connection points at each ETS TV screen location suitable for the attachment of ETS TV screens and ETS TV screen enclosures. The connection points shall be readily accessible to facilitate the future installation of ETS TV screens and ETS TV screen enclosures by the City without having to modify the Canopy structure by methods such as welding and drilling.
- F. The Canopy structure shall be designed and constructed to support all loads from the ETS TV screens, including the ETS TV screen enclosures and the wind loads on the screens, assuming the following for each ETS TV screen:
  - 1. dimensions of 1390 mm (width) x 990 mm (height) x 125 mm (depth); and
  - 2. weight of 100 kg, including mounting devices; for clarity, a pair of ETS TV screens on a centre-loading Platform weighs 200 kg.

#### **5-2.6.11.7 Corporate Advertising Screens**

- A. Provide systems infrastructure for corporate advertising screens in accordance with Section 6-1.18.2 [*Corporate Advertising Screens*] of this Schedule.
- B. Corporate advertising screens will be supplied and installed by the City.
- C. Provide anchors and anchor holes in accordance with Figure 5-2.6.11.7 [*Corporate Advertising Screen Baseplate Requirements*].
  - 1. Confirm with the City:
    - a. anchor hole diameter, spacing and depth before drilling anchor holes;
    - b. anchor rod specifications before installation anchors; and
    - c. conduit access location and diameter before installing conduit.



**Figure 5-2.6.11.7: Corporate Advertising Screen Baseplate Requirements**

- D. Corporate advertising screens shall be:
1. located within 20 m of each Platform Access Point for all Stop Platforms such that;
    - a. each side-loading Platform shall have two (2) corporate advertising screens; and
    - b. each centre-loading Platform shall have two (2) sets of back to back corporate advertising screens, for a total of four (4) corporate advertising screens; and
  2. located within 20 m of each Station Platform entrance; and
  3. positioned:
    - a. adjacent to the non-trackside Platform edge for side-loading Platforms;
    - b. in the transverse centre of the Platform for centre-loading Platforms; and
    - c. parallel to the Tracks.
- E. In addition to the requirements of Section 5-2.6.11.7 [*Corporate Advertising Screens*]:
1. at Misericordia Station:
    - a. locate one (1) corporate advertising screen within the heated waiting area at the L1 Ground level positioned within 15 m of the bottom of the L1 Ground vertical circulation elements but not impeding desired pedestrian flows.
  2. at WEM Station:
    - a. locate two (2) corporate advertising screens within the heated waiting area at the L1 Ground level positioned within 20 m of the bottom of the L1 Ground vertical circulation elements but not impeding desired pedestrian flows.
- F. The corporate advertising screens will be 2400 mm (height) x 2000 mm (width) x 300 mm (depth) and weigh 325 kg.
- G. Corporate advertising screens on Stop Platforms shall be protected by a roof having the same architectural language, form and material as the Canopies at the applicable Stop and a minimum plan area of 4.2 m<sup>2</sup>.

#### **5-2.6.12 Systems Cabinets**

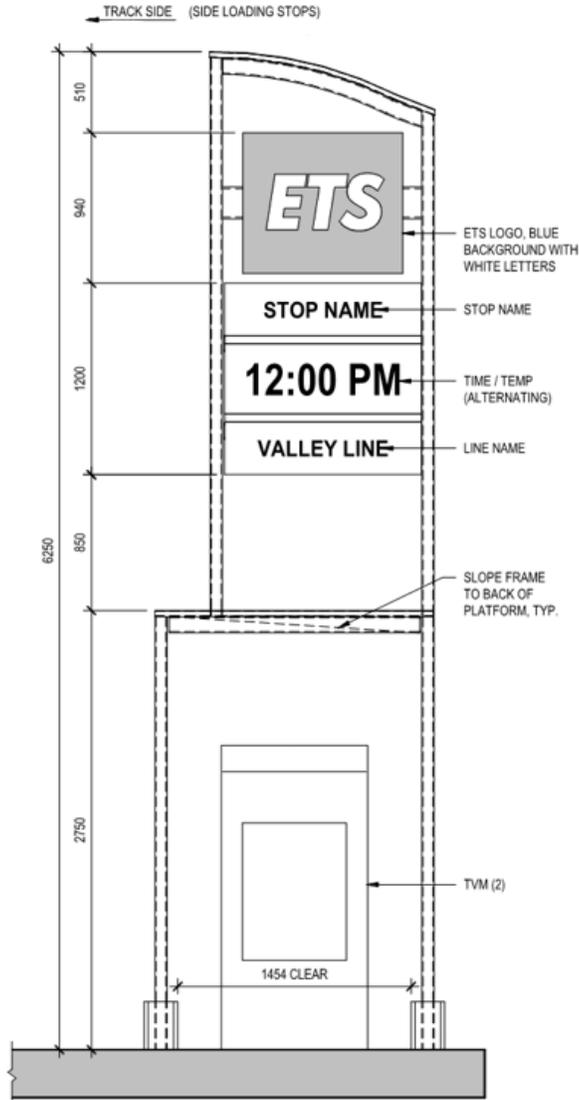
- A. Systems cabinets on Stop Platforms shall be located within 30 m of each Platform Access Point such that:

