

# INTRODUCTION

## INTRODUCTION

This chapter lays the foundation for your increased understanding of the process of electrical estimating and submitting bids. It also covers the basic concepts about estimating and bidding that all electrical contractors must understand in order to be successful in business.

A large percentage of electrical firms obtain most of their electrical construction and maintenance work through this process, and the bid price must be based on a solid estimate. A correct estimate determines what it will cost you to complete the job according to the customer's needs, as described in the drawings and specifications.

The "lowest" price and the "best" price are not necessarily the same thing. The failure to understand this is perhaps the major reason why so many electrical firms go out of business each year. If you now understand this one concept, this course has already paid for itself. As you continue forward, you will gain even more insight and value. What you learn about estimating will help your business be successful and it will help you personally.

Electrical contractors are awarded most of their work through either competitive or negotiated bidding. The bid price must be acceptable to your customer and include sufficient profit for your firm to stay in business.

**CAUTION:** *If it is discovered after the bid has been submitted that you made an error, the customer might accept an amended bid, reject the bid outright, or hold you to your price as per the submitted bid. Even though there might be penalties having to do with a bid bond and/or your reputation, it is important to communicate with the customer, especially if the error represents a significant cost. Of course, if this happens too often your credibility will begin to decrease.*

### Competitive Bids

Competitive bid work requires the contractor to submit a price or a set of prices the company will charge to perform the services required in accordance with the drawings and specifications. This bid process requires competing contractors to submit bids and the customer chooses from among them.

**Author's Comment:** Customers often look at more than just the bid price; factors that might be considered include a previous relationship, satisfaction with previous work, the contractor's attitude, the firm's reputation and its experience relating to the work to be done, the technical approach of how the specified work will be

## Notes

completed in the time required, and whether the company has adequate resources to complete the project in a timely manner. Many contractors like this type of bidding because everything is laid out so everyone is bidding on the “same page.” Efficiency and organization on the jobsite ultimately determine profitability.

### Negotiated Bids

Negotiated bid work usually does not require competitive bidding; instead, the electrical contractor deals directly with the customer—perhaps a general contractor or owner for whom the contractor has worked in the past. Together, they negotiate a price based on what the customer needs.

If you enter a negotiation knowing how much it will cost you for the project (estimate), then you will be able to negotiate the job price and schedule from a position of knowledge. Not only will you have more power in the negotiations, but those you are negotiating with will have more confidence with your price.

**CAUTION:** *Going into a negotiation without an estimate means you will negotiate without knowing how or what you agree to will affect your schedule or budget. You can easily end up agreeing to things you will not be able to deliver, possibly at a cost that is above what you anticipated. Things may sound doable at the time, but once you “work up the numbers” or review other information a good estimate contains, you may discover that you have just set your firm up for cascading cash-flow problems, resource conflicts, or even failure to perform. A good estimating system reduces the likelihood of creating these problems.*

### Best Value Bids

This type of bid is similar to negotiated bidding and is used when working with an owner or general contractor.

## 1.1 Estimating versus Bidding

Determining the selling price for a job has two separate components, the estimate price and the bid price. The estimate total is what the job will cost you to complete. Profit is then added and the new total is the bid price which is the amount you wish the customer to agree to pay for the work performed.

## The Estimate Price

The purpose of estimating is to determine the cost of a project before you actually do the work. Estimating must take into consideration variable job conditions, the cost of materials, labor cost, labor availability, direct job expenses, and management costs (overhead).

## The Bid Price

Once you know the estimated cost of a project (your cost), you add profit to determine the selling (bid) price of the job. Methods and formulas for the addition of profit will be covered later in this textbook.

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## 1.2 A Good Estimating System

A good estimating system should help you to quickly and accurately determine the cost of a project in a manner that includes all anticipated costs. To be efficient and accurate, it must be systematic and routine in order to keep errors to a minimum.

## 1.3 Objectives and Purpose of an Electrical Contractor

All businesses exist for one reason and that is to make money (profit)! So while you may enjoy your work (and I hope you do) or are even passionate about it (and I hope you are), the purpose of an electrical contractor is to make a profit on every single job. Profit is a reward for taking risks, so it is important to be aware of and evaluate the degree of risk contained in each job. Providing the best service, with the most profit possible considering the market, is essential to your success.

