

96th Avenue

Surrey, British Columbia, Canada

Keller provided earth retention for a new building and completed the project in eight weeks with zero lost-time incidents.



The project

Weststone Developments was constructing a new apartment building with 2 levels of below-grade parking. The soil conditions present were not conducive to traditional shotcrete shoring methods so Keller was called in to design a wall system to suit the job.

The challenge

The main challenge was installing piles and keeping them vertical, as the pile overlap was a mere 100mm. Keller had already selected Continuous Flight Auger (CFA) as the installation method and had secured the project based on an optimized schedule than traditional cast-in-place pile installation.

The solution

A scalloped, cast-in-place guide wall was constructed to lock the piles together at the top of the wall. A deviation sensor was installed to measure the pile verticality. If there were any deviations above the specified 1% they were reconstructed to ensure the interlock was guaranteed across the depth of the proposed excavation. The secant pile system was made up of 400 no. piles at 600mm diameter.

Project facts

Owner(s)

Weststone

Keller business unit(s)

Keller

Main contractor(s)

Vancouver Shotcrete & Shoring Ltd.

Engineer(s)

GeoPacific

Solutions

Support of excavation

Markets

Residential

Techniques

CFA (auger cast) / ACIP piles

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