- a. each side-loading Platform shall have two (2) systems cabinets, with one (1) of the two (2) systems cabinets designated as a communications cabinet in accordance with Section 6-1.6 [*Wayside Equipment and Enclosures*] of this Schedule; and
  - b. each centre-loading Platform shall have two (2) sets of back to back systems cabinets, for a total of four (4) systems cabinets, with two (2) of the four (4) systems cabinets designated as a communications cabinet in accordance with Section 6-1.6 [*Wayside Equipment and Enclosures*] of this Schedule.
- B. At Stations, systems cabinets shall be located within the Communications Room.
  - C. All electrical equipment on Platforms shall be located in the systems cabinets, except where specifically routed to serve the Platform.
  - D. The systems cabinet enclosures shall be stainless steel, be fully integrated with the other Platform amenities and are not required to be treated in accordance with Section 2-9.4.B [*Wayside Equipment Enclosures*] of this Schedule.
  - E. The dimensions of each systems cabinet on side-loading Stop Platforms shall not exceed 3.0 m (width) x 2.135 m (height) x 0.815 m (depth).
  - F. The dimensions of each systems cabinet on centre-loading Stop Platforms shall not exceed 3.0 m (width) x 2.135 m (height) x 1.63 (depth).
  - G. The doors of the systems cabinets shall be designed such that when the doors are opened fully they do not extend into the Pedestrian Clear Width of the Platforms.
  - H. Systems cabinets on Stop Platforms shall not be protected by a roof or Canopy.

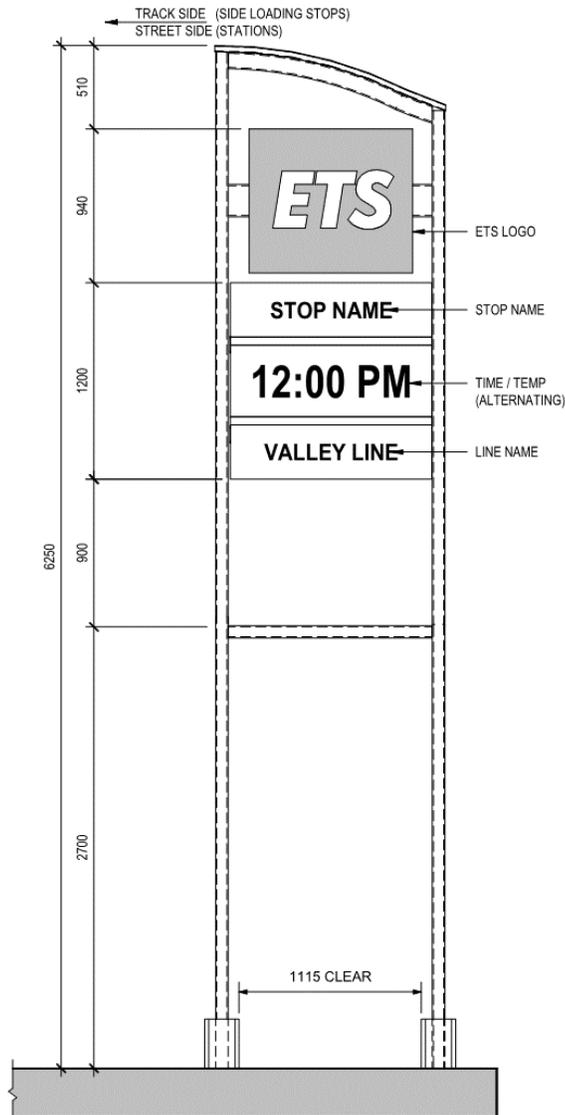
#### **5-2.6.13 Clock Tower**

- A. Provide one (1) Clock Tower per Stop, except for:
  - 1. the Lewis Farms Stop, where no Clock Tower shall be provided; and
  - 2. Stops with split side-loading Platforms, where each Platform shall be provided with a Clock Tower, for a total of two (2) Clock Towers per Stop.
- B. Clock Towers at Stops shall be located:
  - 1. centrally along the length of the Platform at all Stops with its long dimension perpendicular to the length of the Platform; and
  - 2. on the roadside Platform for Stops with non-split side-loading Platforms and where the Trackway is adjacent to the Roadway on one side only.
- C. Provide a Clock Tower at the Misericordia Station that is located northeast of the west vehicle access to the Misericordia Hospital off 87 Avenue; the Clock Tower shall be positioned such that:
  - 1. its long dimension is perpendicular to 87 Avenue;
  - 2. it is easily viewable from both sides of 87 Avenue; and
  - 3. its high side is oriented to the south per Figure 5-2.6.13.B [*Clock Tower at Stations*].
- D. Clock Towers shall be as shown in Figure 5-2.6.13.A [*Clock Tower at Stops*] and Figure 5-2.6.13.B [*Clock Tower at Stations*] of this Schedule and shall include:

1. ETS brand with the official ETS logo;
  2. Stop/Station name;
  3. digital alternating time and temperature display, with time accurate to within  $\pm 10$  seconds and temperature accurate to within  $\pm 1^\circ\text{C}$ ; using automatic and periodic updates via a received radio signal; and
  4. the line name, i.e. "Valley Line", in green – pantone 355.
- E. The structural elements of the Stop Clock Towers shall have the same surface finish and use the same type of steel cross-section as the Stop Canopies.
- F. The structural elements of the Misericordia Station Clock Towers shall have the same surface finish and use the same type of steel cross section as the Stop Canopies provided at one (1) of the two (2) adjacent Stops.
- G. Clock Towers shall be energized from the nearest "Normal" electrical load centre via embedded conduit.



