BY DAVID GERSTEL

The Greased Pigs of Estimating

David Gerstel has been a builder for four decades and is the author of Running a Successful Construction Company, *often referred to as an industry "bible." David's new book, also a bestseller,* Nail Your Numbers, A Path to Skilled Construction Estimating and Bidding, *can be ordered from Amazon, other online booksellers, and most local booksellers.*

Recently, I was corresponding with the builder and author Mark Kerson about spreadsheets and their use as a kind of net to capture the elusive items that can slip by us during estimating. Mark has managed to succeed—namely, do work that makes him and his crew proud and his customers happy even while he prospers financially—as both a developer and a general contractor. He has also written a good book, *The Elements of Building*, about construction company management.

I read Mark's book regularly for inspiration as well as information. But sometimes Mark and I differ about business strategies or systems. We were exploring one of those differences in our recent exchange. Mark has long made use of a software estimating package that includes a digital catalog of labor and material costs along with a spreadsheet prefilled with lists of thousands of items of work from site prep through finish details.

Mark chose his software with care, because, as he says, "software estimating packages are not all created equal, not by a long shot." Even with his software, he is skeptical about the cost data and does not rely upon it. But he values the spreadsheet because it includes such a comprehensive list of work items—one that can be easily customized to fit his operation. He feels the list prompts him to capture every bit of the construction called for in his projects. He also believes that any builder, especially an inexperienced builder, is better off letting a reliable outside party create an initial but customizable list rather than trying to build one from scratch.

While I think Mark is dead right about the need for prompts and about the need for spreadsheets to double as comprehensive checklists, I have preferred building my own checklist on an Excel spreadsheet rather than buying a construction software package. Excel is inexpensive. You can get superb education in its use, also at low cost, at Lynda.com. And if you construct your own spreadsheet/checklist on Excel, you have complete control of it.

I also think that even if you are new to the building business, you can readily build your own comprehensive checklist. You simply create a skeletal list out of your own experience and awareness. Then you expand that list by drawing items from the extensive columns of items provided in estimating books like *Nail Your Numbers* and others listed in *Nail*'s Resources section.

A SAMPLER OF ITEMS THAT CAN EASILY SLIP BY DURING ESTIMATING

GENERAL REQUIREMENTS
- Labor for obtaining permits
- Special fees such as school district levies

SITE WORK
- Protection of special plants & trees
- Erosion control
- Removal of roots & grubbing

DECONSTRUCTION AND DEMO
- Temporary protection of finishes
- Hidden layers of wall covering

FOUNDATIONS
- Trimming of footing trenches
- Below slab insulation
- Exacting layout and construction of formwork for modernist designs

FRAMING
- Blocking
- Tie-ins to existing framing

FINISH
- Special hardware such as peep holes, mail slots, & address numbers.
- Matching of existing materials

TRADE PARTNER WORK
- Crew and supervision time used by trade partners
- Completion of small items overlooked by trade partners

Note: *This list is excerpted from chapters six through eight of* Nail Your Numbers

The books will cost you far, far less than a software package, which will burden you not only with an initial substantial cost, but with annual fees for updates. It is steady pursuit of such savings, in my experience, that is the surest path to financial independence and beyond as a builder. I have been fortunate to enjoy great results by operating as an overhead frugalista, vigilant in my conservation of resources and out to assassinate every little bit of overhead that is not essential to the strength of my enterprise and its survival through times both good and rough.

But there is another reason, too, that I prefer to build and maintain my own spreadsheet/checklist. It derives from my sensitivity to the prime rule of estimating: Don't miss anything.

Do not miss any of the items of construction called for in the plans. Or in the specs. Or in the scopes of work to be handled by trade partners.

Mark thinks that a comprehensive list such as the one included in his software package is arguably the best tool for preventing misses. It "allows you," he says, "to focus more on the important stuff instead of wondering all the time about what you might have overlooked."

I, on the other hand, am inclined to think that the spreadsheet/checklist that you have built entirely yourself will prove the better tool. As I said to Mark, "It strikes me as virtually incontestable that you increase your awareness of your list by building it yourself, just as you understand any construction and its use more deeply by entirely creating it yourself." You won't understand framing as well if you only remodel structures initially built by other builders rather than also framing new structures yourself. You won't have as strong a grasp of all that goes into estimating for framing if you just work your way through someone else's checklist, modifying it here and there, rather than building your own checklist by thinking through the entire process step by step.

Mark and I have wrapped up our exchange by concluding that neither of us is likely to be absolutely right or wrong. His approach might be better for some guys, mine for others. Or as Mark says, "That is what makes construction so complex (and interesting). Both and neither. This idea and that." Take what you can use, leave the rest.

No matter which method you elect for acquiring a spreadsheet/checklist—buying one prebuilt and modifying it or building your own—you must keep after what I call "the slipperies"—those greased pigs of estimating that can so easily evade your awareness as you work your way down a spreadsheet.

There are myriad such slipperies. If they escape your attention, they can do major damage to your bottom line and, thereby, to your company. They are expensive. And they stick their snouts into every division of work in a project.

During estimating for site preparation, you may need to account for measures that are not always required but that may be for a particular job. You may, for example, have to estimate for the material and labor costs for protecting trees treasured by an owner or a town.

