

A Practical Application for Square-Foot Costs

by Bob Kovacs

By far the most common question asked on *JLC's* online estimating forum is how much to charge per square foot for typical construction — painting, trim, framing, and so forth. Estimating cost books are full of these numbers. The trouble is, they're someone else's numbers, based on someone else's costs. They might happen to be close to your costs, but if not, they're of less use.

Square-foot estimating might make

sense for production builders who have accumulated loads of cost data from past projects, and who can change their designs to fit their target costs. But in remodeling or custom home building, it's nearly impossible to use square-foot costs, because each job is different and there are so many opportunities for clients to get involved in the design. It's okay to use square-foot costs for allowances, but I would never use them for a hard bid.

Create Your Own Cost Sheet

While I don't believe in square-foot estimating, I've found that a square-foot cost sheet can be an excellent tool for prequalifying clients. The cost sheet contains simplified cost data from a variety of recent jobs. It allows you to present cost options to clients based on your experience with projects similar to the one they're envisioning.

The table on this page shows cost data for five kitchen remodeling projects,

Project Cost Data Sheet

Project Location	Jones Kitchen Scotch Plains, NJ	Smith Kitchen Woodbridge, NJ	Jackson Kitchen Dunellen, NJ	Quimby Kitchen Colonia, NJ	McGee Kitchen Edison, NJ
Square footage	240	120	148	80	320
Demolition	\$8.66	\$9.97	\$10.22	\$6.36	\$10.78
Framing/structural	\$18.25	\$10.63	\$12.77	\$0.00	\$22.05
Doors/windows	\$10.52	\$6.65	\$7.66	\$0.00	\$14.70
Insulation and drywall	\$10.83	\$11.96	\$14.30	\$0.00	\$14.46
Wall finishes	\$6.03	\$5.98	\$7.15	\$9.54	\$10.78
Flooring	\$23.51	\$7.98	\$45.97	\$16.97	\$31.36
Cabinetry	\$86.63	\$53.17	\$66.41	\$50.90	\$107.80
Countertops	\$30.94	\$26.58	\$34.74	\$25.45	\$41.65
Appliances	\$24.44	\$33.23	\$17.37	\$36.05	\$34.30
Plumbing	\$9.28	\$6.65	\$7.15	\$0.00	\$15.68
Hvac	\$4.33	\$0.00	\$5.11	\$0.00	\$9.80
Electrical	\$11.76	\$10.57	\$9.71	\$16.97	\$17.15
Total cost	\$245.18	\$183.37	\$238.56	\$162.24	\$330.51

The Jones Kitchen

This job was a complete gut of an existing space. The pantry and entry were reframed. Two windows and three doors were replaced along with all the drywall and insulation. Finishes included limestone tile floors, custom hickory cabinets, granite countertops, and stainless-steel appliances. The sink and range were both moved (requiring plumbing and hvac work), and eight recessed lights were added.

The Smith Kitchen

This project was a basic update. The walls were stripped, new drywall installed, one window replaced, and a small pantry built. Stock cabinets were installed with solid-surface tops, and the existing wood floors were refinished. The mechanical work included plumbing for a dishwasher and the addition of GFCIs to meet code.

The Jackson Kitchen

The space was gutted, one door was moved, and three doors were replaced. New drywall and insulation were installed, and the range hood and oven were replaced. The new cabinets were semicustom, and the flooring and counters were granite. Electrical was brought to code by adding GFCIs.

The Quimby Kitchen

This was a quick makeover for resale. The cabinets were refaced, laminate countertops installed, and the walls and ceiling painted. Appliances were replaced, and GFCIs were added.

The McGee Kitchen

A bearing wall was removed so that space could be taken from an adjacent room. A walk-out bay window was added, granite flooring installed, and the walls faux finished to imitate Tuscan plaster. Custom cabinets and granite counters were installed, as were commercial-style appliances. The mechanical systems were completely reworked to accommodate the commercial range, two sinks, and extensive lighting.

broken down by job phase. The square-foot costs vary from \$162.23 to \$330.51. That's a big difference and illustrates the variability of square-foot costs.

The descriptions of the five projects show why square-foot costs vary so much. Projects with higher framing costs per square foot usually had other extensive work being done in that phase. The projects with luxurious finishes had higher costs in those categories, while some projects required more extensive plumbing, hvac, and electrical work.

In some cases, higher costs in a phase result from the size of the job. For example, the only electrical work we did in the Quimby kitchen was to add GFCIs, but the square-foot cost for electrical was almost as high as it was at the McGee job, which involved major electrical work. The difference is that Quimby was a small job, and McGee was big.

Certain costs remain the same no matter how big the project is. For example, the plumber might charge \$800 to move the sink in either kitchen, but the square-foot cost would be substantially lower in the McGee kitchen (\$2.50) than in the smaller Quimby kitchen (\$10). The same principle would apply if all the projects used the same \$2,000 appliance package.