**Figure 5-2.6.13.A: Clock Tower at Stops**



**Figure 5-2.6.13.B: Clock Tower at Stations**

#### 5-2.6.14 Baseplates

- A. All baseplates and anchors on Platforms, except for those for Passenger Interface Equipment, shall:
1. be encased in cast-in-place concrete surrounds with chamfered corners that:
    - a. are minimum 150 mm and maximum of 300 mm high; and
    - b. extend no more than 175 mm from each face of the structure being supported by the baseplate; and
  2. not present a tripping hazard.

### **5-2.6.15 Non-Trackside Platform Edges**

- A. Where the non-trackside Platform edge is adjacent to a sidewalk, an SUP or a landscaped area, no step between the top of Platform and the top of sidewalk, SUP and the landscaped area, respectively, shall be permitted, except along the Alex Decoteau Stop north Platform as permitted by Section 5-2.9.7 [*Alex Decoteau Stop*] of this Schedule.

### **5-2.7 ACCESSIBILITY**

- A. All handrails on stairs or ramps shall terminate to the wall or ground and have a consistent system of tactile cues, such as notches, dimples, grade 1 braille, raised numbers or other texture changes within the last 300 mm at both ends of the handrail before it changes direction to the ground or wall.
- B. Stations shall be provided with tactile direction indicator surfaces in compliance with Section 4.3.5.4 of CSA B651.
- C. All swing doors at Stations shall be activated through an accessible hand swipe sensor.

#### **5-2.7.1 Accessibility to Platforms**

- A. At a minimum, provide one (1) Platform Access Point complying with CSA B651 at each end of all Stop Platforms.
- B. Provide handrails along the walkway from adjacent grade to the Platform Access Points;
  - 1. at the non-trackside Platform edge for side-loading Platforms; and
  - 2. at the centre of centre-loading Platforms.
- C. Platform Access Points shall be full width of the Platform and located fully outside the Platform length specified in Section 5-2.6.3.2 [*Platform Length*] of this Schedule.
- D. Where it is not possible to comply with the length requirements in Section 5-2.7.1 [*Accessibility to Platforms*]:
  - 1. Platform Access Points may be inset, longitudinally, but only to the extent necessary and only on the side opposite the trackside edge of the Platform and so as not to encroach on the Pedestrian Clear Width, as illustrated in Figure 5-2.6.3 [*Stop Platform Functional Layout*] of this Schedule;
  - 2. steps with a rise between 120 mm and 180 mm and a run of a minimum of 250 mm shall be provided at the Platform end on the trackside edge; and
  - 3. the tactile attention indicator shall continue down the steps into the refuge area, consistent with Section 2-4.3 [*Crossing Treatments*] of this Schedule.
- E. Walkways leading up to Platform Access Points shall have a slope not exceeding 5%.

#### **5-2.7.2 Vertical Circulation**

- A. Provide up-escalators wherever the vertical distance between floor levels exceeds 3.7 m and down-escalators wherever the vertical distance between floor levels exceeds 7.3 m.
- B. Provide elevators where the vertical distance between floor levels exceeds 1.5 m.

C. At Stations:

1. provide a minimum of one (1) centrally located 3.30 m wide set of stairs from the heated waiting area at L1 Ground level to L2 Mezzanine level;
  2. provide a minimum of one (1) 2.30 m wide set of stairs from the L2 Mezzanine level to each Platform at the L3 Platform level;
  3. have a minimum of two (2) 150 mm wide bicycle curbs, placed along the edges of the stairs;
- D. Stairs located adjacent to escalators shall be parallel to the angle of inclination of the escalator and sized to have landings at a common elevation with the escalator landings.
- E. The common lowest landing of each staircase located next to an escalator shall have the first riser of the stair shall align with the first riser of the adjacent escalator.

## **5-2.8 STORM AND MELT WATER DRAINAGE**

### **5-2.8.1 Canopies and Roofs**

- A. Canopies and roofs over corporate advertising screens and TVMs shall shed water away from the trackside Platform edge.
- B. Up to the 1:5 year design storm event, water runoff from Canopies and roofs shall be collected and discharged into the Stormwater Management System. Dripping of water over Canopy and roof edges is not permitted.

### **5-2.8.2 Platforms**

- A. Up to the 1:5 year design storm event, water runoff on side-loading Platforms shall be collected at the non-trackside Platform edge and discharged into the Stormwater Management System.
- B. Up to the 1:5 year design storm event, water runoff on centre-loading Platforms shall be collected at the centre between the two Platform edges and discharged into the Stormwater Management System.
- C. Drainage of Platforms shall be designed for a 1:100 year design storm event.

