

Working Cost-Plus

by Sal Alfano

A well-crafted cost-plus contract protects the interests of both the contractor and the customer

As most builders understand it, cost-plus construction is a recipe for disaster. How can you sell a job, they ask, without putting a limit on the total cost? And why would anyone in a competitive business like construction want to come right out and tell his clients what his materials really cost and how much he really pays employees?

In my 20 years as a builder, I used cost-plus contracts for about half my work, and I'll admit that it's more complicated than working with a fixed price. After all, a fixed price contract rewards you with large profits if you buy right and perform efficiently, and the owner isn't looking over your shoulder every step of the way. Most owners are happy with fixed price contracts, too, because they know what the project will cost before construction begins. And since owners usually hire the low bidder, they don't care how much money the builder pockets as long as the work is up to snuff and completed on time.

Still, there are good reasons to work with a cost-plus contract at least some of the time. For one thing, a fixed price is impractical on jobs that have a lot of unknowns or that require new materials and unfamiliar methods. The same is true on "fast track" jobs where the owner needs to start construction before plans and specs are complete. Under these circumstances, a cost-plus contract reduces both your risk and the need to pad your price to cover contingencies.

But the strongest reason to work cost-plus is that it helps to establish trust and good communication between you and your clients, and gives you a tool you can use to break out of the competitive bidding wars and into negotiated projects. On top of that, a cost-plus contract forces you to develop good record-keeping habits. Properly administering a cost-plus contract amounts to doing job-cost accounting every time you requisition for payment. If you're already doing job-cost analysis regularly, the transition to cost-plus work

will be easy. If you're not job-costing, cost-plus work may motivate you to start.

What Is Cost-Plus?

Most of the complaints about cost-plus work are the result of misunderstanding or wrongheadedness. In the first place, working cost-plus does not necessarily mean that there's no cost estimate or that the contract is open-ended. I always worked with a *guaranteed maximum cost*, sometimes referred to as an "upset price." The basic idea is for the owner to reimburse the builder for the actual costs of construction, plus a fee (for administration and a fair net profit), up to the amount of

the guaranteed maximum cost. Cost overruns are borne by the builder. These provisions take care of the owner's worries about limiting the total cost of the job, but still leave room to save money.

Nonbelievers are only partly right when they complain that cost-plus contracts don't give builders a way to cover overhead. While it's true that the cost-plus format prevents builders from charging owners for *general* overhead expenses, it does permit reimbursement of *specific* overhead expenses that are directly related to the job covered by the contract. Obviously, success in cost-plus work depends on how the contract itself

is structured, and on the procedures you use to administrate it.

Reimbursable Costs

The single most distinguishing feature of a cost-plus contract is the need to document in detail the costs of construction. Because you get paid for only those expenses you can prove, it's necessary to keep accurate and timely records of your direct costs (materials, labor, and subcontractors) as well as job-related indirect costs. Cost-plus contract language should be very specific about what is and what is not reimbursable (see Figure 1). Using a detailed estimate during contract negotiations helps to explain the costs of construction and prevent misunderstandings later.

Materials and equipment. Direct costs for materials and equipment that become a part of the building are reimbursable dollar-for-dollar, including delivery charges. However, you should also be reimbursed for materials and equipment that are not a permanent part of the building, but are consumed during construction. Temporary bracing and poly used to protect stored materials or work-in-place are good examples. Also include charges for tool sharpening, as well as the cost of blades, bits, and small hand tools like cold chisels and shovels, that are broken or dulled beyond usefulness during the ordinary performance of the work.

Rental charges for machinery, equipment, and special tools (like pneumatic hammer drills) are also reimbursable, including transportation costs to and from the site. In fact, you can charge a rental fee for some of your own equipment. For example, the cost of pipe staging that you own, which on a fixed price job would be figured into your overhead, can be billed as a reimbursable expense on a cost-plus job, as long as the rate is competitive and reflects the value of the equipment. Temporary heating and lighting equipment are other good examples.

One problem is figuring out how to handle the several types of con-

Costs To Be Reimbursed

The term *Cost of the Work* shall include costs set forth below incurred in the proper performance of the Work and paid by the Contractor.

