

Traction Power Substation FAQs

What is a Traction Power Substation?

A traction power substation provides electrical power to CTrains through the overhead catenary system (wires above the CTrain). The CTrain runs on direct current (DC) power, but the electricity provided to the city is alternating current (AC). The substation transforms AC into DC electricity so it can be used to power the CTrains. Substations are similar in size to a shipping container, with a final site footprint comparable to the size of a double car garage.

Why does Calgary Transit need to install more substations?

Calgary Transit is introducing 4-car trains, which require more power to operate than 3-car trains. The power system needs to be upgraded and seven additional substations are being built around the city. The new substations are critical transit infrastructure that will improve transit use for over 300,000 CTrain riders every weekday.

Are traction power substations safe?

Substations are very safe and regularly used for light rail projects. They do not emit radiation, electricity or any harmful pollutants. They can be found in residential neighbourhoods throughout North America and around the world. All electrical equipment is enclosed within a locked building providing security and sound absorption. Equipment is enclosed by sturdy, grounded metal compartments that contain the electricity.

Are they noisy?

Substations are quiet. The noise level of the substation is below 40 decibels, which respects city noise bylaws. This is equivalent to the noise emitted from a whispered conversation.

Will people be accessing it very often?

The substation will occasionally be accessed by maintenance personnel. The building will be fenced and locked.