



9119-19-0162

## Building Accessibility Audit Validation Report

895 Eastern Ave. (53,000 sf)

Toronto Fire & EMS Training Centre



Submitted to the City of Toronto  
by IBI Group  
Version 1: May 21, 2021

## 1 Executive Summary

895 Easter Ave also known as Toronto Fire & EMS training Centre, is a two-story facility training and administrative building for EMS and Fire personnel.

895 Eastern Ave. was originally **audited on November 17, 2017, by (IBI Group)**. The audit & 3D point cloud scan performed by IBI group in March 2, 2021 confirmed many of the accessibility issues found in IBI Group's original audit, such as the lack of accessible entrances, non-compliant stairs, lack of accessible washrooms and showers, control heights etc. IBI's audit also found additional accessibility issues such as the lack of universal washrooms, the lack of operable and compliant platform lifts, accessible classroom spaces, and accessible kitchens.

## 2 Purpose of the Report

The intent of the Final Report is to validate the completeness of the existing audit report, highlight any deviations from the codes and TADG guidelines, summarize findings, provide recommendations for the proposed modifications in the audit report, prepare preliminary sketches showing the location of the major improvements, and provide cost estimates for the proposed upgrades.

The approach used to produce this validation report included reviewing existing audit report, (produced as part of Stage 1 of the program), reviewing existing drawings and other relevant documentation (if available), reviewing the existing site conditions, documenting the additional upgrades, and preparing the concept sketches.

## 3 Background Information

IBI Group has been retained to conduct accessibility audit reviews of the existing audit reports and prepare validation reports for the City of Toronto's Facilities Management Division. Existing reports and spaces have been reviewed and assessed against the Accessibility for Ontarians with Disabilities Act (AODA), the Ontario Building Code (OBC) Section 3.8 Barrier-Free Design, and the draft version of the 2015 Toronto Accessibility Design Guidelines (TADG) dated October 7, 2016 and Table 1 related to Key Dimensions and Compliance Alternatives for Elements of Accessibility, as provided by City of Toronto.

**Table 1:** Key Dimensions and Compliance Alternatives for Elements of accessibility

Item	Element	Current OBC/AODA Requirement	Acceptable Existing Condition	OBC Part 11 Compliance Alternative
1.	Accessible Entrances	1 accessible entrance where 1-3 entrances provided 2 accessible entrances where 4-5 entrances provided 50% where more than 6	1 existing accessible entrance acceptable	X
2	Curb ramps	Curb ramp – multiple requirements in both AODA and OBC	Existing curb ramp acceptable, provided width not less than 1 200mm	X
3	Clear width at doors	Min. 860 mm	Min. 810 mm acceptable	X
4	Vestibule	Min 1500 mm + width of any door that swings into the space	Min 1200 mm + width of any door that swings into the space acceptable	X
5	Width of barrier-free path of travel	Min. 1100 mm	Min. 920 mm acceptable	X
6	Passing places along accessible routes	Spaced no more than 30 m apart, Min. 1800 mm x 1800 mm where route less than 1600 mm wide	Spaced no more than 30 m apart, Min. 1500 mm x 1500 mm where route less than 1500 mm wide acceptable	X
7	Stair dimensions	Many existing requirements	Existing acceptable	X
8	Stair handrail configuration	Many existing requirements including min. 300 mm extension at top and 300 mm + 1 tread length at bottom	Existing acceptable	X
9	Width of ramp	Min. 900 mm between handrails	Min. 870 mm between handrails acceptable	X
10	Grab bar at accessible toilet fixtures	Horizontal rear grab bar and L-shaped side grab bar	Any existing rear and side grab bar acceptable	X
11	Universal washroom	Many requirements including min. 1700 mm turn space clear of fixtures	Existing universal washroom is acceptable	X
12	Accessible drinking fountain	Many detailed requirements	Spout located near front, max. 915 mm above the floor and controls that can be easily operated from a wheelchair acceptable.	X



Auditors, working singly or in pairs, have visually assessed normally occupied spaces beginning with exterior spaces and the entrance point of the building then moving throughout the building.