1. Wages paid for labor in the direct employ of the Contractor in the performance of the Work, including welfare, unemployment compensation, social security, and other benefits.
2. Cost of all materials, supplies, and equipment incorporated in the Work, including costs of transportation thereof. All discounts for cash or prompt payment to vendors shall accrue to the Contractor.
3. Payments made by the contractor to Subcontractors for Work performed pursuant to subcontracts under this Agreement.
4. Cost of all materials, supplies, equipment, temporary facilities, and hand tools not owned by workers, which are consumed in the performance of the Work.
5. Reasonable rental costs of all necessary machinery and equipment, exclusive of hand tools, used at the site of the Work, whether rented from the Contractor or others.
6. Cost of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes related to the Work.
7. Cost of removal of all debris.
8. Costs incurred due to an emergency affecting the safety of persons or property.
9. Minor expenses, such as long-distance telephone calls, telephone service at the site, and petty cash items in connection with the Work.

Figure 1. To avoid misunderstandings, a cost-plus contract should specify both reimbursable and nonreimbursable costs. A good model for cost-plus contracts is AIA document A111, available from the American Institute of Architects, 1735 New York Ave. NW, Washington, DC 20006; 202/626-7300.

Tracking the Cost of the Work

Over the years, I developed a system that tracks change orders, current expenses, and past payments, and that gauges job progress by comparing actual costs to estimated costs. All of this information appears on a single form, called a *progress summary* sheet, which I submit with every application for payment, accompanied by supporting detail. Because of all the calculations involved, I set it up on a computer spreadsheet, but it can also be prepared and maintained by hand.

My progress summary sheet is organized into three sections: *estimated costs* (columns A, B, C, and D), *actual costs* (columns E, F, and G), and *projected costs* (columns H, I, and J). Its purpose is to document expenses and to predict cost overruns and savings. How you use it depends on the level of detail you and your client decide is necessary. You can easily scale down or expand the version presented here to meet your needs.

Progress Summary		Job: Sandage Residence			Application No. Three			8 Feb 93	
A Cost Category	B Sched. Cost	C Cost of Change Orders	D Revised Sched. Cost	E Previous Billing	F Current Billing	G Total Billed To Date	H Percent Complete	I Required To Complete	J Available To Complete
1 General	1,100		1,100	850	146	996	90%	110	104
2 Framing	4,100	615	4,715	2,357	(17)	2,339	100%	0	2,376
3 Drywall	9,100	1,365	10,465	8,392	1,717	10,109	100%	0	356
4 Doors/Windows	4,500	675	5,175	3,175	638	3,813	90%	517	1,362
5 Trim	2,000	300	2,300	511	1,165	1,676	65%	805	624
6 Painting	5,600	840	6,440		3,413	3,413	50%	3,220	3,027
7 Flooring	6,650		6,650						6,650
8 Heating	7,600		7,600	7,003		7,003	99%	76	597
9 Electrical	4,350		4,350	2,071	1,457	3,528	80%	870	822
10 (A) Structural	440	66	506	477		477	100%	0	29
11 subtotal	45,440	3,861	49,301	24,834	8,520	33,354		5,599	15,947
12 Labor	13,626	1,043	14,669	7,831	4,993	12,823	95%	733	1,846
13 subtotal	59,066	4,904	63,970	32,665	13,513	46,177		6,332	17,793
14 Fee (12%)	7,088	588	7,676	3,920	1,622	5,541		760	2,135
15 Totals	66,154	5,492	71,646	36,584	15,135	51,719		7,092	19,928

Estimated Costs

Column A is a list of construction cost categories. I loosely follow CSI format, but you can organize the schedule room-by-room, by interior and exterior work, or by some other scheme that makes sense.

Column B is a breakdown of the dollar value of each cost category. You can combine material and subcontractor costs together into one category, making sure to include a category, such as the line labeled "General," for indirect costs like permits, fees, and other miscellaneous expenses.

Create separate categories for all labor costs and for the fee. This is easier than distributing these costs throughout all categories. The same is true for allowances. Here, the "A" on line 10 denotes an allowance for structural work.

Column C shows the estimated cost of change order work. To keep the numbers in this column straight, break out change order estimates into three parts — materials and subs, labor, and the fee — and distribute them to the appropriate categories.

Column D holds the sum of the scheduled value plus the value of change orders (B + C). The total of column D shows the *revised guaranteed maximum cost*. Changing the scheduled value is necessary to accurately reflect the change in the scope of the work, and to allow the 50/50 split to work properly.

Actual Costs

Column E holds the amount previously billed for expenses in each cost category.

Column F shows the amount currently payable in each category. The total of column F equals the total *itemized costs* currently billed.

Column G (the sum of E and F) shows the expenses to date for each category. Every time you prepare an application for payment, you must update column E by transferring into it the number in column G.