Economies of scale can also lower square-foot cost. For example, if the kitchens had the same ceramic floor tile, the tile setter would probably charge a higher rate for the smaller projects. It might take only three hours to set 80 square feet of tile, but he'd have to fill in with another project while he waited for the thinset to cure. He could give you a better price on the larger job because he could spend a whole day on it.

On the other hand, the conventional wisdom that big jobs cost less per square foot than small ones doesn't

always hold. The McGee kitchen, which was a large project, still ended up costing more per foot than the smaller ones. In this case, it was because of expensive finishes and extensive structural and mechanical work.

Using the Cost Data Sheet

Picture your first meeting with clients who want to remodel their kitchen. You show them pictures of your work, they describe what they want, and then they ask what it's going to cost. Based on what they've said, you tell them it will cost between \$24,000 and \$30,000. They're likely to respond that that's more than they want to spend and that \$6,000 sounds like a pretty big range. This is when many contractors start throwing out numbers from memory to justify their seat-of-the-pants estimate. In most cases, that serves only to confuse the customer and may prevent you from getting the job.

It's much better to go into that meeting with accurate cost data from past jobs. When the clients ask why the kitchen will cost so much or why there's such a big range in price, you can show them a cost data sheet for projects similar to theirs. You can illustrate why one kitchen is \$40 per square foot more than another. Maybe one had tile floors and granite counters, while the other had vinyl floors and laminate counters. Or maybe one project involved structural and mechanical work, and the other made no changes to the shell. Going over these variables with the clients on an item-by-item basis instills trust and makes it easier to come up with a plan that fits their budget.

Bob Kovacs moderates the estimating forum at jlconline.com, and is president of Constructive Solutions, in Iselin, N.J., offering estimating and preconstruction services to contractors and architects.

Using Job Descriptions to Train and Motivate

by Tim Faller

A good personnel management strategy makes it possible to pay people fairly when you hire them, as well as motivate them for growth. If employees see the potential to make more money based on their own efforts and not someone else's whims, they'll work harder and better, and your company will benefit.

You can't expect field and office staff to improve on their own: You need to provide help, training, and support in establishing and meeting goals.

One of the best tools you have is the job description, which explains the goal of the job, your expectation as owner, and the plan for achieving the goal. You should have a job description for every type of employee in your company. Having an employee without a job description is like running a remodeling project without good plans and specs: It always leads to confusion and conflict.

Writing a Job Description

A good job description must be clear and complete. It should include all tasks and activities that the position requires and clearly describe the desired behavior. Accomplishment of required tasks must be within the employee's power, and the employee's performance must be measurable.

For example, suppose a lead carpenter job description says that the employee must "ensure customer satisfaction." That's neither clear nor doable. It doesn't explain what customer satisfaction is or how to know when it's been achieved, and its achievement is not always within an employee's power.

Instead, under "Customer Satisfaction," the job description should list the specific tasks involved, such as:

- Communicate daily with clients about schedule, cleanliness, changes, and any other job-related concerns.
- Keep the job clean. Broom-clean on a

Lead Carpenter Job Description

General Job Requirements

- Be able to lift loads of 60 pounds
- Be able to work on ladders and roofs up to 50 feet off the ground
- Be organized
- Read and write to a 12th-grade level
- Communicate by speaking English

Customer Satisfaction. You are responsible for:

- Daily communication with the client about schedule, cleanliness, changes, and any other concerns
- Keeping the job clean. Broom-clean on a daily basis, vacuum-clean at the end of each week.
- Getting answers to clients' questions and concerns within 24 hours
- Writing and presenting change orders within 48 hours
- Conducting a weekly site meeting with the client, production manager, and salesperson to review job progress

Job-Site Supervision. You are responsible for:

- Participating in a Preconstruction Conference before each job starts
- Inspecting existing conditions to determine if there is damage not covered in the contract
- Creating and maintaining a project schedule designed to complete the job on budget while meeting any commitments made during the sales process. If this cannot be done, it is your responsibility to inform your production manager or the sales staff.
- Not performing any work not in the contract unless authorized by a signed change order
- Arriving on the job before 7:00 a.m. for setup and remaining on the job until 3:30 p.m.
- Taking a half-hour lunch and breaks as needed to ensure a safe job site
- Installing all dust, safety, and security protections before any work is started on the project
- Enforcing all company safety policies and providing safe conditions for both workers and clients
- Enforcing company policies regarding foul language, drugs, drinking, and smoking. If someone continues to violate these policies, it is your responsibility to report that person to your supervisor.
- Unlocking the job site at the beginning of each day and securing the property at the end of the day
- Being available during working hours to answer questions regarding the job from anyone on the site

daily basis; vacuum-clean at the end of each week or daily if in a living space.

- Provide answers to clients' questions within 24 hours or advise them of any delay in responding.
- Write and present change orders to clients within 48 hours or inform them of any delay.
- Conduct weekly site meeting with client, production manager, and salesperson to review job progress.
- Receive a 9 or better on postproduction customer survey.