To be a successful electrical contractor, you must provide a quality service to your customers at a competitive price where the price is greater than your actual cost. Successful electrical contracting is really just that simple—providing a quality electrical installation at a competitive price that exceeds your actual cost. Therefore, the first step to becoming a successful electrical contractor is to determine your expected cost.

## 1.4 Why So Many Electrical Contractors Are Unsuccessful

Most electrical contractors wear many hats—estimator, project manager, secretary, warehouse person, truck driver, supervisor, electrician, salesperson, and so on. There are not enough hours in the day or night to keep up with all of the demands of running a successful

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contracting business. If an electrical contractor is not careful, he or she might forget the most important hat—managing the job to ensure that a profit is made.

There are many reasons why people lose money on jobs:

- Forgetting to include costs, thinking there is no overhead because you are working out of your house
- Being too trusting and finding the customer cannot pay
- Missing things on the bid
- Forgetting to bill things out (including the job itself)
- Not following up to ensure payment is received (not paying attention to detail)
- Not seeking help before getting into trouble

Remember to manage the job to ensure that a profit is ALWAYS made on EVERY job! You must make that firm commitment.

If you do not know how to properly determine the cost of a job (estimate), you are not likely to be in business very long. Failure to know the cost of doing business (estimating) is probably the number one reason contractors fail. If your bids are high (too much profit), you will not get much work. If your bids are low (no profit), you will get lots of work, but of course you will have to close up shop.

Successful contractors manage projects to ensure profit. The estimate becomes your budget and you must track that job to be sure the targeted amount of profit is met. Actual cost is affected by job management. Estimating is both a science (gathering costs) and an art form (effectively managing the job).

With over 75,000 electrical contractors in the United States, competition is fierce. The successful electrical contractor must manage projects so he or she can compete profitably in today's highly competitive marketplace. The actual cost of any project is significantly affected by how well the job is managed.

## 1.5 Project Management

To properly manage a job, the project manager must have a budget, and the budget is derived from the estimate. The job budget must describe what material is required for each phase of the job, and when it will be needed. It must also describe the types and amount of labor (the number of hours, and the number and type of electricians) required to complete each phase of the job, and as with material, when it will be needed. With proper information, the project manager will be better prepared to complete the project as planned, and ensure it comes in at (or under) budget and a profit is made.

**Author's Comment:** Information for project management is easy to acquire using computer-assisted estimating software.

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Proper project management makes the difference between profit and loss on a properly estimated project. Effective job planning, labor scheduling, and material purchasing are all factors in the ultimate cost of a project. The field manager must understand how the job was estimated and continuous communication between the electricians performing the work in the field, the project manager, and the estimator is essential for profit.

Without a proper job budget, you will not know what materials or tools you need or when you need them. This can, and often does, result in not having the material or the tools on the job in a timely manner (poor field performance). That situation means your workers stand around wasting time and money. If you fail to manage your material properly, you might have too much on the job, thereby increasing the likelihood of it being damaged, wasted, stolen, or incurring unanticipated costs for moving extra material around the jobsite (handling multiple times).

Job management requires the project manager to know what labor is needed and when. Insufficient manpower can create conflicts with the other trades and with the owner. Too much manpower on the job at the wrong time results in lower productivity and increased costs that cannot be recovered. If you are going to be successful as an electrical contractor, you must manage your material and labor so they are at the job when required thereby ensuring productivity in accordance with the estimate and job schedule. You must also manage them in accordance with the estimate and agreed upon schedule.

As a job progresses it is often necessary to adjust the budget (estimate) based on information and feedback from the jobsite. Job conditions might be different than those expected, or the project manager, field manager, and/or field personnel might come up with ideas that improve production.

## 1.6 Can I Be Competitive?

A collapsing market may make it difficult to win jobs because of the increase in competition. You might try focusing on your area of expertise rather than bidding on jobs with which you have no experience.

Most electrical contractors are concerned about their ability to be competitive, make money, and stay in business. To be competitive and profitable, he or she must offer the customer a quality service at a reasonable price. To accomplish this, the electrical contractor must control the job and administrative (overhead) costs so they are within the estimated budget. Factors that affect a contractor's competitiveness include:

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- Competition
- Cost of Material (Buying Power)
- Experience
- Labor Cost and Productivity
- Management Skills
- Overhead
- Selling the Job at Your Price

**Competition**

Make it a point to know who your competitors are, and what their capabilities are. Look at their Website, and visit jobs they have done so you can see their quality of workmanship and areas of specialization. Talk to your crews in the field, as they are often a gold mine for this type of information.

