



Taking the Next Step

Tucker Paving extends its already-solid embrace of automation to its excavators



Based in Central Florida, one of the fastest-growing areas in the country, Tucker Paving, which regularly manages as many as 40 projects at any given time, is committed to helping meet the huge demand for housing and commercial space, according to Eric Woodcock, the company's equipment manager.

Company

Tucker Paving, Inc.
Winter Haven, Florida

Project

Earthmoving for residential development
Davenport, Florida

Topcon Products

MC-Max Excavator/MC-Max
Dozer solutions

Topcon Dealer

Dobbs Positioning Solutions
Orlando, Florida branch

"Developments in this part of the state are springing up everywhere," he said. "On one recent project, called BellaVida Resort, we are doing mass excavation for 300+ homesites. Since we started, we've been moving at a nice clip, largely because of the GNSS-based equipment we have at work."

Even though Tucker already had more than 21 dozers and motor graders employing that solution when true excavator automation entered the construction realm several years back, the company was eager to tap those benefits as well.

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"Chip Tucker, our owner, is very progressive when it comes to equipment that can improve the operation," said Ron Woodcock, one of the company's superintendents. "At the BellaVida site alone, we had three excavators all running the MC-Max Excavator solution from Topcon. Our operators love it and it's really streamlined our workflow."

One of the most attractive mass ex-related features of the system to Tucker's operators is the ability to quickly switch between 2D indicate-only and 3D automatic modes. In 2D mode, should they only need an indication of bucket-depth in relation to grade, they have it and can dig as normal. However, when digging a precise slope, MC-Max in 3D automatic-mode keeps them on-grade and tracking the design file, eliminating the risk of over- or under-excavating.

Ron Hall, one of the company's superintendents, says the new solution also pays valuable dividends through elimination of staking and the need to have a GPS-equipped dozer working alongside the excavator, essentially acting as its GPS.

"Automating the excavator, not only allows the machine to operate accurately and independently, it also frees up a dozer to do work on another part of the site, raising productivity even further," he said. Without GPS, the mass grading part of this job would probably take two and a half to three months. Because of the efficiency GPS brings to the site, I'm going to mass grade this job in three weeks. You can't beat that."



One of the most noticeable benefits automating the excavator function has shown is in construction of any of the eleven onsite water features at BellaVida. Typically a headache – and an ideal situation for the dual-machine approach mentioned above – pond creation has instead become the area in which Tucker's automated excavators have thrived.

"Our operators have really embraced the Topcon technology and their comfort level is reflected in the excellent production rates we've been getting," said Woodcock. "While the ponds at BellaVida varied in size, each one still needed to be excavated to a specific depth and sloped to a specific angle – a challenging operation. Giving the operator the ability to simply reach out with his bucket and know, with confidence, that he is at the correct depth or creating the perfect slope, proved invaluable."

The largest pond Tucker's team created, in which they moved approximately 9,300 yards of dirt, best illustrates the boost in productivity.

"It took us three days to complete the operation using two of the automated excavators; doing it with stakes would have easily been a five-day operation," said Woodcock. "With schedules as demanding as they've been, that was a huge time savings."



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That last point, speed, has loomed very large for Tucker Paving, added Woodcock.

"When it comes to bidding on jobs, there are times when we may not come in at the lowest price," he said. "However, the fact that we can give the customer a shorter schedule is ultimately what they want. In the current environment, time is often more important to a developer than cost. If we can tackle a job that would normally take six months and – using technology like automated excavators, machine control dozers, etc. – reduce that time frame by almost half, that's going to win every time."

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