Ready-to-Use Spreadsheets for Estimating

by Craig Savage

Most small- to medium-sized builders who are just beginning to use a computer in their businesses need advice on where to start. The model I usually propose includes off-the-shelf programs that combine stand-alone applications into an inexpensive, simple-to-use "system." One program that fits the model perfectly is GC *Works*, a construction management system tailored to residential builders. The program is designed for new construction and development, but will also work for remodeling. I call GC Works a "system" because it combines with QuickBooks (Intuit, P.O. Box 3014, Menlo Park, CA 94026; 800/624-6930) and ClarisWorks (Claris Corp., 5201 Patrick Henry Dr., Santa Clara, CA 95052; 408/727-8227) to handle most of the work that goes on in a construction office — estimating, accounting, job costing, proposal writing, and scheduling.

GC Works ($375 basic edition; $475 contractor edition; $125 CostBook) requires ClarisWorks, and either Quicken or QuickBooks. The program is available directly from Synapse Software, 1171 Titus Ave., Rochester, NY 14617; 800/467-5790 (716/467-5796 in N.Y.).

In a sense, GC Works is a system within a system, because ClarisWorks is itself an integrated application that combines spreadsheet, database, word processing, drawing, and communications programs into one software package. GC Works uses the Claris spreadsheet for estimates, change orders, work orders, and schedules; the word processor for proposals and other useful forms; and the database for unit-cost tracking. Add the accounting and job-costing power of QuickBooks, and you have the whole enchilada.

Estimating Templates

In GC Works, estimates are performed on a ClarisWorks spreadsheet template that has been renamed and saved with a job name that you supply. The template acts as a checklist for the estimate, presenting one-by-one a series of cost categories, like Interior Wallboard and Interior Trim Carpentry. You can create several "default" templates, one for each type of project you commonly estimate. For example, a kitchen estimate saved as a default template can be used again later for other kitchen jobs. Ditto for a room addition, a three-bedroom house, a bathroom remodel, and any other type of job you need to estimate frequently. When you're ready to use a template for a new estimate, you will only need to change customer information and enter new quantities for the individual line items. You can also adjust for any price changes that may have occurred since the last time you used the template.

Takeoff. GC Works does not add up quantities for similar items to arrive at a total price. Instead, it calculates a unit price for each of 25 cost categories, based on specific information you supply about the nature of the job you're estimating. This means that the easiest way to handle takeoff is to do it first with pencil and paper using a printout of the Takeoff template from the spreadsheet. Once you have a quantity for each category, such as linear footage of interior drywall and square footage of floor area, you can transfer the totals to the spreadsheet.

The next step is to fill in the estimate Legend — a section of the spreadsheet that holds job information such as Buyer Name, Job Code, and Start Date. Some of this data links to the rest of the spreadsheet (the Start Date, for instance, links to the internal schedule), so it's important that you fill it all in.

Job specs. Once the Legend data is filled in, the next step is to scroll down into the Job Specifications section of the estimating template, where you will supply values for what GC Works calls the Primary Job Variables (see Figure 1). Some of these values are used to calculate amounts and costs for the 25 cost categories in the estimate. Others, such as the General Factors, adjust prices according to geographic location, OSHA Compliance Measures, Sales Commissions, Overhead, Markup, and other variables (Figure 2). You can choose whether these factors are applied to direct costs or as a percentage of total cost.

Similarly, the Line Item Factors apply to the whole estimate. Job Standards, for instance, establish overall quality of the

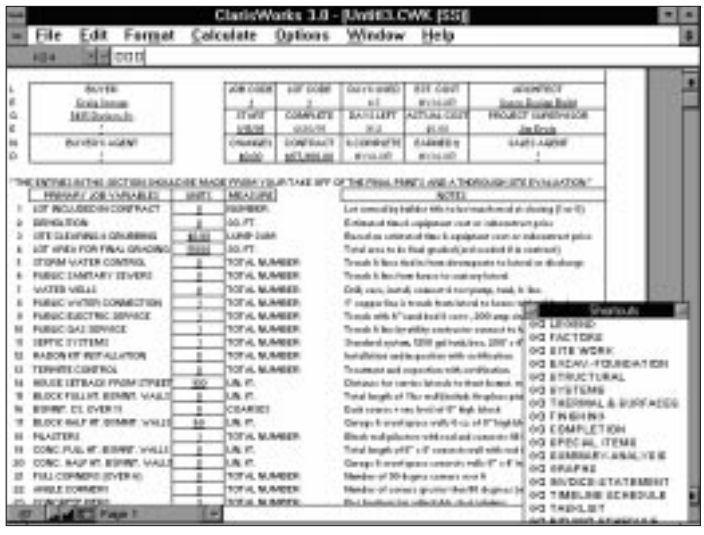

Figure 1. *One of the first steps in building an estimate in GC Works is to enter values for each item in a list of Primary Job Variables that are used to calculate unit costs. Built-in macros make it easy to navigate to other parts of the spreadsheet by clicking on an item in the "Shortcuts" menu (lower right).*

