

## Cost Estimating/byoh.com Spread Sheet

I used to say, "Estimating the cost of a new house is not an exact science." Now I believe that due to technology, it's more exact than some sciences. You can come very close to estimating your total cost to build, and you can guide your construction project toward that estimated cost right up till the last cost expenditure, but you can only do it if you are the general contractor.

Why is cost estimating more accurate today? One word: spreadsheets. When I started in this business in 1970, I didn't know what a spreadsheet was. I always found it difficult to manually list costs (bids from subcontractors and suppliers), make adjustments, and keep track of overages during construction. (There are rarely underage adjustments!) However, over the years, I have been involved in thousands of construction loans and have seen the absolute necessity for cost control.

I try to stay abreast of technology as it relates to helping builders figure their cost estimates and track those costs during construction, and I have seen cost estimating become more accurate and easier to calculate. There are many spreadsheets available. Some are expensive or difficult to use, and most require expensive software, such as Microsoft Excel, which few people have on their home computers. So I designed a simple preformatted spreadsheet that is available at [www.BYOH.com](http://www.BYOH.com) that comes with its own software

### **On byoh.com you'll find:**

- Software you can install for controlling building costs.**
- Up to date, average "cost to build" figures for all states.**
- Current (daily/hourly) mortgage rates.**
- Links to valuable sites I have reviewed.**

**Remember:** cost estimating is the most important step! If you can't afford the house, now is the time to find out. My Web site will help you accurately figure out the cost of a new home in your area and the give you up-to-date interest rates to work with. The cost-estimating program comes bundled with its own software and is very easy to use. It (almost) makes estimating fun!

It is critical to do accurate cost estimating and even more important to control those costs as the house progresses. If you don't calculate an accurate budget before you start building and stick to that estimated budget, you probably won't save 25 percent of the cost of the project, and you may well end up not being able to afford to finish and/or keep the house. This is not good!

### **The Process of Estimating**

Do you like to shop? If you don't, you may not save as much as someone who does. As I am fond of saying in my seminars, "Building a house is the largest shopping expedition you will ever go on. You will 'shop till you drop' and you'll still be shopping as the moving van pulls up to your new house. For some people, it's as if they died and went to heaven. For others, well, it's tough."

Putting together your bids and estimates requires shopping around. And as you'll see in chapter 4 on financing, you'll have the world's biggest credit card.

How do you shop for a whole house? Use the cost estimate form as your shopping list.

Important note: GET ALL BIDS & ESTIMATES IN WRITING!

### **Let Your House Plans Do the Talking.**

Once you get your house plans, start shopping for bids and estimates from subcontractors and suppliers. The items you will be shopping for are broken down into categories as seen on the sample spreadsheet. These are suggested categories. You can alter them and/or add more as you see fit. Your objective is to get firm bids for all items.

## COST ESTIMATE

**Name:**  
**Job Address:**

			A	B	C	D
SUBCONTRACTOR, SUPPLIER	DESCRIPTION	ORIGINAL COST ESTIMATE	ADJUSTED COST ESTIMATE	TOTAL OF PREVIOUS PAYMENTS	CURRENT DRAW REQUEST AMOUNT	ESTIMATED COST TO COMPLETE
	Permits, Fees, Surveys					0
	Utilities					0
	Excavation					0
	Foundation					0
	Rough Lumber					0
	Rough Labor					0
	Windows/Ext Doors					0
	Roofing					0
	Concrete Flatwork					0
	Siding					0
	Plumbing					0
	Heating					0
	Electrical					0
	Insulation					0
	Water (Well)					0
	Sewer (Septic)					0
	Fireplaces					0
	Drywall					0
	Cabinets					0
	Interior Trim					0
	Interior Trim Labor					0
	Painting					0
	Appliances					0
	Light Fixtures					0
	Floor Coverings					0
	Driveway					0
	Garage Door					0
	Land					0
	Misc.					0
	Other					0
						0
						0
						0
						0
						0
						0
						0
						0
						0
<b>TOTALS</b>		0	0	0	0	0

