

P&H Inland Grain Terminal

Dugald, Manitoba, Canada

Keller designed and constructed a deep foundations solution for a new grain terminal, overcoming the challenges of changing weather conditions.



The project

As part of the larger P&H National Grain Asset Network, a new grain terminal was being constructed in Dugald to expand its storage capacity and grain transportation. The new site includes over 27,500 tons (25,000 tonnes) of grain storage, a reclaim tunnel, an annex, and two large boot pans. Ground conditions consisted of firm to stiff clay to 23 ft (7m) deep, underlain by silty and sandy glacial till to 59 ft (18m). Groundwater was encountered between 20 ft and 23 ft (6m and 7m). A deep foundations solution was required to support the new facility.

The challenge

Construction took place during the winter and spring months, requiring the capability to work through frigid temperatures and spring thaw conditions. Also, the owner set out a strict construction schedule.

The solution

Keller was contracted to design and install drilled shafts to support the terminal. Following 11 PDA tests to confirm design and capacity, Keller installed 276 shafts to depths of 32 ft (9.6m). The abrupt spring thaw mixed with loose backfilled material led to sloughing of soils and challenging drilling conditions. Therefore, 167 shafts required sleeving to below the water table, 10 ft to 25 ft (3m to 7.6m). Keller worked closely with the general contractor to coordinate the schedule given the changes and successfully turned the site over for the next phase of work.

Project facts

Owner(s)

Perrish & Heimbecker Ltd.

Keller business unit(s)

Keller

Main contractor(s)

Todd & Sargent Canada

Engineer(s)

Keller

Solutions

Deep foundations

Markets

Commercial

Techniques

Drilled shafts

Email address

info@keller-na.com

Phone number

1 (800) 456-6548