



Chair/Director: Dylan Hill | Past Chair/Director: Nicholas Vlachopoulos | Treasurer: Efrosyni Skordaki
Executive Member: Steve Rose | Executive Member: Martin Burger | Executive Member: Shane Dunstan
Student Members: Jane Peter, Jean-Marc Leblanc, Ioannis Vazaios

On May 26, 2016 the CGS Kingston Section attended a tour of the site of a proposed CN railway bridge, located on John Counter Boulevard in Kingston, Ontario. The Section was graciously hosted by Aecon, Geopac, as well as WSP Canada.

John Counter Boulevard is a major east-west arterial route that passes across the top of Kingston, from the Cataraqui River to Princess Street, and acts as a link to four of Kingston's main thoroughfares: Montreal Street, Division Street, Princess Street and Taylor-Kidd Boulevard. More than 20,000 vehicles and 50 trains pass through this crossing on John Counter Boulevard each day.



Group observing wick drain installation

Currently, the embankment leading to the proposed bridge is being constructed. Soil conditions in the area consist of several meters of fill soils overlying soft clays to depths upwards of 25 m below existing grades. Pre-loading of the area was specified as a part of the embankment design in order to ensure that sufficient consolidation of the clay occurs prior to construction of the roadway and new bridge. In order to accelerate the process, wick drains are being installed in order to more quickly dewater the clay and in turn increase the time-rate of settlement. Over 500,000 linear metres of wick drain were installed at this Site, at a rate of approximately 20,000 m in a day of work. The wick drain tips will be left in a drainage material layer, consisting of OPSS Granular 'B' Type II, which will subsequently be covered by several metres of coarse rock fill in order to surcharge the area.



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Installation of vibrating wire piezometers with a Geoprobe geo-environmental drill rig

The group also was able to observe the installation of vibrating wire piezometers during the visit, the purpose of which is to monitor changing pore water pressure during the surcharge and subsequent embankment settlement. Other instruments installed on the site to monitor the ongoing settlement included open standpipe piezometers and settlement plates.



Group at the conclusion of the visit

The section wishes to again extend a special thank you to Andrew O'Keefe and Zain Jessani of Aecon for facilitating this site visit.