



J. Masterson Saves Time and Money Riding with Topcon GPS

GPS – A good investment for today's tight budget

By Joanne Ray



In this down economy, saving time and money is a priority in the contractor world and J. Masterson Construction Corp. is no exception. As vice-president of the Danvers, Mass. based company, Jeff Masterson is always thinking of creative ways to give his clients more for less. "Right now, we are bidding tight and trying to do more with less," Masterson said.

This past summer, maximizing time and money became easier for Masterson when the company purchased two Topcon Hyperlite GPS's from Bunce Positioning Systems in Stow, Mass. At the time, the company was doing site work for a high-end, residential community known as English Commons in Topsfield, Mass. The 70-acre site will take three to four years to complete and will consist of 52 units of townhouses, 22 buildings, 4,000 linear ft. of road, 1,500 linear ft. of directional drilled water main, four detention basins and one large shared septic system. Since December 2009, at any given time, as many as 15 laborers and 12 machines have been on-site doing earth moving, utility, roadwork, paving, curbing and building preparation.

Masterson is pleased to be six months ahead of schedule and due in part to the new GPS base and rover system. Using the GPS is primarily the responsibility of site supervisor, Doug Campbell.

"When we started using the GPS we became a lot more efficient," said project manager, Bill Peach. "Now, Doug is able to do his own layout as opposed to calling a surveyor and having to wait a couple of days. When we knock over a stake, we don't have to call them back. Doug can figure it out that day 'on the fly.'"

Campbell said that when they first purchased the GPS the company had a smooth transition while learning how to use the machinery.

"Brian Riley delivered the equipment and then Steven Meier from Bunce came out for one eight-hour day and then a couple of hours of follow-up and I took it from there," Campbell said. "We spent a lot of time in the office getting it setup which took some time. It was a very smooth transition."

Peach pointed out that the plans for the entire job are programmed into the GPS.

"Doug has the buildings, grading, and utilities all on that little computer, so instead of running back and forth to the trailer to look at the plans, he can just look them up right then and there," Peach said. "This saves time. It is really amazing the amount of information you can hold in that data collector."

Doug Campbell uses GPS to check grades.

Top: Milton Maciel checks roadway grades with rotary laser.

Masterson said in the long run he is confident that the GPS will help the company to win bids.

“The GPS reduces engineering costs to the owner because now we can offer in-house engineering and surveying,” Masterson said. “It will give us the edge because we don’t have to hire surveyors anymore. Doug can stand out in the middle of the site and he can tell right away whether he needs a cut or a fill. In the past, you needed two people - one surveyor and another roadman to do the same layout. Now, it is Doug all by himself. He has a base station that he turns on every morning and he can roam around and do his thing. So, just that alone - going from two guys to one - is a tremendous savings. Anything we can do in-house is a benefit.”

Masterson said that the tool also gives Campbell confidence that he can get the measurements accurate.

“We have a lot more quality control,” Masterson said. “They use to measure and put a stake in where things had to be done and then you would come back later and the stake would be gone. Then you would have to wait for the surveyor to come out. Now, Doug can check something right there. It is a great benefit.”

Masterson said another benefit is that the GPS can do volume checks for a stockpile of fill to avoid over-exporting and then buying it back later on. Due to the success of its first unit, J. Masterson bought a second GPS to use on a project in Beverly, Mass. that started in June.

“The data collector has the ability to do the calculations right there,” Masterson said. “It can save you thousands of dollars. When we saw how efficient the first GPS was, when we got the other job I said, ‘get another one.’”

The Beverly retirement community will have 155 units in a four-story building and 18 cottages. The job is on a 15-acre site with 155 units in the main building. The property will house 18 cottages, two garages, 1,700 linear ft. of road, 153 parking spaces and one large detention basin.

“The GPS was huge on that site because we had to move 28,000 cubic yds. and export 21,000 cubic yds. and once we got started it looked like the quantities were not right,” Masterson said. “With the GPS, we were able to keep an eye on it to make sure we did not over export. If we didn’t have the GPS, we probably would have over exported and we would have had to buy it back. We were able to stay right on top of it on a daily basis.”

Peach said that the GPS has an up front cost that will pay off in the long run. Peach found that the GPS’s have gone down in price since he looked into buying one for the company just five years ago.

“The technology cost has gotten better and prices have come down,” Peach said. “When we looked at these five years ago, and they were twice as expensive, we just couldn’t do it. Five years ago we did a \$10 million dollar job and I couldn’t justify the cost then.”

Steven Meier, training and support manager from Bunce said that it was a pleasure working with the Masterson crew.

“The crew has been using the system with great success and minimal support,” Meier said.

“Hopefully, as we continue to become more efficient by using the GPS, I think it will help us win more work,” Peach said. 🧐



Jeff Masterson, Doug Campbell and Bill Peach talk over the project as they stand in front of the TOPCON Hyperlite GPS.

Top: Jeff Masterson and Doug Campbell checking roadside grades with Dana Seaboyer operating a John Deere 330C excavator in the background.

Left: Milton Maciel directs Leonel Policarpo as he excavates for drain pipe in the John Deere 330C.

