Controlling Costs With Design-Build

by Paul Eldrenkamp

Sooner or later, any contractor-architect relationship risks foundering on the shores of pricing. It's inevitable. What the architect wants the project to cost and what the contractor fears it will cost occasionally cannot be reconciled. This quandary often ends with the architect concluding that the contractor is just charging too much and deciding to put the project out to bid (if it's not already out to bid).

But a contractor who charges more than someone else is not necessarily charging too much. Given some of the entrenched habits of our industry, it's at least as likely that the other contractor is charging too little. Too little, that is, to be able to do a good job with the task at hand. So, while competitive bidding may weed out an overpriced contractor, its downside as a process is that it may well reward someone who has not allowed enough time in his or her bid to meet the architect's or the client's expectations.

Architects who argue against a negotiated contract or design-build usually do so under a conviction of duty, as watchdogs of the project budget — a critical responsibility that architects absorb and that contractors often fail to appreciate. But many architects are too limited in their approach to this responsibility. Competitive bid is not the only way, or even the best way, to go. In this column, I'll make the case for some of the built-in cost controls of design-build — some of the ways design-build meets the strict demands of budgetary responsibility.

Strategic Design

First, primary cost control comes from the discipline required to design to a budget. My design-build company's current strategy is to do enough design work (anywhere from 8 to 40 hours, depending on the project) to be able to have some tangible documentation on which to base a budget. This is billable time, noted as a line item in the design budget that accompanies our design contract.

This preliminary design time includes as-built documentation and some schematic designs. The clients and architect meet and put together components of the various schematic options. The architect then does a hard-line drawing of the preferred floor plan, thereby providing me with a reasonably clear description of the scope. I can then compare that preliminary plan with past job-cost data for similar, completed projects — both in the aggregate (this kitchen is a lot like the Adams kitchen or the Cummings kitchen) and in its component parts (the plumbing for this bathroom is similar to that for the Wilson project; the tile is a lot like the tile in the Simmons bathroom). This gives me a pretty solid starting budget, based on recent real-world experience. I share this budget first with the architect and then with the homeowner.

Reality check. The budget determines subsequent design direction. If we're within 10% or so of budget, we know we can proceed with some confidence. If we're 20% or 30% over the initially targeted budget, we know we have to lop something off. In my experience, reconsidering finishes (plastic laminate instead of granite, vinyl instead of ceramic) gives us about 10% play in a project budget, but if we need to cut more than 10%, we have to look at taking whole rooms or other chunks out of the program requirements (cancel that third-floor bathroom; hold off on the deck; finish the basement next year).

This first budget reality check is often the low point in the relationship. I prepare clients for this up front when I describe the process, saying, "The first serious budget meeting after the schematic phase has been completed will be the hardest." As a remodeler and custom builder, my single most important task is managing client expectations. If they're expecting it to be a hard conversation and it turns out to be good news — "Yes! We're within 10% of target!" — they're thrilled. If it's bad news — "We need to pull the master suite out of the scope to meet target" — they're prepared for it. They may not be happy, but they're not surprised, and if they're not surprised, they're probably not going to fire you on the spot — which is a move they will be considering (ask me how I know) if you have not prepared them for the potential awkwardness of this first serious budget meeting.

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Open numbers. The level of budget detail I present at this meeting depends on the needs of the clients. Some people want to see a line-item breakdown. I usually show these as ranges, with the high end 10% to 20% more than the low end. Some are content to hear the information and discuss it more abstractly. I don't give

more information than is asked for (implicitly or explicitly). If someone asks for detail, it's a good idea to ask them how they want it presented (by room, by phase, by option, by whatever) rather than to assume you know. In design-build, *always* be open with your numbers — never wriggle on that.

I show my overhead and profit. There are many ways to account for these; I place most of the burden on my labor costs and show a lower across-the-board markup. It's a totally legitimate bookkeeping practice and one that helps play to expectations. Splitting overhead and profit into two line items makes them both easier to sell.

In addition to guiding design direction, the initial budget serves a couple of other roles. It gives clients some guidance as they shop for products; for instance, they know they have $25,000 for cabinets and $10,000 for appliances. It also serves as a benchmark for subsequent budget meetings.

Value Engineering

My cost database includes typical ratios, established over time. I know, for instance, that in about 80% of the kitchens we've done, electrical costs average 8% to 12% of the total production budget. Plumbing and heating costs run 9% to 11% including fixtures. Cabinets and countertops have a much wider swing — 10% to 30%. Flooring runs 3% to 5%. These ratios hold true largely independent of subcontractor.

So, as I do my budget comparisons over the course of the design process, I'm performing thorough value engineering: If the electrical for this kitchen is coming in at 15% of the production budget — $5,000 over the initial budget of $10,000 — we take a hard look at that component. Did we over design the lighting? Did the client fall in love with some particularly expensive alabaster fixtures? Do we have the wrong electrician looking at the job? (We try to be three deep in each subtrade to provide a built-in, ongoing reality check for various subcontract costs.)

Once we've identified the likely reason we're over budget, we can respond appropriately. We can get another electrician to look at the plans; we can simplify the electrical design; we can simplify the design for another phase of the project to make up the difference (specify copper baseboard instead of radiant floor heat, for instance); or the homeowner can agree to fund the extra costs.

In it for the long haul. On occasion I have taken some of the extra costs out of my own overhead. Of course, I don't like doing that, but if I've given misleading budget numbers and the client has paid for design time based on my mistake, I need to be accountable. However, I make sure the financial punishment fits the crime, and I also try to use the experience to get it right the next time (a process that has taken me two decades and still counting). This, of course, is a level of accountability that a low-bid contractor will never be able to offer without going out of business.

Proactive advantages. The value engineering we provide is an essential, continuing component of the design process. What the client sees (we hope) is steady, seamless progress toward the targeted construction start, not a wild scramble to get a project under control after the bids have come in, with the baby due in three months, the short-term rental already started, and the bidding contractors quickly losing interest once they've seen the difference between expectations and reality.

Paying close and obvious attention to costs in this fashion and making a sincere effort at value engineering are the only ways to gain and maintain pricing credibility with an architect or with a client and must be the basis for any design-build arrangement.

Added value. This process also benefits our clients in a perhaps unexpected way. It forces them to think hard about their priorities throughout the design process, rather than wait to the end when the bids have come in. We give them the detailed information they need to choose whether to go with plastic laminate and stay within the budget, or go with granite and add an extra $20 or $30 a month in debt payments over the next 20 years. To choose — *before* they've spent $5,000 for a detailed design — whether that master suite is worth dipping even further into their home equity for. To think about whether the $5,000 saved by installing electrical baseboard instead of hydronic baseboard is worth the additional $200 a year in operating costs.

Because we do this kind of cost evaluation during the design process, our change orders have dropped as a percent of total revenues, from the teens to single digits (from averages around 15% over the years, to current averages of less than 3%). This has translated to improved schedule control, higher crew morale, and greater client satisfaction. It's also compelling proof of a return on the clients' investment of 10% to 12% in up-front design costs. And a strong argument that, when thoughtfully done, design-build offers a superior model of budgetary stewardship.

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