### 3.1 Building Details

Facility Name	<b>Toronto Fire &amp; EMS Training Centre</b>
Address	<b>895 Eastern Ave.</b>
GFA (sq. ft.)	53,000
Stories	2
Basement	N/A
SAP	000614-B05
District	South
Verification Date	<b>March 2, 2021</b>

## 4 Validation Methodology

The validation methodology used to prepare this report consisted of the following steps:

- Review of the existing site drawings provided by the City prior to site visit.
- Review existing audit report (BCA) provided as part of the RFP
- Arrange for site visit and survey the existing conditions based on the AODA Codes and Standards.
- When drawings for the site are not available or not accurate, prepare/update drawings by means of scanning the facility or site measurement to obtain reasonable site drawings.
- Compare existing site conditions and findings with original audit report findings as part of Stage 1.
- Prepare a summary of recommendations outlining all new findings, verified original audit findings, and discrepancies or alterations to the original audit findings.
- Review and verify on site the proper location and adequacy of the major proposed upgrades such as elevator addition, new universal washroom, upgrades of existing washrooms, upgrade of corridors and access doors, front entrance lobby access and ramp, stairs, kitchens, etc.
- Prepare schematic sketches of upgrades options related to each site.
- Prepare validation report complete with concept sketches and cost estimates.

## 5 Assumptions

This report is based on the following assumptions:

- Drawings for this building were provided by the City and found to be reasonable. However, the layout varied from the actual site conditions in some cases
- Mechanical, Electrical, Storage and Janitorial Rooms are not required to be accessible. Areas not requiring Barrier-Free Path of Travel such as Service Rooms, Elevator Machine Rooms, Janitor's, Service Spaces, Crawl Spaces, Attic or Roof Spaces, High Hazard Industrial Occupancies, Floor area with fixed seats that are not part of barrier-free path of travel, and inside a suite of residential occupancy.



c) Cost Estimating Notes

The methodology employed by the Cost Consultant is generally the methodology applied to all estimates. Establish a quantity and apply a unit cost to the quantity to arrive at the expected total cost. In some cases where the work is not quantifiable an allowance has been established.

Due to the lack of design detail, the replacement cost estimates provided for the condition assessment report are considered conceptual or high level. Because conceptual estimates are very broadly developed, the costs used will rely heavily on the estimator's experience and judgement.

In order to arrive at a suitable cost, the estimator will research past projects and cost databases to costs for projects that most closely relate to the individual project facilities being priced. Databases might include historic costs within our company's extensive database or national publications such as R.S. Means that track construction costs.

All costs are based on the assumption that the work will be competitively tendered and constructed using a fixed lump sum form of contract. For each facility, it is assumed that all the work for that facility will be done under a single contract.

The estimated costs are Class D (Order of Magnitude) and should be considered accurate to within plus or minus twenty to thirty percent (20% - 30%).

All costs include the contractor's general requirements (Overhead and Fees) and are based on working within an occupied facility that will remain in use while the work is carried out.

The following are not included in the construction cost estimates:

- Design or Engineering Fees
- Financing
- Contaminated or Hazardous Materials
- Construction Management
- Design Contingency
- Construction Contingency
- Escalation
- Temporary Facilities
- HST
- Specific Stakeholders Input

d) Exterior lighting cannot be tested during the day.

## 6 Challenges and Impediments related to client program and site conditions

Considering the magnitude and complexity of this program, the validation and implementation stages are expected to present few challenges and impediments. These challenges include: Lack of existing site information; minimum interruption to client programme; and site conditions.

a) Lack of existing site information

Based on the review of the information provided by the City, with relation to this building, the following is a list of the information required to commence the validation and design:

Challenges	Resolutions
<ul style="list-style-type: none"> <li>Site Plan / Survey was not provided</li> </ul>	<ul style="list-style-type: none"> <li>Underground drawing showing existing mechanical/electrical services required</li> <li>Site Survey with Property lines required</li> </ul>
<ul style="list-style-type: none"> <li>Drawings for this building were available in PDF only, but not accurate</li> </ul>	<ul style="list-style-type: none"> <li>Site was scanned by IBI</li> </ul>
<ul style="list-style-type: none"> <li>Structural drawings not available</li> </ul>	<ul style="list-style-type: none"> <li>Structural drawings for the addition of an elevator are required</li> <li>Survey with structural engineer</li> </ul>



b) Client Program

The following is a list of the activities that will have to be incorporated into the design of the building upgrade in order to minimize the impact of the client program:

Challenges	Interruptions to Client Programs
<ul style="list-style-type: none"> <li>Minimizing reductions to tenant program space due to the size and strategic placement of large items (i.e. elevators, washrooms)</li> </ul>	<ul style="list-style-type: none"> <li>Locating a Universal Washroom in Storage Room 143 will significantly reduce the size of the storage room.</li> </ul>
<ul style="list-style-type: none"> <li>Interruptions to tenant program operations</li> </ul>	<ul style="list-style-type: none"> <li>The addition of a Universal Washroom and a compliant exterior lift will require lengthy closures of certain tenants' spaces, some of which are located in key access areas which would disrupt operations</li> </ul>
<ul style="list-style-type: none"> <li>Drainage and ventilation</li> </ul>	<ul style="list-style-type: none"> <li>Addition of universal washrooms requires significant renovation in a large area to allow for drainage connections and ventilation to the roof or exterior of the building</li> </ul>

## 7 Assessment & Summary of Recommendations

### 7.1 Comparisons of Site Conditions to Existing Report

As part of the validation process, the design team reviewed the existing audit report, reviewed the site conditions and documented accessibility audit deviations from a compliant and complete accessibility audit.

Table 2 provides a list and description of the items that were found to be missing from the original audit report, detailed in the audit report but impractical to construct, misrepresented in the audit report and require correction, and upgrades listed in the audit report but represent an interruption to the facility program. This section should be read in conjunction with the existing audit report.



## TABLE 2: Summary of Scope Verification



Group #14 - 895 Eastern Ave - Toronto Fire & EMS Station Training Centre								
ID	Work Captured in Original Audit	Work Confirmed and/or Altered	Work Not Captured in Previous Audit	Additional Comments / Reasons for Alteration	Compliance Alternatives & Feasibility Issues	IBI Recommendation	Level of Code Compliance	Costing
<b>EXTERIOR</b>								
<b>1.1 Barrier-Free Entrances/Accessible Paths to Entrances and Exits</b>								\$ 7,500
1			Sloped walkway landing needs to be reconstructed Infront of the North Entrance Lift A to provide a clear 1500mm turn radius Infront of the proposed new accessible lift in ID 23.			Reconstruct sloped entrance Infront of the North Entrance Lift A to provide a clear 1500mm turn radius Infront of the proposed new accessible lift in ID 23.	TADG	\$ 7,500
<b>1.1.9 Ramps</b>								\$ 5,000
2			West Entrance ramp doesn't have handrails or compliant TADG accessories such as textural warning strips and tactile attention indicators.			TADG compliant handrail and guard rails, color contrast strips and tactile attention indicators are to be installed to the West Entrance ramp.	TADG	\$ 5,000
<b>1.1.10 Exterior Stairs</b>								\$ 27,000
3	Reconstruct front entrance stairs.	Altered as noted.		The following are in regards to EXT. Stair A1 (5 Risers) Existing conditions: TADG: Riser: 150mm TADG : 125mm - 180mm Tread: 245mm TADG: 280mm-350mm Nosing strip: N/A TADG: 30mm-50mm per step. Guard: 975mm TADG: Minimum height of 1070mm. Handrail: N/A TADG: 865mm-965mm. Textural warning strips: N/A TADG: 2, 50mm strips at the bottom of the stairs. Tactile attention indicator: N/A TADG: 610mm at the top of the stairs.		EXT. Stair A1 will require to have the following added.  Install 6 compliant handrails that are TADG compliant. As well as handrail hazard strips with braille and or tactile characters.  Textural warning strips installed at the bottom of all staircases. (2 strips with a 50mm gap in-between.)  Tactile attention indicator to be provided at the landing.	TADG	\$ 13,500