## **5-2.9 STOP-SPECIFIC DESIGN REQUIREMENTS**

### **5-2.9.1 Introduction**

- A. This Section 5-2.9 [*Stop Specific Design Requirements*] sets out additional Design and Construction requirements applicable to specific Stops.

### **5-2.9.2 Lewis Farms Stop**

- A. This Section 5-2.9.2 [*Lewis Farms Stop*] sets out additional Design and Construction requirements applicable to the Lewis Farms Stop.
- B. Provide one (1) universal heated Operator's washroom at the Lewis Farms Stop located centrally along the Platform width and length.
- C. All rooms at the Lewis Farms Stop shall comply with the *Room Data Sheets – Lewis Farms Stop*, a copy of which is included in the Disclosed Data.

### **5-2.9.3 Aldergrove/Belmead Stop**

- A. This Section 5-2.9.3 [*Aldergrove/Belmead Stop*] sets out additional Design and Construction requirements applicable to the Aldergrove/Belmead Stop.
- B. The south Platform of the Aldergrove/Belmead Stop shall be integrated with the sidewalk, with no step, rail, or other form of barrier, except for Platform amenities as outlined in Section 5-2.6 [*Platforms and Platform Amenities*] of this Schedule, between the non-tracksides Platform edge and the adjacent property line.
- C. The configuration of the south Platform elements may be non-symmetrical with respect to the short centreline of the Platform. Platform elements shall not be placed in front of existing pedestrian pathways leading to the development to the south.
- D. Maximize the Pedestrian Clear Width on the south Platform.

### **5-2.9.4 Jasper Place Stop**

- A. This Section 5-2.9.4 [*Jasper Place Stop*] sets out additional Design and Construction requirements applicable to the Jasper Place Stop.
- B. The west Platform of the Jasper Place Stop shall be integrated with the sidewalk with no step, rail, or other form of barrier, except for Platform amenities as outlined in Section 5-2.6 [*Platforms and Platform Amenities*] of this Schedule, between the non-tracksides Platform edge and the adjacent hardscaped areas to the west.
- C. Platform elements shall not be placed in front of the hardscaped areas to the west, which will be pedestrian desire lines.
- D. Maximize the Pedestrian Clear Width on the west Platform.

### **5-2.9.5 Grovenor/142 St. Stop**

- A. This Section 5-2.9.5 [*Grovenor/142 St. Stop*] set outs additional Design and Construction requirements applicable to the Grovenor/142 St. Stop.
- B. The north Platform of the Grovenor/142 St. Stop shall be integrated with the sidewalk with no step, rail, or other form of barrier, except for Platform amenities as outlined in Section 5-2.6 [*Platforms and Platform Amenities*] of this Schedule, between the non-tracksides Platform edge and the adjacent pedestrian plaza within the West Block Glenora development.
- C. Maximize the Pedestrian Clear Width on the north Platform.

### **5-2.9.6 NorQuest Stop**

- A. This Section 5-2.9.6 [*NorQuest Stop*] sets out additional Design and Construction requirements applicable to the NorQuest Stop.
- B. The west Platform of the NorQuest Stop shall be integrated with the sidewalk, with no step, rail, or other form of barrier, except for Platform amenities as outlined in Section 5-2.6 [*Platforms and Platform Amenities*] of this Schedule, between the non-tracksides Platform edge and the Lands boundary.
- C. The configuration of the west Platform elements may be non-symmetrical with respect to the short centreline of the Platform. Platform elements shall not be placed in front of any building accesses or windows.

- D. The Canopy on the west Platform shall:
1. measure a minimum of 32 m in total length in the long dimension of the west Platform;
  2. cover a minimum of 100 m<sup>2</sup>;
  3. not block existing building windows; and
  4. not be placed within 3 m of an existing building access, measured parallel to the building face.
- E. Shelters are not permitted on the west Platform.
- F. Maximize the Pedestrian Clear Width on the west Platform.
- G. Shared-use poles exceeding 4.5 m in height, measured from top of Platform to the top of the pole, may be placed on:
1. the west Platform, provided they are placed as close as practicable to the non-trackside Platform edge without blocking any windows or existing building accesses to adjacent properties; and
  2. the east Platform provided they are placed as close as practicable to the non-trackside Platform edge
- H. The lighting of the NorQuest Platform shall be designed such that light spill into the Addiction Recovery Centre (10302 107 St NW) is minimized.
- I. Provide a perforated metal privacy screen along the non-trackside edge of the west Platform to obscure views into the north-facing windows of the Addiction Recovery Centre (10302 107 St NW), as follows:
1. the screen shall extend the full length of the Canopy and to within 2 m of the south end of the Platform;
  2. the bottom of the screen shall be 800 mm above the top of Platform;
  3. the top of the screen shall be 2450 mm above the top of Platform;
  4. the screen shall be attached to the Canopy columns and any VMS, signage, or light poles as required such that there are no additional vertical structural supports;
  5. the screen and screen supports shall be detachable from the Stop Canopy columns and poles to allow for portions to be removed if they are no longer required in the future;
  6. if horizontal supports are required, they shall be located on the non-Platform side of the screen;
  7. the screen, screen supports and all connections shall have the same surface finish and colour as the Stop Canopy on all sides; and
  8. the screen supports shall use the same type of steel cross-section as the Stop Canopy.
- J. Notwithstanding Section 5-2.4.2.1 [*Stop/Station Identification Sign*], one (1) of the four (4) required Stop/Station identification signs on the west Platform need not have a single line "Route Map".
- K. The south Platform Access Point of the west Platform shall not impede the barrier free pedestrian access to the Addiction Recovery Centre (10302 107 St NW).

