

Speeding Up on Channel Project

by Daniel C. Brown

A 3D excavator guidance system is helping earthmoving subcontractor Ebert Construction beat the schedule by 15 percent on a 9-million USD channel repair project for the U.S. Army Corps of Engineers in Topeka, Kansas.

Ebert Construction Co., Wamego, Kansas, is using Leica Geosystems machine control systems on its excavators to help reshape 2.5 miles (4km) of the channel at Soldier Creek, which is contained by two parallel levees spaced 300 feet (91.5m) apart. In 2005 a major flood eroded the creek banks. This project will repair the damage, helping to prevent further flooding upstream of the reconstructed area. Ebert has engaged a fleet of earthmoving equipment to remove 350,000 cubic yards (270,000m³) of earth from the side slopes and take them to waste areas behind the levee. Some 170,000 cubic yards (130,000m³) are being moved from cuts to fills on the slopes.

Two hydraulic excavators, each fitted with a Leica PowerDigger 3D machine control system, are being used to shape the side slopes. Each slope is designed

with an upper and a lower bank, both on a 3:1 slope and separated by a gentler 10:1 slope. Jim Ebert, project manager for the contractor, says the Leica PowerDigger 3D systems improve the excavators' efficiency because no grade checking is needed. He further states that the systems save Ebert 40,000 USD a year by eliminating the grade checker. The PowerDiggers' screen shows the operators the cuts and fills on a continuous basis. "Plus", says Ebert, "we can work underwater without having a grade checker climb into the water."

"The Leica Geosystems GPS system takes the guesswork out of grading for the operators," says Trent Ebert, project superintendent. "And there's no more calling us to say the stakes got run over by a dozer. There's no downtime. Nobody has to watch the operators; they can dig, back up, find the next place to cut and keep on going." Completion is scheduled for February 2011, but the contractors hope to achieve substantial completion before winter. ■

About the author:

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