

## Stabilization and Realignment of Townhomes – Sudbury, Ontario

October 2002

### The Problem:

- Townhouse complexes consisting of one and two-storey units with foundations founded on a native compact, silty sand
- Two (2) townhouse complex footings were constructed below the existing high groundwater elevation
- Fines from the native soil underneath the footings washed into the weeping tile system, undermining the existing footings
- Settlement up to 250 mm (10 in.) occurred and the units were considered unstable and could no longer be occupied



### The Solution:

- **Chance® Helical Pier®** was deemed the best repair system because it installs easily into soils with a high water table and there are no vibrations or spoils during installation
- Portable equipment could be used to install helical piers inside the basements of the units, and a small excavator fitted with an hydraulic power unit installed the piers on the exterior
- The lifting capabilities of the patented **Chance® Helical Pier® Foundation Repair Bracket** made it possible to raise the existing structure
- The **Chance® Helical Pier® Foundation System** was the most economical and least disruptive option to stabilize and realign these structures.

**Product Used:** (52) Chance® Helical Piers

**Depth:** 3.0 to 6.5 m (10 to 20 ft) below footing elevation

**Loads:** 178 KN (40 kips) allowable load

**Termination:** Foundation repair bracket  
Structures were raised up the 250 mm (10 inches) they settled



**Geotechnical Engineer:** AMEC  
**Structural Engineer:** JL Richards and Associates Limited  
**Chance® Helical Pier Installer:** EBS Engineering and Construction Limited