Consider the number of contractors bidding the job. When possible, try not to bid jobs that have more than four competitors. This is because the greater the number of competitors, the greater the chance that someone will make a mistake and have a “low-ball” price. On the other hand, if there are fewer than three competitors, you can probably raise your profit margin and still be competitive. Be knowledgeable about your competitors’ capacity and their work on hand relative to that capacity.

Small contractors cannot be as price-competitive as larger contractors because the overhead for smaller contractors is higher (as a percentage) in relationship to material and labor costs and they are not able to purchase material at the same level of discount pricing that large contractors can receive. Small contractors often have poor management skills, but might have better focus and service. Fortunately for the smaller contractor, larger contractors do not always fish in the same pond, nor do they typically offer the personal service that some customers demand.

**Cost of Material**

Suppliers seldom acknowledge it, but they offer different prices to different contractors for the same material. What can you do to be offered the best price? Start by becoming a good customer and making it in the suppliers’ best interest to give you the best price. A few simple rules for receiving the best price are to shop around and check prices. Also, pay your bills on time so you can take advantage of any discounts offered. Some suppliers will give their best paying contractors lower prices during the estimating period.

Did you know that it costs more to pick your material up at the supply house counter than it does to have it delivered? Do not pick up your material if you have the option of having it delivered. You should check with the supplier to be sure that the cost will be the same, but realize that you have to cover the cost of your labor if you pick up material as opposed to having it delivered.

Some contractors buy commonly used commodity items in large quantities to obtain a lower price which they can use in their estimate. They weigh the cost of financing, storage, and double handling against their price advantage.

**Author's Comment:** The lowest price is not everything; you will want a relationship with a supplier who will help you solve your problems and who will be there when needed. Always remember the big picture (just like you want your customers to do).

## Experience

The more experience you and your employees have with a given type of construction, the fewer mistakes will be made and the more efficient and productive the job will be. This means you will be able to do the job with less labor time, resulting in a reduction in the estimated cost. Each job carries a degree of risk which can be affected by the amount of experience you have with that type of job.

To be competitive in a market you are not familiar with, you need to educate yourself by attending seminars, reading trade magazines, and watching training DVDs. Do whatever you can to minimize your inexperience. But the labor cost for the first job in a new market will always be higher than following jobs.

Another factor that must be considered when determining the bid price of an unfamiliar type of work is risk, particularly the risk that labor will be higher than you estimated. The greater the perceived risk, the higher the profit margin needs to be in order to offset possible losses. If you bid work with which you are experienced, your profit margin can be higher and your bid can still be competitive.

When you have submitted a bid and you are not awarded the job, ask the customer for a briefing to review your costs and technical approach. This will help build valuable estimating knowledge for a particular type of project and customer to help you be more competitive on future bids.

*Notes***Labor Cost and Productivity**

Competitiveness between contractors based on different pay scales can be significant; some pay rock-bottom wages and others pay union scale. You need to pay your electricians a competitive salary and provide suitable benefits to discourage them from leaving for greener pastures. The salary should compensate them for their abilities and their contribution to your company's bottom line. By paying top dollar with benefits, you should be able to hire and retain highly skilled, motivated, educated electricians to work for you for years, if not a lifetime.

It is not necessary to pay all electricians the same wage; higher skilled electricians earn the company more and should be paid more. They also motivate the lesser skilled to become more skilled.

Having motivated, loyal, and skilled electricians who have been with your organization for years will ultimately result in a lower labor installation cost as opposed to having an unhappy and unskilled labor force who feel no loyalty to your company. If you pay low wages, you can expect problems with your employees, the inspector, general contractors, and other trades. This all spills over into the customer's experience with your company. Remember these are the persons that represent your company and interface directly with your customers.

**Management Skills**

Successful electrical contractors know how to manage their labor and material in accordance with the estimate. Failure to manage the project in accordance with the estimate means that it is unlikely you will make the profit you projected. Many electrical contractors are electricians without formal business management training; as a result, they do not do a very good job as a business owner. They often prefer to "work with the tools" rather than "deal with the paper work" of the business. But if you want to be a successful electrical contractor, then you need to attend management seminars, watch training DVDs, and become involved with a local contractors' organization.