**Group #14 - 895 Eastern Ave - Toronto Fire & EMS Station Training Centre**

ID	Work Captured in Original Audit	Work Confirmed and/or Altered	Work Not Captured in Previous Audit	Additional Comments / Reasons for Alteration	Compliance Alternatives & Feasibility Issues	IBI Recommendation	Level of Code Compliance	Costing
4				The following are in regards to EXT. Stair A2 (5 Risers) Existing conditions: TADG: Riser: 175mm TADG : 125mm - 180mm Tread: 250mm TADG: 280mm-350mm Nosing strip: N/A TADG: 30mm-50mm per step. Guard: 925mm TADG: Minimum height of 1070mm. Handrail: N/A TADG: 865mm-965mm. Textural warning strips: N/A TADG: 2, 50mm strips at the bottom of the stairs. Tactile attention indicator: N/A TADG: 610mm at the top of the stairs.		EXT. Stair A2 will require to have the following added.  Install 6 compliant handrails that are TADG compliant. As well as handrail hazard strips with braille and or tactile characters.  Textural warning strips installed at the bottom of all staircases. (2 strips with a 50mm gap in-between.)  Tactile attention indicator to be provided at the landing.	TADG	\$ 13,500
<b>1.3.1 Off Street Parking or Parking Lots</b>								\$ -
5	Provide 4 more accessible parking spots.	Altered as noted.		4 Accessible slots have been provided. 2 have been provided to the North Entrance parking lot and 2 in the West Entrance Parking lot. All new parking spaces comply with TADG requirements.		No action required.	Exempt	N/A
6	Repaint existing accessible parking spots.	Altered as noted.		North parking lot has been re-painted and now complies with TADG requirements.		No action required.	Exempt	N/A



Group #14 - 895 Eastern Ave - Toronto Fire & EMS Station Training Centre								
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<b>1.4.4 Outdoor Eating and Picnic Areas</b>								\$ 1,750
6a			Picnic benches at the West Side of of this facility are not accessible and don't that comply with the TADG requirements.			Replace existing picnic table and provide 1 TADG compliant picnic table with the required extension with the underside knee and toe clearance.	TADG	\$ 1,750
<b>1.6.1 Exterior Finishes</b>								\$ -
7	Reconstruct the sidewalks to comply.	Altered as noted		Side walk has since been resurfaced and is now compliant with TADG requirements.		No action required.	Exempt	N/A
<b>1.6.2 Tactile Attention Indicators</b>								\$ -
8	Install tactile attention indicators on stairs.	Altered as noted		Refer to ID 3 - ID 4 for Exterior Stair recommendations and ID 13 - ID 19 for Interior Stairs recommendations.  No action required.		Refer to ID 3 - ID 4 for Exterior Stair recommendations and ID 13 - ID 19 for Interior Stairs recommendations. No action required.	Exempt	N/A
9	Install tactile attention indicators on ramps.	Altered as noted		Refer to ID 2 for Exterior Ramps recommendations and ID 20 for Interior Ramps recommendations.		Refer to ID 2 for Exterior Ramps recommendations and ID 20 for Interior Ramps recommendations.  No action required.	Exempt	N/A
<b>1.6.3 Tactile Directional Indicators</b>								\$ 80,000
10	Provide approx.. 40m of tactile directional indicators from the front parking lot to the first floor of the facility.	Altered as noted				Provide a total of 108.5 SQ.M of tactile directional indicators that are surface mounted throughout the facility. Refer to Schematic for locations.	TADG	\$ 80,000

## 8 Required Testing and Surveys

To implement the accessibility upgrade to this building, we have identified the following required testing to minimize site surprises and project cost:

- a) Electric system assessment (Fire Alarm)
- b) Scoping of existing drains to locate and identify more practical connection point (Universal)
- c) Locations of existing main building services such as gas, power, fiber, etc. (Ramps)

## 9 Schematic Designs

Based on the recommendations outlined in the Audit Report and the Supplementary Proposals summarized in **Section 7** of this Report "Assessment and Summary of Recommendations", the following sketches provide some options of the proposed upgrades for the major improvements. Some items may have more than one option provided for the purpose of selection by CoT PM Team, where the selection is made based on best value to the City with minimum interruption to the facility operation program. Refer to Sketches below.

