Traditional Value Engineering

"Value Engineering" is the term euphemistically applied to any effort to redesign a project to get the cost down. In our experience, the process is a great exercise for the project developer (who almost always gets a lower price) and a lousy experience for the builder (whose costs almost always go up from the poorly thought-out changes). In most cases, there is very little in the way of true engineering performed in the process, and neither the developer nor the builder gains any real value.

Good design implies a lot more than a good looking building. It incorporates the best practices of several design and engineering disciplines, including those of an architect, a civil engineer, a structural engineer, a mechanical-electrical engineer and a specification writer. At their best, these disciplines can create buildings that are spectacular to look at, easy to live or work in, energy efficient and straightforward to build. And all this coordination takes time—lots of it!

Now consider the typical value engineering exercise. The project bids have come in "over budget" (always determined by the project developer). The interest clock is already running, the marketing window is slipping away, and the pressure is on to get construction underway. The builder, anxious to keep his overhead covered and his fee projections intact, volunteers to solicit savings ideas from his subcontractors and vendors, and all of these companies know a better, cheaper way to do it. They submit their proposals, the builder puts together a new price, and the problem is solved.

Except that it isn't. In only rare instances is the design team kept involved in the value engineering process—"they would just drag things out and argue against every suggestion." So all the thought that went into the design, all the coordination that took weeks or months to work out goes down the drain. Worse yet, most of the work that has been value-engineered is now being performed "design-build", since the same arguments for keeping the design team out during the re-pricing still hold true on re-drawing. The builder and his subcontractors start work with drawings that only barely resemble what is being built, the field crews have no single source of information to direct them, and, sooner or later, the interferences and oversights start to creep into the work. The builder's team spends more and more time trying to work out the problems, with little help from the original design team (since the latter often doesn't know what has changed and sometimes disagrees with it). The project slows to a crawl, general conditions costs skyrocket, and the builder's fee expectations fade into the sunset.

The truly enlightened owner-builder team knows better

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than all this. The owner knows that any money he saves on the front end will probably be more than offset by the delays, the loss in functionality and, of course, the value he gave up in the first place. The builder knows that his estimating team can't possibly consider all the design ramifications of a value-engineering idea as well as the original design team can, and certainly not in 1/10th the time. And he knows that, while the owner gets all the benefits of the ideas, the builder gets all the headaches and the lost time fixing those not-so-great ideas.

We are aware that value-engineering probably isn't about to go away. Too many developers want the project done for less, regardless of how the prices come in. What we would suggest to the builder, who suffers first—if not most—from value-engineering is to keep the design team involved. Insist that they evaluate every alternative, and let them make the case for all the reasons why something shouldn't be done. Finally, insist that the design team incorporate the approved value-engineering ideas into the original drawings. (If the developer won't pay for it, consider paying the design team out of your fee—you'll still be better off.)

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