

BIDDING AND ESTIMATING

Chapter Survey...

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Accurate estimating is important to the profitability of a construction company. If a job is estimated correctly, the contractor has a good chance at getting the job and making money. If the job is poorly estimated, the contractor may lose the bid or win the bid and lose money on the project.

The estimator must ask these questions when assessing whether to bid on a project.

- ✓ **Company Resources and Type of Work:** Does our company have the resources to perform this work? Is this project consistent with the type of work we do?
- ✓ **Site Considerations:** Are there any special site considerations that we need to consider? Do the site conditions create any additional costs for our company?
- ✓ **Location and Cost Effectiveness:** How can we do the work efficiently and in the most cost effective manner? Does the location present special

considerations and added cost through travel time and limited accessibility?

- ✓ **Risk Assessment:** What are the risks and how will we manage them?
- ✓ **Profitability of Project:** What is our profit margin on this work?

If you know you cannot complete the job on time or there is a chance you could lose money on the project, we recommend that you not bid the job. The jobs you choose should contribute to your long-term goals and the reputation you want your company to have in the market.

Bid Documents

In a competitive bid situation, a bid package is often put together that includes

- ✓ **an invitation to bid** that gives a brief overview of the project, deadlines, and general requirements;
- ✓ **bid instructions** that contain specifics of how the bid should be completed and submitted;
- ✓ **bid forms**, including but not limited to items such as a bid sheet, bid schedule, bidder's questionnaire on experience, financial responsibility and capability, and a copy of the contract; and
- ✓ **supplements**, including items important to the overall bid process such as a property survey and soil analysis.

It is important to follow all the instructions in the bid package carefully and submit all documents according to the required specifications. The bidder can be found unresponsive if information is incorrectly submitted or omitted altogether.

Pre-bid meetings may also be scheduled, especially for larger projects. In a pre-bid meeting, the project specifications and any changes to the bid package are discussed.

Bidding Guidelines Under Louisiana Law

In the State of Louisiana, a contractor's license is required prior to bidding on commercial projects of \$50,000 or more; electrical, mechanical, or plumbing projects exceeding \$10,000; residential projects of more than \$75,000; home improvement projects exceeding \$7,500 (home improvement projects exceeding \$75,000 are considered residential projects); mold remediation projects of \$1 or more; and hazardous materials projects (including asbestos, lead removal and abatement, underground storage tank installation and removal, and hazardous waste treatment or removal) of \$1 or more.

All architects, engineers, and awarding authorities must state in the bid specifications the requirement that a contractor hold an active license and show the license number on the bid envelope.

If the bid does not contain the contractor's certification and show the contractor's license number on the bid envelope, the bid is automatically rejected.

If changes are made to a bid package before it is due, an addendum is issued. The addendum becomes part of the bid documents and, ultimately, part of the contract when awarded. It is important to carefully review all addenda to evaluate the impact on your bid. Changes in plans and specifications may affect your bid pricing or even your decision to bid at all.

Carefully evaluate whether bidding on a project is the right decision for your company.

Ethics in Bidding

Good ethical conduct is necessary to maintain the integrity of the bidding process. The situations listed below are not only a poor way to do business, but some state statutes forbid these practices on public projects.

✓ **Bid Shopping**

Bid shopping occurs when the general contractor approaches subcontractors other than those who have submitted bids to seek a lower offer than

what was quoted in original bids. In this situation, the general contractor reveals the original bids submitted and tries to reduce the price.

✓ **Bid Peddling**

Bid peddling occurs when the subcontractor approaches the general contractor after the project was awarded with the intent of lowering the original price submitted on bid day.

✓ **Bid Rigging**

Bid rigging is a form of collusion where contractors coordinate their bids to fix the award outcome of a project.

Estimate Planning

Once you have determined that you want to submit a bid, you must prepare your estimate. An estimate is the sum of the costs to complete the project, plus your added overhead and profit margin. Before you start putting numbers down on paper, you should understand all the factors that impact the cost of the job. A good estimate will fall within 1 percent to 2 percent of actual construction costs.

Project Documents

A complete set of project documents is required to prepare an accurate cost estimate. These documents include the following:

✓ **Construction or architectural drawings** that show a schematic diagram of the job. The drawings may illustrate many different views or elevations of the job.



