

GroundED

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Supportworks Opens New National Headquarters

Supportworks, Inc. celebrated a major milestone by moving into its new national headquarters in June—just two months after celebrating its 10-year anniversary. The 200,000-square-foot facility in Papillion, Nebraska, was designed and built to accommodate the needs of its growing workforce, better serve its network of 130+ installation contractors and allow room for thoughtful and strategic growth.

Supportworks designs, manufactures and distributes best-in-class foundation and concrete stabilization, repair and protection products, while also providing consultative business training, support and resources to the network of contractors that purchase those products. The company was recognized on the Inc. 5000 list of America's fastest-growing companies for the fifth time, with a team that totaled only five people on Day One now being almost 90-strong and growing. This staff includes experts in each core department of a contractor's business, or "gears of the business machine," such as marketing, customer care, sales, production, human resources and accounting. In order to deliver the custom training and resources that help dealers excel across all gears, the company also employs a

marketing, creative and technology team that includes content strategists, developers, graphic designers and video specialists. Product innovation is primarily led by the product development and engineering departments. The engineering department includes four licensed engineers: two geotechnical and two structural engineers.

Supportworks and its sister company and local contractor, Thrasher, Inc., broke ground on the new office building and warehouse in 2016, just up the road from their previous headquarters. The Supportworks warehouse and distribution center alone is nearly 70,000 square feet, with 11 loading dock doors for shipping and receiving. This facility will allow the company to stay ahead of demand from its network of contractors for many years to come. Adjacent to the warehouse and the Thrasher shop, the two-story office building includes a state-of-the-art training center, 30 conference/meeting rooms, casual in and outdoor collaboration areas, a cafeteria, a fitness center, an ultramodern video lab, sunlit workspaces and more.

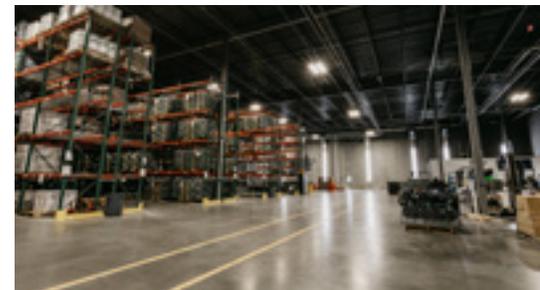
"We are proud to walk alongside Thrasher and our other contractors, fueling innovation

and providing radical support to help their businesses succeed," said Dave Thrasher, President of Supportworks.

"Our new headquarters is not only an ideal space to nurture the entrepreneurial spirit, hard work and creative thinking that got us here, but also one where we're excited to welcome our family of contractors for collaboration and training."

Learn more about Supportworks' philosophy, employees and products at Supportworks.com. For technical information visit its commercial website, OnStableGround.com.

JEFF KORTAN, P.E., SENIOR DIRECTOR OF ENGINEERING



Product warehouse

Project: Steel Company AdditionsLocation: **Bettendorf, IA**Pier Installer: **MidAmerica Basement Systems**

Challenge: Two overhead cranes and 12 heavy equipment additions were planned within two 120 feet by 205 feet, slab-on-grade buildings at a steel foundry. Soil conditions at the site consisted of sandy clay extending to bedrock at approximately 14 to 20 feet. Drilled concrete piers were originally considered to support the crane and equipment loads. However, high estimates of mobilization and overall costs, along with questions regarding the feasibility of the indoor installation, prompted consideration of other deep foundation options.

Solution: Helical piles were selected over the drilled piers because they could be installed quickly using relatively small equipment within limited access and low headroom conditions. Furthermore, helical pile installation does not require casing where high groundwater is present, and does not create spoils to be hauled off site, which were concerns associated with the drilled pier option.

Each of the crane columns would be supported by a pile cap with three helical piles. Helical pile configurations consisted of both the Model 287 (2.875-inch OD by 0.203-inch wall) and the Model 288 (2.875-inch OD by 0.276-inch wall) hollow round shafts with 8"-10" double-helix lead sections to support design working loads of 13.5 and 27 kips, respectively. The heavy equipment foundations consisted of poured concrete mats supported by four to ten Model 288 helical piles (same plate configuration as described above) with various design working loads up to 27 kips. Standard extensions advanced the piles to depths from 14 to 20 feet below floor slab elevation to bear on or within the underlying bedrock. The piles were advanced to torque-correlated ultimate capacities of at least twice the design working loads ($FOS \geq 2$) or until spin-off on competent bedrock occurred. The piles were fitted with standard new construction brackets and cast into the poured concrete foundations. A total of 176 helical piles were installed at the site in 12 working days.