NOTE: TOTAL OF COLUMNS B+C+D SHOULD = TOTAL OF COLUMN A AT ALL TIMES

For average cost to build any house, anywhere in the USA, visit [byoh.com](http://byoh.com)

**Obtain cost estimating spreadsheet & software at [byoh.com](http://byoh.com)**

Spreadsheet software provided by [byoh.com](http://byoh.com), LLC

Never accept a bid that is "by the hour." It doesn't work. Remember Murphy's Law # 390: "If you want to see how long a job can take, pay them by the hour." You may pay a little more for a firm bid, but it's worth it for peace of mind. For example,

if an excavator quotes \$X per hour per man plus \$X per hour per piece of equipment, insist on a firm total. If he (or she) won't offer one, move on to the next excavator on your list. See chapter 6 on finding good subcontractors.

The people and companies you will be contacting know how to give estimates based on plans and are used to being asked for bids. Don't worry, this is part of their job, whether you eventually hire them or not. I take my plans, drop them off or mail them to a sub or supplier, and say, "Give me a price on XXX. If you see anything else on the plans you can provide, give me a price on that too."

One morning early in my building career I met with an excavator at my lot to give him the plans and get a price for excavating. I had never met him before. He was a friend of a friend. He gave me what I thought was a good price. He then said, "We also do septic systems, driveways, backfill, rough and final grading, and a few other things, and my brother does foundations, concrete slabs, flat work, etc." Wow, I struck gold! I hate to shop, so I got bids on four more parts of the project. Got the picture?

Note that your suppliers and subcontractors will determine the exact (almost) number of items and square footage of materials needed based on your house plans. This is called a "take off."

As you go through this process line by line, category by category, you may find even better prices for previous line items that you already have bids for. With the spreadsheet up and running, you'll be amazed how easy it is to watch that bottom line (that's the "total" line, by the way) shrink as you get the best prices.

You can make as many spread sheets for subcategories within the line items as you need. For example: Foundation costs may be made up of several costs such as sand, fill dirt, steel reinforcing, forms, etc. Simply start a new spreadsheet, label it "Foundation," and change the list of costs by typing in what you need. The pre-typed ones can be overwritten. Do a new one for each "Main" category as needed. It's fun!

"Whew!" you may be saying, "it's a lot of work getting all those bids and estimates!" Well, I never said you didn't have work to earn your 25 percent, but you still won't have to pick up a hammer!

When you finally see the bottom line of the first column approaching 75 percent of your budget, you should feel pretty good. As I have already mentioned

and will discuss further in chapter 4, your lender will be ordering an appraisal that will tell you the market value of your completed house. Your estimated total cost of construction (that bottom line), excluding land, permits, and the 6 or 7 percent real estate commissions figured in by the appraiser, should not exceed 50 percent to 60 percent of that market value. If it's higher, get back to work shopping.

Building supply companies, home centers, carpet stores, appliance dealers, and so forth all know what to do. They will give you the best price they can, as they know you are shopping elsewhere. If they don't, you'll know as you enter their bids on your spreadsheet, and the bottom line grows too large.

### **Balancing Costs**

As you pay for items during construction, enter the actual price paid under the "adjusted cost estimate" column on your spreadsheet. Scroll down to the "total" lines, compare "adjusted" to "original" and you'll know instantly if you are running over cost. If expenses run higher than estimated in some categories, you may have to trim costs in others.

Most of the heavy costs come at the beginning of construction for such items as excavation work, well and septic digging and installation, lumber, masonry, carpentry, plumbing, electrical work, windows and doors, and heating, ventilating, and air-conditioning (HVAC). Some of the items bought later still have a very significant effect on the total cost of the house. These include hardwood floors and other flooring, appliances, plumbing fixtures, wallpapering, millwork and interior trim, and carpeting. It is possible to cut costs on many of these items by choosing less expensive options or postponing installation of certain items (such as wallpaper) until after you've moved in.

Molding and trim details (such as a wainscot or cornice molding) can be added later if reducing immediate costs is important. Windows can vary as much as \$100 each just because of brand name, though the difference in quality is negligible. Do you need a ten-cycle dishwasher, when a five-cycle or a two-cycle will do as well? So it is with each item. Compromise is the key to happy home building!

