Invest in Standardization; Maximize Productivity

Denver-based Maxim Consulting Group, LLC has been helping construction firms develop and streamline their prefabrication operations for the past eight years. Following is Managing Director Michael McLin's insight on prefabrication trends and best practices.

Why interest is rising: We're in a price-driven market, and supply and demand has been out of whack since the recession. When the economy is down, prefabrication is used to be more price competitive. When the economy is coming back, prefabrication is a strategy for contractors to do a larger volume of work without having to increase their workforce in the field.

"Successful companies look at prefabrication as part of their business model rather than being a stick-built contractor that happens to have a fabrication shop. It's a very different mindset."

—Michael McLin

Who's getting involved: Companies with $10 million to $15 million in annual sales are getting serious about single-trade prefabrication. Larger companies are starting to focus on multi-trade fabrication.

The importance of pre-planning: In addition to finding space to build a prefabrication shop, the most critical business investment that needs to be made to drive scalable prefabrication is establishing a consistent design and pre-planning process. The development and implementation of standards is necessary to ensure consistent output at each step: design, pre-planning, prefabrication and installation. Standards also allow for the identification of constraints in the process that are slowing throughput. Additional resources should be applied to remove or minimize the constraints so design, pre-planning, prefabrication and field installation are in balance. The integration of these business processes is a complex task that must be executed at the executive level or with the input of outside expertise.

Productivity outcomes: Too often firms approach each job as if it was special. They need to stop thinking about prefabrication as unique to each project and start thinking about it like a manufacturer of standard products. Best-in-class organizations can pull 20 percent to 40 percent of their annual field labor hours into the prefabrication facility and execute the work at an average cost savings of 25 percent. Prefabrication also allows contractors to meet more aggressive schedules, which adds value for the owner and the general contractor. Companies that have standardized products and design assemblies have an opportunity to approach the engineer, owner or facility manager and compare what was specified to what the contractor manufactures and say: 'If we're allowed to use our standard product, we'll be able to give the owner money back and the general contractor gets a quicker schedule.' It's a win for everybody.

Documenting costs: As companies start incurring up to 40 percent of field labor hours through the fab shop, it's a significant cost component that must be tracked. Companies must modify their cost controls to ensure the design, pre-planning, prefabrication and field installation costs can be budgeted and tracked in each disparate work step, as well as aggregated to understand the total installed cost. By doing so, contractors will be able to evaluate their bid units and incorporate prefabrication into their pricing instead of pricing the work like it is stick-built and then arbitrarily cutting labor, which is the industry norm now.

The value of vendors: Many contractors try to manage the supply chain and beat up vendors on price. In reality, vendors are supply chain experts that can bring tremendous value to contractors through logistics support, process integration and vendor-managed inventory. Contractors should stick with their core competencies; don't reinvent the wheel and try to become the expert on everything. The implementation of vendor partnership agreements and vendor-managed inventory is gaining momentum and should be looked at closely by a company considering how to improve its prefabrication operation.

—Joanna Masterson