



EXPERTLY DESIGNED.
RELIABLY DRIVEN.

SaskPower Chinook Power Station

FEBRUARY - AUGUST 2017

DFI was an integral part of helping the client assess the construction benefits of using steel driven piles instead of a concrete pile foundation. The project scope included the supply and installation of 1,200 steel piles for the Chinook Power Station near Swift Current, Saskatchewan. The prime contractor and DFI worked closely together to overcome potential project delays, such as road ban restrictions and complex soil variability. Ultimately, DFI's flexibility and agility proved invaluable to the project's success.



PRECISE PLANNING

DFI leveraged its previous project experience to advise the client on scheduling and execution strategies for the piling scope. Costly delays were avoided by taking the entire project into consideration.



SUPPLY



SURVEY



INSTALL



CAP & WELD

Major Milestones

- Prime contractor completes concrete pile designs



Road Ban Dates Released
Weight restrictions will impede delivery timelines

- Prime contractor engages DFI to advise on a workaround for the impending road ban and suitability of steel piles
- DFI completes preliminary PDA testing and provides findings to the contractor's design team
- With DFI's guidance, the contractor designs length and diameter of steel piles



- DFI strategizes to reduce the road ban's impact

DFI proactively mobilizes the piling rig early to stage equipment on site in advance of road use restrictions

Within two months, DFI rapidly manufactures and delivers several hundred steel piles



Road Ban Enacted
Weight restrictions limit shipping capacities

- DFI continues manufacturing and delivering piles within road ban restrictions
- DFI conducts ongoing PDA testing on select piles



PDA Tests Show High Variability in Soil Density
Some pile lengths must be adjusted to accommodate new findings

- DFI's field engineering team conducts and advises on extensive PDA tests to determine soil variabilities and pile requirements
- DFI's construction team revises installation sequence to install as many originally designed piles as possible that meet length requirements and variable soil density limitations
- Road ban is lifted
- To reduce project costs, DFI makes use of previously delivered piling materials by back-hauling and extending pile lengths to meet revised pile requirements
- Utilizing its large fleet network, DFI delivers new piles
- DFI supplies and installs more than 1,200 piles, total



Prime Contractor Unsure How to Tie into Above-Ground Concrete Components
The contractor seeks advice from DFI

- DFI's team proposes an easily executable approach to tie in the above-ground concrete that results in a substantial cost savings for the contractor
- DFI completes the work, on time and under budget.