- L. Notwithstanding Section 5-2.6.3.7E [*Platform Configuration and Functional Zones*] of this Schedule, Platform elements on the east Platform need not mirror the Platform elements on the west Platform.

#### **5-2.9.7 Alex Decoteau Stop**

- A. This Section 5-2.9.7 [*Alex Decoteau Stop*] set outs additional Design and Construction requirements applicable to the Alex Decoteau Stop.
- B. The north Platform of the Alex Decoteau shall be integrated with the sidewalk, with no rail or other form of barrier, except for Platform amenities as outlined in Section 5-2.6 [*Platforms and Platform Amenities*] of this Schedule, between the non-trackside Platform edge and the existing Alex Decoteau Park.
- C. Barrier free connections shall be provided from the north Platform to all pedestrian pathways in the Alex Decoteau Park, except that:
  - 1. steps may be provided where the grading design cannot accommodate a flush interface between the north Platform and the pathways in the Alex Decoteau Park as shown on Appendix 5-2A [*102 Avenue – 107 Street Streetscape Drawings*] of this Schedule.
- D. The configuration of the north Platform elements may be non-symmetrical with respect to the short centreline of the Platform. Platform elements shall not be placed in front of existing pedestrian pathways leading to the Alex Decoteau Park to the north.
- E. The Canopies on the north Platform shall be distributed in two (2) discrete areas, one (1) of which shall be located on the west side of the Platform short centreline, and one (1) of which shall be located on the east side of the Platform short centreline, such that the Canopies are distributed evenly between the east and west side of the Platform centreline.
- F. Shelters are not permitted on the north Platform.
- G. Maximize the Pedestrian Clear Width on the north Platform.
- H. Shared-use poles exceeding 4.5 m in height, measured from top of Platform to the top of the pole, may be placed on:
  - 1. the north Platform, provided they are placed as close as practicable to the non-trackside Platform edge without blocking any pedestrian connections to Alex Decoteau Park; and
  - 2. the south Platform provided they are placed as close as practicable to the non-trackside Platform edge.
- I. Notwithstanding Section 5-2.4.2.1 [*Stop/Station Identification Sign*], one (1) of the four (4) required Stop/Station identification signs on the north Platform need not have a single line “Route Map”.
- J. Notwithstanding Section 5-2.6.3.7E [*Platform Configuration and Functional Zones*] of this Schedule, Platform elements on the south Platform need not mirror the Platform elements on the north Platform.

#### **5-2.10 WEM STATION**

- A. Notwithstanding Section 5-2.6 [*Platforms and Platform Amenities*], this Section 5-2.10 [*WEM Station*] sets out additional Design and Construction requirements applicable to the WEM Station.
- B. All rooms at WEM Station shall comply with the *Room Data Sheets – WEM Station*, a copy of which is included in the Disclosed Data.

- C. For clarity, in this Section 5-2.10 [*WEM Station*] of this Schedule the following terms, when used to describe where one area will be situated with reference to another area(s), shall have the following meanings:
1. “ready access” shall mean that the applicable areas are in close proximity and on the same level, but not necessarily adjoining; and
  2. “direct access” shall mean that the applicable areas are adjoining and interconnected, unless noted otherwise.

**5-2.10.1 Program Requirements**

- A. WEM Station shall as a minimum comprise of the rooms and spaces identified in Table 5-2.10 [*WEM Station Room Program*]
- B. WEM Station shall have three (3) levels:
1. L1 Ground level, integrated with the WEM Transit Centre;
  2. L2 Mezzanine level, an intermediate mezzanine level; and
  3. L3 Platform level, with two (2) side loading Platforms.

**Table 5-2.10: WEM Station Room Program**

Room Description	Level Requirement	Minimum Requirements
Exterior Unheated Waiting Area in Shelters	L1 Ground	Refer to Section 2-12 [ <i>WEM Transit Centre</i> ] of this Schedule
Interior Heated Waiting Area	L1 Ground	None
Heated Waiting Area	L2 Mezzanine	None
Heated Waiting Area – Eastbound Platform	L3 Platform (EB)	Direct access to Platform
Heated Waiting Area – Westbound Platform	L3 Platform (WB)	Direct access to Platform
Female Operator's Washroom	L1 Ground	Ready access from heated waiting area
Male Operator's Washroom	L1 Ground	Ready access from heated waiting area
Retail Kiosk	L1 Ground	Direct access to heated waiting area
Electrical Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Communications Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Janitorial Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area

