

As a leader in Canada's foundation contracting industry, Deep Foundations installs all major types of piles, but its strength has always been its people

By Lisa Kopochinski

A staple of Canada's foundation contracting industry for more than four decades, Deep Foundations Contractors Inc. has definitely achieved its original vision many times over: to become an innovative corporation with the most modern, well-maintained equipment and a highly skilled and motivated workforce.

Diversified in its offerings, the company installs all types of foundation piles and excavation shoring, including secant pile walls, soldier piles and lagging, driven piles, caissons, micro piles, sheet pile walls, continuous flight auger piles, soil nailing, access shafts and helical piles/screw piles.

History

Formed in 1971 by David Miller and Bill Lardner (who both left senior positions with an international foundation company), the two partners started their first project – a pipeline installation in Ingersoll, Ont. – out of Miller's basement. The company would later become the first in Canada to install secant piles as a water cutoff wall, and also the first to bring hydraulic drill rigs to the country, which are now an industry standard.

Fast-forward 43 years. Today, Deep Foundations – the largest foundation contractor in Ontario – has achieved steady growth, with revenues exceeding \$100 million per year. With its head office in Stouffville, Ont., a western office yard in Fort McMurray, Alta. and an office in Edmonton, the employee-owned private corporation (with 200 staff companywide) works with owners, developers and general contractors to deliver the best deep foundation solutions for each client's unique needs.

"We have come a great distance in that time, solidifying our name as one of the premier specialized foundation contractors in North America," said Ron Vermey, the company's vice president, sales and project management. "Our clients are developers, contractors, large corporations in the oil sands, municipal, provincial and federal governments."

With an ability to install any type of pile, Deep Foundations possesses an impressive fleet of equipment that includes hydraulic drills, crane-mounted drills, track-mounted drills, micropile and tieback drills, low headroom pile drivers,

Tunnel Boring Machine entering exit shaft at Steeles West Station

- Excavation shoring consisting of soldier piles and lagging, secant wall braced with soil anchors, struts and corner braces
- King piles, road decking



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High Profile Clients

Deep Foundations has delivered successful foundation projects for clients in Alberta, Saskatchewan, Ontario and New Brunswick, including:

- Aecon Construction
- Bird Construction
- Canadian National Railway
- City of Calgary
- Dominus Management
- Dufferin Construction
- EllisDon Construction
- Hydro One
- Ledcor Construction
- Obayashi/Kenaidan Contracting
- PCL Construction
- TransCanada Pipeline
- Walsh Construction

**Suncor/Williams Energy,
Fort McMurray, Alta.**

- Drilled caissons, continuous flight auger-cast piles
- Working safely in a live plant



Model GK-405 Vibrating Wire Readout

The Model GK-405 Vibrating Wire Readout is designed for use with all Geokon vibrating wire sensors. It comprises a battery-powered readout unit that communicates, via Bluetooth®, with a Handheld Field PC running the GK-405 application. The Model GK-405 can also read the thermistors included with most Geokon vibrating wire sensors, and display the temperature directly in °C.

All readings can be stored and exported to a number of different file formats. Syncing to a host computer is simple and straightforward, allowing project folders and data files to be easily saved. The Model GK-405 Readout is available with or without the Handheld Field PC because the Model GK-604-6 Field PC, provided with Geokon's GK-604 Inclinometer Readout, is compatible with both systems.

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air-track drills, oscillators, crawler cranes, vibratory hammers and impact hammers – to name just a few.

“We have some of the most powerful hydraulic drills in Canada,” said Vermey, “and the largest, most powerful drills that are capable of drilling up to five metres diameter in overburden and rock up to 40 metres deep.

Many notable projects

Deep Foundations has an impressive portfolio of world-class work that includes projects at the CN Tower, Rogers Centre (Toronto SkyDome), Ontario Place, Toronto City Hall, Exhibition Place, the Hospital for Sick Children, Ottawa Court House, University of Toronto Cellular and Biomolecular Research, University of Waterloo Quantum Nano Centre and for the Toronto Subway System. (A full list of projects ranging from \$250,000 to more than \$30 million can be found on www.deep.ca).

Other notable projects also include:

- Deep has completed or is near completion of the foundations and earth retention systems for four of the five new subway stations (Sheppard, Finch, Steeles, Vaughan), as well as two other major projects for Metronix in Toronto. These projects consist of soldier piles and lagging, caisson cutoff wall, sheet piling, driven piles and caisson foundations. This is more than \$110 million of foundation contracting work.
- Deep is also the foundation and earth retention system contractor for the installation of the shafts for the tunnel



“In the past five years we have twice received the Quality in Construction

Award from the International Association of Foundation Drilling. We are also multiple winners of the Ontario Road Builders Association Award for zero lost time injuries. We’re very proud of our safety rating and the recognition of our peers.”

