

## SmartStop Storage Facility Etobicoke, Ontario

### | Challenge

The SmartStop Self Storage project involved the construction of several 2-storey storage buildings with an upper layer of loose sand/silt fill soil along with intermittent organic soils found throughout the proposed site. Concerns over the risk of increased cost and schedule delays made over-excavation methods an inefficient solution to these challenging soils.

### | Solution

The project team selected the Geopier Impact® solution as the cost-effective answer for its overall performance and schedule surety

### | Outcome

The Geopier system was installed using a displacement mandrel and 30 tons of direct vertical crowd pressure augmented by vertical ramming energy to create stiff columns of compacted granular surrounded by improved soil. The unique vertical crowd and ramming energy of the Geopier installation method provided superior capacity and settlement control when compared to other aggregate-based reinforcement systems that rely solely on horizontal vibrations. For this project, the very loose-fill soils were reinforced to deliver an improved bearing capacity of 200 kPa at Serviceability Limit States (SLS).



*SmartStop Storage Facility in Etobicoke*

#### **General Contractor**

Maple Reinders

#### **Structural Engineers**

Tacoma Engineering

### **Project Team**

#### **Geotechnical Engineer**

Forward Engineering

#### **Owner**

Smart Centres partnered with SmartStop

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

Before you Remove It or Go Through It, contact us to *Improve It*  
at (905) 266-2599 or email us at [solutions@geosolv.ca](mailto:solutions@geosolv.ca)