

Increase profit through enhanced productivity

BY EARLE GOODWIN

In a competitive industry where margins are low, you have to look to productivity gains to improve profitability. But achieving productivity improvements in the construction industry (where you rely heavily on human input) is not as straightforward as it may be in the manufacturing sector (where the automation of one or more processes can help you achieve your goals).

Before you can improve productivity, though, you have to determine where you are. Brian Foster, a senior consultant with construction management consulting firm Revay and Associates, agrees, and gives another reason for closely monitoring your jobs. "If you aren't measuring productivity, you can't track performance," he says, adding, "And if you don't track performance, you can't formulate a realistic completion program for the job."

Keeping track of the work

Tracking performance means having some expectation of how the job will progress: you need to know what should be completed at each stage in the schedule. Indeed, you may already have a good sense of job progression because of your many years of experience, but does your good sense have any basis in fact?

One way to find out is to closely monitor your jobs and plot completion against the schedule when the job has wrapped up. After doing this for successive projects, you will have built up a factual database that tells you, for example, that you will have five per cent of the work done when 10 per cent of the scheduled time has elapsed and 87 per cent done when 80 per cent of the time has elapsed. Now you are able to track current projects against your average, which will alert you to any deviations.

A useful tool for capturing this data is the jobsite journal. These diaries allow the site supervisor to record all pertinent informa-

tion on work progress for each day... material and labour on-site, weather conditions, problems encountered, solutions found, reasons for delays, progress made, etc. The resulting document provides a wealth of information when it is time to analyze the job. It is also invaluable when you have to make a claim for delays or justify extras.

You can also exploit your timesheets, which you already use to record the hours your field forces put in to pay them properly. By using codes to have them account for their hours based on the activities they were doing (i.e. conduit installation, wiring, terminating), you'll have an accurate record of how many hours each worker applied to each activity. Again, this helps you monitor a job and build up data for your averages.

Brian also stresses the importance of planning, which he describes as "thinking out general strategy" (whereas scheduling is a list of tasks that have to be completed according to a specific a time-frame). "Don't confuse the two," he warns.

Bringing in the hardware

The use of computer drawings allows for more detailed layouts, greatly improving the efficiency of an installation. These drawings contain a lot of detail and can be manipulated, allowing you to spot and correct interferences and other problems before they become costly work stoppages.

In fact, computer skills are becoming more important to construction managers. Brian has found that "most of the young guys know their computers but don't have [enough industry] experience, while many experienced guys don't know computers well enough". Essentially, the best results are achieved when the person using the computer has a thorough understanding of construction means and methods.

The reliance on computers is just one of the changes occurring in construction at

Thinking about software?

Will (Korky) Koroluk, who regularly writes on computers in construction, suggests several pieces of software and Web services that could be useful to your outfit. These suggestions are not endorsements: only you can tell whether they'll work for your company.

Web TimeSheet© www.replicon.com

Not a big suite of services, but not intended to be. It does timesheets very well. Customizable. Allows sheets to be analyzed and integrated into accounting software.

Copernic Desktop Search© www.copernic.com

A handy utility that quickly searches your computer for a file you're having trouble finding. Also searches the Web. And the best part? It's free.

Construction Office™ 2004 www.uniteddesign.com

An integrated suite of services for small- to medium-sized construction firms.

Build in the Black© www.buildintheblack.com

A suite of services including built-in accounting. Designed for general contractors but might find application in electrical.

an accelerated pace, making ongoing training vital. Over the past few years, community colleges, contractors' associations and suppliers have begun offering courses in construction management, either as full courses of study or topic-specific workshops. The information provided is often backed by years of research, giving you access to industry best practices.

Impacted schedule and overtime work

Construction, however, is done on jobsites, and one of the biggest obstacles to productivity on-site is delays. Because a lot of electrical work is done at the tail-end of the construction process, delays in the work of any of the other trades will often squeeze your schedule. This means that, at some point, you may have to look for ways to compress your schedule, such as scheduling overtime.

Work done in overtime can sometimes be more productive than that done during regular hours, but only in the short term. Long-term overtime is another matter altogether: studies have shown that efficiency drops off with every additional day overtime is worked. When you combine the cost of overtime pay with declining output, it becomes very inefficient.

Brian says you are usually better off adding a shift rather than weeks of overtime. And when you are going to double-shift, he finds things work out best when each shift works in its own separate area with its own supplies, tools and job box. When both shifts have to do the same work, schedule a half-hour between the end of one shift and the start of the next, but invest in having the shift supervisors' time overlap for an hour each day. This helps better mesh the two shifts.

Productivity improvements are incremental. You have to constantly monitor and adjust your systems and processes to achieve them. But, with patience, perseverance and innovative thinking, they can be achieved. The rewards are worth it. **EB**

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