



Forming an Advantage

For this Florida “shell” contractor, a robotic solution means an uptick in productivity



Bill Nagele is all about speed. His passion for drag racing, the pair of ZR-Series Corvettes parked in his garage, and his love for performance machinery of all types bears that out. So, with quickness in mind, Universal Forming, Inc. drew heavily upon a Topcon GT-503V for the shell layout of a \$400 million expansion of the Moffitt Cancer Research Center in Tampa. A fairly recent addition to the company’s “toolbox,” they found the unit easy to operate, more accurate than anything they had used before — and, yes, it was fast.

Company

Universal Forming, Orlando, Florida

Project

Moffitt Cancer Research Center
Expansion

Topcon Products

GT-500V Series Robotic Total Station

Topcon Dealer

Lengemann Corp., Altoona, Florida

Established in 2005 by contractors Bill Nagele and Todd Volheim, Universal Forming has established itself as one of Florida’s leading concrete structure

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builders. It has done so based on a commitment to excellence in quality, safety, and adherence to schedules.

“I own the company, but at heart, I have always been a production person,” said Nagele. “I think that’s why we’ve been successful; we are far more productive than our competition.”

That focus on productivity extends to Nagele’s choice of layout instrumentation for his crews. One of those crew members, layout/survey technician Dave Yanna, said he benefited from the advantages the robotic solution provides as he shot hundreds of points per floor at the Moffitt expansion project.

“The most obvious benefit is the speed of the gun,” he said. “Even when I’ve been several floors below the instrument and laying out for an adjacent structure, it tracks and holds me better than anything I’ve ever used. Should something come between me and the gun, it quickly reacquires my prism and resumes tracking — it’s a great tool to have.”

While construction survey/layout efforts have traditionally been a two-person operation, Yanna sees working alone as far more efficient.



“Bill has asked me in the past if I needed a helper and I said I really don’t need anyone else,” he said. “On this job, working alone with the robot, I am placing hundreds of points on each floor. I am doing things faster and more accurately than if I was working with someone on the other end of a radio. I have all the info right on my data collector so, as fast as I can move, I can mark a point. For me, this is the only way to work.”

“

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While some people, like Yanna, function well as a solo act, Nagele said using the robot as a team is equally beneficial.

“One-person crews are great for layout, but our work is about more than just shooting forms,” he said. “There are elevations, embed locations, and so on, that have to be



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done. In those cases, we still utilize a team — but it is a far more efficient team with the robot. When robotic total stations first hit the market, I was admittedly skeptical. However, once I saw the accuracies the GT-503V could get us, I was totally on board. In this business, if you lag behind, you’re left behind. And lagging behind anything has never been an option for me!”



A [full-length version](#) of this story is on the Topcon website.



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