

Budgeting for the Construction Phase

Charles Schreckenberger, AIA, and Bill Schmalz, FAIA

In a 2014 AIA Convention workshop on Construction Contract Administration (CCA), the audience was asked this question: “For how many of you is CCA a profit center?” Of the 50+ attendees, only one raised his hand, and it turned out that he is a consultant whose business consists exclusively of performing CCA services. So why do architects lose money during the construction phase? Or, to turn the question around, how can architects *make* money during that phase?

Several factors determine the answer to that question, and most of them are decided months, even years before construction begins. In fact, most of them are decided when the Owner-Architect Agreement is signed.

Even in these days of “big data” and multiple ways of analyzing it, many contractual decisions are made by traditional rules of thumb, and one of those rules is this: When you budget a project, you allow 10% of the fee for Schematic Design (SD), 25% for Design Development (DD), 40% for Construction Documents (CD), 5% for Bidding, and 20% for CCA. It’s a simple rule that, like most rules of thumb, doesn’t require much thought, but will almost always lead you to lose money during CCA. Let’s take a look at a hypothetical example to illustrate how using 20% of the fee for the CCA phase just doesn’t work. Let’s say your fee allows for 5,000 hours of labor at your average labor rate. Using the 10/25/40/5/20 rule of thumb, your hours per phase look like this:

SD	10%	500 hours
DD	25%	1,250 hours
CD	40%	2,000 hours
Bidding	5%	250 hours
CCA	20%	1,000 Hours

But this table leaves out a critical factor: time. Let’s now say that your contract stipulates two months for SD, four months for DD, six months for CD, two months for Bidding, and 24 months for CCA. Now our table looks like this:

SD	10%	500 hours	2 months	250 hours/month
DD	25%	1,250 hours	4 months	312 hours/month
CD	40%	2,000 hours	6 months	333 hours/month
Bidding	5%	250 hours	2 months	125 hours/month
CCA	20%	1,000 Hours	24 months	42 hours/month

With project duration included in the analysis, the problem becomes evident. While the design and documentation phases allow for 1.5 to 2 full-time staff members, the CCA budget allows for only 9.7 hours/week, or a quarter of a person. If weekly site visits and project meetings are contractually required, that accounts for almost all of the person’s time. In other words, no time to review submittals,

no time to respond to RFIs, no time to review and approve pay requests, no time to review change order requests, and no time to make document modifications.

Perhaps a better way to budget the appropriate fee allocation for CCA is to determine what effort is likely to be needed during construction, rather than assign an arbitrary percent of the labor budget to the phase. In our example above, what you know about the project may tell you that a half-time person is needed throughout construction. That will double the amount of hours you budget for CCA. Since your fee is fixed, those hours have to come from the earlier design and documentation phases. Your new budget may look like this:

SD	10%	500 hours	2 months	250 hours/month
DD	20%	1,000 hours	4 months	250 hours/month
CD	27%	1,330 hours	6 months	222 hours/month
Bidding	5%	250 hours	2 months	125 hours/month
CCA	38%	1,920 Hours	24 months	80 hours/month

As you can see, to cover your anticipated CCA labor costs, you had to dip into the DD and CD budgets. If you are designing and documenting projects the way architects did 40 years ago (the 10/25/40/5/20 rule dates back at least that far), then your designs and documents will suffer. Sounds dismal, right? Well, help is on the way. Since this paper is about CCA budgeting and ultimately profitability, we won't get into the detail of how embracing BIM, Integrated Project Delivery, and other advanced project delivery tools have altered how we might re-allocate the design and documentation fees, but if you if you apply these tools, the new breakdown of hours can be successful. That, however, is a topic for another white paper.