

Change Order Estimating — Why This Matters to Owners and Architects, and not just GCs

A job has been estimated, bought out, and is under construction. Great! A vision and a need are being realized, and everyone is employed and happy. But, inevitably, despite proper planning and thorough vetting in the preconstruction process, changes will pop up. They can be due to unforeseen jobsite conditions, architect-specified material changes, or owner-requested changes, etc. The bottom line is that additional costs are on their way — and someone has to pay for them.

Change order estimating, as well as review, is just as critical to the overall construction process as all the initial budgets and plans were in the beginning. Why? Because these realized costs can affect the relationships and reputations of everyone involved and, most importantly, they affect the finished product.

We were recently hired to manage the change order process for a \$20MM project that saw over 100 change orders for various legitimate reasons. In composing side-by-side cost estimate comparisons and reviewing the entire subcontractor/general contractor-submitted change orders, we noticed a critical component that was causing issues. The change orders were coming in noticeably higher than they should.

The GC on the job was what we call a “pass thru” GC — they don't perform any of the work, they simply subcontract it all out and manage the process. So, when a change order came into being, they went to their subs and got pricing, bundled it all together, added their markup, and submitted it. We analyzed their pricing and, realizing it was off, requested quantities. When we received the quantities we noticed they were too high. We had to gather the owner, the architect and the GC together for a meeting to discuss the issues on this, since it was a \$1MM change order.

What we found was that the owner gave the architect a vague idea of what was wanted. The architect designed as best they could to this idea and, by the time it got down the chain to the subcontractors, they followed the drawings. They also took a big guess as to how to tie everything in together. This guess caused the price to be higher than it should have been. The subcontractor plugged in a “safety net” for undefined construction details.

It boiled down to a lack of communication. The owner had a rough idea that was passed down and never really figured out properly. The GC was too busy focusing on the accelerated schedule, and just passed all the costs through without thoroughly reviewing them. The mistake of that “guesstimate” was over \$60K.

Had it not been caught, it would have caused the owner to overpay severely. And it could have been caught during an onsite meeting with the owner, architect, and GC. Bringing them together could have solved the problem in minutes. Had this overcharge by the sub not been caught, the owner would not have been able to afford some of the additional packages he wanted to include on the project. No one was being dishonest; it was just that everyone was currently overwhelmed and just let it slide.

This happens constantly, and is why you need to spend time on the change order process. Involve all team members on large changes. Get everyone on site or on a conference call

so they're all clear on the means and methods. Don't make a sub guess at scope and include more costs than are needed. Change orders affect everyone on the job, which is why you need everyone involved to communicate, to question every item, and to ensure that everyone knows exactly what is involved — down to the nitty gritty details.

When estimating a change order, make sure you have several components in place, and make sure that the GC and sub have those same components in place. What are they?

- Current drawings with all addenda and any red lines.
- All RFIs.
- All submittals.
- All proposed sketches.
- All previous change orders.

Take all of these items and assess what was really part of the base contract and what is new. It sounds simple, but it really requires that the person estimating change orders pays attention to what has been agreed to and paid for previously. The biggest mistake in the process would be if you didn't have a current set of construction documents that incorporates all the items mentioned above. Without knowing what the existing ceilings are supposed to be, how can you tell what credits and new charges are needed, and how can you tell what substructure work may be required to get to the finished ceiling level?

One other critical mistake people make when composing change orders is not thinking in all dimensions and directions; or rather, only thinking in two dimensions. You should approach each estimate, as well as each change order estimate, like a compass. You are sitting dead center on this compass and need to look north, east, south and west to capture all components. Oftentimes change orders are related to finishes, and it's easy to forget what's underneath the finishes. The owner wants a new patio added on, but when you dig out for the foundation is there a utility in the way? What kind of sand or stone bedding is needed under the foundation? These are real costs that need to be quantified and agreed upon, not carried as plug numbers.

If a plumbing fixture has to be moved due to a design conflict, how do we get to the piping? Does a floor have to be torn up and patched? Do you have to remove and replace a ceiling on a lower level? If you use the compass method to think in 3D and all directions, you will catch these things in your drawings and your construction, and they will ultimately affect the change order cost, whether positively or negatively.

To sum up ... communicating properly, having all current documentation, meeting with all parties, and thinking in 3D will help all parties involved with change order estimating. It is imperative that the owner, the architect, and the GC insist on this — despite everyone's time constraints. A few minutes now can save thousands of dollars later. For you, the architect, it makes your life easier because the GC knows exactly what to do, and you don't get any job visit surprises. For you, the owner, this affects what you may be able to do with your available funds.

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