



A Hands-On Approach

"If I had two hours to chop down a tree I'd spend the first hour sharpening the ax." – Abraham Lincoln

Generally speaking the management of job costs involves four un-related variables – or profit levers.

Most job costing and budgeting systems show only the summary of these four levers which does not tell the whole picture nor does it provide the critical feedback between operations and estimating so that the entire system can be fine-tuned.

If the project team is only focused on the bottom-line job costs there is a huge opportunity for improvement in profitability as the entire project team begins to understand each of these levers and how they individually relate to job costs. We will dive briefly into a discussion of these four critical levers and how they relate to job costs.



- **Method:** The method chosen for installation – for example, when trenching you could choose benching, sloping or using shoring. You may also choose a trenchless (directional drilling) installation. Each method has different production levels and costs associated with it. During the estimating phase specific installation methods are chosen for each activity. During the pre-planning of the project adjustments to these methods may be made. Production target rates and the project budget are based on the method. Changing methods may lower or increase costs but a change in method should not be considered the same as a production increase or decrease.
- **Procurement:** The amount actually paid for a product or service. Getting pipe for \$2.50 per foot versus \$3.10 per foot is an example of procurement management. Average labor cost increases or decreases are also examples of procurement. Though these will lower costs they are distinct from quantity or production variables. Even if the procurement leads to securing a piece of equipment cheaper than estimated this is still not considered a production management item.

- **Quantity:** This is a huge variable and feedback to the estimator is very important because variations have big effects on profitability but are also relatively simple to fix through take-off methods. It is very dangerous to lump quantity into production. These are two very distinct parts of the estimate process and feedback must come back separately in order to truly refine the process. The key is looking at a task and figuring out a common unit to view as a quantity. For some tasks such as trenching this may be simple (linear feet) but for other tasks such as electrical branch rough-in this may be more challenging because of all the different sizes and types of conduit involved. It is on these tasks that are more difficult (such as electrical branch) that it is even more likely that the quantity take-off process can be refined to be more in-sync with operations.

- **Production:** The actual rate a crew produces at. For example getting a backhoe crew to completely install 300 feet of 4" sewer laterals in an 8 hour day is better than having the same crew installing 250 feet in the same 8 hour day. There are a lot of variables involved in making this comparison so it is important to eliminate as many variables as possible. The first variable we eliminate is cost variations by establishing average labor and equipment rates based on the estimate and inclusive of a standard mobilization charge spread over 5 days. Whether this cost number is a little high or a little low it will allow comparison between days. The second major variable is in the work complexity. The laterals on one day may be deeper, shorter or the ground may be harder than those done on the next day. Production tracking is the most challenging of the variables but also the one with the biggest opportunity for increased profitability (or losses.)

When systems are put in place to monitor each of these variables separately and when your project team starts discussing these four profit levers while pre-planning the project, during construction and in the post-job review your overall profitability will increase significantly.

D. Brown Management has successfully helped a variety of different contractors setup production tracking systems helping them fine-tune both their estimating and field operations. These services are provided as part of our Construction Project Pre-Planning facilitation services that include critical training for the project team on pre-planning, impacted productivity and production tracking. During the sessions we focus on identifying risks and opportunities specific to your project. Working together we develop action-item lists and the outline of a project plan. These sessions can be done remotely to minimize the impact on your project team. Learn more at:

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Contact: David Brown

david@dbrownmanagement.com

(916) 716-1696 PH | (916) 244-0413 FAX