Some of the expensive items you may want in your house may add little, if any, increase in appraised value (resale value). Examples are handmade tiles, exotic wood trims, and granite counters. Sorry, but that's a real estate fact of life.

### **Cost Breakdowns**

Here is a more detailed description of the items and categories you will most likely encounter in building your home. If an accurate dollar amount estimate isn't available, use an educated guesstimate for now.

- **Permits, fees, surveys.** Your building inspection department can give you the cost of permits and fees, which vary by locale. Permits in some areas include water and sewer tap-in fees. Permits can be very expensive and time consuming.

Your lender will require you to have a vacant land survey and another survey once the foundation is in, called a mortgage survey, which determines where the house actually is placed relative to property lines and setback requirements. (You should get one of these even if you are paying cash and don't have a lender.) You will also have to insure your building project against loss due to fire or other acts of God. Any other costs necessary to get your project started can be included in this category and some guesstimates can be utilized.

- **Utilities (electric, gas, phone).** In some rural areas this item can be very costly, running into thousands of dollars. Check with your local utility companies in advance.

- **Excavation.** This item will depend on such factors as locale, soil conditions, terrain, and season of the year. Excavating for a basement will cost more than excavating for a slab or a crawl space. Get a written bid.

- **Foundation.** This item will vary considerably based on factors such as slope of lot and the height of basement walls.

- **Rough Lumber.** This includes all materials except windows, doors, and roof shingles (although it can include those as well). These are most of the materials necessary to dry-in the house, which means putting up the walls, windows, exterior doors, and roof to make the interior waterproof. A good lumber company will put together this material list for you free of charge because it wants your business.

- **Rough Labor.** This is the labor required to bring the house to the dry-in stage. After this stage is completed, all other stages can commence, some simultaneously. The best way to contract for this job is by the square foot, with the square footage agreed to before you start. Five people will arrive at five different square footage totals, using the same set of plans. Some will vary by 300 square feet or more. Sounds incredible, doesn't it? But I swear that it's true. In determining the square footage, houses are measured from outside wall to outside wall, not from roof overhangs. If the house is not easily divided into rectangles for simplifying square

footage determination and you can't figure it out, have the designer do it for you. Ready-made plans generally come with the square footage broken down for you. Use those figures.

•**Windows and Exterior Doors.** This cost is simple to estimate since you have an exact count. I do not recommend any particular brand, but I do recommend that you visit a couple of building supply companies and compare. Most carry more than one brand. Locally made windows usually are less expensive than national brands and often carry comparable warranties. For special windows such as angular or bay windows, get exact quotes from the supplier. Generally there is no additional cost to install windows (except special or unusual ones), as that labor is included in your carpenter's framing charge. Be sure it is.

Exterior doors are as easy to estimate as windows, and all the same factors apply, including that the labor to install them should be included in the framing bill from your carpenter. Sliding glass or patio doors will be slightly more expensive and may require a separate installation charge, depending on your carpenter. Be sure that the installer caulks under the threshold thoroughly, using exterior grade silicone or polyurethane caulk.

•**Roofing.** This is measured and estimated by "squares." A square of roofing is the amount of roofing material required to cover 100 square feet (10 feet X 10 feet). I advise having either your supplier or your contractor do this estimate. They won't be exact, but may come a little closer than you will, though you might want to make your own calculations and see how they compare. Asphalt-fiberglass shingles are priced according to the guarantee offered by the manufacturer. Fifteen-year shingles will be less expensive per square than 20- or 25-year shingles. It is probably best to go with a better-quality shingle, which will still be more economical than other types of roofing such as cedar shakes or steel panels. The cost of labor to install will depend upon the sub, the weight of the shingle (more durable shingles are usually heavier and therefore more expensive), and the pitch of the roof (the steeper the pitch, the higher the price for labor). The most common shingles for roofing are the 245-pound asphalt variety, and an average roof pitch is about 6 inches rise for each foot of horizontal travel (a 6/12 pitch).