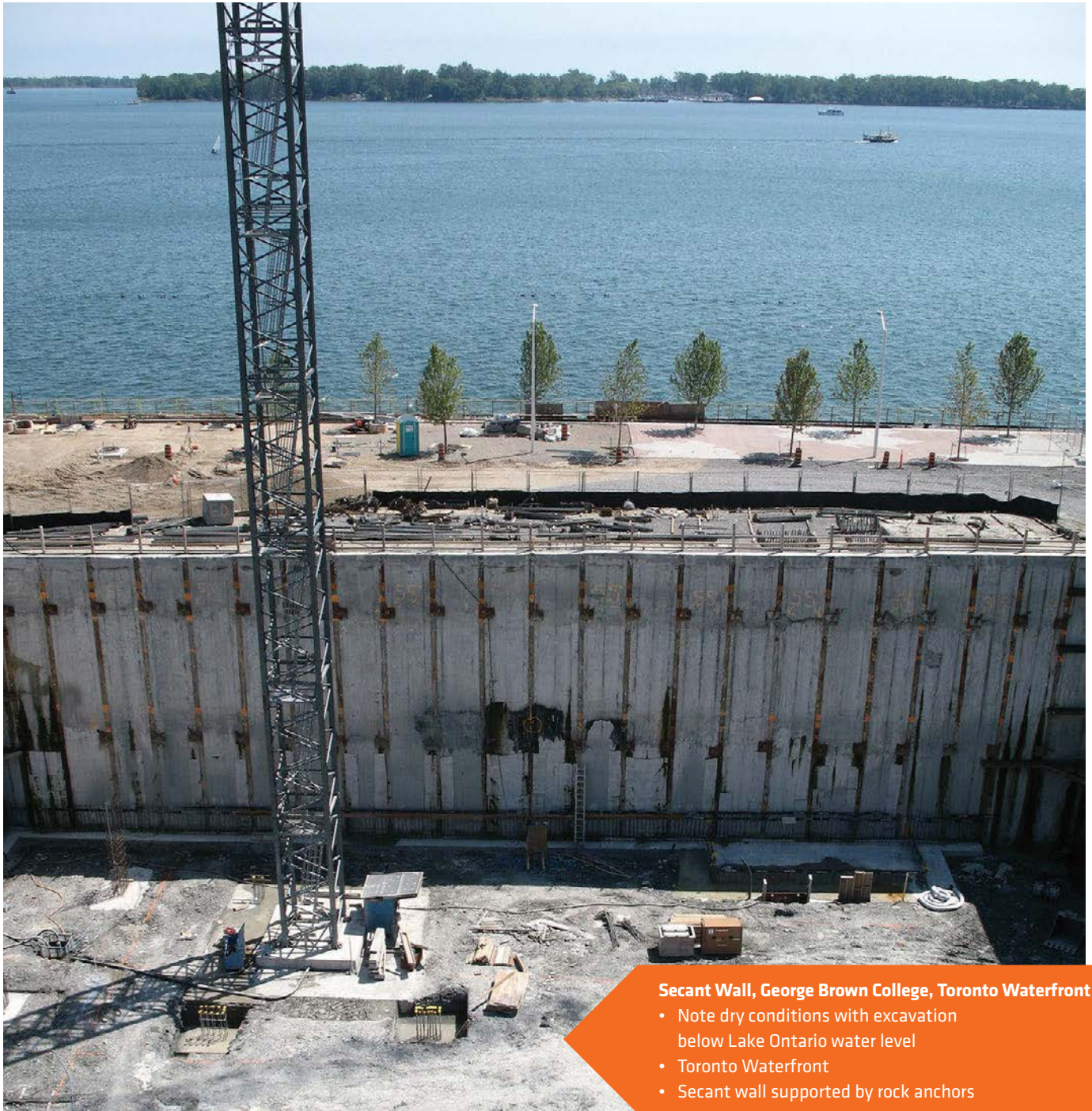
**– Ron Vermey, Vice President,
Sales and Project Management,
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Secant Wall, George Brown College, Toronto Waterfront

- Note dry conditions with excavation below Lake Ontario water level
- Toronto Waterfront
- Secant wall supported by rock anchors

boring machines currently constructing the Eglinton subway line in Toronto. These projects exceed \$30 million in foundation contracting work.

- The installation of the first secant pile wall for the City of Calgary in 2008. The circular access shaft was adjacent to the Bow River and the overlapping one-metre diameter concrete piles formed a tight water wall. The general contractor was Dibco Underground.
- The recently completed BioAmber project in Sarnia, Ont. that was 213 HP 310 by 100 piles up to 62 metres deep.
- This year, the company installed bored cast-in-place (caissons) for the new Highway 63 bridge over the La Biche

River for Alberta Transportation. The piles were 1.5-metre diameter by 18 metres deep. The general contractor was Formula Contracting.

