

Bridge and Rail Overpass Modifications

July 2020

Info Sheet

This Info Sheet describes the different types of potential bridge or rail overpass modifications and provides examples of where these potential modifications may be considered in the Guelph Subdivision of the Kitchener corridor.

A bridge allows a road or pedestrian walkway to cross over a railroad underneath. A rail overpass is a structure that allows a railroad to cross over a road or watercourse underneath.

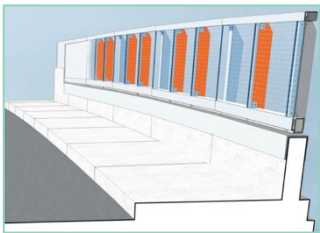
While some structures do not require any modifications to accommodate electrification of the Guelph Subdivision portion of the Kitchener corridor, 16 bridges and rail overpasses may need to be modified.

Bridge and rail overpass modifications are required when the proposed electrification infrastructure does not fit under a bridge or on a rail overpass.



22nd Side Road Bridge

Types of bridge and rail overpass modifications



Bridge barriers

Solid barriers are required on overhead bridges for the safety of users as well as the protection of the energized equipment.



Flash plates

A conductive plate installed between an energized wire and reinforced concrete. It is used to prevent 'flash over', which is where current finds its way into the reinforcing steel.



Overhead Contact System (OCS) attachments

Used to provide support for OCS wires in situations with restricted clearance, such as tunnels and overhead bridges.

Lowering track and other modifications, such as special track maintenance and OCS design solutions, are considered to address vertical clearance issues.

Potential Modifications on the Kitchener Corridor - Guelph Subdivision

Metrolinx continues to examine potential design solutions/measures to each of the bridges and rail overpasses that may require modification to accommodate electrification. The following table describes the potential modifications based on preliminary and ongoing investigations.

Location and type	OCS wires to be attached	Bridge protection barrier to be added / modified	Flash plate to be attached	Lowering track / other modifications for vertical clearance
Town of Halton Hills				
22nd Side Road Bridge	Yes	Yes	No	Yes
Township of Guelph/Eramosa				
Jones Baseline Road Bridge	Yes	Yes	Yes	No
City of Guelph				
Watson Parkway Rail Overpass	Yes	N/A	N/A	N/A
Metcalfe Street & Huron Street Pedestrian Bridge	No	Yes	No	No
Viaduct - Elizabeth/Arthur Street, Speed River, GJR Goderich Sub, Woolwich Street North Rail Overpass	Yes	N/A	N/A	N/A
Wilson Street Rail Overpass	Yes	N/A	N/A	N/A
Gordon/Norfolk Street Rail Overpass	Yes	N/A	N/A	N/A
Hanlon Parkway (Hwy 6) Rail Overpass	Yes	N/A	N/A	N/A
Paisley Road West Rail Overpass	Yes	N/A	N/A	N/A
Elmira Road North Rail Overpass	Yes	N/A	N/A	N/A
Township of Woolwich				
Fountain Street South Bridge	Yes	Yes	Yes	No
City of Kitchener				
Grand River & Pathway Rail Overpass	Yes	N/A	N/A	N/A
Victoria Street North (Hwy 7) Rail Overpass	Yes	N/A	N/A	N/A
River Road East Pedestrian Bridge	No	Yes	No	No
Conestoga Parkway (Hwy 85) Rail Overpass	Yes	N/A	N/A	N/A
Margaret Avenue Bridge	Yes	Yes	Yes	Yes

22nd Side Road Bridge

The vertical clearance issue with the 22nd Side Road Bridge can be resolved by lowering the track. There may be impacts to drainage as a result.

Margaret Ave Bridge

The vertical clearance issue with the Margaret Avenue Bridge can be resolved with track maintenance work and OCS design solutions.

For more information about the Guelph Subdivision Electrification TPAP and to download other materials, visit our website: metrolinxengage.com/goexpansion/kw