✓ **Specifications** are details that determine the type of materials or methods to be used in construction. If there is a conflict between the specifications and applicable codes, you must follow the stricter of the two. The codes are the minimum requirements by law. You must always meet or exceed the applicable codes.

✓ The **contract** is the agreement between you and your customer to complete the specified work. The conditions outlining the obligations of each party, such as the owner and contractor, are included in the contract. If your bid is accepted, the construction drawings and specifications become part of the contract package. Contracts are covered in more detail in Chapter 8.

- ✓ **Bonds** may be required as part of the bid submittal (discussed in Chapter 4). Bonds commonly required are bid and performance bonds.

You should carefully review these documents to understand the project and the expectations of the customer.

Site Visit

There may be specifics about the site that influence the cost estimate. These details cannot always be determined from the construction documents. It is important that you go to the actual site and look at any factors that may impact the project. Soil type, grading, vehicle access, and availability to electricity and water are some of the variables that could affect the cost of the project. You want to anticipate as many of these problems as you can before beginning work.

During this time, you should consider the environmental aspects of the project. If you need to obtain environmental permits, this process will affect your estimated costs.

Louisiana Pollutant Discharge Elimination System (LPDES) Permits

It is important to note that Louisiana Pollutant Discharge Elimination System (LPDES) permit requirements may have a significant impact on your project. Projects that involve the discharge of pollutants from any point source into waters of the State of Louisiana require an LPDES discharge permit. As defined under LAC 33:IX.2313, a point source is any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. Additional information on LPDES permits is covered in Chapter 12, Jobsite Safety and Environmental Factors.

Your project may also require special equipment and processes that should be factored into your estimate. Chapter 12, Jobsite Safety and Environmental Factors, discusses environmental impacts in more depth.

Estimating Framework



Estimating should be a systematic process. Approaching the estimate in an organized way will help you avoid errors or omissions. Taking the extra time to construct a framework for the estimate will increase your accuracy.

Your estimating framework essentially lists the process for completing the job. This can be accomplished by

- ✓ defining the phases of the project; and
- ✓ listing each task and materials needed for each phase.

Once your framework is established, you can enter the time and cost for each task. If you are awarded the job, you can easily convert your estimating framework into your job schedule.

Define the Phases

The first thing you need to consider when you build your estimate is the phases of the project that you are working on. For example, you might list the phases as preconstruction, construction, and post-construction. The order of tasks will drive your scheduling process.

List Each Task and Materials Needed

Once you list the phases of the project, you need to develop a list of tasks and materials for each phase. Be very specific in this step. If you omit an item or add an unnecessary item, your estimate will be inaccurate. The task and material list should also include labor time needed and material amounts. By identifying these items early in the process, you may determine the need for items such as overtime to meet certain project deadlines and temporary storage. All of these items play a part in the cost estimate.

Estimating Checklist

The Construction Specifications Institute publishes a classification system called MasterFormat. This system includes numbers and job tasks grouped by major construction activities. This is a helpful tool when setting up your estimating framework to ensure that you have accounted for all aspects of materials and labor. After you become familiar with the estimating process, you may develop your own estimating checklist customized for your needs.

Determining Estimated Costs

Quantity Take-off Method

One accurate method of estimating is the quantity take-off method. Using this method, you individually estimate units of materials and labor for each task you listed in your estimating framework.

After estimating materials and labor, the following items are added:

- ✓ subcontractor fees,
- ✓ labor burden,
- ✓ project overhead costs,
- ✓ project equipment,
- ✓ contingencies,
- ✓ allowances,
- ✓ company overhead, and
- ✓ profit.

By going through the items individually, you can adjust your estimate to accommodate the unique aspects of the project you may have uncovered when reviewing the construction documents or during your site survey.

STEP 1 Determine Labor Cost for Each Task

Using your estimating framework, you can begin to enter your labor cost. Information from previous jobs can help you determine accurate job costs. There are also published costs available through books such as the RSMeans cost data series, but this is no substitute for your knowledge of the industry. Your experience with your local labor market and wages should be factored into your estimated costs.

For each labor item on your estimating framework list, use the following formula to determine the labor cost.

$$\text{Required Labor Hours per Task} \times \text{Labor Rate} = \text{Labor Cost per Task}$$

The required labor hours can vary based on several different factors, such as employee skill level, size of crew, and weather conditions. These factors must be taken into account when determining the required labor hours. Hours spent planning and scheduling must also be figured into the labor cost equation.