## 10 Cost Estimates

Provide updated Class D cost estimates for each of the schematic design options (developed by a certified cost consultant) where the scope identified for compliance deviates from the original AODA accessibility audit report provided to the vendor by City of Toronto staff. The costing will need to incorporate the results of the vendor's site/building assessment including capital costs associated with the replacement of building systems as deemed necessary in Phase 1. The costing is to include an estimate for the contingency and cash allowance to be carried for each site based on site conditions and the site assessment. This allowance will be determined in coordination with the City.

The following is a breakdown of the large discrepancies in cost estimates between the original audit and the IBI recommendations in this validation.

The original audit had included recommendations for Platform Lifts at a price of \$15,000, whereas IBI has made recommendations to have new platform lift at a price of \$260,000.

The original audit had included recommendations for Door and Doorways which carried a total cost of \$278,000, whereas IBI has made recommendations for Doors and Doorways now carries a total cost of \$239,000.

The original audit had included recommendations for Corridors and Aisles at a price of \$33,000, IBI has since assessed the existing conditions and it is no longer in need of any accessibility upgrades.

The original audit had included recommendations for Vestibules at a price of \$20,000, IBI has since assessed the existing conditions and it is no longer in need of any accessibility upgrades.

The original audit had included recommendations for Changerooms at a price of \$68,500, IBI has since assessed the existing conditions and it is no longer in need of any accessibility upgrades.

**Table 3: Cost Estimate of Validation Report**

895 Eastern Ave. (Toronto Fire & EMS Training Centre)	Cost Estimates
Total Cost Estimate from Validation Report	\$989,050

**Table 4: Cost Summary by Priority Level (Original Audit)**

WBS	Priority 1	Priority 2	Priority 3	Total by Code
OBC	\$ 214,500	\$ 18,000	\$ 2,000	<b>\$234,500.00</b>
AODA/DOPS	\$ 20,000	\$ 0	\$ 0	<b>\$20,000.00</b>
TADG	\$ 387,000	\$ 149,550	\$ 218,500	<b>\$755,050.00</b>

## 11 Current Site Plans/ Surveys/ Topographical Graphs

None available at this time

## 12 Energy Savings

Energy savings rebate/incentive review and application processing/management (including application follow up for funding). Energy savings opportunities to be investigated based on the elements to be updated in this AODA scope, i.e. to be done for scope related to the accessibility work outlined in this RFP. Energy savings as a result of the AODA scope of this project maybe applicable in the form of energy efficient appliances and LED lighting for renovated kitchens, LED lighting for proposed Universal Washroom.

## 13 Office Modernization Program

Where applicable, Office Modernization Program guidelines have been applied to office and workstation spaces.