When you arrive at your spreadsheet division for concrete, if you are estimating formwork for a "crisp" modernist design, you want your checklist to nudge you to capture the full cost of the hyper-meticulous layout and installation required by such designs. Let that one slip away, and you can miss your labor cost by 50%, according to one veteran estimator. She told me that she doubles her usual labor figure for formwork for modernist designs. She has discovered, in the sleek, high-end homes for which she often builds estimates, that a small deviation in the forms can translate into wavering drywall on the third floor—and that in turn can stimulate disappointment or worse in the designer and client. So, she allows for extreme horizontal and vertical control during construction of the forms. She is right to do so. Modernist designs may

The stepped concrete column (whose formwork is visible behind the scaffolding) was costly to construct for several reasons, including complexity and difficult access. Most impactful, the column was to serve as a prominent finish item, so all forming and concrete installation had to be meticulously controlled.

Photo excerpted from *Nail Your Numbers*

appear simple. But as one of my leads likes to say, "simple is hard."

When you arrive at your estimate for framing, you encounter a whole slew of slippery piglets—notably in the form of blocking. I gradually became aware of them as I improved my spreadsheet/checklist over the years so that it now includes blocking for joists, cabinet hanging, bathroom fittings, support of rough plumbing, mounting of electrical devices, drywall backing—and the list goes on. Even so, I sometimes wonder if it is yet complete. The same estimator who emphasizes the cost of the formwork for "simple" modernist projects told me that she allows 4% of the total cost of framing for blocking.

That 4% can translate into a large chunk of dollars. Assume that framing runs 15% of direct costs of a large addition or new home, with total direct costs of $400,000. In that case, blocking will cost $2,400 (400,000 x .15 x .04 = 2,400). That's a sum worth catching in your estimating net.

At the finish division of an estimate, slipperies can arise from requirements to match existing finishes. Just how close a match are you providing for? There is reasonable matching. Then there is the exact matching of that beat-up old strip oak hoped for by a client who views their flooring as a precious antique while you thought of that stain-and-wax-gooped-over mess as ripe for removal and replacement. (You can take care of such items by including with your estimate a written assumption that states the degree of matching you and the client have agreed upon, then allowing sufficient labor and material to achieve it.)

Some of the most potentially damaging of the finish slipperies pop up in designs that require you to produce structural elements that double as finish. Consider the column shown in the photo on the facing page. Such items can require labor several times what would be needed for the same installation if it were hidden from view, not functioning as finish.

Of all the greased pigs, the most insidious are those that can occur at multiple points in an estimate. I will hit on a few big ones here.

First, there are General Requirements—items such as initial job mobilization, daily job setup and cleanup, scaffolding, permits, special inspections, and most especially, supervision by crew leads or project managers (see "A Big But Often Overlooked Cost of Building," Jan/19). They are slippery because they are, for the most part, invisible in the plans and specs. They aren't mentioned or shown. But you must see them, nevertheless.

There are a great many General Requirements. And they are costly, not only individually but in aggregate. They can amount to 10% or even much more of the direct costs of a job. Somewhat amazingly, as was emphasized in our recent article on General Requirements, they seem to slip by even seasoned builders.

Apprentice labor may well be the most significant of the elusive items for builders who employ in-house crews. The real cost of apprentices often is misunderstood and severely underestimated. When you factor in the much higher workers' comp rates for apprentices along with the supervision they require, their hourly cost can run close to that of journey-level carpenters. If they are deployed to tasks beyond their skill level, their inefficiency and mistakes will push their cost per unit of production far past that of full carpenters. Therefore, during estimating, you need to use their base rate only for those simple repetitive tasks at which they can be efficient and effective. If you anticipate deploying them to more complex work to keep them busy, you must either jump up their rate or allow for very low productivity.

When you arrive at your estimate for framing, you encounter a whole slew of slippery items—notably in the form of blocking. You might be surprised at what a sizable percentage of direct costs it can amount to.

If you prefer to work largely with trade partners rather than employing crews, then the greased pigs you will need to keep after most persistently are items that can readily slip between the trades. For example, you don't want to find yourself in the position, as did a builder who was working in my neighborhood recently, of assuming your foundation sub will install the under-slab insulation when he thought that either you or another trade partner was taking responsibility for it. The Included/NIC form for use with subs that we discussed in an earlier article ("Taking the Slack Out of Subcontractor Bids," Oct/18) can help you round up such items and avoid the need to repeatedly "split the difference" with subs for items that escaped attention.

How else can you best avoid getting trampled on by the pigs during the course of building estimates? If you like prebuilt spreadsheet/checklists such as Mark Kerson prefers, then perhaps you would be wise to go through them and emphasize or add elusive items.

If you prefer to build your own spreadsheet/checklist, as I do, then my method of netting the slipperies might work for you, too. Whenever I am working with a new set of plans, if I notice an item that is not already listed on my spreadsheet, I immediately open Excel and include it. If I am in the field and notice an item that I have not yet put into my spreadsheet, I make a note of it. The note goes into my inbox to remind me to put the item into Excel the next time I am doing office work.

One way or the other, you do have to get the slipperies into your spreadsheet/checklist. You must corral those greased pigs. Fail to do so and you will fail to bring home enough bacon. Construction is a tough enough business without letting some of the elusive financial reward slip away due to oversights of items in a project you should have accounted for during estimating.

David Gerstel's books, including Nail Your Numbers, *as well as Mark Kerson's* Elements of Building *can be purchased from Amazon.*