To help keep the numbers straight in columns E, F, and G, prepare an itemization sheet (below). For each cost category, list every invoice for materials and subcontractors, and transfer the subtotals to column F.

Projected Costs

Column H is an estimate of the *percent complete* for each cost category — your best guess of how far along each phase of construction has progressed. When determining this percentage, include work-in-place, as

well as materials — like windows — that have been delivered to the site but are not yet installed.

Column I. To get the value for Column I, multiply the revised scheduled value by the percent complete and subtract the result from the revised value: $D - (D \times H)$. This shows how much money is required to finish the work of each cost category based on the percent complete estimate.

In Column J, subtract the total expenses from the revised value ($D - G$) to determine how much money is available to complete the work of each cost category. When compared to column I, the number in Column J shows whether you are ahead or behind your estimated cost.

Construction Cost Itemization

Itemization of Current Expenses			08 Feb 93	Application No. Three	
Cost Category	Amount	Vendor	Inv. No.	Notes	Category Total
General	146.44	Mitchell's	12392	trash	146.44
Framing	(16.92)	White Lmbr	M47378	CREDIT	(16.92)
Drywall	40.53	Sloan's	12592	mud	
	1676.00	Dennis	12292	sub	1716.53
Doors & Windows	335.23	White Lmbr	M47522	window	
	302.99	White Lmbr	M47523	window	638.22
Trim	764.16	Dix Hardwds	A12292	hardwood	
	401.31	White Lmbr	M48009	moldings	1165.47
Painting	3413.08	Aldey	20292	sub	3413.08
Elect.	314.12	M. Stone	11292	sub	
	629.23	M. Stone	11992	sub	
	513.44	M. Stone	12892	sub	1456.79
Total Material & Subs					8519.61

Labor Rate Schedule

The following rates will be charged for the employees listed. New employees will be added at a rate based on their gross hourly wage plus 30% burden.

Name	Rate/Hr.
S. Allen	\$25
D. Pruitt	\$25
W. Roberts	\$20
E. Bertrand	\$18
M. Clarke	\$15

Figure 2. A labor rate schedule lists the rates you will charge for each employee who will work on the project. Make sure the contract allows you to add to the list after construction has begun.

tractor discounts offered by vendors. If you receive a cash advance from the owner to secure a cash discount on a specific purchase, the discount ought to be passed through to the owner. In general, however, do not pass on discounts based on total monthly volume from all jobs, or discounts based on prompt payment.

Subcontracts. Subcontractor costs are also fully reimbursable, including materials, labor, and the sub's gross profit. You may not, however, add your gross profit on top. But you can recover the costs of direct supervision of subs in your estimate and billing for labor. Treat discounts as you would for materials and equipment.

On fixed price contracts, which are almost always awarded to the low bidder, the owner's concern is that the quality of a low-priced sub's work will not be up to snuff. In a cost-plus contract, however, the opposite is often true: Because actual costs are reimbursed, the owner may be concerned that your subcontractors' prices are too high and that the same quality can be had for less money. I was able to counter these objections because: (1) I had established long-term relationships with good subcontractors who priced their work fairly; and (2) I explained to my clients that, even when my subs' prices were comparatively high, they represented a good value. Subs who use high-quality materials where they have a choice and who are good at solving problems will find ways to save money in the long run.

Labor. All wages for your employees are reimbursable, including labor burden. In other words, the hourly rate you charge for employees should include federal and state taxes, health insurance, vacation and sick pay, and general liability and workers comp. It's a good idea to include in the contract an hourly labor rate schedule for each employee who will be working on the job, either by name or by job classification (Figure

2). Include language that allows you to add to this list after construction has begun.

To avoid clock-watching by the owner, explain your normal work schedule, including daily start and finish times, and coffee break policy. Also explain that some billable time is spent each day setting up, cleaning up, and standing around reading plans and solving problems.

Indirect costs. Some expenses that are considered to be overhead in a fixed price contract can be billed directly to a cost-plus job, providing they relate only to that job. Transportation costs fall into this category, including mileage for company vehicles used to commute to the site. Telephone service at the site is reimbursable as well, including long-distance phone calls that pertain directly to the job.

On very large commercial and industrial cost-plus projects, the contract distinguishes between a builder's home and field offices, and only field office expenses are reimbursable. For small builders, however, the home office and the field office are the same, and your contract should allow you to be reimbursed for legitimate office expenses. Usually this includes billing for time spent preparing requisitions for payment, for photocopies of invoices, and for long-distance phone calls directly related to the job. Be sure to include estimates for these costs in the guaranteed maximum cost.