Another helpful tool when determining labor cost is your historical cost data. Determining your final labor cost from past projects will help you put together more accurate estimates for future jobs. Developing a cost-tracking system is discussed later in this chapter.

STEP 2 Add Labor Burden

As an employer, you incur costs such as employment taxes and insurance. These obligations add approximately 30 percent to your labor cost. This additional amount is referred to as labor burden.



Labor burden includes items such as

- ✓ Medicare and social security (discussed in Chapter 15),
- ✓ federal unemployment insurance (discussed in Chapter 15),
- ✓ workers' compensation,
- ✓ liability insurance,
- ✓ state unemployment insurance, and
- ✓ company benefits (such as medical insurance, vacations, etc.).

Labor burden must be factored into your total labor cost.

STEP 3 Determine Materials Cost

Just as you plugged labor cost into your estimating framework, you can do the same with materials cost. For each material item listed on your estimating framework, you need to obtain a cost.



Your suppliers can provide you with the materials price per unit or a lump sum. The cost of materials can fluctuate according to the availability of raw materials and demand, so it is important to keep current cost data. In addition to tracking wage, earnings, employment, and benefit statistics, the Bureau of Labor Statistics (www.bls.gov) tracks the prices of major groups of construction materials as part of its Producer Price Index (PPI) program. Periodically reviewing this resource can help you understand potential increases and decreases in materials cost.

You may receive the materials cost as a unit cost. If necessary, use the following formula to determine the

total material cost per unit for each of the materials categories on your take-off sheet.

$$\text{Price per Unit} \times \text{Number of Units Needed} = \text{Total Material Unit Cost}$$

To make sure you receive the best price, obtain at least three bids from suppliers. You should also add a small contingency for waste. Depending on the type of material and the job specifications, your waste contingency will vary.

STEP 4 Determine Project Equipment Cost
Equipment needed to complete the job is figured as a direct cost of the project and added to your estimate.

For example, if you need a crane to set an air handling unit on top of a building as part of a HVAC project, it is considered a direct cost.

Small tools and pickup trucks are considered an indirect cost and not part of project equipment. These indirect costs are figured into project overhead.

Figuring the direct cost of equipment differs depending if you rent or own the equipment.

Owned Equipment: To estimate owned equipment, you must arrive at a unit cost for the equipment. To calculate unit cost, consider the following factors:

- ✓ actual value of equipment factoring in its age and amount of depreciation from the original purchase price;
- ✓ maintenance and operating costs;
- ✓ taxes and fees;
- ✓ labor to operate equipment, including any training or licensing costs; and
- ✓ insurance.

Unit cost is calculated by estimating the number of hours you will use the equipment per year and dividing this number by the total yearly cost of the equipment calculated by considering the operational factors.

For example, if you figure the total cost of the equipment for the year is \$30,000 and you plan to use the equipment for a total of 1,000 hours, your unit cost to operate the equipment is \$30 an hour.

If you estimate using the equipment for 40 hours on a project, your estimated project equipment cost for that project is \$1,200.

Rental Equipment: The following items are considered when figuring the cost of rental equipment:

- ✓ equipment rental rate;
- ✓ labor cost to pick up and return equipment or delivery fees;
- ✓ labor cost to operate equipment; and
- ✓ other costs associated with operating the equipment (e.g., cost of fuel).

Subcontracting: You may decide that neither option is cost effective or feasible and subcontract the work. In this case, this line item would appear under subcontractor fees.

Rent, Lease, or Buy? Construction equipment is vital to the completion of construction projects. Equipment can range from cranes to computers. The decision to rent, lease, or purchase this equipment is a challenging one, and there are many considerations to each option.

Leasing is a long-term rental agreement that provides the benefits of using the equipment without purchasing. Lease payments are made to the owner of the equipment in exchange for the use of the equipment. At the end of the lease term, the owner takes possession of the equipment.

Leasing equipment has many advantages. One of the biggest is the ability to use the equipment with a limited capital expenditure. Other advantages compared to purchasing include

- ✓ no down payment;
- ✓ duration of payments over a longer period making them lower;
- ✓ lease payments (as defined by the IRS) are deductible as operating expenses; and
- ✓ obsolete equipment is returned to the owner at end of the lease.