Room Description	Level Requirement	Minimum Requirements
Mechanical Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Universal Public Washroom 1	L1 Ground	Direct access to heated waiting area such that the two (2) universal public washrooms are directly adjacent to each other
Universal Public Washroom 2	L1 Ground	Direct access to heated waiting area such that the two (2) universal public washrooms are directly adjacent to each other
Security Office	L1 Ground	Direct access to heated waiting area such that two (2) walls of the Security Office are shared with the heated waiting area
Elevator Control Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area

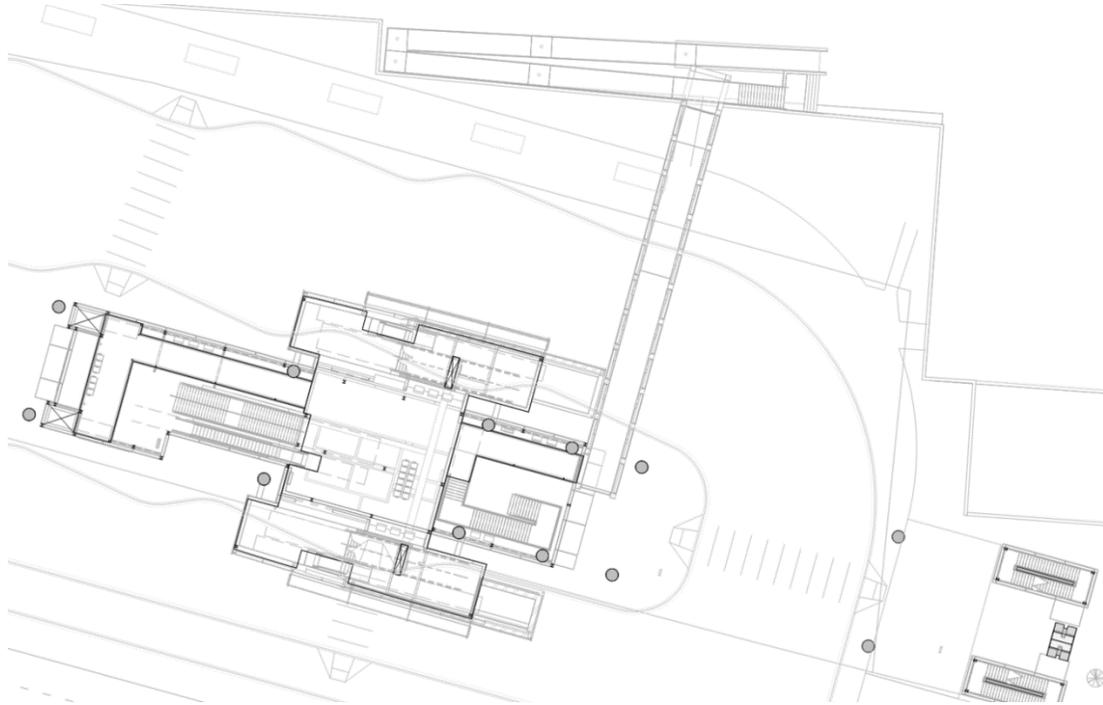
- C. Reserve space for one (1) Automated Teller Machine (ATM) within the heated waiting area at L1 Ground, to be supplied and installed by the City.
- D. The ATM will be 0.5 m (width) x 1.5 m (height) x 0.6 m (depth).
- E. Provide the systems infrastructure for the ATM in accordance with Section 6-1.24 [*Automated Teller Machine*] of this Schedule.
- F. A permanent emergency generator shall be located in accordance with the requirements of Section 2-10.3.5 [*WEM Station*] and Section 6-1.9.5 [*Emergency and Standby Sources*] of this Schedule.
- G. No Shelters are required on the Platforms.
- H. Provide waste and recycling receptacles as follows:
  - 1. a minimum of four (4) on the L3 Platform level with a minimum of one (1) located within 10 m of each entrance to a vertical circulation area;
  - 2. a minimum of two (2) on the L2 Mezzanine level with a minimum of one (1) located within 10 m of each entrance to a vertical circulation area; and
  - 3. a minimum of two (2) on the L1 Ground level within the heated waiting area.
- I. Provide hand sanitizer stations as follows:
  - 1. a minimum of one (1) within the Heated Waiting Area on the L1 Ground level at every public at-grade entrance; and
  - 2. a minimum of one (1) within each Heated Waiting Area on the L3 Platform level.

**5-2.10.2 Passenger Circulation Requirements**

- A. All vertical circulation elements shall be fully integrated into the overall architecture of the WEM Station and shall be accessible to Passengers during Operating Hours per Schedule 7 [*Performance Demonstration Requirements*].