Many electrical contractors do not realize that they are not alone in their experiences. By joining an electrical contractors' organization you will gain the experience of those who have been there before you. Learning from another contractor's misfortune is always better than making the mistake yourself. In the construction industry it is a fact that your best friends are your competitors. An uneducated, unethical contractor is the biggest hindrance to obtaining a fair price for your work. In many parts of the country there are local electrical contractors' organizations that many contractors join.

In addition, there are two well-respected national electrical contractor associations:

Independent Electrical Contractors, Inc. (IEC)  
4401 Ford Avenue, Suite 1100  
Alexandria, VA 22302  
Telephone: 800.456.4324, or 703.549.7351  
Fax: 703.549.7448  
[www.ieci.org](http://www.ieci.org)

National Electrical Contractors Association (NECA)  
3 Bethesda Metro Center, Suite 1100  
Bethesda, MD 20814-5372  
Telephone: 301.657.3110  
Fax: 301.215.4500  
[www.necanet.org](http://www.necanet.org)

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## Overhead

Overhead expenses are those costs that are required to operate the business such as telephones, shop rent, vehicles, advertising, insurance, office personnel, and so on. Since overhead costs represent between 20 and 40 percent of an electrical contractor's total sales, it is critical to keep that cost as low as possible.

## Selling the Job at Your Price

Confidence and professionalism are important ingredients in getting your price. Confidence comes from knowing your price is a good value to the customer and that they will be pleased with the quality of service you provide. Next to confidence is professionalism. Do you come across as a professional by your appearance and the appearance of your workers and vehicles? Many electrical contractors dress and carry themselves as a tradesman rather than a business person. When you are meeting with the customer, dress as a business person. But it does not stop there; ensure that your electricians and vehicles have a professional appearance. If you provide outstanding service at a reasonable price, then you will "close" more contracts if you come across as a professional business organization.

What do the customers want? Do they want a quality installation at a fair price, or are they willing to accept an inferior job as long as the price is low? Price is a major factor, but it is not the only factor - low price, without quality service often results in an unhappy customer. With proper management you can provide a quality installation and in the long run a quality installation at a fair price will be more cost-effective for your customers and better for your reputation.

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## 1.7 The Electrical Market

Many contractors develop a niche (a special place) in the market such as service, housing, medical facilities, banking, commercial buildings, or industrial maintenance.

**CAUTION:** *The electrical industry is in constant change—parts of the market are expanding or contracting depending on technology, the economy, and customers' needs. So be careful, do not put all of your eggs in one basket or you might find your niche almost disappearing, as happened when the housing market collapsed in 2007.*

New and expanding markets offer greater opportunities to develop new customers, possibly with fewer competitors and greater profit margins. Consider every bid request as an opportunity to monitor the market's direction, and then decide which path you will choose to follow.

## 1.8 Negotiated Work

Some electrical contractors, based on past performance (honesty, quality service, and professionalism), have a secure long-term relationship with the customer where they have the opportunity to negotiate the price of an upcoming project. This is a fragile but lucrative market that can be maintained only when the electrical contractor is honest in pricing and provides outstanding service that meets or exceeds the customer's expectations. Maintaining these kinds of clients requires a higher level of record keeping and client interaction.

## 1.9 Best Value

This type of bid is similar to negotiated bidding and is used when working with an owner or general contractor. Your goal is to show the value being brought to your customer to support the bid submitted. Compromise on the bid price can be reached (for example) by suggesting less expensive material than shown on the plans and specifications that will still meet the customer's needs.

# Summary

## Introduction

A large percentage of electrical firms obtain most of their electrical construction and maintenance work through the process of estimating and submitting bids, and the price must be based on a solid estimate. A correct estimate determines what it will cost you to complete the job according to the customer's needs, as described in the drawings and specifications. Electrical contractors are awarded most of their work through either competitive or negotiated bidding.

## 1.1 Estimating versus Bidding

Determining the selling price for a job has two separate components, the estimate price and the bid price.