Equipment ownership allows you to take advantage of certain tax benefits and in the long run usually costs are less than leasing. Leases are long-term contractual agreements that generally cannot be cancelled. If you no longer need the equipment, you must still make payments for the full term of the lease.

Purchasing equipment is advantageous when the equipment has a long and useful life and will not become obsolete in the short-term. You gain ownership of the equipment after the purchase is made but you should consider how the equipment will

hold value over a long-term period. For this reason, salvage value is a benefit to purchasing equipment.

Renting equipment may be an alternative to purchasing or leasing. Although renting equipment is usually the costliest, it is the best option in certain circumstances. These include

- ✓ short-term, specialized projects;
- ✓ replacement for equipment being repaired;
- ✓ equipment with high maintenance costs; and
- ✓ jobs that require transportation and storage to distant locations.

The decision to rent, purchase, or lease is one that should be analyzed carefully to provide the most cost-effective solution for your company.

STEP 5 Add Subcontractor Fees
Subcontractors will be a consideration if you need to outsource work that your company does not have the resources to complete. Chapter 13 covers hiring and working with subcontractors. You should get at least three bids from subcontractors, so you have a good measure of comparison. Carefully evaluate subcontractors to determine that they have the proper qualifications, licensure, and insurance coverage. Subcontractor fees must be added to the estimate that you give your customer.

STEP 6 Add Allowances
There may be items that are not specified in the project plans, such as finish materials (carpeting, fixtures, lighting, etc.). For these items, you can specify an allowance in your estimate. This is the owner's budget for these items. If the owner's choices exceed or fall short of the allowance amount, the contract should clearly address who is responsible for the difference. Typically, a change order is created stating the amount under or over what is stated in the contract. Change orders are discussed in Chapter 8.

STEP 7 Add Contingencies
A contingency percentage is sometimes added to an estimate to protect the contractor if an unanticipated problem or condition arises during the course of the project. Contingency markups are generally based on the risk level of the project.

For example, a low risk project might have a 2 percent contingency markup, but a project that has more unknown factors would have a higher markup.

STEP 8 Add Project Overhead
Project overhead costs are items that are necessary to complete the project but are not directly associated with labor and materials. These costs typically account for 5 percent to 10 percent of the total bid, but these costs should be itemized as much as possible to achieve the most accurate result.

Examples of project overhead costs include

- ✓ bonds,
- ✓ temporary storage,
- ✓ temporary office,
- ✓ security guard,
- ✓ utilities,
- ✓ dumpsters, and
- ✓ portable toilets.



Project overhead differs from company overhead. Company overhead cannot be directly linked with a project.

STEP 9 Add Company Overhead
Company overhead is the cost of doing business. These expenses are necessary to keeping the operation running. Examples of these expenses are

- ✓ office rent,
- ✓ accounting fees,
- ✓ taxes,
- ✓ telephone,
- ✓ legal fees, and
- ✓ administrative labor.



Calculating an Overhead Percentage

Using historical information from the past year is the best way to predict overhead for the following year. Overhead percentages generally average between 5 percent and 20 percent, so it is best to calculate the overhead rates specific to your company.

Company Overhead: To arrive at a company overhead percentage, you can make the following calculations.

- ✓ Add up all of your overhead costs from the previous year. These numbers may be found on your income statement as part of your administrative expenses.
- ✓ Divide your overhead costs by your revenues (found on your income statement) to arrive at your overhead percentage.

Project Overhead: Project overhead is a similar calculation.

- ✓ Add up all of your project overhead costs from the previous year.
- ✓ Divide your project overhead costs by your revenues (found on your income statement) to arrive at your overhead percentage.

Adding Overhead to the Bid: You must add these overhead percentages to your estimate to cover overhead costs.

For example, let's say you calculated the direct costs for your bid at \$100,000, your project overhead at 9 percent, and company overhead percentage at 11 percent. Your direct costs are then 80 percent of your total bid price. Since overhead is a percentage of revenue, you should divide the direct costs of your bid by 80 percent (.80).

Here is what the calculation should look like:

$$\text{\$100,000} \div .80 = \text{\$125,000}$$

After adding in overhead, the bid price with direct costs and overhead is \$125,000.

