



# Foundation Companies Close 2016 Strong and Optimistic

By Larry Kahaner

**C**ompanies involved in foundations are reaping the benefits of new techniques and methods that allow building on land that was once deemed unbuildable.

For instance, at Geopier Foundation Company, Inc. ([www.geopier.com](http://www.geopier.com)), Director of Business Development Matt Caskey points to their GeoConcrete Column (GCC) system which offers a cost-effective solution to support heavy applied loads, and control settlement at sites with weak and compressible cohesive and organic soils overlying dense soils or rock. The system provides this reinforcement by matching high modulus elements with the low modulus soil to control settlements. GCCs are installed through a patented displacement process by driving a hollow mandrel to the design depth while simultaneously pumping concrete. The process forms an enlarged concrete base to develop resistance efficiently. GeoConcrete Columns are only rammed at the base. Following the creation of the bottom bulb, the mandrel is extracted while continually pumping concrete under pressure. The GCCs then support engineered footing pads and high-bearing-pressure shallow footings or mat foundations to provide settlement control. GeoConcrete Columns are an effective replacement for deep foundations including driven piles, drilled shafts or auger cast-in-place piles, or time-consuming surcharging.

Caskey says, "Through continued research and development, Geopier has expanded its system capabilities to ensure high performance and reliability while providing value compared to deep foundation alternatives. Geopier's design-build engineering support and site-specific modulus testing, combined with the experience of providing settlement control for thousands of projects, provide an unmatched level of ground improvement options for virtually any soil type and groundwater condition across many applications. Geopier rigid inclusions are high-stiffness elements constructed of cement treated aggregate, grouted aggregate, or plain concrete and are used to transfer loads through weak soils, such as soft clays and organics, down to a suitable bearing stratum."

He adds: "We are expanding our technologies, and continuing to explore and test new ground improvement techniques that will continue to grow the intermediate foundation market. We also continue to hire new employees ranging from additional regional engineers, engineers to assist in our design center, a director of business development and more office help. We also continue to update our marketing efforts. We are becoming much more active regionally, as well as promoting ourselves through social channels such as LinkedIn and YouTube."

At RISA Technologies ([www.risa.com](http://www.risa.com)), CEO Amber Freund notes that RISAFoundation v9 was recently released and includes masonry retaining wall design. "Structural engineers who used RISAFoundation to design concrete retaining walls in the past wanted the ability to switch between masonry and concrete for their designs. This new feature allows them the flexibility of evaluating the best material solution for their project," Freund says.

She says that the company is seeing a growth trend in commercial and residential markets. "Slow and steady seems to be the pattern." Freund concludes: "Engineers are increasingly turning to software to evaluate different material and design choices. This is becoming more of a necessity as projects become so fast paced." (See ad on page 60.)

Last year was an exciting year for Subsurface Constructors ([www.subsurfaceconstructors.com](http://www.subsurfaceconstructors.com)), according to Lyle Simonton, Director of Business Development. "Not only did we turn 110 years old, but we were able to stay extremely busy in all three of our major services areas – deep foundations, ground improvement, and earth retention. We continue to see structural engineers seek out more cost-effective ways to support structures in soft soils, which often results in designing foundations supported by aggregate pier ground improvement. Subsurface Constructors completed over 75 such projects nationwide in 2016, including small retail projects, such as Dollar General Stores, to large educational and medical facilities like the Post-Acute Rehab Hospital in Corpus Christi, Texas."



Simonton notes that structural engineers seem to be leaning more heavily on specialty geotechnical contractors in project development efforts with respect to preliminary design, budgeting, and specification writing. "As one of the few companies to provide both deep foundation and aggregate pier ground improvement, Subsurface Constructors helps structural engineers determine the most economical approach for foundation support."

"In 2016, Subsurface Constructors saw an increase in ground improvement work in the Northeastern United States as a result of their new office in the Boston area," Simonton adds. "With so much of the development in this region taking place in old urban fills and very soft existing soil, aggregate piers and grouted columns are often the go-to ground improvement solutions for structural support." (See ad on page 42.)

Hayward Baker's Director of Business Development ([www.haywardbaker.com](http://www.haywardbaker.com)), Jeff Hill, says that his company is doing more earthquake drains. "It is a more cost-effective means to mitigate liquefiable slopes than some of the traditional improvement methods. We also make a push for rigid inclusions. We believe that it is a good improvement technique when soils are too soft to use aggregate piers but the structure doesn't dictate a traditional deep foundation."

Hill says: "There's been a lot more emphasis in the last couple of years on real-time monitoring, and using real-time monitoring parameters for structural movement, vibration, settlement, poor water pressure, and things like that. It is all generated on a computer. We can make a three-dimensional map of the structure as we're doing our work. For example, we can map an adjacent structure to monitor and protect it from the work that we're doing concurrently."

As for trends, Hill sees more competition. "We are seeing some of our techniques become mature and frankly more commoditized. We're also starting to see more people enter the specialty foundation business, and a lot of them are not experienced with the techniques. We're noticing some construction integrity issues that we didn't see ten or fifteen years ago because there were just a few people doing this work, and they had a lot of experience."

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He concludes: "The segment continues to grow and I think that it's because there is a wider acceptance of specialty techniques. We routinely get calls from structural engineers because an owner is saying 'you need to consider aggregate piers' or something of that nature which, ten years ago, we didn't see. Business is excellent. It is growing. We're having a very good year at Hayward Baker pretty much across the country. (See ad on page 39.) ▀