## 1.2 A Good Estimating System

A good estimating system should help you to quickly and accurately determine the cost of a project in a manner that includes all anticipated costs. To be efficient and accurate, it must be systematic and routine in order to keep errors to a minimum.

## 1.3 Objectives and Purpose of an Electrical Contractor

The purpose of an electrical contractor is to make a profit on every single job. To be a successful electrical contractor, you must provide a quality service to your customers at a competitive price where the price is greater than your actual cost.

## 1.4 Why So Many Electrical Contractors are Unsuccessful

If you do not know how to properly determine the cost of a job (estimate), you are not likely to be in business very long. Failure to know the cost of doing business (estimating) is probably the number one reason contractors fail. If your bids are high (too much profit), you will not get much work. If your bids are low (no profit), you will get lots of work, but of course you will have to close up shop.

The successful electrical contractor must manage projects so he or she can compete profitably in today's highly competitive marketplace. The actual cost of any project is significantly affected by how well the job is managed.

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To properly manage a job, the project manager must have a budget, and the budget is derived from the estimate. It must describe what material is required, when material is needed, and the types and amount of labor required to complete each phase of the job.

### 1.5 Project Management

Proper project management makes the difference between profit and loss on a project. Effective job planning, labor scheduling, and material purchasing are all factors in the ultimate cost of a project. The field manager must understand how the job was estimated.

### 1.6 Can I Be Competitive?

Most electrical contractors are concerned about their ability to be competitive, make money, and stay in business. Factors that affect a contractor's competitiveness include:

- Competition
- Cost of Material (Buying Power)
- Experience
- Labor Cost and Productivity
- Management Skills
- Overhead
- Selling the Job at Your Price

### 1.7 The Electrical Market

Many contractors develop a niche (a special place) in the market such as service, housing, medical facilities, banking, commercial buildings, or industrial maintenance.

New and expanding markets offer greater opportunities to develop new customers, possibly with fewer competitors and greater profit margins. Consider every bid request as an opportunity to monitor the market's direction, and then decide which path you will choose to follow.

### 1.8 Negotiated Work

Some electrical contractors, based on past performance (honesty, quality service, and professionalism), have a secure long-term relationship with the customer where they have the opportunity to negotiate the price of an upcoming project. This is a fragile but lucrative market that can be maintained only when the electrical contractor is honest in pricing and provides outstanding service that meets or exceeds the customer's expectations.

## 1.9 Best Value

This type of bid is similar to negotiated bidding and is used when working with an owner or general contractor. Your goal is to show the value being brought to your customer to support the bid submitted.

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# Conclusion

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One of the most important things you have learned in this chapter is the purpose of electrical contracting. It is a business... and businesses exist to make money! That does not mean charging the most you can get by with or cheating customers, because companies that do such things tend not to be around for very long.

It means charging the correct prices and doing the work the right way so you can justify those prices. Many electrical contractors are unsuccessful because their prices are wrong. The solution is not merely to raise prices or to lower them. You have to charge the “right” price, and to do that you need to know what it costs to do a given job—that is where estimating comes in.

A good estimate is the foundation for a good bid and the budget needed to properly manage the job.

# Essay Questions

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1. How do electrical contractors obtain most of their work?
2. What are the two components used to determine the selling price for a job?
3. What are three important qualities of a good estimating system?
4. How can you be a successful electrical contractor?
5. Why are many electrical contractors unsuccessful?
6. What information is derived from the estimate for the budget the project manager must have in order to properly manage a job?

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# Multiple-Choice Questions

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## Introduction

1. Competitive bid work requires the contractor to submit a price or a set of prices the company will charge to perform the services required in accordance with the \_\_\_\_\_.
  - (a) drawings
  - (b) specifications
  - (c) a or b
  - (d) a and b
2. Negotiated bid work usually does not require competitive bidding; instead, the electrical contractor deals directly with the \_\_\_\_\_.
  - (a) customer
  - (b) inspector
  - (c) other trades
  - (d) none of these

## 1.1 Estimating versus Bidding

3. The purpose of \_\_\_\_\_ is to determine the cost of a project before you actually do the work.
  - (a) negotiating
  - (b) bidding
  - (c) estimating
  - (d) selling
4. Estimating must take into consideration \_\_\_\_\_, the cost of materials, labor cost, labor availability, direct job expenses, and management costs (overhead).
  - (a) the inspector
  - (b) variable job conditions
  - (c) weather conditions
  - (d) all of these