Each of these statements clearly expresses a desired behavior, and each addresses the goal of customer satisfaction in a specific way. Each task can be managed by the lead carpenter and performance measured by management.

Setting Monetary Goals

The job description becomes an effective tool at review time. In most cases, there are areas where an employee is performing well and areas that need improvement. You and the employee can agree on which areas need work and develop a plan for that work.

It's important for the supervisor to come to the review with specific information about the employee's performance. For example, to monitor the responsibilities listed above, the manager could visit the site regularly, take pictures, and interview the clients. Objective information brings fairness to the process and helps to avoid evaluations that are hasty or clouded by personal likes and dislikes.

It also provides a basis for fair wages. Every job type in the company should have a wage range. When new employees enter the company, evaluate them and start them at the right place on the scale. Then, end every job review with a list of growth goals and a prescribed raise for achieving those goals.

Let's say the pay range for a lead carpenter is \$15 to \$25 an hour, that there are 50 items on the carpenter's job description, and that a carpenter has to perform well on

Protecting the client's property from theft, damage, or weather-related loss
Protecting any items that will be reused or cannot be removed from the construction area, such as cabinets, bushes, or pool tables
Installing and maintaining a company job sign in the front of the job
Maintaining a clean job site as seen from the street
Removing large quantities of debris on a weekly basis or as needed
Never using a client's property or tools
Following through on the completion of a job, even after you have started another
Participating in the Final Completion Walk-Through and completing punchlist items within 10 working days unless otherwise noted

Carpentry Labor. You are responsible for:

Knowing and understanding all plans and specifications
Getting answers to questions when plans and specifications are unclear
Completing all work related to carpentry and other work generally done by this company, including:

- framing
- installing windows, entry doors, siding, and exterior trim
- installing interior doors, trim, and cabinets
- installing hardwood flooring
- hooking up appliances

Having all the tools required for work described above
Supervising all work done by other employees to ensure conformance with company standards and specifications

Supervision and Scheduling of Subcontractors.

You are responsible for:

Calling subcontractors for prescheduling two weeks before they are needed on the site
Calling subcontractors to confirm schedule and discuss the work one week before they are needed
Calling subcontractors to reconfirm schedule 48 hours ahead of the time they are needed
Calling subcontractors to reconfirm schedule 24 hours ahead
Being prepared for subcontractors on the day they are scheduled. If the job is not ready, you are responsible for giving them at least one week's notice.
Providing all subcontractors with job plans and specs before they arrive to facilitate a smooth start
Providing the sub with accurate paperwork, such as revised plans and specifications
Answering any questions subs have on the site concerning layout or specifications
Checking subs' work when they are finished to ensure completeness and conformance with their contract
Authorizing payment of subcontractors by the office
Cleaning up after subs or ensuring that they clean up

Inspections. You are responsible for:

- Knowing the inspection process in all jurisdictions where we work
- Scheduling and monitoring the inspection of all phases of work, including the final
- Being on site when the inspector arrives, accompanying him or her, and dealing with issues that arise
- Staying current on codes that affect your work

Material Management. You are responsible for:

- Completing a material takeoff of all materials during the planning stage of each job.
 - List will specify the material, the amount, and the use.
- Faxing the material list to suppliers for price quotes
- Ordering materials 48 hours in advance of need so that they are delivered to the site on time
- Ordering the proper amount of materials to limit extra trips to the lumberyard during the workday to one every two weeks
- Receiving deliveries, signing receipts, and checking to ensure proper quantities and quality
- Returning undamaged materials that cannot be used at earliest opportunity
- Storing materials in a way that avoids damage after they are delivered to the site
- Checking the status of special orders at the beginning of each job, making sure they are ordered in enough time to ensure installation according to the schedule


Maintenance of Job Paperwork. You are responsible for:

- Completing the daily job log at the end of every day
- Completing your time card at the end of every day and submitting it to office by noon on Tuesday
- Completing the daily schedule form at the end of every day
- Submitting all receipts of purchased or delivered items every Friday
- Completing the Change Order Estimate form and Change Order form for all changes made to the contract. These must be turned in every Friday.

25 of them to be classed as a lead. That leaves 25 items for growth. If you start a new lead carpenter at the low end, of \$15 per hour, you can increase his pay \$1.20 per hour for every three new items that he masters. That gives individuals responsibility for their own growth and ability to earn more. It also takes the guesswork out of giving raises.

Some newly hired lead carpenters may perform well on more tasks from the beginning. You should pay a wage commensurate with their knowledge and ability to work profitably, regardless of how long they've been with the company. This puts all employees on level ground and ensures that you're giving

the proper pay to the right people.

In the long term, good people management means that you consciously work with each employee to grow into his or her job description at its fullest. As you see areas that need work, don't waste time complaining about lack of performance. Instead, work with the employee to develop a growth plan. 

Tim Faller, president of Field Training Services, in Westerly, R.I. (www.leadcarpenter.com), is a former home builder and author of The Lead Carpenter Handbook. He moderates the lead carpentry forum at jlconline.com.