



Report
Staff Report
The Corporation of the City of Brampton
9/10/2024

Date: 2024-08-20

Subject: **Accessible Design Guidelines for Electric Vehicle Charging Stations**

Contact: Sabrina Cook, Accessibility Coordinator, City Clerk's Office

Report number: Legislative Services-2024-683

Recommendations:

1. That the report from Sabrina Cook, Accessibility Coordinator, City Clerk's Office, to the Accessibility Advisory Committee Meeting of September 10, 2024, re: **Accessible Design Guidelines for Electric Vehicle Charging Stations**, be received.

Overview:

- There are currently no standards, regulations, or legislation for accessible Electric Vehicle charging stations;
- The City of Brampton is committed to enhancing accessibility, removing and preventing barriers, and ensuring equitable access to the City's goods, services, programs, and facilities;
- City staff have partnered with the Region of Peel to draft the Accessible Design Guidelines for Electric Vehicle Charging Stations; and
- Upon review and feedback from the Accessibility Advisory Committee, City staff will finalize the Accessible Design Guidelines for Electric Vehicle Charging Stations in order to ensure future City-owned Electric Vehicle Charging Stations are accessible.

Background:

Electric vehicles (EVs) are becoming increasingly popular, with more than 19,000 battery and plug-in hybrid EVs registered in Peel region at the end of Q1 2024. This is almost a 50% increase from one year ago, and as such, the need for public charging stations is also increasing. There are currently no applicable standards or legislation that ensure EV charging stations are designed accessibly. A lack of accessible EV charging stations creates a barrier for persons with disabilities, and makes it difficult, if

not impossible, for drivers with disabilities to operate chargers at a City-owned charging facility.

The Current State of the City of Brampton's Public EV Charging Stations

The City has 92 charging stations located at 19 locations across the city, including but not limited to, recreation and community centres, City Hall and the West Tower, the Rose Theatre, and Springdale Library. In 2023, these charging stations provided 25,378 charging sessions to staff and residents, and in Q1 and Q2 2024, 25,369 charging sessions have been provided to date.

Staff conducted site visits of several locations and noted the following accessibility barriers:

- Charging stations not mounted flush with the surface;
- Obstructed access, long reach distances, and high mounting heights for operable parts and charging connectors;
- Small text and small screens with glare, causing difficulty to view the screens; and
- No access aisles to maneuver mobility devices.

Current Situation:

The City of Brampton's Accessibility Office partnered with staff from the Region of Peel's Accessibility and Climate Change & Energy Management teams to draft design guidelines for accessible EV charging stations.

Staff conducted research and benchmarking and reviewed best practices and requirements for accessible EV charging stations from a number of resources, including but not limited to: the Canadian Standards Association, British Standards Institution, United States Access Board, Americans with Disabilities Act, and British Columbia Hydro. Led by Region of Peel staff, these resources and information informed the draft Accessible Design Guidelines and Use Policy for Electric Vehicle Charging Stations (the Guidelines).

The Guidelines have been peer reviewed by subject matter experts from the Rick Hansen Foundation, ensuring accurate and relevant guidelines. City staff from various departments were consulted and informed throughout the development of the Guidelines and were asked to review the draft document.

A summary of the key elements of the Guidelines can be found below. Additional information and the full set of requirements can be found in Attachment 1: Accessible Design Guidelines and Use Policy for Electric Vehicle Charging Stations.

Design Guidelines

Number of Accessible Chargers and 'Use Last' Policy

For new charging station installations, the greater of one or five per cent of parking spaces with AC (Level 2) chargers, and the first parking space with a DC Fast (Level 3) charger with 50 kilowatts or higher power output, per site will be accessible for persons with disabilities, wherever feasible. This applies to all new City of Brampton-owned EV charging stations for use by the general public and/or staff.

In line with the US Access Board recommendations to balance charger accessibility and utilization, and until there is provincial and/or federal legislation, a 'Use Last' policy is recommended. This would allow EV drivers without accessible parking permits to use an accessible EV charging station space only when all other charging spaces are occupied and in use. Signage to effectively communicate the 'Use Last' policy can be found in Section 1.3 of the Guidelines in Attachment 1.

Site and Spatial Design

Dimensions of the accessible EV charging spaces and the access aisles should follow the guidelines set forth in the [Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c.11](#) (AODA) and in the [City of Brampton's Traffic By-Law 93-93](#). Additional space allocations, such as wider access aisles (2000mm) and clear ground space (2100mm) around all sides of the charger with operable parts, should also be considered.

Charging Equipment

Accessible mounting heights, maximum reach distances, and force limitations are recommended for operable parts such as buttons, connectors, card scanners, and screens.

Chargers should be flush with grade and have an unobstructed side reach. If not possible, and an elevate concrete pad is required for mounting the charging equipment, the edge of the pad shall not protrude outward more than 250mm from any side with operable parts. When bollards and/or impact protection barriers are used, they must not impede access or reach to the charger's operable parts.

Accessible font sizes and high contrast colours are also required for screen interfaces. Charging websites and mobile applications are recommended to adhere to the Web Content Accessibility Guidelines (WCAG 2.0) and enable speech output coordinated with information on the chargers' screens.

Next Steps and Proposed Direction

Upon receiving feedback and endorsement from the Accessibility Advisory Committee, the Accessibility Office will finalize the draft Accessible Design Guidelines and circulate the final document to stakeholders. The information will be included in the Accessibility

Technical Standards and be made available online at brampton.ca as a resource for staff and members of the community. Staff will also work with Public Works & Engineering to determine whether the Guidelines can also be included in their documentation.

Corporate Implications:

Financial Implications: n/a

Strategic Focus Area:

This report achieves the Government & Leadership strategic focus area by ensuring that the City is committed to recognizing and removing existing barriers and enhancing and improving accessibility. Equitable access to City services, facilities, and goods is essential in providing increased opportunities for all residents of Brampton, and this should include EV charging stations.

Conclusion:

As EVs become more popular and Brampton's population continues to age and the number of people with disabilities also increases, designing accessible EV charging stations allows all EV drivers equitable access and removes barriers. Collaborating with the Region of Peel on this important initiative highlight Brampton's leadership and commitment to accessibility and preventing and removing barriers.

Authored by:

Reviewed by:

Sabrina Cook
Accessibility Coordinator
City Clerk's Office

Janice Adshead
Deputy Clerk, Records and Information
Management
City Clerk's Office

Approved by:

Genevieve Scharback
City Clerk

Attachments:

- Attachment 1 – Accessible Design Guidelines and Use Policy for Electric Vehicle Charging Stations