• **Concrete flatwork (slabs), garage floors, basement floors.** This refers to smooth finish concrete work, not rough finish as in driveways, patios, and walks. It also involves the use of other materials such as Styrofoam, wire mesh, expansion joints, and polyethylene. Extra site preparation and gravel base installation can also

figure in this expense. Your concrete subcontractors can explain this to you. The work is closely inspected by most building departments. Get a bid based on square footage of actual concrete area.

- **Siding.** Depending on the material used (which may range from brick to vinyl), you can get an accurate bid from a subcontractor that includes the cost of siding materials and any flashing required around windows and doors.

- **Plumbing.** This bid should include all fixtures such as toilets, sinks, and water heater. It will not include such items as a dishwasher, garbage disposal, washing machine, or other household appliances. If you supply the plumbing fixtures, your plumbing labor bids will be higher to offset the plumber's loss of profit on the fixtures. If a fixture you supply is defective, you will be responsible for taking care of warranty work, not the plumber. Keep that in mind.

- **Heating.** Use heating and air-conditioning systems recommended by your local utility company experts. Cost of installation should include proper ventilation for the bathrooms, the kitchen, and the clothes dryer.

- **Electrical.** In addition to electrical wiring costs, this bid should include all switches, receptacles, wires, panels and breakers, wiring of all built-in appliances, cable and phone wiring, and compliance with codes. It does not include lighting fixtures.

- **Insulation.** Get a bid per local code for minimum insulation. To get the maximum insulation for number of dollars spent, consult your local utility company experts.

- **Water (Well).** For water tap-in fees, call your local municipality. For a well bid, call a well drilling firm familiar with the area and get a firm maximum bid as well as a drilling price per linear foot drilled.

- **Sewer (Septic).** For a sewer tap-in fee, call your local municipality. For the price of a septic field, get a written bid from a local contractor who does septic system installation. Note: Alternative types of septic systems for clay soil, high water table, etc. are very expensive but usually doable.

- **Fireplaces.** Masonry or prefab. Prefabricated fireplaces are less expensive. Masonry fireplaces may give you more options. Shop around for differences and determine what your budget can handle.

- **Drywall.** Bids should include labor and materials to hang the wallboard, tape joints, and finish with joint compound (two coats). If you supply the drywall, you won't save any money, but you will be responsible for scheduling delivery, so decide how much your time and stress is worth.



- **Cabinets.** Bids should include kitchen cabinets and bathroom vanity cabinets. Labor to install should be included in the carpenter's trim labor.
- **Interior Trim.** A bid from the lumber supplier should include all interior doors, moldings, closet shelves, and stairway trim. It should also include additional sub flooring (also called underlayment) for carpet.
- **Interior Trim Labor.** You should get a bid to install all the materials for both cabinets and interior trim listed above.
- **Painting.** First-time house contractors (builders) often skimp on this category by planning to do it themselves. But it is still smart to get an estimate, even if just for the materials. If you are not planning on doing the labor yourself, get a written bid for both labor and materials. If you prefer to do your own labor, remember Murphy's Law # 414: "Do-it-yourself labor takes twice as long and you get half the quality."
- **Appliances.** In the planning stage, you don't need the actual models picked out, just a ballpark idea of what you think you will eventually buy. Use a dollar allowance in your estimate that you feel is adequate to get the appliances you want.
- **Light Fixtures.** Though you probably won't have your actual fixtures selected, figure an amount that will be enough to cover the costs of all necessary fixtures. You can do this by shopping around at lighting stores, home centers, and online.
- **Floor Coverings.** Estimate approximate costs for all floor coverings, taking into account varying amounts for wood, carpet, tile, or other coverings.
- **Driveway.** Depending on the material used, get a bid in writing based on the square footage of the area to be covered. Make sure you agree on the square footage.
- **Garage Door.** If you can still afford one, get a price from your local lumber company — with or without operators, installed or uninstalled.
- **Other.** Anything not included above, i.e., fences, sidewalks, decks, swimming pools, saunas, etc.