

SOIL NAIL WALLS



Common Uses:

- *Providing temporary and permanent earth retention systems for deep excavations typically in residual soils and weathered bedrock.*
- *Creating permanent retaining walls.*
- *Stabilizing slopes and landslides.*
- *Offering temporary shoring during the repair of an existing wall.*
- *Stabilizing vertical cuts in front of existing bridge abutments during highway widening operations.*

Nicholson Construction Company's soil nailing technology creates retaining walls that reinforce the soil mass without excavating the soil behind the wall. The walls are constructed in-situ and built in stages from the top down. Soil nailing technology can be applied to new permanent construction, temporary construction and to the restoration of existing structures. Steel reinforcing bars (nails) are installed and grouted over a regular pattern to create a soil that acts as a coherent mass with improved shear strength. This reinforced soil mass provides stability for landslides, cut slopes and deep excavations. Nicholson's design and construction of retaining walls with soil nails provide a cost effective alternative to more conventional shoring methods.

The installation of soil nail structures typically involves three stages that are repeated until the desired depth of the retaining wall is achieved. The first stage is the excavation of the cut from the top down to a predetermined height. Next, the steel nails, carrying tension, are drilled and grouted into the face at depths and spacings designed to insure that the soil acts as a coherent mass. Finally, the excavated face is reinforced with shotcrete.