# Attachment A – Schematic Designs



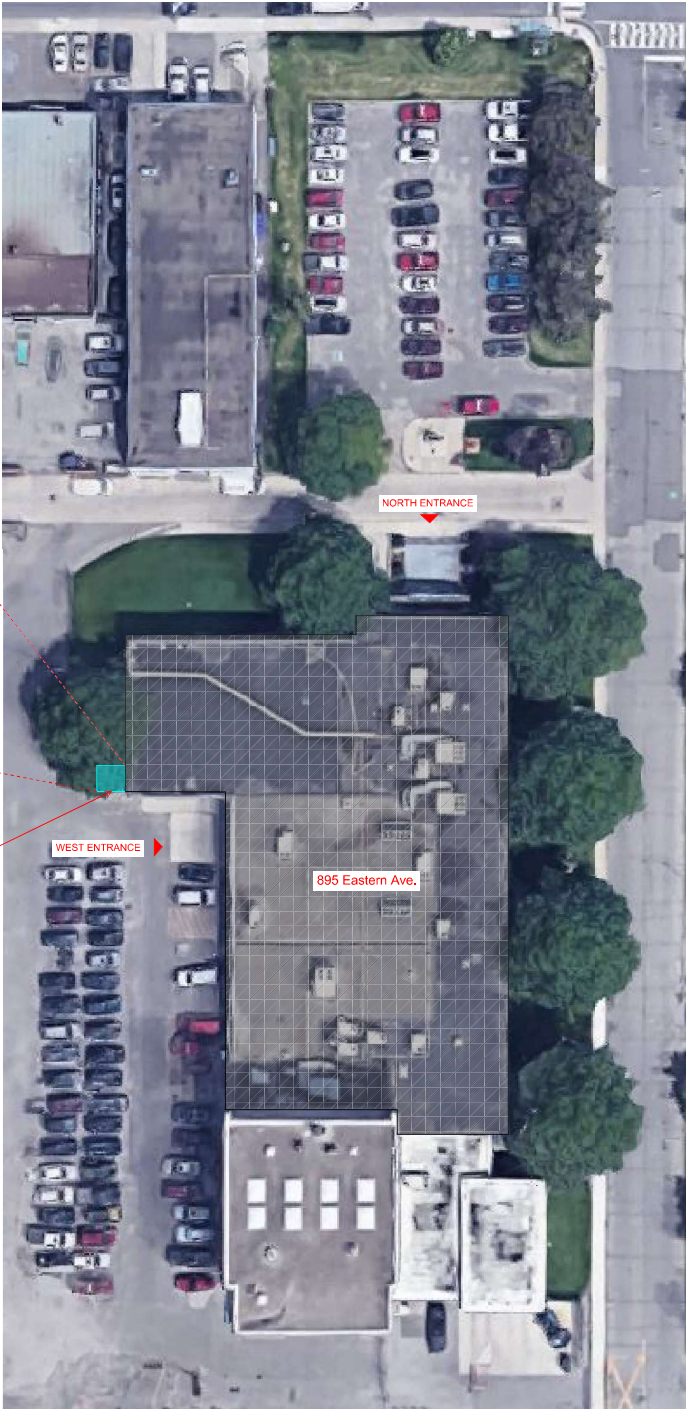
IBI GROUP  
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Legend	
	Push Button
	Area of Refuge/ Protect in Place
	Accessible Path
	Kitchen
	Elevator/Lift
	WC/Shower
	Ramps / Stairs
	Parking
	Vestibule
	Floors
	Demolishing Walls
	Door Opening To Be Widened
	Exit Doors
	Non Compliant Lux Reading
	Tactile Signage
	Door Hardware Improvements



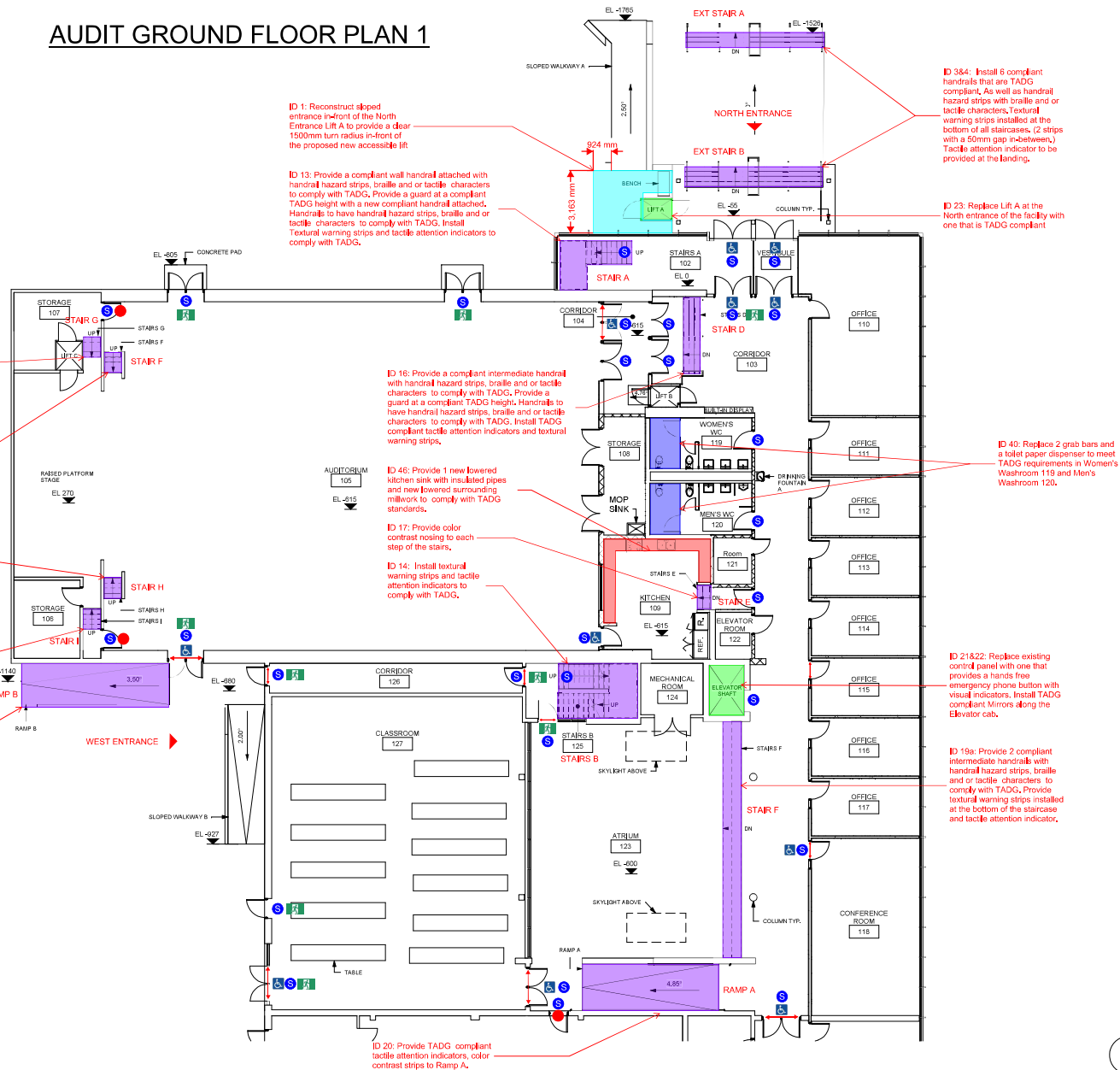
ID 23: Replace existing picnic table and provide 1 TADG compliant picnic table with the required extension with the underside knee and toe clearance.





