



## Beeland Co-op - Tisdale Home Centre & Yard Area

Tisdale, Saskatchewan, Canada

When faced with differing ground conditions, Keller used its in-house engineering expertise to offer an alternative drilled shaft design, moving the commercial development to the next phase.



## The project

Formerly the site of the Tisdale Mall, which was demolished in 2015, a new retail development consisting of a food store, a home center, a cold storage area, and a yard is being constructed. Ground conditions consisted of asphaltic concrete and fill overlaying clay and glacial clay till, requiring a deep foundations solution to support the proposed loads; the geotechnical engineer recommended drilled shafts.

Keller was contracted to install the shafts across the site. To confirm ground conditions before drilling, Keller drilled a test hole, encountering rocks and water below 10.5m. This meant any piles designed past that depth would be difficult to drill and case.

Therefore, Keller offered an alternative design in which all the piles originally designed to be more than 34.4 ft (10.5 m) would instead be belled and kept to a maximum depth of 26 ft (8 m). Keller installed 71 shafts for the home center and cold storage sections of the development.

While construction was scheduled in early fall to ensure foundations were installed before the extreme winter weather, the weather proved unpredictable. Due to the extreme cold and snowfall, Keller employed heating systems to keep the shafts from freezing during installation.

## Project facts

### Owner(s)

Federated Co-operatives Limited

### Keller business unit(s)

Keller

### Main contractor(s)

Quorex Construction Services Ltd.

### Engineer(s)

Keller  
Pearsons Engineering

### Solutions

Deep foundations

### Markets

Commercial

### Techniques

Drilled shafts

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