STEP 10 Add Markup and Determine Profit Margin

Considerations for properly pricing a job include

- ✓ cost estimate,
- ✓ customer needs and expectations,
- ✓ local market and competition, and
- ✓ expected profit margin.

Determining the right pricing based on these factors is important to maximizing your profit and satisfying your customers.

Cost-based pricing is one of the most common ways to price a bid. Essentially, the cost of the project is determined through the cost estimate and an overhead percentage, plus a markup percentage. The markup

percentage is divided into the direct costs of the project, just like the overhead costs in the previous example. If you estimated correctly, you will achieve your internal profit margin goals.

The standard industry markup is 15 percent, but you should consider the market and competition. You must be careful to keep your estimate in line with your competition and understand how much your customers are willing to pay for your work.

In your estimate, markup is applied to the direct costs of the project, such as labor, material, project equipment, project overhead, and subcontractors.

If your markup is too low, you may not cover your project costs, causing you to break even, or lose money on the job. To get the work, you may decide to bid low by lowering your profit markup and make it up on future projects, but this should not be a common practice. You will eventually go out of business if an insufficient amount of profit is achieved over time.

On the flip side, if your markup is too high, you may bid yourself out of jobs. Typically, the higher the markup, the fewer jobs you receive. The lower the markup, the more jobs you receive. You must estimate and choose your markup carefully to ensure a steady flow of jobs and profits for your company.

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Attention to detail is important to preparing an accurate estimate.

Other Methods of Estimating

Quantity take-off is generally the most accurate way to estimate, but there are other estimating methods you can use.

- ✓ A conceptual estimate is generally prepared by the architect using cost models from previous projects. The contractor may arrive at a much different cost because of the project's unique characteristics.
- ✓ Using the square-foot method of estimating, the project cost is a calculation of the square footage of the project multiplied by a unit cost. This is a quick way to arrive at an estimated cost, but this method does not account for project specifics that affect cost. Another variation of this method is putting together an estimate using cubic feet of the project multiplied by a unit cost.

- ✓ The unit price method of estimating bundles all cost factors such as labor, materials, equipment, and subcontractors to come up with a unit price for the entire task. For example, let's say you are placing and finishing a 2,000-square-foot concrete slab and you determined that your unit price is \$2.00 per square foot for this task. The total unit price is \$4,000.

Estimating Pitfalls

Accurate estimating is a vital function for construction businesses and can make the difference between getting the right jobs and making a profit on a job. There are pitfalls that are detrimental to the estimating function that you want to avoid.



Preliminary Estimates

Your customers may be eager to determine what their project will cost and will ask for an estimate on the spot. Quoting a price before you have a chance to make accurate calculations is a risky practice. If you quote a price too high, it is possible that you could lose the bid. If you quote a price too low, the potential customer may be disappointed and feel you were dishonest in your initial contact.

Inaccurate Estimates

Inaccuracies occur when you make errors and omissions in your estimate. To avoid inaccuracies, you should always check your estimates. Errors to look for:

- ✓ **Mathematical errors:** Always check your work and if possible, have someone else check the mathematical accuracy of the estimate.
- ✓ **Omissions in labor or materials:** Be as thorough as possible when setting up the framework for your estimate. The use of a standard format, such as MasterFormat, will help you avoid this mistake.
- ✓ **Non-standard abbreviations:** Non-standard abbreviations may be interpreted as a different measurement or material. Spell out the actual word rather than inventing an abbreviation that is unclear or vague.

- ✓ **Units of measure:** Define linear, square, and cubic measure accurately. The difference between these measures can make a drastic difference in cost.

The more accurately you prepare your estimates, the better chance you have to make your projected profit.

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*Accurate estimates help you get the right jobs
and make a profit.*
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Using an Estimator

Estimators develop the cost information business owners or managers need to bid for a contract. Small business owners or managers may perform this function without the use of a professional estimator. Large companies or a large project may need to use an estimator.

Estimators follow the same estimating process: performing the quantity take-off, analyzing subcontractor bids, determining equipment needs and sequence of operations, analyzing physical constraints at the site and contingencies, and determining allowances and overhead costs. The estimator may also have a say in setting the profit for the project and the terms and conditions of the contract. The estimator's job is solely to perform the estimating function and, if used, the estimator is an important member of the project team.