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5. Once you know the estimated cost of a project, you add \_\_\_\_\_ to determine the selling (bid) price of the job.
- (a) overhead
  - (b) profit
  - (c) labor burden
  - (d) none of these

### 1.2 A Good Estimating System

6. To be efficient and accurate, a good estimating system must be systematic and routine in order to keep \_\_\_\_\_ to a minimum.
- (a) errors
  - (b) profit
  - (c) cost
  - (d) overhead

### 1.3 Objectives and Purpose of an Electrical Contractor

7. The purpose of an electrical contractor is to \_\_\_\_\_.
- (a) stay in business
  - (b) determine the cost of every job offered
  - (c) treat employees fairly
  - (d) make a profit on every single job
8. The first step to becoming a successful electrical contractor is to determine your \_\_\_\_\_.
- (a) overhead
  - (b) expected cost
  - (c) profit margin
  - (d) labor burden

### 1.4 Why So Many Electrical Contractors are Unsuccessful

9. Failure to know the \_\_\_\_\_ is probably the number one reason contractors fail.
- (a) *National Electrical Code*
  - (b) market
  - (c) cost of doing business (estimating)
  - (d) all of these
10. The actual cost of any project is significantly affected by how well \_\_\_\_\_.
- (a) the job is managed
  - (b) overhead is applied
  - (c) market changes are anticipated
  - (d) the general contractor maintains the schedule

### 1.5 Project Management

11. The factor(s) pertaining to the ultimate cost of a project is(are) \_\_\_\_\_.
- (a) effective job planning
  - (b) labor scheduling
  - (c) material purchasing
  - (d) all of these
12. If you are going to be successful as an electrical contractor, you must manage your \_\_\_\_\_ to ensure that it(they) is(are) at the job when required.
- (a) material
  - (b) labor
  - (c) a and b
  - (d) none of these

### 1.6 Can I Be Competitive?

13. Make it a point to know who your competitors are, and what their \_\_\_\_\_.
- (a) overhead is
  - (b) capabilities are
  - (c) profit margin is
  - (d) expenses are

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14. When possible, try not to bid jobs that have more than \_\_\_\_\_ competitors.
  - (a) four
  - (b) five
  - (c) six
  - (d) seven
  
15. Suppliers seldom acknowledge it, but they offer different prices to different contractors for the same material.
  - (a) True
  - (b) False
  
16. To be competitive in a market you are not familiar with, you need to educate yourself by \_\_\_\_\_.
  - (a) attending seminars
  - (b) reading trade magazines
  - (c) watching training DVDs
  - (d) all of these
  
17. You need to pay your electricians a competitive salary and provide suitable benefits to discourage them from \_\_\_\_\_.
  - (a) wasting material
  - (b) leaving for greener pastures
  - (c) discussing their wages
  - (d) being unproductive
  
18. Most electrical contractors are electricians without formal \_\_\_\_\_.
  - (a) electrical management skills
  - (b) accounting training
  - (c) business management training
  - (d) labor management skills

19. Overhead costs represent between \_\_\_\_\_ percent of an electrical contractor's total sales.
- (a) 10 and 15
  - (b) 15 and 20
  - (c) 20 and 30
  - (d) 20 and 40
20. \_\_\_\_\_ is(are) an important ingredient(s) in having your price accepted.
- (a) Professionalism
  - (b) Confidence
  - (c) a or b
  - (d) a and b

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### 1.7 The Electrical Market

21. Consider every \_\_\_\_\_ as an opportunity to monitor the market's direction, and then decide which path you will choose to follow.
- (a) bid request
  - (b) telephone call
  - (c) completed estimate
  - (d) all of these

### 1.8 Negotiated Work

22. Some electrical contractors, based on past performance (honesty, quality service, and professionalism), have a secure short-term relationship with the customer where they have the opportunity to negotiate the price of an upcoming project.
- (a) True
  - (b) False

Notes

### 1.9 Best Value

23. Best value bids are similar to \_\_\_\_\_ bids and are used when working with an owner or general contractor. Your goal is to show the value being brought to your customer to support the bid submitted.
- (a) competitive
  - (b) square foot
  - (c) negotiated
  - (d) all of these