

## West Harbour GO Station Hamilton, Ontario

### | Challenge

Aggressive schedule demands required track and station work to be operational in time for the Pan Am Games. The construction of the new retaining wall at the station was planned in an area of soft, compressible clay at a limited-access site where vibration and impact on adjacent active railroad and site works had to be minimized.

### | Solution

The initial H-pile option to support the wall was challenged with practical construction issues including excessive vibrations, extended working pad laydown area requirements, access issues, splicing, and working grades variations. Making driven H-piles all but impossible to use. After consultation with GeoSolv, the design team chose a Ductile Iron Pile alternative for the retaining wall.

### | Outcome

GeoSolv installed vertical and battered (3:1) piles avoiding the need for significant working grade modifications. The modular Ductile Iron Pile sections allowed for battered pile installation in tight access conditions. Full-scale load testing demonstrated less than 4.5 mm (0.18 in.) of deflection at the maximum design load. Utilizing this system significantly reduced potential issues with slope stability or impact on nearby rail activity.



*Construction of the Hamilton GO Station project in 2015-2016 has been a key part of Hamilton's recent surge in growth and real estate value*

## Project Team

**Geotechnical Engineer**  
exp Services Inc.

**General Contractor**  
Kenaidan Contracting Ltd.

**Structural & Architect**  
IBI Group

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

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