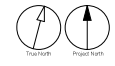
# AUDIT GROUND FLOOR PLAN 1

Legend	
	Push Button
	Area of Refuge/Protect in Place
	Accessible Path
	Kitchen
	Elevator/Lift
	WVC/Shower
	Ramps / Stairs
	Parking
	Vestibule
	Floors
	Demolishing Walls
	Door Opening To Be Widened
	Exit Doors
	Non Compliant Lux Reading
	Tactile Signage
	Door Hardware Improvements



Scale 1:100  
0 2.5 5 10 m

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PROJECT TITLE <b>CITY OF TORONTO ACCESSIBILITY UPGRADES</b>		
PROJECT ADDRESS <b>TORONTO FIRE &amp; EMS TRAINING CENTRE 895 EASTERN AVE.</b>		
PROJECT NO. <b>122260</b>		
DRAWN BY: Author	CHECKED BY: Checker	
PROJECT MGR:	APPROVED BY: Approver	
SHEET TITLE <b>GROUND FLOOR - PARTIAL 1</b>		
SHEET NUMBER <b>G14-325-SK.2</b>		ISSUE









[illegible]

**ID 1: Reconstruct sloped entrance in-front of the North Entrance Lift A to provide a clear 1500mm turn radius in-front of the proposed new accessible lift**

**ID 23: Replace Lift A at the North entrance of the facility with one that is TADG compliant**

**Legend**

-  Push Button
-  Area of Refuge/ Protect in Place
-  Accessible Path
-  Kitchen
-  Elevator/Lift
-  WC/Shower
-  Ramps / Stairs
-  Parking
-  Vestibule
-  Floors
-  Demolishing Walls
-  Door Opening To Be Widened
-  Exit Doors
-  Non Compliant Lux Reading
-  Tactile Signage
-  Door Hardware Improvements

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PROJECT TITLE  
CITY OF TORONTO  
ACCESSIBILITY UPGRADES

PROJECT ADDRESS  
TORONTO FIRE & EMS  
TRAINING CENTRE  
895 EASTERN AVE.


PROJECT NO:	122260
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DRAWN BY: Author	CHECKED BY: Checker
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SHEET TITLE  
GROUND FLOOR -  
PARTIAL 1

SHEET NUMBER	ISSUE
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Scale 1:100



0 2.5 5 10 m