GEOSOLV DESIGN > BUILD

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Eglinton Crosstown Elevated Guideway – Retaining Wall Toronto, Ontario

Challenge

Soil conditions consisted of fill over native silty clay to clayey silt till with interstadial sands and silts. The fill consisted of loose to dense silty sand to sand fill, then firm to stiff clayey silt to silty clay and loose sandy silt becoming hard/very dense with depth. The variable and weak soils extended to a depth of up to 11m below grade. An 8m high retaining wall was to be constructed for the approach embankment leading up the elevated guideway abutment.

Solution

The Geopier Impact® system was selected for its ability to reinforce weak soils and for its clean installation without leaving any additional soil on-site and for being able to eliminate the need for casings to be used. The Impact system's performance and cost-effective qualities make it an ideal solution for soils that are prone to cave-ins, such as on this project. The Impact system was able to control total and differential settlement.

Outcome

By utilizing the Geopier Impact system, a weak layer at depth that was creating design problems for the wall was successfully improved and reinforced. The abutment itself was on piles, and the Geopier system was installed after the piles, providing for a strong foundation subgrade improvement system to rest the approach embankment/retaining wall on.

The elevated guideway takes the trains from the east over Blackcreek drive and into Mount Denis station, the last stop before the MSF, also on GeoSolv's ground improvement systems

Project Team

G.C./Owner
Crosslinx Transit Solutions
Contractors

Engineering Team
Crosslinx Transit Solutions
Design

Ground Improvement - Rigid Inclusions - Piling Systems - Slope Stability - Ground Reinforcement

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