- B. Provide access from the heated waiting area at L1 Ground to the heated waiting area at L2 Mezzanine via a minimum of two (2) stairs and one (1) escalator.
- C. Provide access from the heated waiting area at L2 Mezzanine to each of the Platforms at L3 Platform via enclosed stairs and escalators that:
  - 1. are placed outboard of the Platforms and cantilevered over the WEM Transit Centre with a minimum of 4.8 m vertical clearance measured from the underside of the structure; and
  - 2. need not be conditioned but shall be within the operating temperature range of the escalators in accordance with the Valley Line West LRT Facilities Design and Construction Standards.
- D. Partitions separating the heated waiting area on L2 Mezzanine from L3 Platform shall be located at L2 Mezzanine.
- E. Elevators shall provide direct access from the heated waiting area at L1 Ground to each Platform at L3 Platform, including loading/unloading capabilities for each elevator to the heated waiting area at L2 Mezzanine.
- F. Additional vertical circulation accesses shall be provided from the sidewalk level east of the WEM Transit Centre to the east end of each Platform at L3 Platform via fully glazed enclosed stairs that need not be conditioned.
- G. Provide connection points suitable for attachment by the City or a design using piers on the WEM Transit Centre island to accommodate a future enclosed pedestrian bridge that spans over the WEM Transit Centre to connect the heated waiting area at L2 Mezzanine to the existing WEM parkade as shown in Figure 5-2.10.1.2 [*Future Enclosed Pedestrian Bridge*] and:
  - 1. with the Final Design, provide a detailed design of the piers, including foundations and connection points, as applicable; the design shall show how the pedestrian bridge is supported by the piers or attached to the connection points;
  - 2. if the pedestrian bridge is supported on piers, the piers shall be integrated into the overall architecture of WEM Station and 87 Avenue Elevated Guideway and shall not adversely affect pedestrian flows within the WEM Transit Centre;
  - 3. the future pedestrian bridge shall be designed to allow an interior clearance box that is 4.0 m wide and 3.0 m high;
  - 4. notwithstanding Section 4-1.9.3 [*Vertical Clearance*] of this Schedule, the minimum vertical clearance between the bus loop and the underside of the pedestrian bridge shall be 4.8 m; and
  - 5. the connection points and structure of WEM Station or the supporting piers shall be designed to accommodate the following total unfactored loads for the future pedestrian bridge, which may be divided equally between the east and west side connection points or supporting piers:
    - a. gravity loads:
      - i. dead load = 1 250 kN;
      - ii. superimposed dead load = 400 kN;
      - iii. live load = 700 kN; and
      - iv. snow load = 350 kN; and

- b. governing lateral loads:
  - i. wind load = +/- 90 kN.
- H. Provide a minimum of one (1) publicly accessible entrance to the heated waiting area on L1 Ground along each of the north, south, west, and east building faces.
- I. Provide a minimum 1.8 m wide barrier-free pedestrian crossing across the Trackway at each end of the Platforms at L3 Platform, which shall be located outside of the minimum 90 m Platform length, in accordance with CSA B651.



**Figure 5-2.10.1.2: Future Enclosed Pedestrian Bridge**

**5-2.10.3 General Station Requirements**

- A. WEM Station shall be an “Open Station” as defined in NFPA 130.
- B. The full extent of the L3 Platform level in the direction of the 87 Avenue Elevated Guideway shall be covered by a Canopy and glazed sidewalls as set out in Section 2-10.3.6 [*WEM Station and Misericordia Station*] of this Schedule, except that:
  - 1. the ends of the Canopy perpendicular to the Track are permitted to be open; and
  - 2. openings in the clerestory side walls are permitted, provided that the openings do not expose Passengers to the effects of wind, rain, or snow.
- C. Provide two interior wall spaces, each a minimum of 2000 mm high by 2500 mm wide, within the heated waiting area at the L1 Ground level of WEM Station to accommodate the two existing Public Art pieces from the existing WEM transit centre (Thing 1 & Thing 2), de-constructed and transported in accordance with Section 1-7.5.4 [*Special Items*] of this Schedule.
- D. Runoff from the WEM Station, up to the 1:100 year design storm event, shall be:

1. managed to prevent any impacts on persons on all three levels of the WEM Station and on buses, pedestrians and other users in the WEM Transit Centre; and
  2. collected in eaves trough/downspout systems and managed per Section 3-5.6 [*Stormwater Management-Specific Facilities*] and Section 1-1.6.4 [*Sustainability General Requirements*] of this Schedule.
- E. Water ingress into the conditioned spaces on L1 Ground, L2 Mezzanine, and the vertical circulation spaces of WEM Station shall not be permitted under any design storm event.
- F. Subject to Section 2-14.6.5.2E [*Design Intent*] of this Schedule, downspouts from the WEM Station may discharge into the on-site storm system, without resulting in any ponding, ice build-up or other impacts on buses, pedestrians and other users of the WEM Transit Centre up to the 1:100 year design storm event.

### 5-2.11 MISERICORDIA STATION

- A. Notwithstanding Section 5-2.6 [*Platforms and Platform Amenities*], this Section 5-2.11 [*Misericordia Station*] set outs additional Design and Construction requirements applicable to the Misericordia Station.
- B. All rooms at Misericordia Station shall comply with the *Room Data Sheets – Misericordia Station*, a copy of which is included in the Disclosed Data.
- C. For clarity, in this Section 5-2.11 [*Misericordia Station*] of this Schedule the following terms, when used to describe where one area will be situated with reference to another area(s), shall have the following meanings:
1. “ready access” shall mean that the applicable areas are in close proximity and on the same level, but not necessarily adjoining; and
  2. “direct access” shall mean that the applicable areas are adjoining and interconnected, unless noted otherwise.