Submitting Your Bid

Once your estimate is complete and you are ready to submit your bid, you must make sure to follow all of the instructions in the bid package. These instructions include submitting all of the required documents and the exact information requested by the bid submission deadline. Even though you may have a template put together for the estimating process, you may need to customize your bid so as to respond to the bid specifications. Once your bid is submitted, it is reviewed by the owner. Bid review is generally a 30- to 90-day process. You are notified of the acceptance or rejection of your bid after this review process is complete.

Job Cost Recording System

A job cost recording system provides many benefits to the estimating and project management process.

- ✓ Current projects are monitored more closely with a cost tracking system. Cost overruns are identified and corrective action is taken sooner.
- ✓ Information from a job cost recording system helps with future estimates by creating more accurate unit costs.
- ✓ Many analytical reports can be generated from cost data to review performance by project, activity, year, etc. Using this data can help you make more strategic decisions.

There are many ways to set up a job cost recording system, but to ensure accuracy, it must remain consistent for all projects.

The first step is to develop a cost code system. A cost code system includes the following components.

- ✓ **Project Number:** A project numbering system could be as simple as starting with the number one (1) and consecutively numbering subsequent projects. A more complex project numbering system might also include a code for the type of project and the year it was started. For example, let's say you are working on a remodel project (R) that started in 2006 (06) and was the first (01) project of the year. Your project number could be R-06-01.
- ✓ **Activity Classification Code:** You may want to develop your own system or use a classification system such as the CSI MasterFormat. For example, for a finish carpentry job you could use MasterFormat number 06200. If you use the same classifications on your estimate, it will be easier to compare estimated to actual costs.
- ✓ **Distribution Code:** These are items such as material, labor, equipment, and project overhead. For example, coding might be as simple as one-letter abbreviations:

Material = M

Labor = L

Equipment = E

Project Overhead = P

This code can be placed behind the activity classification code. For example, the labor for finish carpentry could be classified as 06200L and materials as 06200M.

Once your system is set up, you can begin entering the cost data. Materials, equipment, and project overhead costs can be gathered from purchase orders, receipts, and invoices. Labor costs can be taken from timecards. It is important that employees fill out timecards completely and with enough detail so you can accurately record labor costs. A sample time card is located in Chapter 14.

Technology Tools for Estimating



Many computer tools are available to help streamline the estimating process. This technology provides many benefits:

- ✓ shorter time to prepare the estimate;
- ✓ improved accuracy; and
- ✓ professional presentation to the customer.

Estimating software ranges from a basic spreadsheet format to complex databases. However, the programs share some common features:

- ✓ databases for unit cost items, such as material and labor;
- ✓ multiple estimate report formats to present to the customer (hard copy and electronic);
- ✓ tracking method for historical information;
- ✓ ability to recall and modify past projects; and
- ✓ job costing capabilities.

As with any software, you must understand the fundamentals. If you do not know how to estimate, the software available will provide limited benefits to the process.

Final Inspection...

Bid Documents: All bid documents should be completed according to the specific requirements of the bid.

Ethics in Bidding: Good ethical practices are important to maintaining the integrity of the bid process.

Estimate Planning: Careful review of construction documents and a site visit are important first steps to creating an accurate estimate.

Estimating Framework: An estimating framework includes the project phases and the labor and materials needed for each phase.

Determining Estimated Costs: The quantity take-off method is one of the more accurate estimating methods. All direct and indirect costs must be added to ensure the estimate is complete.

Other Methods of Estimating: Estimates can be prepared using different methods with varying degrees of accuracy.

Estimating Pitfalls: It is important to be accurate and detailed when estimating a job. You may not make your expected profit if you make mistakes in your estimate.

Using an Estimator: An estimator is used to perform the estimating function on a project. The estimator may also make recommendations on the project profit margin and terms of the contract.

Submitting Your Bid: All instructions in a bid package must be followed or the bid may be rejected. There is typically a 30- to 90-day bid review process.

Job Cost Recording System: Monitoring current projects, creating more accurate future estimates, and providing reports for analysis are benefits of implementing a job cost recording system.

Technology Tools for Estimating: There are several computer tools to help you create your estimate, but it is still important to fully understand the process.