Placing helical pile lead section for installation at machinery location



Adding pile extension



Pile caps poured flush with slab for crane columns



Columns supported by helical piles



Overhead crane to be installed

Upcoming Webinar Opportunities

- An Introduction to Helical Foundation Systems

1st Wednesday of every month 11:30 am (CT) and 1:30 pm (CT)

- An Introduction to Polyurethane Foam Injection

2nd Wednesday of every month 11:30 am (CT) and 1:30 pm (CT)

- An Introduction to Hydraulically Driven Push Pier Systems

3rd Wednesday of every month 11:30 am (CT) and 1:30 pm (CT)

Project: Cardinal Stadium ExpansionLocation: **Louisville, KY**Pier Installer: **Foundation Supportworks® by Woods**

Challenge: Cardinal Stadium is an open-air football stadium which is home to the University of Louisville Cardinals. A \$63 million expansion project was approved for the north end of the stadium which included the addition of 10,000 seats, bringing the total seating capacity to 65,000. Improvements would also be made to the Howard Schnellenberger Football Complex. The project was required to be completed in time for the September 2018 season home opener.

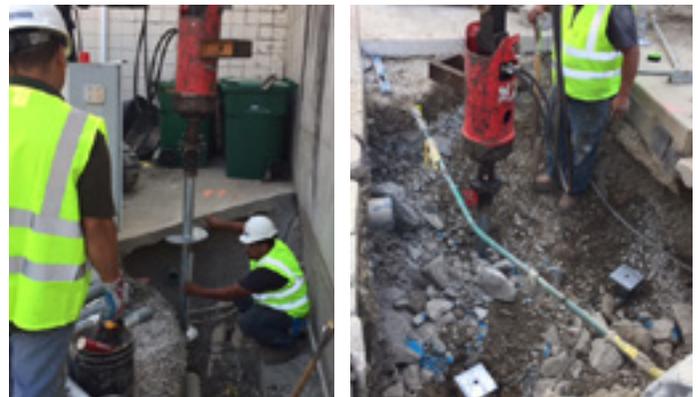
Although drilled piers were planned for the new stadium seat foundations, another foundation solution was needed at four locations where access was restricted for the drilled pier equipment. Access was limited at these areas by underground utilities and close proximity to existing foundations.

The test borings indicated a general subsurface profile consisting of 5 to 7 feet of clay fill underlain by stiff to very stiff clay to a depth of 15 feet where a medium dense sand was observed to a depth of 30 feet. Layers of medium dense sand and stiff clay were encountered below 30 feet to the top of bedrock at 60 feet.

Solution: Helical piles were considered the ideal deep foundation option given the soil conditions, required pile capacities and need for smaller installation equipment. Helical piles could also be installed within these select areas around existing underground utilities. The helical pile design consisted of the Model 288 (2.875-inch OD by 0.276-inch wall) hollow round shaft with 8"-10"-12" triple-helix lead sections to support the design working compression load of 35 kips. Ten piles were installed to depths of 17 to 24 feet to bear within the medium dense sand and to meet or exceed the target installation torque of 7,800 ft-lb. Torque-correlated ultimate capacities were at least twice the design working load ($FOS \geq 2$). The piles were fitted with new construction brackets to be cast into concrete pile caps. The pile leads, extensions and brackets were hot-dip galvanized for corrosion protection. The ten helical piles were installed in one day, and the crew and equipment were off-site prior to a mandatory stop work time of 4:00 pm to allow the football team to practice in private and without distractions.



Papa John's Cardinal Stadium with construction at north end



Installation of Model 288 piers near existing foundations

Installing around existing utilities



Skid steer used for installation



New construction brackets in place

To sign up, email us at training@supportworks.com with the following information:

- Name of the firm
- Location of firm
- Approximate number of engineers/architects/GCs that will be in attendance

Supportworks® Inc. is an approved provider of continuing education credits through the AIA, RCEP and the Florida State Board of Engineers.

HelixPro® 2.0 Design Software

A state-of-the-art program that allows you to calculate bearing and uplift capacities of Supportworks helical piles as well as tension capacities of Supportworks helical tiebacks as they pertain to specific site and soil parameters.

Register today to use this FREE program:
www.helixpro.supportworks.com

YOUR LOCAL DEALER

For more information about Supportworks, Inc., or to locate a Supportworks dealer in your area, please visit supportworks.com or call 800.281.8545



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What's Inside

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MidAmerica Basement Systems

 **Cardinal Stadium Expansion** – Louisville, KY
Foundation Supportworks® by Woods

DISTRIBUTION
CHECKLIST

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