#### 5-2.11.1 Program Requirements

- A. Misericordia Station shall as a minimum comprise of the rooms and spaces identified in Table 5-2.11 [*Misericordia Station Room Program*].
- B. Misericordia Station shall have three (3) levels:
1. L1 Ground level;
  2. L2 Mezzanine level, an intermediate mezzanine level; and
  3. L3 Platform level, with two (2) side loading Platforms.

**Table 5-2.11: Misericordia Station Room Program**

Room Description	Level Requirement	Minimum Requirements
Heated Waiting Area	L1 Ground	None
Heated Waiting Area	L2 Mezzanine	None

Room Description	Level Requirement	Minimum Requirements
Heated Waiting Area – Eastbound Platform	L3 Platform (EB)	Direct access to Platform
Heated Waiting Area – Westbound Platform	L3 Platform (WB)	Direct access to Platform
Electrical Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Communications Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Janitorial Room	L1 Ground	Ready access from heated waiting area
Mechanical Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area
Universal Public Washroom	L1 Ground	Direct access to heated waiting area
Elevator Control Room	L1 Ground or L2 Mezzanine	Ready access from heated waiting area

- C. A permanent emergency generator shall be located in accordance with the requirements of Section 2-10.3.6 [*Misericordia Station*] and Section 6-1.9.5 [*Emergency and Standby Sources*] of this Schedule.
- D. Provide waste and recycling receptacles as follows:
1. a minimum of four (4) on the L3 Platform level with a minimum of one (1) located within 10 m of each entrance to a vertical circulation area; and
  2. a minimum of one (1) on the L1 Ground level within the heated waiting area.
- E. Provide hand sanitizer stations as follows:
1. a minimum of one (1) within the Heated Waiting Area on the L1 Ground level at every public at-grade entrance; and
  2. a minimum of one (1) within each Heated Waiting Area on the L3 Platform level.

#### **5-2.11.2 Passenger Circulation Requirements**

- A. All vertical circulation elements shall be fully integrated into the overall architecture of the Misericordia Station, and shall be accessible to Passengers during Operating Hours per Schedule 7 [*Performance Demonstration Requirements*].
- B. Provide access from the heated waiting area at L1 Ground to the heated waiting area at L2 Mezzanine via one (1) set of stairs and one (1) escalator.
- C. Provide access from the heated waiting area at L2 Mezzanine to each of the Platforms at L3 Platform via enclosed stairs and escalators that:
1. are placed outboard of the Platforms on L3 Platform and cantilevered with a minimum of 3.0 m vertical clearance measured from the underside of the structure; and

2. need not be conditioned but shall be within the operating temperature range of the escalators in accordance with the Valley Line West LRT Facilities Design and Construction Standards.
- D. Doors and partitions separating the heated waiting area at L2 Mezzanine from L3 Platform shall be located at L2 Mezzanine.
  - E. Elevators shall provide direct access from the heated waiting area at L1 Ground to each Platform at L3 Platform and need not include loading/unloading capabilities for each elevator to the heated waiting area at L2 Mezzanine.
  - F. Additional vertical circulation access shall be provided from the sidewalk level to the east end of each Platform at L3 Platform via enclosed stairs that need not be conditioned and shall be fully glazed.
  - G. Provide a minimum 1.8 m wide barrier-free pedestrian crossing across the Trackway at each end of the Platforms at L3 Platform, which shall be located outside of the minimum 90 m Platform length, in accordance with CSA B651.
  - H. Provide a minimum of one (1) publicly accessible entrance to the heated waiting area on L1 Ground along each of the west and east building faces.

### **5-2.11.3 General Station Requirements**

- A. Misericordia Station shall be an “Open Station” as defined in NFPA 130.
- B. The full extent of the L3 Platform level in the direction of the 87 Avenue Elevated Guideway shall be covered by a Canopy and glazed sidewalls as set out in Section 2-10.3.6 [*WEM Station and Misericordia Station*] of this Schedule, except that:
  1. the ends of the canopy perpendicular to the Track are permitted to be open; and
  2. a minimum 4000 mm and maximum 6000 mm wide opening in the centre of the Canopy above and parallel to the Trackway is permitted for the L3 Platform level outside of the portion of the Station that contains the cantilevered vertical circulation elements, provided the exposure of Passengers to the effects of wind, rain, and snow are minimized.
- C. Runoff from the Misericordia Station, up to the 1:100 year design storm event, shall be:
  1. managed to prevent any impacts on persons on all three levels of Misericordia Station and on pedestrians, vehicles, and other users in the area surrounding the Station; and
  2. collected in eaves trough/downspout systems and managed per Section 1-1.6.4 [*Sustainability General Requirements*] and Section 3-5 [*Stormwater Management*] of this Schedule.
- D. Water ingress into the conditioned spaces on L1 Ground, L2 Mezzanine, and the vertical circulation spaces of Misericordia Station shall not be permitted under any design storm event.
- E. Subject to Section 2-14.6.5.2E [*Design Intent*] of this Schedule, downspouts from the Misericordia Station may discharge into the on-site storm system, without resulting in any ponding, ice build-up or other impacts on pedestrians, vehicles and other users of the area surrounding the Station up to the 1:100 year design storm event.

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