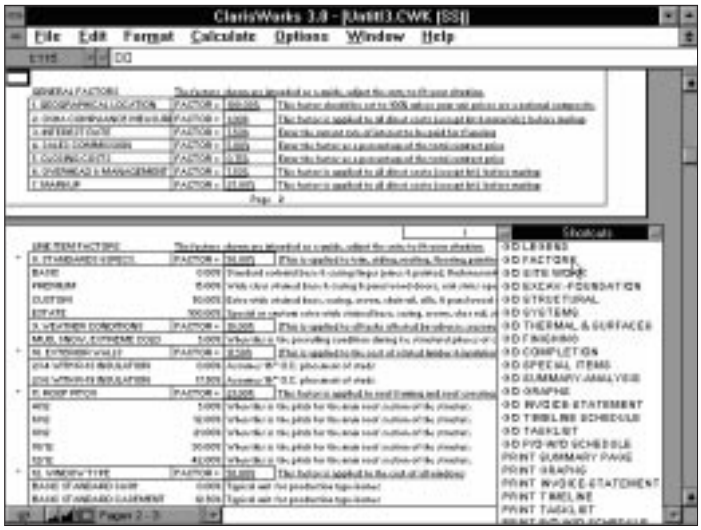

Figure 2. *Percentages entered in the General Factors table are applied to either individual item prices or to the total estimate cost. Line Item Factors make similar adjustments for overall work quality, weather conditions, and other standards.*

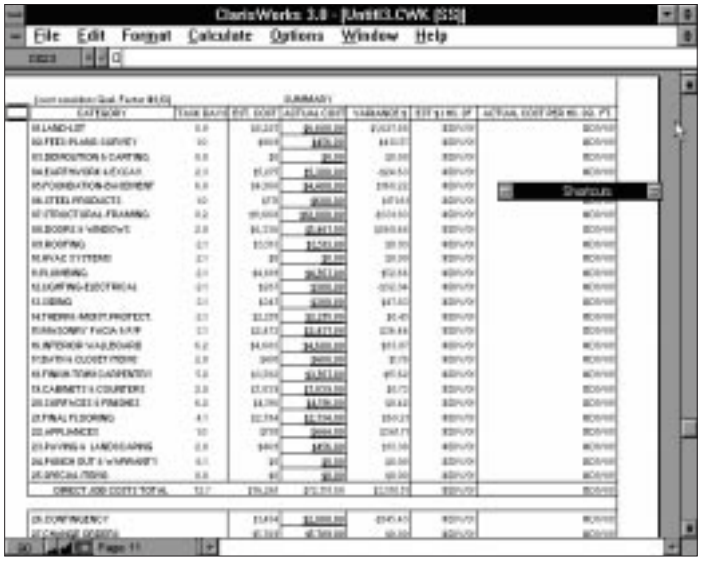

Figure 3. *The estimate Summary spreadsheet compares estimated costs, which are calculated automatically by GC Works, with actual costs, which must be manually entered from QuickBooks.*

project as one of four types: Basic, Premium, Custom, and Estate. Other factors include Weather Conditions, Insulation Standards, and the one I like best: the Buyer Personality, whose three choices are Fair and Reasonable, Difficult, and Totally Nasty.

Detailed Estimate. What GC Works calls the "body" of the estimate consists of 25 sections that are listed in sequence from the ground up, and from outside in — roughly the order of construction. Each Expense Item is displayed in the first column of a spreadsheet row, followed by several columns of either data or formulas to calculate item totals. (Any line items that are not already included in the template can be entered from the keyboard.) The value in the Cost Total column, for example, is the result of multiplying the values in the Cost Per Unit and Units columns. Any Job Line Item Factors that apply to a particular Expense Item are also figured in. The Bid Price column is for subcontractor quotes and overrides calculated values.

All of this detailed estimate data is displayed on one screen in the estimate Summary (Figure 3). Spreadsheet columns labeled Task Days, Estimated Cost, and Estimated SqFt. Cost are calculated by GC Works. Values in the columns labeled Actual Cost and Actual SqFt. Cost, however, are taken from QuickBooks and manually entered into the summary; the Variance column tracks the difference between estimated and actual costs. When a job is complete, a spreadsheet macro extracts the summary of the job billing and transfers it to a database record for historical analysis.

The accounting side of GC Works uses either QuickBooks or Quicken. GC Works supplies several custom charts of accounts as well as a completely set-up construction company. Custom reports and transactions that are the heart of the link between QuickBooks and GC Works are also provided. For instance, one memorized report called "Actual vs. Estimate by Job" will print out a complete job-cost report. (Data from this report is what you enter manually into the GC Works estimate summary.)

GC Works also uses estimate data to create a Timeline Schedule and a Project Task List, and to build a Gantt chart and a To-Do Task List organized by category, or phase. Finally, another view of the estimate, called a Job Invoice Statement, can be used as an invoice for cost-plus work, or as documentation for construction draws on fixed-price jobs.

More Than Estimating

GC Works is not just an estimating program. The program can also help you manage your business with several ClarisWorks database templates, including sales contacts, job histories, purchase orders, change orders, and subcontract agreements. There is a very sophisticated cost book (organized by CSI divisions) for anyone who wants to estimate stick-by-stick rather than use the unit-price spreadsheet.

One very handy spreadsheet template is called Quick Quote, which produces "ballpark" estimates based on historical cost information. Other templates include Final Job Cost Statement, Personal Financial Statement, Petty Cash Voucher and Transaction Log, Proforma Master, Progress Payments Form, Rent Statement, Time Sheet, and Contractors Inspection List.

The word processor templates cover Builders Specs, Buyer Final Inspection, Buyer Release of Liability, Construction Contract, and others too numerous to mention. While they aren't linked to the spreadsheet, these templates are well-designed, professional forms that would take hours to create yourself.

In fact, you could do everything I've mentioned in this article yourself on your own spreadsheet. But why spend more than 300 hours reinventing the wheel? ■

Craig Savage, a longtime builder and computer user, owns Savage Co., in Carpinteria, Calif., and publishes the Macintosh Construction Forum *and* Window On Construction *newsletters.*