- Deep Foundations was also the “go-to” contractor when an oil sands project needed quick action. Equipment was mobilized to the site within days of initial contact from the client, Williams Energy, for this project that consisted of bored cast-in-place piles and CFA piles. The general contractor was J.V. Driver.

“It was a pleasure working with the Deep Foundations crew,” said Rick Braun, general superintendent of J.V. Driver.

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“They installed just over 140 CFA and cast-in-place piles in a life plant without incident. It is clear they put safety at the top of their list.”

Other clients have echoed these same sentiments.

“Deep is a leader and innovator in the industry,” said Paul Ostrander, president and CEO of Holcim Canada (Dufferin Construction). “Doing business with Deep Foundations creates value for Holcim Canada.”

Added Gian Fortuna, vice president of contracts for Kenaidan Contracting: “Deep Foundations has been a good partner over the last 20 years and the ‘go-to’ contractor for our challenging earth shoring and caisson foundation work packages.”

Not a challenge-free journey

Deep Foundations has garnered a stellar reputation, but its journey has not been without its challenges.

“The construction industry in Canada is vibrant, progressive and very competitive,” said Vermey. “A big challenge is [the lack of] a skilled workforce. However, a large part of our success is our inclusiveness and our exceptional incentive and succession plan.”

The company invests greatly in the development of its personnel. The training is rigorous and mandatory.

For example, the company formed “Deep University,” which offers numerous courses and training sessions by outside accredited organizations. Topics include pile driving,



Steeles West Station, Toronto-York Spadina Subway Extension, Northwest area of Toronto

- Excavation shoring consisting of soldier piles and lagging, secant wall braced with soil anchors, struts and corner braces
- King piles, road decking

Awards

Deep Foundations has received numerous safety and quality awards over the decades. Awards received in just the past eight years include:

- 2012** ADSC The International Association of Foundation Drilling (ADSC) Quality Award – Best in North America
- 2012** ADSC Safety Award
- 2011** ADSC Safety Award
- 2009** ADSC Safety Award
- 2008** ADSC Quality Award

- 2008** ADSC Safety Award Best in North America
- 2008** Ontario Road Builders Association (ORBA) Safety Award for Zero Lost Time Injuries
- 2007** ADSC Safety Award Best in North America
- 2007** ORBA Safety Award for Zero Lost Time Injuries



Lorne Park, Ont. pumping station

- Secant wall for pumping station
- Secant wall embedded into rock and supported by rock anchors

sheet piling, drilled shafts, project management and environmental compliance, among others.

“Young engineers will spend two to three years in extensive training programs at Deep to ensure they are both technically and business savvy,” said Vermey. “There are also special bonuses for individual workers for safe practices.”

He adds that the company is proud of the number of employees who have remained with Deep Foundations for decades.

“We are very fortunate that numerous staff that have been loyal for 20 and 30 or more years. We also have a number of retired gentlemen working on a part-time basis sharing their invaluable experiences and knowledge with us.”

Safety awards and more

Safety is paramount to Deep Foundations so it is no surprise the company has been rated number one in safety for foundation contractors in North America numerous times and received many awards – both domestic and international.

“In the past five years we have twice received the Quality in Construction Award from the International Association of Foundation Drilling,” said Vermey. “We are also multiple winners of the Ontario Road Builders Association Award for zero lost time injuries. We’re very proud of our safety rating and the recognition of our peers.”

In addition to its training and enforcement of safety policies and procedures, Deep Foundations can add “inventor” to its long list of achievements, having taken the initiative of

creating new, safer equipment to protect employees and the public.

“As one example, we invented a pile driving spotter with an on-board computer that prevents torsional loading of the lattice boom,” said Vermey. “This invention received an international patent.”

The company’s commitment to the health and welfare of its team has also led to numerous accolades – one being a spot on the list of Canada’s best managed companies.

John Hughes, national leader of Canada’s Best Managed Companies and managing partner, Growth Enterprises with Deloitte, a national sponsor of the Canada’s Best Managed Companies program, recently recognized Deep Foundations by saying, “We believe that there are three vital blocks to sustainable growth: strategy, capability and commitment. Deep Foundations has demonstrated it is a model of success in all three areas and is duly recognized as one of Canada’s best managed.”

A bright future

As for near future and beyond, the landscape looks bright for Deep Foundations.

“Our focus for the next few years will be to expand our Fort McMurray and Western Canada operations and to ensure clients in this region understand the benefits of having Deep on their team similar to clients in the Ontario region,” said Vermey. “In addition, Deep will continue to complete major infrastructure projects in the Ontario region.” ☺