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Tapping innovative technology yields big benefits for South Carolina concrete specialist



If experience has taught Brandon Boulware, owner of Southern Concrete & Construction (SCC), anything, it is that leveraging new technology can yield some impressive benefits. The Anderson, South Carolina, company offers a broad scope of concrete specialties ranging from simple sidewalk work to massive bridge deck pours. So, in 2020, when presented with the opportunity to implement Topcon Millimeter GPS on their Power Curber 5700C slipform paver, Boulware took that leap.

“One of the key advantages of GPS-based machine control of any kind is that it minimizes reliance upon surveyors,” he said. “That’s a cost savings for the contractors we work for, which in turn is motivation for them to choose SCC. For us, the direct benefit is in eliminating the need

Company

Southern Concrete & Construction
Anderson, South Carolina

Project

Pours for curb and gutter/concrete barrier
Charleston, South Carolina/Clayton,
North Carolina

Topcon Products

Millimeter GPS, LN-150 3D laser, and
LZ-T5 lasers

Topcon Dealer

Georgia Surveyor Exchange
Savannah, Georgia

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for stringline in our pours which has dramatically improved our onsite efficiencies. And that's actually a plus for everyone."

Those efficiencies were recently on display at a Charleston-area project in which SCC was pouring more than eight miles of curb at an industrial warehouse complex. "Because we were using Topcon Millimeter GPS, we were able to eliminate the need for a stringline crew as well as the time needed to set the line itself," said Boulware. That was a huge plus for us – probably in the range of a 40% time savings alone."

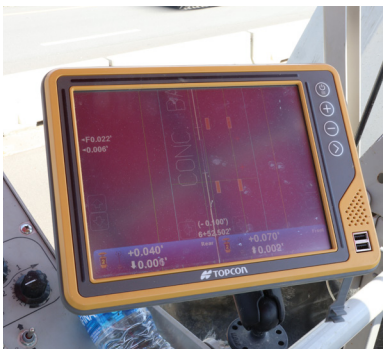
For times when onsite obstructions – tree canopies, warehouse structures, etc.— make GPS use prohibitive, Boulware calls upon a pair of Topcon LN-150 robotic stations to provide an LPS solution. Doing so, bypasses the need for satellite tracking or a base station, using optical angles and distances to determine location and communicate that to a prism on the curb machine.

"We were on Millimeter GPS the majority of the time," he said. "However, when we were up against the buildings and the signal became tough to maintain, the LN-150s were a great workaround. It's nice to always have a 'Plan B' and, even though we don't need it that often, LPS with those robots is ideal."



On a separate job site located more than 200 miles north in Clayton, North Carolina, SCC recently contributed to the widening of U. S. 70. The highway is currently undergoing a significant upgrade, one facet of which involves SCC using a Power Curber 7700 Multipurpose Slipform Machine to construct more than 13,000 feet of concrete barrier wall on an entrance ramp.

"We are slipforming that barrier wall as well as some bridge parapet work," said Boulware. "The barrier, a standard single slope design, is 49 inches tall and measures 8 inches the top and 24 inches at the base. We bid this job with the use of Millimeter GPS in mind, knowing it would eliminate the time- and labor-intensive use of stringline. We can continuously pour without having to stop, pull string and re-set. So, not only can our bid be more competitive, as mentioned, it saves the contractor the cost of a surveyor – savings across the board."



Each morning, SCC would set a pair of Topcon LZ-T5 lasers about 300 feet apart then add one more in the afternoon to get them through the 1,000 feet of barrier wall they were slipforming each day. "The mix design for the wall was a hearty one: 4,500 psi with a 1.5" slump," said Boulware. "However, the 7700C handled it great and we were able to get the production we needed each day. The fact that we can pair it up with a powerful solution like Topcon Millimeter

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GPS makes it extremely valuable, both to us and those who hire us. Our reputation as a company that gets things done on time, in budget and right the first time will just keep growing."

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



Visit the [Topcon YouTube channel](#) to watch video on the Millimeter GPS solution featured in this TAW.