Nonreimbursable Costs

A cost-plus contract should specifically exclude expenses for which the owner is not obligated to reimburse you. The most obvious nonreimbursable expenses are costs that exceed the guaranteed maximum cost. Capital expenses, such as interest on borrowed money, are also excluded, as are costs incurred due to your negligence or the negligence of your employees and subs. This applies to defective work and costs associated with the exchange or return of materials and equipment that were incorrectly ordered or delivered.

The Fee

The "plus" part of cost-plus is the fee. It compensates the builder for his skill in coordinating all phases of construction, and indirectly reimburses the time spent estimating and negotiating the project. The fee also rewards the risk of taking on these responsibilities by providing for a fair net profit. The fee is usually expressed as a percentage, which when added to the estimated reimbursable costs of construction, establishes the guaranteed maximum cost.

Fifty-fifty split. One objection to

Application For Payment

To: William Sandage
19 Baldwin Terrace
Richmond, Vt. 05477

Application No.: Three
Period From: 01 Jan 93
To: 05 Feb 93
Contract Date: 07 Nov 92

The undersigned Contractor certifies that to the best of his knowledge, information, and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by him for Work for which previous Applications were made and payments received from the Owner, and that current payment shown herein is now due.

Guaranteed Maximum Cost.....	\$66,154
Net Change by Change Order	5,492
Revised Guaranteed Maximum Cost.....	71,646
Total Itemized Costs.....	46,177
Fee (12%)	5,541
Retainage (Fee x .3)	1,662
Total Earned Less Retainage	50,056
Less Previous Payments	(35,408)
Current Payment Due.....	\$14,648

Contractor _____ Date _____

Figure 3. The application for payment provides the financial history of the job at a

cost-plus work — often raised by the owner — is that there is no incentive for the builder to try to save money. In fact, there's a disincentive: If the builder is paid a fee on top of his costs, then he makes more money as costs go higher because the fee increases proportionately. This is true up to the amount of the guaranteed maximum cost, and even a little beyond. Setting a fixed fee — an unchanging dollar amount — solves the problem for the owner, but is unfair for the builder if change orders increase the value of the work substantially.

A better solution is to split the difference between actual costs and the guaranteed maximum cost at the end of the job, with half the savings going to the builder and half to the owner. This gives the builder an incentive to save money because half of the savings goes straight into his pocket as profit.

Retainage. There is less need for retainage with a cost-plus contract because the billing process gives the owner detailed information about the progress and cost of the job. If the owner insists on retainage, how-

ever, the easiest way to track it is to withhold a portion of the fee from each payment. For example, I usually agreed to have 30% of the fee withheld from each payment until the total retainage reached a specific dollar amount, like \$3,000. In any case, all retainage should be paid in full with the final payment.

Applying For Payment

In cost-plus work, the owner pays for the actual costs of construction, so it's important to establish a billing system that gauges the progress of the work. I used three interrelated forms for each billing. The numbers on the *Application for Payment* (Figure 3) are taken from the detailed cost information provided on the *Construction Cost Itemization* sheet, to which are attached copies of invoices and statements, and the *Progress Summary* sheet, which compares budgeted to actual costs (see "Tracking the Cost of the Work," page 40). Depending on the size and duration of the project, preparing these documents can take from a few hours to an entire day each time you apply for payment. Be sure to include this time in your estimate and to bill

for it as a cost of construction. I prepared an application for payment once a month, timed to meet my vendors' "net 10" discount schedule. You may want to bill more frequently.

Analysis. The progress summary sheet can cause some confusion. It's important for your clients to understand that they are liable for the current payment even if the summary sheet shows or predicts cost overruns in one or more categories. This can happen inadvertently, for example, when costs are put in the wrong category. I once mistakenly distributed expenses for interior painting to a category labeled "Interior Finish" instead of to a separate category for painting, which was also listed. At the end of the job, the "Interior Painting" category was empty, while the "Interior Finish" category showed a cost overrun. It took quite a bit of explaining to convince the owner that I didn't owe him a rebate for painting work that, according to my own summary sheet, had never been done. You can avoid this kind of confusion by using clearly defined categories and taking care to be consistent when you distribute expenses.

Of course, the owners have a legitimate interest in protecting their investment if the majority of categories on the Progress Summary sheet show a cost overrun. More often, however, overruns in one category are balanced by savings in another. And in any case, the guaranteed maximum cost functions to protect the owner from overpaying for the work. ■

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